

Principles and Parameters in Natural Language
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Lecture - 05
Language Faculty
Language in Human Mind

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So far ...

- Language
- Language is more language a continuum.
- Study of Language
 - Language in Mind (I - Language)
 - Use of Language (E - language)



So far we have looked at language where while talking about various aspects of language and its generic features by now we, I was trying to make you see a particular point about language, which is it is a, it is more like a continuum than like definite numbers. For a particular reason that there are not boundaries, specific boundaries defined at one place one stops and then the other begins ok.

Now, one can ask a question is this completely unfair to count languages, but that is also not completely unfair because at one point on the same continuum two languages or let me put it this way. At two different points on the same continuum, if we think language is a continuum things do sound very different right.

Sometimes so different that they are mutually unintelligible therefore, it is ok to count them as different numbers to as long as we understand that as in some places on the same continuum it might be difficult or languages share lot of things with one another. As long as we understand these things we have we are fine, then we also started talking about two

different aspects of languages study that is 2 different approaches through which language is studied. One is language purely as a phenomena of human mind and the other is language the use of language in actual world, real societies these are two different ways of looking at language. We started looking at some of them and we will go into more details, along these two lines where we will be focusing largely on language is a phenomenon of human mind which is I language.

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- Language is the most sophisticated product of Human Mind. It is a 'special purpose' cognitive ability.
- Language is a powerful social tool.
- The nature of language is that of a system. It is mathematical. It is one of the things that we learn without putting much efforts to it as a native language.



Some of the, some of other things just to refresh ourselves and to help you keep these things in the mind all the time as part of generic understanding or general knowledge about language, but it is the most sophisticated product of human mind. What could be other products of human mind?

Student: (Refer Time: 03:26).

If we say this is one of the most sophisticated products it assumes that there are other things, other things may not be, may not be as categorically a product as well as languages are or languages.

When we say most sophisticated product of human mind we refer to other kinds of activities that human mind performs right and in such activities it has a specific distinction. We will also go through lots of a specific details where we do not claim that we are studying human mind per say, but we will see how studying language helps the

study human mind. Lot of scientists have a studied human mind from different perspectives biologists, neurologists, neuroscientists in fact, beginning from ancient time and philosophy to mathematics to life sciences, this part of a study this part of scholarly endeavoured to a study human mind that is the functioning of human mind has been one of the real goals of many types of a studies.

Nobody as of now conclusively claim, the conclusively claims that they have they have figured out this thing; however, the pursuit is on, do you know people are studying actual physical properties of human mind have concluded that there is nothing inside. It do you do you know for this disposition are you are you familiar with people who have studied physical properties of human mind that is when they, when they have open it up they found there is nothing inside it, now and a on a lighter note that sounds not just hilarious, but it is consistent with what people have, from ancient time people have been calling if they find somebody who does not understand much.

They say is he has an empty brain right, he has an empty mind actually human mind is empty; there is nothing, nothing in that. Now, that part is just a side comment; however, what is interesting about it is if there is nothing to see then how does it do all kinds of complicated computation, the this question clear to you? When you open up any machine motor engine or this kind of a machine you find lots of lots of circuits, lots of complicated machineries units in any one of them in all of them.

However, there is nothing in human mind at least there is nothing visible, then how does it function do anyone of you know how it, one of the ways one of the things available in human mind helps it coordinate its functions, no no, have you heard about neurons right, what are they, what is that? What is that what you mean what are neurons?

Student: Brain cells.

Brain.

Student: Cells.

Not really, not really cells, but well if we are not particular and technical in terms of definitions we can say that how many of them are there in human mind.

Student: (Refer Time: 07:46).

Right and then people are studying neurons claim that specific set of neurons are assigned a specific activities and then the report to one another and then to the larger units and then to the larger units and there also assignments in a way that they can perform multiple actions at a time. Therefore, while we are doing other things we are either aware of things happening or we can perform multiple activities right. Now, so that that is one part of it, yet we do not know if there is a set of neurons assigned to language we know or at least we believe that there is a set of neurons assigned for carrying information all over the place.

Telling us information about look about environment around us and thinking seeing, moving, motor coordinated, co ordinations probably there are things for that there are specific set of neurons assigned for that, but we do not have evidence if there is a set of neurons assigned for language. That that is one point and remember I do not remember whether I told you this thing in the last class or the before or the class before there is still a discussion going on about language being coded in human genes. So, these are, these are hypothetical questions that scientists are working on we do not have evidence for these things as of the yet.

So, this is what we mean when we say it is one of the most sophisticated product of human mind and we call it product because to otherwise to study human mind we need to look at its physical properties; however, if you look at the structure of human language then that leads us to the study of human mind as well. If sometimes when it is difficult to study the power house, probably looking at the product can help us understand lower x coming from ok.

So, that way studying structure of language particularly human language and trying to find out its underlying system helps us understand human mind, that is if the underlying system of language is such that where a underlying system of languages design in such a way in such a complex way then this must not be and this must not be a product of an ordinary activity and that way backward we look at human mind and then we say studying language helps us understand performance of human mind is well.

When we look at the specific aspects of language and its complexities all remind you time to time with reference to why it is called I language and what it refers to when we say I language and then how is complex a phenomena it could be. In terms of E language

when we when we look at it, it seems to be a very powerful social tool we have talked about the spread of language 6800, 1650 in India and then how language and continuum that we discussed and just I told you about it that it is difficult to count and how it is, how it can be looked at in both ways.

How language becomes part of identity of human beings as a group, as a society or as an individual sometimes it is more it is a stronger than religion and other aspects of life and things like that therefore, its undoubtedly a very powerful tool as well besides being a systematic, besides having an underlying system which is purely. Some sometimes when you look at it is a structure you will see it is purely mathematical in nature and ok.

We will, we will look at the mathematical part again when we are looking at specific structures and at all levels of sounds words and sentences more. So, at the level of sentences and another interesting aspect of language is which you also we have briefly discussed we are going to going to the details of that as well that when it comes to learning of a of a language and here by learning I refer to learning of language as a child, learning of language in a natural environment. That is not in a classroom setting and we are talking about first language, all the all these terms first language natural environment are technical in the sense of a study of language we will we will look at those terms as well.

What I want to underline here is when we look at learning of language we end up concluding that it happens in such a way that we do not even realize what happened and before you realize you end up with speaking a fully developed system which we call grammatical sentences in a normal setting. And which enables us to communicate with one another in a nice way and at that stage we say now the child is linguistically adult and which happens, do you do you have any idea when it happens? When do you think a child starts to speaking a good grammatical sentence.

Student: 5 (Refer Time: 14:45).

5.

Student: 4, 5.

4 to 5 years yeah that simple. So, by the time by the age of 4 and 5 a child becomes linguistically adult in a very a strict sense that by adult we do we do not mean a discussion of nuclear science. What we only mean is a good sentence, a child can convey you simpler things that whether it wants water, food it has pain it is not, it a child wants something. If the child can talk in a in a normal way and then that kind of thing continues and we reach at reach different levels. So, this is what we mean that we learn it without putting any effort and even as an adult you wants to go back and see which people have done in a systematic way.

Now, what does really happen when a child really begins speaking such a complicated system by the age of 4, what could have happened? We can only say that it happens we do not really know what happens.

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- Language is a rule-governed system.
- Linguists/linguistics makes such rules explicit with scientific investigation.
- Language is one of the strongest marker of society, culture, and identity.



And I will show you some of them as well and you know these things we have just been talking about it that it is a rule governed system and its a strongest marker of society culture and identity and a few words about culture I am not sure if we get to come back to this thing or when we are looking at sentences I will refer back to it couple of times.

The only reason why I am bringing culture in it most of the time in a class on principles of principles and parameters or about I language people would want to stay away from this term because they only want to look at language as a phenomena here. They only want to look at the mathematical properties of language that is its communitorial

capabilities of how words combine your sentences and what are the underlying rules in it.

I am bringing in here this term culture to prepare you for looking at in a little bit more serious sense of the term culture and which is, which is the following? When we acquire language or we continue enriching it acquisition of language does not take place without acquisition of its cultural components. There are, there are a lot of things that are embedded in language which are attributed to its cultural components and a speaker of a language by a speaker I mean native is speaker of a language does not learn such things as a specific additional instructions, they grow up with such things the way they grow up speaking a language ok.

For example if someone, if we have to say someone died right, there are various different ways of saying the same thing in different languages and because I need to move to a different thing I am not giving you the specific examples, but you understand what I what I am saying. Now, nobody tells you the which one is appropriate in which circumstances right, but you know that right, how can we talk about it without giving you an example, can any one of you give an example what are the terms for death, this is this may not be a great thing to talk about early in the morning, but nonetheless when this has come up as an let us talk about an example.

Give me these 2 3 terms and that could be in Hindi or any other language, anybody.

Student: (Refer Time: 19:17) for that.

Sorry.

Student: Serenity.

Which refers to?

Student: Solidity or serenity.

Ok.

Student: (Refer Time: 19:27) associated with that.

That is that is not I am referring to, I am referring to different words for death in a particular language for example, I can give you two from Hindi [FL].

Student: [FL].

[FL].

Student: (Refer Time: 19:51) [FL].

[FL] and some of the derogatory once.

Student: [FL].

[FL] is not derogatory one all right, even these even these 4, 5 of them right. When we want to talk about somebody in a more dignified in respectful way, which one would you prefer. If do we need to say let us say, let us talk about the recent one I do not want to use the example of Mahatma Gandhi. Let us talk about the recent one or for that example Mahatma Gandhi, do we say Mahatma Gandhi [FL] or we say Mahatma Gandhi [FL] which one sounds better.

Student: (Refer Time: 20:43).

Why.

Student: Respectable no respectable (Refer Time: 20:47).

The other one has little bit of a little bit of, the other one is a little bit marked right and there are more derogatory ones than that which we do not use in a specific situation. Though all I am trying to tell you is we do not learn these things, we are not given a list of words for different situations and then we are never told either in a classroom or in any other form in society use this one for this situation and everybody agrees on which one should be used in which situation for example, when I give you this example I think all of you agree.

That one is marked over the other right, this requisition does not take place in a, in a instructional way therefore, we can say that cultural components of language also takes place at the time of its acquisition as a systematic phenomena as a rule governed phenomena all right fine.

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- In short:
 - Language is child's play!
 - In learning of the first language children perform better than adults.
 - Language is special purpose cognitive ability.



And this is why we say language is a Childs play really it is a Childs play because children perform much better than adults and here I have a reference to it.

It means more when you compare it with second language acquisition. So, the every time we talk about a child we mean first language acquisition and every time we are talking about adults we are talking about second languages. So, it simply means that if you want to learn a language, learning of language takes place in a better way when a child learns it.

However, as an adult when we try to learn a language you know what happens, we can learn little bit here and there we can go all the way very close to native like competence we can see that near native competence, but we never depend on such competence what we depend on or what makes as a native speaker of a language is the situation when we have learnt we have acquired a language as a child while going up.

That is that is what it means and the last one is it language is a special purpose cognitive ability is also related to the, to the first one and it is related to what we started with language as a sophisticated product of human mind. F or example, when you look at other things like let us say swimming or riding a bicycle or let us take just these two examples there is a role of practicing these things the more you practice the a better swimmer you become right.

The more you practice a better cyclist you become and there are lots of other activities where which is cognitive ability for example, singing the more you practice the a better singer you become such activities are called general purpose cognition language is called as special purpose cognition because there is absolutely no role of practice in language. Learning of language does not take place through practice and I will come back to this and emphasize this more and I am only underlying this right now for you to think. Lot of times we are made to believe that we learn language also through practice, the more we practice the better we perform in language. Now, we can accept the role of practice in learning your language when it comes to second language to some extent in acquisition of first language the role of practice is 0 and I say it with responsibility it is 0 absolutely no role of practice.

A simple argument is if we, if we learn a language through practice then we would learn only the words that we have heard; we will be speaking only the sentences from our languages that we have heard before. However, as a native speaker of a language irrespective of which one you speak you have capability to speak a sentence that you may you may not have ever heard before. In other words you have capability to speak or understand any word any sentence of your language, whether you have heard them before or not you get the this thing, this argument alone completely rules out the possibility of practice in learning language and therefore, language as a cognitive phenomena of human mind as a cognitive ability is special in the sense that it is different from everything else human mind performs.

There is a role of human mind is singing there is a role of human mind in swimming, cycling everything else, but the role of human mind in learning a language is very different from learning anything else. There is one more distinction which is quite obvious which is all other things that we have just mentioned like swimming, riding, singing. You perform better and these things when you grow up, your ability to perform at these things develop or increases when you are growing up if you look at language it decreases, the more you grow up it decreases why that happens there is a there is an there is a theory for that not assumptions and I will take you through that that as well.

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- To begin with, it is hard to count languages.
- There are 6800+ languages spoken around the world.
- 1652 languages are spoken in India.
- India speaks around 25% of the languages of the world.
- India speaks languages of FIVE major families:
 - Indo-Aryan
 - Dravidian
 - Austro-Asiatic
 - Tibeto-Burman
 - Andamanese



These are the again I have just put them as a list here these are the things which we have discussed, 6800 languages 62, 1652 in India which is approximately 25 percent from 5 different language families.

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- All the languages of the world have limited number of sounds.
- All languages of the world share sounds with one another. In other words, there is no language of the world that does not share sound with the other one.
- Language boundaries are so porous.
- All the sounds must have a combination of consonants and vowels.
- No words can be made without a vowel sound.
- Most common combination of sounds is CVCV



Some of these things also we have discussed and I am just adding couple of them as new fact here, languages of the world have limited sounds they have sounds in a limited number that is no language goes beyond 50 or around 50.

All of them will share sound with others that is there is not going to be a language which has completely distinct set of sounds from other languages and again this has reference to language continuum the more, the closer they are on the continuum higher the possibility of sharing larger number of sounds. The farther they are on the line or the continuum lower the possibility of sharing many sounds. So, it is no mystery that Tamil and Telugu will share more sounds than Tamil and Assamese or for that matter Tamil and or French this is this is no mystery.

Geographical proximity, geographical coexistence and mutual existence help you conclude that these languages will share more sounds; however, what is, what is more interesting is no matter how far apart languages could be it just does not happen that they do not share a sound or few sounds all right and here once again to underline that it never happens that two language it will share just one sound for the sake of maintaining these rules. It is not just one sound if not too many it is definitely a bunch of sounds all right and that also tells us irrespective of geographical boundaries language, language is definitely.

A phenomena of human mind and therefore, human mind functions alike this sentence should not be difficult for you to understand now that language boundaries are porous there are not hard and fast boundaries between languages and which is either consequence or which helps people communicate. When I say consequence language being porous is probably a consequence of language sharing sounds or we can look at it in a different way which is they share sounds because they are in closer proximity and because they are porous. Now, when we are talking about set of sounds all the sounds are not of just same type have you heard about this terms consonants and vowels.

Student: (Refer Time: 31:43).

Now, in the I do not need the definition from you, I only want you to understand it because those definitions are not that relevant or for that matter we will talk about that and we will spend a couple of minutes on that, but I want you to understand more fundamental stuff and something which is more theoretical in nature. Now, in the set of sounds in a given language again there is no language which has just vowels or only consonants, whatever the number of sounds available in a language may be that is going to be combination of both consonants and vowels.

Can you guess why or can you guess what would be the result of it, if I can give you a hint at the level of words because eventually we make words out of sounds. So, if we need both and all the languages definitely have both sounds, both types of sounds. So, what will be its consequence at the level of word, any idea maybe you are thinking too hard therefore, you are not saying it its very simple thing, no tell me what I am going to say is a consequence of that or not.

If we have a word in any language you cannot get a word only with consonants, if vowels are required in every language then vowels are going to play a role in every word in no language you are going to have a word where there is no vowel. Pay attention to this carefully, you can have a you, the reason why it was difficult for you to guess probably and I am guessing about it is you can have a word only with vowels therefore, we cannot say that all the words must have both consonants and vowels get it, we cannot say all the words of all the languages must have both.

We can have a word in probably all the languages of the world only with vowel sounds, but there cannot be a word in any language of the world only with consonant sounds while you are thinking about a word on the basis of what I have just said which sound is more fundamental consonants or vowels.

Student: Vowels.

Naturally right, vowels are going to be more fundamental because now on the basis of this we can say there cannot be a word without a vowel. We can have a word only with vowels, we cannot have a word only with consonants therefore, we cannot have a word without a vowel does that sound, does it sound like something mathematical to you? Do you do you see some nature of mathematics in it. This is the underlying system of the language at the level of sound and this is way too fundamental that I am, I am telling you which is, see how this is organized at the level of sounds that is sorry or at the level of words, no words in any language without a vowel.

Get it now, at this note can we quickly talk about that vowels and consonants, very quickly because I need to go to language and dialects very quickly, what do you think is a vowel sound or what do you think is a consonant sound? You may have heard these things and you when you hear these two types of sounds you are told something along

with them and we are going to look at not exactly the definitions of these thing these two types of sounds.

But what they really mean in a little bit more detailed way not tomorrow we will be talking about acquisition of language, but a day later that that will be next week, but today I just want to hear something from you about consonants and vowel sound, what do you think is a consonant sound? No, we you have heard these 2 sounds first sure right that there are some of the sounds that are consonants, some of the sounds that are vowel. Forget about the definition or anything about both what is the difference between the 2. No, all right think about them, I think I am taking you to way to fundamental level in the study of language right.

About sounds and it is classical distinction between a consonant sound and a vowel sound and yet I want you to think, you not knowing this does not say anything about you, trust me it is really not saying that you do not understand anything or you do not understand about sounds. Now, what I want your attention to is the following, a speaker of a language we do not need to go to a laboratory to establish we speak languages or we speak language right, but it is very easy on the basis of this example to conclude.

When you speak the language you definitely speak, you definitely have that inventory of sounds of sounds of that language again that inventory includes both types consonants and vowels right. Now, you know the consonant sounds and vowel sounds of the inventory of your language right, but when you are asked can you give me few vowel sounds in a classroom setting in an articulated way it is difficult for us to even tell the distinction between the 2.

Hang on here, I am no I am not trying to make a make fun of fun of it, I am trying to establish a point which is this capability that I know here, refers to acquisition of language as what we know I language and that is the capability which is refers to what is called knowledge of language and I come to this term again at that point in time it will be easier for you to see and I will give you tons of examples of these things that language or the rules of language consists of rules that we all know.

But, we just do not know that we know them all, like this particular example of distinction between a consonant and a vowel, get the get this point all right. So, we will we will come to more of such rules later and please think about the distinction between

2. Like I said as a speaker of the language we do not really need to know those rules, as a speaker of the language we do not really need to know distinction between consonants and vowels. But, if we want to study them there is a way to find out the distinction between that, between the 2 and I am not asking you to look them up in any books I am only asking you to think about them what could be the distinction between the two and we will make them more obvious.

When we are talking about sounds all right and I am I am leaving the last part of CVCV, CVCV simply refers to consonant vowel consonant vowel and we will talk about these types of phonotactic rules, little later.

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Some Questions

- Keeping E-language in mind, where does one language stop and the other begins?
- What are the names of different language families?
- What is the difference between language and dialect.



What do we mean by a variety of a language?

Now, we have discussed some questions like these before. So, keeping E language in mind where does the language is where does one language to stop and the other begins we have looked at that and its it could be difficult there are overlapping areas and those overlaps are not ordinary overlaps those overlaps are not inconsequential.

They have huge consequences in defining the language or understanding language as a either as a phenomena of human mind or as a phenomena of society, we will keep looking at them as well. We want to look at today where we did not get to a spend little bit time on language in dialect and I want you to understand this particular distinction in a little bit more technical way and by technical, I mean little bit more clear or fashion, which is the following.

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Dialect

- a particular form of a language which is peculiar to a specific region or social group
- a variety of a language that is a characteristic of a particular group of the language's speakers
- a regional speech patterns,
- dialect may also be defined by other factors, such as social class



So, these are the things that you that we hear when we when we said a word dialect.

Whether we put them in these words or not these are the things that we have in mind, these are different words in under different bullets, but eventually there is a way to combine them all and this is what we mean when we say dialect all right. However, even more fundamental than this is when we say or when we talk about distinction between language and dialect what we now to begin with or what we assume is language is something superior and dialect is something low. Nobody, the nobody debates that the just the 2 terms tell about themselves that one is higher the other is lower; this is there like oxygen or bloodiness.

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- Language and Dialects
 - Number of speakers
 - Literature
 - Writing system
 - Sub type of main one
- Variety of Language



However what I, what I want you to look at is that is not true, we can understand them which in whichever way we want we can talk about them in different ways that we want, but that is not true. The moment we talk about up and low we are talking about and I want your undivided attention here which is we are talking about language in society, we are not talking about language here, that is I language at the level of I language there is absolutely no distinction between these two terms. Let me first show you some of these things and then I will underline I language again some of the things that you will find people telling you is languages have more number of a speakers and dialects have lesser fewer number of a speakers.

Now, if there is no distinction between the two terms at the level of I language and what we mean by I language is the way we acquire language right, either 2 different varieties of language or 2 different languages. If we compare any language with Hindi the total number of a speaker is going to be lower than, lower than Hindi for any language right. Does that make any other language dialect of Hindi no right, do the also do people learn two different languages in two different ways when we are when we are talking about learning of a language as a child a newly born baby or and when it is growing all the way to with the age of 5 either in the natural environment where Tamil is a spoken or Telugu is a spoken or for that matter French, English or German are spoken they acquire languages in the same way.

If there is no distinction at the level of acquisition of language how can we say that that external factors will make a distinction in putting value judgment about the 2. So, when we say there is no distinction between the 2 terms in a technical sense we mean that that acquisition takes place in the same way that is similarities or differences with other languages. If we call language a as language and language b as dialect and let me give you give names here.

Let us say if we say Hindi is a language and [FL] or [FL] are dialects of Hindi, what I am saying is if Hindi is acquired this way in the same way as [FL] or [FL] that how are they different from one another. They are different from one another of course, at the level of numbers of a speakers, but then in a scientific understanding of an object that number of a speakers would not make a difference, get this point. Similarly, if there is literature available in a language and not in other languages how does that make a difference between the 2 instruments as in the forms of spoken languages. It is just a matter of coincidence that in some languages we have written stuff in the other languages we do not right, what is the language in which most of the books are written in our time.

Student: English.

English right. So, that simply means English is we can a we can associate different kinds of values, value judgments with English it is more important it is a spoken in a much wider geography its spoken by large number of peoples. Can we say a language which is not a spoken by same number of people or there are not those many books written in languages like let us say Hindi or Bangla or Punjabi that they are not languages that is not going to be going to be true.

So, look defining the distinction between the two namely language and dialect on the basis of these terms are only superficial way of looking at them, that that is the only point I am trying to make I am not saying that languages with lots of literary volumes are no good that is not the point I am trying to say. It is just a matter of coincidence that a language has lot of books written in it and the other language does not have it, a language may have too many people speaking it and the other may not have may not have too many speakers that would not make any difference at the technical level, at the same time whether a language has a writing system or not again is not important.

Because I have we have talked about this that we can write any language in any script it is only a way to represent sounds. Now, when we talk about English we are more used to seeing the language English in roman script, when we talk about Hindi we are more used to seeing the language in Nagari script that is all it is a matter of getting used to. Now, if that did not exist then at one level we can write any language in any script again this is not due, I am not trying to devalue the significance of a script all I am trying to say is any script can write any language.

Therefore again whether a language has a script or not has nothing to do with its underlying system and it will be clearer when we talk about its underlying systems of languages therefore, whether a language is lower or higher it is a socio. It is decided on the basis of its socio political status and people start agree right, power structure is such that we agree to anything only in that sense people accept fine what you are saying is it must be true one is higher language the other is not so higher language and this is so much in ours in our system that we do not even need to say that and we accept these things.

However, at the level of its underlying system acquisition and other technical aspect there is no distinction between what we know or what we have been told as language and dialect, we will keep looking at these things more and more when we look at these systems all right. So, we stop here I realize you may have another.