

Appreciating Linguistics: A typological approach
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Lecture - 58
Word Order Typology – Part 2

Hello everyone, welcome to this session of my NPTEL course Appreciating Linguistics. We are talking about language typology and crosslinguistic studies in the world's languages.

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Typology

- Two central questions of linguistics :
 - the crosslinguistic distribution of structural properties across languages
 - and the reasons for their distribution.
- Five kinds of explanations:
 - shared inheritance,
 - contact,
 - shared environment,
 - **language types**
 - **language universals.**



Language typology : The study of typologically and universally shared features of languages.

Reference: Introducing Language Typology by Edith A. Moravcsik

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When we think about language universals, we must account for the questions which are related to typological crosslinguistic similarities. Let us summarize what we have discussed so far. What are the two central questions in linguistics which were raised? First, the crosslinguistic distribution of structural properties across languages and what are the reasons. So, two things we discussed what is the distribution of the crosslinguistic structural properties, and once we found at least a few linguistic phenomena which are distributed across languages then we are trying to find out what is the reason.

If you can recall, we were talking about subject object verb; we were talking about noun phrase and adposition, possessor and possessum relation, all these distributions should be the reason of something and this reason is based on five. So, five different possible explanations

that we have discussed so far and this leads to research in language universals and language typology. Now let us look at the summarized version of what we have discussed so far.

What are the two questions that most of the typologists try to find an answer to? The first question, how are the linguistic phenomena distributed or if I can put it in a simpler form, what is the crosslinguistic distribution of structural properties across languages? That is the first question. Second question, what are the reasons for these crosslinguistic distributions or the crosslinguistics similarities?

So, these are the two focus questions. These are the two primary questions that typologists asked and what are the possible explanations that they give? When you raise a question, you need to give us a possible or potential answer, and the possible answer is that, what are the five kinds of explanations? First hypothesis or the first possible explanation, they have shared inheritance; second, they have shared language contact; third, they have shared communication environment; fourth, they belong to the same language types and fifth, they host certain language universals.

So, if you look at the five kinds of explanations I have given types and universals they are highlighted and why have we highlighted these linguistic types? They would result or would give rise to certain linguistic universals. So, the next set of my discussions or the next set of my sessions would talk about the language universals and what are the possible designs of language universals that we have that involves languages?

So, to sum it up, if I ask you the question what is language typology, what did you understand from here? All these crosslinguistic generalizations that we are talking about, similarities that we are talking about, explanations that are talking about, what is the crux of the story? After you finish this course if I ask you the question what is linguistic typology, your answer should be linguistic typology is the study of typologically and universally shared features of language. That is the definition that you need to remember before thinking about anything else as far as language typology is concerned.

That is why when I framed the syllabus at the course content, I said appreciating linguistics: a typological approach. So, when you approach linguistics as an academic discipline and you were trying to appreciate, you must understand the linguistic universals and why world's

languages which look to be very different from each other on the surface, actually have a lot of similarities that would raise some questions in the linguist's mind and they have tried to explain it. So, to put it in a nutshell, language typology is the study of typologically and universally shared features of language.

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Tools

- Statement Types

Existential Statements

12 a. Some languages have oral stops (e.g. /t/).

b. Some languages have alveolar nasals (/n/).



Distributional Statements

13 a. All languages have oral stops.

b. All languages have alveolar nasals.

Reference: Introducing Language Typology by Edith A. Moravcsik

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With this information, I would move to the language universals. What did I say, what is a language universal? Certain linguistic phenomena which are available across languages. Now let us look at the universals from the speech sound inventories of human language. To begin with, we will start with phonetics, then we will move to the other phenomena.

I will talk about two sets of sentences here; one set of statements that is existential as given in 12 a and the other one is distributional. So, what is the existential statement? The existential statement is the existence of certain things. Some languages have oral stops like /t/, and statement b, some languages have alveolar nasals that is /n/.

These statements are known as existential statements and once we got to know that things like this exist or /t/ which is an oral stop that is there in some languages, nasals are also there alveolar nasals are also there in certain languages. Our next claim is related to the distributional statement. We got to know something exists if something exists in one language, what is the distribution? The distribution is that all languages have oral stops and

all languages have alveolar nasals. So, the first two statements are existential, the next two statements are distributional.

If you find out all and some then the distributional value of oral stop and alveolar nasal is primarily available in all the languages.

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Tools

- Statement Types

Existential Statements

12 a. Some languages have X. ✓

Universal statements:

b. unrestricted universals: All languages have X

implicational universals: All languages that have Y also have X.

Reference: Introducing Language Typology by Edith A. Moravcsik

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NPTEL

Universal
Unrestricted
Implicational
All → X
All → Y → X

So, that is the first phonetic universal that I am talking about. Then the next one is let us let us talk about some other existential and universal statements. So, what does it say? When I say some languages have oral stop and some languages have alveolar nasal then the statement would be some languages have X that would be existential. And, the universal statement would be divided into two, one is unrestricted, the other one is implicational. Here I think I have to explain a few things.

In the previous slide, we saw the discussion about oral stop and alveolar nasal. To put it in a generic statement, the existential statement would be some languages have X, X could be anything, X could be bilabial stop, X could be oral stop, X could be alveolar nasal, X could be any anything else, any other phonetic or X could be a liquid or glide or anything. So, these are the things X can replace anything that is being studied in linguistics. With or with the help of these existential statements, we can draw universal statements and universal statements are

primarily the distribution of the existence of X., We need to study what is the distribution pattern.

When you look at the distributional pattern, you would have one restricted and then you have implicational. Implicational unrestricted means all languages have X. Implicational means all languages that have Y, also have X. So, the distribution of X is implied to the distribution of Y. Remember this is going to be the generic statement. Unrestricted will have all goes to X, but in case of implicational, all goes to Y and it goes to X all languages that have Y will also have X. So, that will be the implicational universal.

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Tools

• Statement Types

- 13 Unrestricted universal:
All languages have personal pronouns.
- 14 Implicational universals:
 - (a) Most languages that have SOV order also have Possessor & Possessum and Noun Phrase & Adposition orders.
 - (b) Most languages that have verb-initial order also have Possessum & Possessor and Adposition & Noun Phrase order.
- 14 a) and 14 b) Can be collapsed into
- 15 Unrestricted universal:
Most languages order heads and dependents uniformly.

Reference: Introducing Language Typology by Edith A. Moravcsik



Now let us put it in the framework of personal pronouns that we were discussing a while ago. How would we put the personal pronoun here? So, the unrestricted universal would be all languages have personal pronouns; that means, the distribution is all. You pick and choose any language, you are going to find a universal. And what is the implicational universal here?

The implicational universal, let us read it 14 a and 14 b the implicational universal most languages that have SOV also have possessor and possessum, noun phrase and adposition order. I would ask you to go back to the data that we had for Hindi, Japanese and Turkish. To understand the implicational universals, please go back to the Hindi, Japanese and Turkish data.

So, what does this data set say? The data says most languages that have SOV order also have possessor and possessum plus noun phrase and adposition. So, that is an implicational universal. What is the second implicational universal? Most languages that have verb initial order will also have possessor possessum and adposition and noun phrase. Most of the languages which have verb initial, they would also have possessive possessum plus adposition noun, the same data set please go back to Hindi, Japanese and Turkish. And if you put 14 a and b examples that I have given here, the unrestricted universal would be most language order heads and dependents uniformly.

If there is a head and there is a dependent, they are distributed in a uniform fashion. That is what we understood so far about unrestricted and implicational universals. All unrestricted universal means all languages will have it, implicational universal means most languages which have X; they will have Y. There is an implication of Y on X then only you call it implicational universals.

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Tools

- Predicative Force of these Statement Types

16 Unrestricted universals

X
 Type I +
 Type II -

17 Implicational universals

	Y	X
Type I	-	-
Type II	+	+
Type III	-	+
*Type IV	+	-

Reference: Introducing Language Typology by Edith A. Moravcsik



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This is just a representation of what we have discussed so far. What is the predictive force? How would you draw such kind of relation as far as universals are concerned? The relation here is let us say unrestricted universals and we have a factor for this and the term is X type I

is plus, type II is minus; that means, if a certain phenomenon is considered to be unrestricted, type I has these features type II does not have these features.

So, either plus or minus that is how we are going to represent it mathematically. And how would the implicational universal work? Implicational universal will have many permutations and combinations which is why many types will emerge. In case of unrestricted, you do not have many types, it is either 1 or 0 when you say 1 in a binary fashion. When you say 1, it goes to plus; when you say 0, it goes to minus; but implicational universal is more flexible; it will result in multiple types.

So, let us say Y and X; if you remember if a language has Y, it will also have X, that is what implicational universals talk about. So, type I no Y no X. That is implicational universal would give you the first type since there is no Y there is no X; type II. If there is Y, then there is X plus plus type two. Third, there is no Y, but X that is also possible, but there would be Y, but no X that is not going to be possible because in the implicational universal X cannot be 0 or X cannot be negative Y can be negative languages might have the feature X. They might not have feature Y.

But the languages going by the definition of implicational universals, languages which do not have feature X, they will have feature Y, that is wrong. So, the fourth type is ruled out. What are the three possible types of implicational universal pattern? Type I no X no Y, type II plus Y plus X, type III minus Y plus X and type IV plus Y minus X, which is ruled out. That is how we have got to understand the four different types.

Let me summarize. What do you understand from here? Languages which have both characteristics or have neither of the characteristics both characteristics type I neither of the characteristics type II and both are predicted to occur. Some languages might fall in the type I category, some might fall in the type II category. However, when languages that have only one of the two features, only one type is possible that is type III. The fourth type, the presence of Y is to imply the presence of X; that means, Y cannot occur without X. That is the reason why the fourth type is ruled out.

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Tools

- The relationship between implicants and implicatum

- 18 (a) A paradigmatic universal
In all languages in which the inflected verb precedes the subject in yes/no-questions, it does so in wh-questions as well. (Greenberg 1966a: #11a)
- (b) A syntagmatic universal
In all languages in which the inflected verb precedes the subject in wh-questions, the wh-word is normally initial. (Greenberg 1966a: #11b)
- (c) A reflexive universal
In all languages in which yes-no questions are differentiated from declaratives by an intonation pattern, the position of this pattern is reckoned from the end of the sentence rather than from the beginning. (Greenberg 1966a: 110, #8)

Reference: Introducing Language Typology by Edith A. Moravcsik



So, these are the implicational universals that we have discussed so far and to know more about it, as I always suggest, please check the book and you are going to know more about these universals from the data that have been discussed over there. So, since we realize there are unrestricted universals where they are available in all the languages. So, type I is always plus type II is always minus. So, type II does not exist, and why type II does not exist as far as unrestricted universals are concerned; that means, if it is unrestricted it is available in all the languages.

And if you write it as minus,+ then; obviously, that kind of a situation does not arise at all. However, in case of implicational universals we have three types. So, where no Y, no X, then it is ok; there is Y, there is X, that is also ok; no Y, but there is X, that is also ok, but the fourth type where Y is there, but there is no X, then that is ruled out. That means, the presence of Y implies the presence of X, so that means, if there is no X you cannot expect Y over there.

So, the fourth one is ruled out. With this information, let us move to the relationship between the implicants and implicatum. When I say implicants and implicatum, I am mainly talking about what are the paradigmatic relation, what are the syntagmatic relation and what is not what are. So, the three different domains of relation would be at paradigmatic level, syntagmatic level and reflexive level. At paradigmatic level it would be known as

paradigmatic universal. So, what does paradigmatic universal say? It says let us read it and then you think about it and come up with examples for me. In all languages in which the inflected verb means the verb has certain inflectional markers precedes the subject in yes-no question it does so in WH questions as well,

I will give you an example in English and you let me know whether that holds true for this or not. Think about a yes-no question in English. Let us say had you given food. So, had you given food, what is the inflected verb here? Given, and what is the subject here? It is you, and what sort of a question is that? This is a yes-no question.

So, what does the paradigmatic universal say? It says in all languages in which the inflected verb precedes the subject. When you say have you eaten; in this case, it will also do the same in WH questions. When you say what have you eaten means, when you add a WH, it will also be what have you eaten.

In the WH question, if the subject comes, then the verb something similar happens in the if it happens in the yes-no question, it is also going to happen in the WH question. Think about Hindi [FL]. Let us not talk about [FL] for the moment. So, [FL] and [FL]. [FL] has an inflection and the subject is here [FL] and if you add a WH word here. So, that was in yes-no question with the addition of a WH word, [FL]. So, the position of [FL] and the position of [FL], they remain almost same in both the cases. That would be the paradigmatic universal.

What is the syntagmatic universal? The syntagmatic universal would be in all languages in which the inflected verb precedes the subject in the WH question, the WH word is normally initial. So, there is a language where the inflected verb precedes the WH question, in such a case, the WH word is normally considered to be initial. These are primarily Greenbergian universals.

The reference given here is Greenberg(1966). What is our reflexive universal? A reflexive universal will be in all languages in which yes-no questions are differentiated from declaratives by an intonation pattern. The position of this pattern is reckoned from the end of sentence rather than from the beginning. I will give you a Hindi example. When you say

[FL], so, when you say [FL], the intonation on [FL] gives you an idea whether this is a question or a declarative sentence.




It is not [FL] that decides the fate of the statement, rather the intonation on [FL] decides the fate of the sentence. So, that is what we would call as reflexive universal. So, how does it read? Again Greenberg(1966), in all languages which have yes-no questions, they are differentiated from the declaratives by an intonation pattern. In such cases what happens the position of the pattern is reckoned from the end of the sentence, not from the beginning. That is the reflexive universal.

So, these are the three types of implicational universals that we have in linguistic typological literature. There are more into it. My suggestion for you would be please go back to the book and find out how well you can understand these things. There are a lot of data given over there.

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Tools

The three kinds of
Implicational Universals

- 19 (a) paradigmatic implication:
If Y, then X (where Y and X are features of different constructions of the same language).
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- (b) syntagmatic implication:
If Y, then X (where Y and X are features of different constituents co-occurring in the same construction).
- 
- (c) reflexive implication:
If Y, then X (where Y and X are features of the same constituent).
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Reference: Introducing Language Typology by Edith A. Moravcsik



Please find out how the pragmatic implication works.

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Tools

The three kinds of Implicational Universals



- 20 In all languages that have prepositions and where the demonstrative follows the noun, the adjective also follows the noun. (Hawkins 1983: 71)

Reference: Introducing Language Typology by Edith A. Moravcsik

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How the syntagmatic implication works.

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Tools

Typology of crosslinguistic statements.



- 21 (A) Crosslinguistic statements may be
- existential statements:
In some languages, there is X.
 - universal statements:
In all languages, there is X.
- (B) Universal statements differ
- (a) in the universe they pertain to
 - unrestricted universals:
In all languages, there is X.
 - implicational universals:
In all languages where there is Y, there is also X.
 - (b) in their modality
 - absolute universals:
In all languages, there is X.
 - statistical universals:
In most (or in 60% etc. of) languages, there is X.

Reference: Introducing Language Typology by Edith A. Moravcsik

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Tools

Typology of crosslinguistic statements.



- 21 (C) Implicational universals differ
- (a) in the relationship between their terms
 - paradigmatic implications:
In all languages, if there is Y, there is also X,
where Y and X are different constructions.
 - syntagmatic implications:
In all languages, if there is Y, there is also X,
where Y and X are parts of the same construction.
 - reflexive implications:
In all languages, if there is Y, there is also X,
where Y and X are features of the same constituent
within a construction.
 - (b) in the complexity of their terms
 - single implicans and/or implicatum:
In all languages where there is Y, there is also X.
 - complex implicans and/or implicatum
In all languages where there is Y (and/or W), there is
also X (and/or Z).

Reference: Introducing Language Typology by Edith A. Moravcsik

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And, how the reflexive implication or the reflexive universal works. So, to wind it up, if I have to put it in a systematic manner or if I have to put it in a summarizing manner, then I would say the implicational universal differs in the relationship between their terms at the paradigmatic level, syntagmatic level and reflexive level. And when at the paradigmatic implication or the paradigmatic level, the generalized statement is something like this.

Let us look at the generic statement given over here. In all languages; if there is Y, there is also X; where Y and X are different constructions. So, that is the paradigmatic relation or the paradigmatic implication. What is the syntagmatic implication? In all languages, if there is Y, there is also X; where Y and X are the parts of the same construction. So, in case of paradigmatic, the constructions are different; in case of syntagmatic the constructions are same and in case of reflexive, in all languages if there is Y, there is also X; where Y and X are features of the same constituent within the construction.

Now let us try to visualize how the paradigmatic implication, syntagmatic implication and reflexive implication works. Let me summarize it. Paradigmatic implication in all languages if there is Y and there is X then both Y and X are in different constructions. At the syntagmatic level, there is Y there is X both Y and X are in the same construction and the reflexive domain or the reflexive implication, in all languages if there is Y and there is X then both Y and X are the features of the same constituent within the within a construction. And

what kind of relation does it have in terms of implicant and implicatum. So, all languages where there is Y, there is also X.

That is single implicant and if there are complex implicants, then it will be in all languages where there is Y, there is also an X. The first one is an unrestricted universal and then the second one is an implicational universal. In this set of discussion I primarily focused on two main types of linguistic universals which are available in linguistic typology literature; the first one is universals and when you are talking about universal, the first one is unrestricted, the second one is implicational.

When you say unrestricted, this particular phenomenon is available in all languages and if it is implicational, then there is this X-Y relation if there is a Y there must be X; without X Y cannot occur. That is the implicational relation and in terms of implicational universals you can study it at a paradigmatic level, syntagmatic level and reflexive level. In the paradigmatic level, both Y and X belong to two different constructions; at the syntactic level they belong to the same construction and at the reflexive level, they are part of the same construction as constituents.

So, that is what Greenberg has to say and followed by many other typologists as far as linguistic universals are concerned. My suggestion for you would be refer to the slides. There are a couple of more slides which I did not really read or I did not really discuss in detail. Please go back to the book that I have suggested Moravcsik's book *Introducing Language Typology* published by Cambridge University Press and find out these things both these restricted and implicational ones in more detail in the second chapter.

So, it is about typology and universals, that will give you a better idea to understand universals and what do you think if you know many languages; let us say you are a polyglot, you actually speak multiple languages, then do you think there are certain features which are absolute universals discussed in the book are available in in your language and all they must be otherwise it should not be considered as unrestricted and how the implicational universals work in the languages that you know.

That is something for you to ponder over and you think about which will help you to understand the language universals in a better manner. Thank you. If there is time, I am going

to talk about a little more about it, otherwise I would primarily ask you to find out more about universals and then let me know in one of the sessions.

Thank you.

Keywords: existential statement, distributional statement, phonetic universal, implicational universal, unrestricted universal, paradigmatic universal, syntagmatic universal, Greenbergian universals, reflexive universal, paradigmatic implication, syntagmatic implication, reflexive implication