

**Appreciating Linguistics: A typological approach**  
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**Lecture - 24**  
**Morphological Typology: Generalization continued – Part 1**

Hello everyone. Welcome to this session of my NPTEL course Appreciating Linguistics: A typological approach. If you can recall in the previous session we were talking about certain generalizations in morphological typology and they were related to the verb patterns, morphological affixes. Then we were also talking about syncretism. Just to refresh what we discussed the first generalization or GEN1 was all about the the category or the nature of the verb and its argument structure.

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### Generalizations

1	If in a language, intransitive verbs incorporate their Single argument, then transitive verbs incorporate their Patient arguments
2	The incorporation of Agents of transitive verbs is almost non-existent.
3	If a language has inflection, it always has derivation. (Greenberg 1966a : #29)
4	Derivational and inflectional affixes do not have jointly cumulative exponents. (Plank 1999 : 290-292)
5	Person and number are frequently signaled by cumulative, rather than separatist, affixes. (Plank 1999 : 292)
6	Crosslinguistically, gender syncretism in the plural is more frequent than in the singular
7	Crosslinguistically, case syncretism most frequently involves the two core cases.




*Latin vs. Greek*  
*ambula -ba-m vs. si-ti-m*

*-er (derivational)*  
*-b (inflectional)*

*nominative vs. accusative*

*Intransitive vs. Transitive*  
*'runi' vs. 'eat'*  
*Iran vs. I ate bread*

Reference: Introducing Language Typology by Edith A. Moravcsik



And it reads something like this; if in a language, intransitive verbs incorporate their single argument, then transitive verbs incorporate their patient arguments. We have already discussed how intransitive verbs are different from transitive ones, and how this generalization works. Then the second or GEN2 was the incorporation of agents of intransitive verbs is almost nonexistent because in the transitive verbs the agents are already there.

So, it is almost impossible to incorporate one more agent in most of the languages. That is why it is said it is almost nonexistent. Then the third generalization was if a language has inflection, it also has derivation; so that means, if you could recall inflectional affixes are like tree-trees, book-books. So, the -s morpheme is the inflectional affix and derivational would be book and booking. Booking as a noun when it is derived from book as a verb, then it will be a derivational affix.

So, from Greenberg (1966), the generalization is that if it has inflection, it will also have derivation. Then taking this inflectional and derivational affix further the next generalization talks about derivational and inflectional affixes do not have jointly cumulative exponents. So, you cannot have one particular morpheme which will have both the features with a verb like let us say for example, speak. And person and number these are generally signaled by the cumulative affixes and the tense form is generally signaled by the separatist affixes and I have given you the example of Greek and Latin.

Then we did talk about syncretism: gender syncretism and case syncretism. In gender syncretism it is more frequent in plural than the singular. That means, in singular you will always find the gender differences more clearly visible, in case of the plural, you may not. Then finally, case syncretism frequently involves two major cases or two core cases which are nominative and accusative. So, with this information, we will move further to the next set of generalizations.

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Reduplication: The morphological pattern whereby the base, or some portion of it, is duplicated is called reduplication. (Hindi-Urdu)

Partially (Ekavach)	vs.	Completely/ Fully (dv.)
jaana-waanaa/ going etc. (verb)		hot-hot (adj)
baagambhaag/ run (noun)		Jaate-Jaate/ going-going (verb)

Moravcsik's examples:



wah- wah- 'go by canoe'
kaajir- kaajir- 'wear a belt'
takin- takin- 'wear socks'

Ewe: asi 'hand' asi-asi 'hand-by-hand'

Latin: quis 'who' quis-quis 'whoever'

Mandarin: jang 'sheet' jang-jang 'every sheet'

Bikol: gabo 'stone' gabo-gabo 'small stones'



This is not the only set of generalizations available in morphological typology. There are more into it and we are going to discuss the next set, but before that I would like to talk about another morphological phenomenon which is a very common feature in South Asian languages or SALs as we say it, and that is *reduplication*, because when you see the next set of generalizations or the morphological typological generalizations, you will see it is primarily based on reduplication. Those who do not know anything about it, it is an interesting linguistic phenomenon where the morphological pattern whereby the base or some portion of it is duplicated.

I have given you some examples of Hindi-Urdu here. So, what is it? The concern here is that we need to understand how reduplication works in a language like Hindi. Why I chose Hindi? There are more examples if you refer to the the data given in Moravcsik's book Introduction to Language and Linguistics published by Cambridge University Press. There is data from Ewe language, Latin, Mandarin, and Bikol. Maybe I will just quickly write the languages which would be discussed by Moravcsik, but before that I will just give you an idea keeping in mind that most of us are speakers of South Asian languages.

Let us have a look at how reduplication works in a language like Hindi-Urdu, which is an Indo Aryan language. So, what is reduplication? That is what you need to ask yourself. Reduplication means repetition of a particular stem or a portion of it. The formal definition is

something like this, let me read it out: the morphological pattern whereby the base or some portion of it, either the base or the portion of it, is duplicated is called reduplication. And this is generally considered as a universal feature; that means, almost all of the languages in the world, they do have reduplication.

However, if it is not true for some of the languages, remember I use the term almost, not all. We are not sure about it, but as far as the studies have been concerned most of the world's languages have reduplications, that is why it is considered to be a universal feature. But at least if it is not true for all the languages, a couple of generalizations can be drawn keeping in mind the reduplication in world's languages.

Now, let us look at this and let us see what are the different types of reduplications that we might have in our languages and you need to think about how it works in your language. I will give you some examples from Hindi-Urdu which is a South Asian Indo-Aryan language.

In Hindi-Urdu, you primarily see two kinds of reduplication, one is partial reduplication and then it is called complete reduplication. Partial reduplication is also known as echo words and complete reduplication is also sometimes called as full reduplication. So, complete or full, the other one is partial or echo words. I have given some data here, look at the computer screen it is written jaana-vaanaa; jaana-vaanaa means going etcetera. So, it is the first phoneme [j] has been changed with [v] in the second word. This is called partial reduplication or the echo word which means going etcetera.

Similarly, bhaagam-bhaag. When you say bhaagam bhaag, bhaag is the primary word and it has been repeated. In this case, this is a noun and jaana-waanaa, it is generally considered as you can call it a gerund or a verb or whatever, but bhaagam-bhaag is surely a noun here. So, this is the example of partial reduplication or echo words and then the other side of the table or other side of the dataset, we have complete or full reduplication.

When you say garam-garam, garam-garam means hot-hot. It is something like I want to eat hot food. So, then you can say [FL], in that case garam-garam, garam is the stem which has been repeated wholly or which has been repeated fully. That is why it will be complete reduplication or full reduplication.

Then we have jaate-jaate which is a verb. So, jaate-jaate would be going-going. That is also reduplication of the verb go. These are some examples of partial versus full reduplications in Hindi-Urdu. If you check Moravcsik's book, you will find quite a few examples have been given from other languages.

For example, there is one language like Ewe where asi is a word which means hand. I am just writing it here. This means hand and when it is reduplicated, you can call it asi asi; so that means, hand-by-hand. This is also an example of reduplication in Ewe. There is another language or another set of data that is given from Latin. In Latin there is a word 'quiz' which means who and when it is a reduplicated, you can say quiz-quiz. Quiz-quiz means whoever. That is also another full reduplication. Then we have a language like Mandarin. This language also has reduplication in their linguistic system. We have jang which means 'sheet'. And then when it is reduplicated, you call it jang-jang which means every sheet.


Then finally, we have a language like Bikol, again the data from Moravcsik. Let us say we have gapo. I am sorry. My apologies if my pronunciation is weird, I am just trying to explain it to my participants. So, gapo which means 'stone' is reduplicated as gapo- gapo. Gapo-gapo means small stones. So, these are all examples of reduplications in various languages of the world.

So here, in this box, we have a SAL example and in this box we have examples or data from the other languages of the world. So, with this information about reduplication where either the whole base or some portion of it is duplicated, we call it reduplication. When it is wholly reduplicated, we call it complete or full reduplication; when it is partially duplicated, we call it echo words or partial reduplication.

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Generalizations

Tagalog  
singyan bi-bingyan kbingyan-yam  
mai-pa-hibili maipa-bi-bili



8	If a language has partial reduplication, it also has total reduplication.
9	Frequent forms of duplifixes are a C, a syllable, or two syllables.
10	Duplifixes are in most cases strictly ordered relative to the base. They may be prefixed, suffixed, or infixes; but in each case, they are adjacent to the portion of the base that they duplicate.
11	Partial reduplication is generally numerically restricted and it mostly involves simple doubling
12	The crosslinguistically most common meaning of reduplication is the quantitative or qualitative augmentation of the meaning of the base. Its second most common meaning is the diminution of size or intensity.
13	Given a category with two opposing semantic terms, the form of the simpler value tends to be not more complex than that of the other term.
14	The free order of affixes is rare across languages and if a language has it, it also has fixed affix order.

Reference: Introducing Language  
Typology by Edith A. Moravcsik



With this information let us move to the next set of generalizations that we have in hand. So, what does the generalization 8 tells us like what does it tell? It tells if a language has partial reduplication, it also has total reduplication.

So, how it is different from the previous statement that I made a while ago? I just said universal like reduplication is a universal phenomenon because most of the world almost all languages in the world, they have this feature or they have this phenomenon. However, since we do not know all the languages in the world, if in case there are some languages which do not have reduplication at least this set of generalizations are going to work. This set of generalizations are going to be considered universal. What is it? That means, if a language has partial reduplication, it must have full or or complete or total reduplication.

So, what is the bare minimum feature? The bare minimum feature is partial reduplication. The other way round may not work, but at least if the partial one is there, the full will definitely be there. However, in some cases the total and partial reduplications are indistinguishable. For example, a language like Marshallese, this is again the data from Moravcsik's book. I am drawing another box here for you to understand. This is a language Marshallese. In this language it is not very clear sometimes whether this is partial or full reduplication.

I will write two examples here; one is wah it means canoe and when it is reduplicated, you see wah-wah; that means, 'go by canoe'. This seems to be a full reduplication. However, in the other example like let us say this is the data kagir, kagir would be 'belt'. This particular language has a word like kagir gir; that means, wear a belt. So, in such cases look at the example number two here kagir and kagir gir; that means, it is a partial replication. But sometimes you may not find it very easy to identify exactly which one has been reduplicated and the problem occurs in a word like takin.

So, takin here means socks and when it is reduplicated, we have takin. It is something like this it is tak in, then kin. So, this would be 'wear socks'. So, here it is a little tricky to identify which one has actually been reduplicated. So, tak in kin so, there are three morphemes you see over here unlike the previous ones when wah becomes wah-wah which is complete reduplication, kagir means kagir gir partial reduplication. But in case of tak in, it is also getting split. In some languages you would find the partial replication and the total reduplication a bit indistinguishable.

However, the generalization that holds true is if a language has partial reduplication, it must have total reduplication also. That is the 8th generalization that we discussed and then we have the 9th generalization which talks about duplication. *Duplication* is again a phonological conditioning. It occurs when you are talking about some duplication or the reduplication or the repetition of a particular phoneme.

In that case you are going to call it duplication. What does the generalization 9 talk about? It talks about the frequent forms of duplication or the duplifixes are a consonant, a syllable or two syllables; that means, the vowels are generally out of the duplication. So, what does get duplicated? It is primarily a consonant or a syllable or two syllables, but very unlikely you would see a particular vowel getting duplicated. So, how does it work? In what sense do we see the duplication of consonants?

It depends on the position; in which position does the consonant stay. In that case, when a particular syllable gets duplicated or when a particular consonant gets duplicated and when two syllables are getting duplicated, these are more frequent than any other viral duplication. So, it depends on the position of the consonant and accordingly the generalization 9 falls into

place. This one is a statistical universal; you are not going to call it an absolute universal rather it depends on which one is more frequent and which one is less frequent.

When it is a consonant it is more frequently duplicated, a syllable more frequently duplicated or two syllables together that also more frequently duplicated, but definitely not the vowels. So, that is the 9th generalization that we have in hand. Next we are moving to the 10th one. The 10th generalization talks about duplifixes. They are in most cases strictly ordered relative to the base. Now what does the second sentence read? The second sentence reads they may be prefixed, suffixed or infix, but in each case they are adjacent to the portion of the base that they duplicate.

It reads very long, but then it is actually a very simple one. When does duplifix occur or when do we see duplication in its most frequent forms? In most of the cases, they are ordered relative to the base. Let us say I am to go into the duplication first. let me tell you what is the adjacency of a base. When you say teacher, -er is the morpheme, it is next to the base that is teach. And what is it? It is a suffixation here because teach is the base and -er is the morpheme which has been attached to it.

This is adjacent to the portion of the base. So, in case of duplifixes what happens? Whether it is a prefix or a suffix or let us say infix in any of the cases it would be attached to the base. I will give you an example for the duplication here from Tagalog; again the data comes from Scratton and Otsu, but then I got the data from Moravcsik (2012). So, let us look at the duplication and how it works in a language like Tagalog.

I will draw a small table. Here is a language that is Tagalog. In this language there is a verb called bingyan. Let us say this is a verb and when it is reduplicated, it becomes bi-bingyan, but it cannot be bingyan-yan. Let me write it in a clearer manner. Maybe I will start from here. So, here is Tagalog. Here is a word bingyan and when it is reduplicated, it becomes bi-bingyan, but definitely not bingyan-yan. Why this one is wrong, but this one is right when it is reduplicated?

What did we study or what did we get to know about let us say reduplications or duplication? Let us read the generalization again. What is the first sentence saying? The first sentence is saying duplifixes are in most cases strictly ordered relative to the base. What is



the base here? The base here is *bing*. If you look at this data, the base is *bing* and *yan* is the extension of it, could be.

I am not very sure considering I am not a speaker of this language, but going by the generalization here the reduplication *bi* which is adjacent to the base *bing* is ok. But when you say *bing yan yan*, the reduplication of a *yan* cannot be considered as the right form of duplication of this consonant or of this syllable. So, *bi bingyan* is ok, but *bing yan yan* is not going to be ok.

Going by this example, the 10th generalization actually can clearly be understood if you look at this also. We can give you another example let us say from the same language, let us say *maipa* is the word then this is *pa* then this is *pabili* and when it is reduplicated or when it is duplicated in that sense, this will be *maipa bi-bili*.

So, *pabili* becomes *maipa-pabili*, this is *maipa-bibili*. So, this *pa* has changed into *bi* and you see that whenever this duplication is happening, it is primarily related to the base for *mai*. It has to be adjacent to the base. These are just some examples from languages like Tagalog. However, in most cases the duplifix is adjacent to the part of the base that is reduplicated. So, what is reduplicated in this case? The *pa* and *bi*; so, *bili* has to be adjacent to *bili* which is why the *pa-bili* and *pa-bili* in first case, *pa pa-bili* and in the second case *pa bi-bi-li*.

The idea here is that whether it is prefixation or suffixation or infixation, in all of the cases it is only the affix which is adjacent to the portion of the base that can be reduplicated not the other ones.

Now how about the next generalization which is generalization 11? In 11 you see partial reduplication is generally numerically restricted and it mostly involves simple doubling. You do not see many instances of partial reduplication in the world's languages rather full reduplication is more common.

So, what does it say? What does GEN11 say? It says it is generally numerically restricted, we will find fewer number of partial reduplication and it mostly involves simple doubling. So, when you were talking about the doubling or the duplifixing of things, generally simply doubles. Let us say *jaana-vaanaa* in Hindi as an example. The Hindi example that we have

given khaanaa vaanaa, jaana vaanaa, apple shapple. It is primarily the simple doubling that happens in most of the partial reduplications and completely different word as a form of reduplication is not numerically as frequent as the full reduplication.

To make it simpler for you, partial reduplication is less frequent and complete reduplication is more frequent in most of the world's languages. Now let us move to the next generalization. Generalization 12 tells us that crosslinguistically let me read it first the most common meaning of reduplication is the quantitative or qualitative augmentation of the meaning of the base. Its second most common meaning is diminutive of size. It is diminution of size or intensity. It is a little tricky to understand what this particular generalization talks about.

I will spend some time to explain this to you, but before that let me read it again. Considering this is a longer one, let us see how it works. The first thing crosslinguistically which means in most of the world's languages, most common meaning of reduplication is quantitative or qualitative augmentation of the meaning of the base. So, generally the meaning is related to the base and that is how reduplication works; very unlikely you will find a reduplicated word which does not have any connection with the base.

Either it is quantitative repetition or qualitative repetition or as it is written in the generalization 12, it is quantitative augmentation or qualitative augmentation of the meaning of the base. The base is important for us in case of reduplication. And what is the second most common meaning? It is the diminution of the size and intensity; either you are talking about the size of the particular base or the intensity of the particular base. But eventually it boils down to the meaning of the base.

So, how does it work? Let me just give you an idea when we are trying to understand the semantics of reduplication, in a wide variety of meanings where the reduplication is used, it is primer it is related to the meaning of the root word. For example, when I say jaanaa vaanaa, the root word or the base is jaanaa and the partial reduplication is vaanaa. But when you are trying to understand what is the semantics or what is the meaning, the meaning here is to go. It cannot be different from go because it is controlled by the semantics of the base.

Considering the base is jaana in Hindi and it means go. When it is partially reduplicated when it is jaana vaanaa, it can never be anything other than jaana; it has to be related to the base. So, either it is the qualitative augmentation or it is the quantitative augmentation, but eventually it is the meaning of the base that decides how the reduplication is going to work or the meaning of the reduplication can never be far away from the meaning of the base. And sometimes it is a qualitative augmentation, sometimes it is a quantitative augmentation, but eventually what is the most common meaning? It is the diminution of the size or the intensity.

Either you are talking about the intensity of the phrase or you are talking about the size of the phrase, but whatever might be the case whether it is size or the intensity or the quantity or the quality, you are talking about, the basic semantics or the basic meaning of the verb that gets retained. That is how we need to understand the generalizations related to the reduplication which is one of the most significant linguistic phenomena in most of the world's languages. After this we will move to the next set of generalizations which are about the overt versus zero affixes.

Keywords: complete reduplication, partial reduplication, duplication