

**Appreciating Linguistics: A typological approach**  
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**Lecture - 25**  
**Morphological Typology: Generalization continued –**  
**Part 2**

We will start with the next set of generalizations which is number 13. First I am going to read the generalization then I will help you to understand it and then you need to be a little careful when you try to figure out the words like syntagmatic or paradigmatic..

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**Generalizations**


*Tapalay  
bingyan  
mai-pa-bibili*     *bi-bingyan    kbingyan-yan  
ma-pa-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

*professionally*  
*introductionally*



Let us read what GEN13 says. It says 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. My suggestion for you would be to read it multiple times and when you read it you will get clarity about the terms like opposing, semantic, terms, simpler value or complex value and so on.

So, how to understand which one has a simpler value, which one has a more complex value? If you can recall we did talk about overt versus zero affixes in one of the previous sessions. There are languages which have both overt ones as in tree-trees; -s is the overt plural marker.

But when you say sheep-sheep, you do not really see any overt plural marker. So, that is zero. Though it might have a plural morpheme, it is considered to be zero marked or it is considered to be null marked plural affix. It does not have an affix in that sense on the surface, but it does have the pluralization in the semantics or in the meaning.

If you remember we were talking about the binary division 1 and 0 in case of form and meaning. Tree-trees form also gets 1 meaning also gets 1, but in case of sheep-sheep form is getting 0 meaning is getting 1 as far as the division is concerned.

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Paradigmatic Relation: Semantic relations between words that can be substituted with another word in the same category.

Syntagmatic Relation: Semantic relations between words that can co-occur in the same sentence.

Segmental level - Phoneme level

Suprasegmental level - Feature level  
stress, intonation etc.

Precedence and adjacency

English	Chicken	chicken-s
Pangasinan	manok manok	manok
Swahili	mi-tu 'man'	mi-ru 'men'
	mi-ru 'to see'	mi-nai 'to not see'

NPTEL

Keeping that in mind to understand the generalization number 13 I would ask you to look at the data on the screen here. I have had 3 languages here: English, then Pangasinan if I can read it correctly. My apologies if the pronunciation is incorrect. Then we have Swahili. In these 3 languages let us see how the pluralization works. We also studied a couple of other examples in the previous slides or in the previous sessions.

In English, for example, chicken and chickens so there is an overt plural marker. In case of Pangasinan you see the singular chicken is manok manok, but when it is plural it becomes only manok, absolutely different. In case of the singular the number of morphemes are more. In case of plural you are actually dropping one of the morphemes. On the other hand we have Swahili where morphologically also the forms are different, phonologically also they are

different; m-tu is 'man' and wa-tu is 'men'. The m- morpheme has been replaced with wa- when it becomes plural. Keeping in mind these 3 kinds of morphemes that we have in hand, now let us approach the generalization 13. What does it say? It says given a category with two opposite semantic terms.

Let us say chicken and chickens, these are opposite semantic terms, one is singular, the other one is plural, and what does it happen? The form of the simpler value tends to be not more complex than that of the other form. So, what is the simpler value here? Simpler value is chicken. And what is the complex one? The addition of a morpheme, chickens. The form of the simpler value is not as complex as the one that has more complex value.

So, when you compare chicken and chickens, which form is the simpler one? It is the singular form that is chicken. Which form is the complex one? It is the plural form which is chickens because it has 2 morphemes. So, what should we understand if you compare these two forms? The one which has the simpler value does not seem to be more complex than the other one.

The value of chicken as a singular unit will be less complex than the value of chickens. Is it clear? Could you understand? Now apply the same thing to the second language like the other language that we have listed here. Pangasinan in this language which one is the simpler value? Chicken in singular is known as manok manok, chicken in plural is known as manok.

So, when you are comparing these two, the simpler one is the plural form and the complex one is the singular form. The value of the plural here is less complex than the value of the singular, as simple as that. You need to find out which form is simpler. It tends to the generalization that in most of the cases the form with the simpler value tends to be not more complex than the other form.

However, in case of Swahili the story is a little different, where man and men have two different phonological and morphological representations. In other Bantu languages also. Here we have just taken into account one of the Bantu languages that is Swahili. So here what happens? Both the singular and the plural are affixed. In the singular also you have a prefix m- and in the plural also you have you have a prefix wa-. How would you find out the simplicity and complexity of the simpler value or the complex value of the particular term?

In that case, both the singular and the plural are marked. So the correlation between the simplicity of the form and the simplicity of the meaning can be stated like this: the one which has a more simple form will have less complex value. English has a different story. The singular is simpler, plural is complex.

Pangasinan singular is complex, plural is simple. In case of Swahili in both the cases there are affixes. So, how to generalize this form? The concern here is that in case of Swahili if you take into account; the one which has less complexity will also have a less complex form. That means, considering man and men both have affixations in Swahili, it is not possible for us to find out which one is more simple, which one is less simple. That is how the generalization 13 comes into existence.

Let us read it again. Given a category with two opposing semantic terms here we have taken the example of plural in case of Swahili, but maybe I will give you another example where there are opposite semantic terms. Let us say here is a word again Swahili data. This is mi - ru; that means 'to see' and there is a word mi - nai; that means, 'to not see'. When it is semantically opposite in that case also, in both in both the cases you will see the overt affixes. Here the generalization is that the form which has a simpler value seems to be not more complex than the other term.

So, if mi-ru has a simpler value it will be less complex than mi - nai. If m-tu has a simpler value it will be less complex than wa-tu. In case of chicken and chickens, chicken has a simpler value, so it is less complex than chickens. Manok manok is more complex than manok which has a simpler value. So, English and Pangasinan are diametrically opposite to each other. In case of English the complex one is the plural, in case of Pangasinan the complex one is the singular. But the generalization holds true if the term has simpler value it will be less complex than the other one.

Now, let us move to the fourteenth generalization. Before that please read the paradigmatic and the syntagmatic relation. You might have to understand it when I ask you some questions related to it. Paradigmatic and syntagmatic are the semantic relations that we discussed in morphological typology. What happens in syntagmatic relations? In such cases semantic relations between words that can co-occur in the same sentence. If it can co-occur the words

would be considered in a syntagmatic relation. In case of paradigmatic relation the words that can be substituted with other words in the same category.

We will go back to it in more detail a little later. But as of now just remember these 2 semantic relations would be required maybe towards a later stage. I am not very sure about it, but just keep that in mind in case we land at some discussions we will get back to this syntagmatic and the paradigmatic ones. Now let us move to the fourteenth generalization. Here it says the free word order of affixes is rare across languages and if a language has it, it also has a fixed affix order. If you can recall we did talk about free and rigid word orders in case of subject, verb, and object things.

So, what we need to discuss now after we got to know how reduplicating works and how the kind of opposing semantic relations or the semantic terms are studied under the category of morphological typological generalization, now let us move to the word order. So, if you can recall the first 3 tools that we had in hand. Typological division on the basis of the choice of morphemes, then we had form of morphemes and then we had order of morphemes. By now we have discussed choice and form. So, generalization 14 starts with the order of morphemes. How the order of morphemes are different and how they are accounted for in the typological literature.

The fourteenth generalization is the free order of affixes. It is rare across languages. In most of the cases, there is a certain order how you need to fix the affixes. When you say uneducated, un- is the prefix, -ed is the suffix and there is an order for it, the prefix happens before the root word, suffix comes after the root word and it generally moves in this order. If you have many suffixes then also there is an order.

Let me think about a word which has multiple morphemes, let us say dissatisfied. Again, that also has dis- as the prefix and -ed as the suffix. Let me think about a word which has multiple suffixes in English. That will help us to understand this generalization in a morphological typological research or morphological typological literature.

When I think about multiple suffixes in English, I would find out a word like professionally. This is what strikes to my mind for the moment. So, what is the root word? The root word is profession then -al and then -ly. If you want to make it even more complex you can also have

a prefix like un-, unprofessionally; this work is unprofessionally done. So, that is a prefix un-, then there is -al then there is -ly. So, there are 3 morphemes here and there must be an order for it. Even the 2 suffixes that you have you cannot say professionallyl. You cannot say that. That means there has been a particular order.

If I write it like this, it will be unprofessionallyl. So, that is going to be a bad word because there is a particular order which follows the affixation. That is how this is a very simple generalization; that means, free order of affixes is rare across languages and what does the generalization say? It says if a language has it, it also has a fixed order, though the other way round is not acceptable. If it has a fixed word order, it may or may not have free word order. But if it has a free word order, it might have a fixed word order. Similar is the case with affixation. If it has a free order of affixes, it must have a fixed order of affixes. But if it has fixed order of affixes, it does not mean that it will have free order.


We have to approach it from restriction on the freeness of the affixes. So, that it can move to the fixedness of the affixes. Across languages the order of affixes is generally fixed. And if it has free, then it must have fixed too. So, that is about the affixation.

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## Generalizations

15	Discontinuous affix order (infixing, circumfixing, and infixing) is rare across languages; and if a language has discontinuous affixing, it also has either prefixing or suffixing or both. (Greenberg 1966a : #26)
16	Suprasegmental affixing is rare across languages and if a language has it, it also has segmental affixes.
17	PRECEDENCE: Crosslinguistically, suffixing is more frequent than prefixing.
18	Crosslinguistically, case affixes tend to be suffixed.
19	Languages that have verb-final sentence order and postpositions are almost always exclusively suffixing.

Reference: Introducing Language Typology by Edith A. Moravcsik



*WALS data*  
*466 Languages*  
*431 - Case affixes*  
*35 - Case Prefixes*



The second generalization also talks about affixation of the affixes like the ordering of the affixes and it reads discontinuous affix order. That is infixing, circumfixing and interfixing,

you remember these 3 they were the discontinuous ones. It is unlike the prefixes and suffixes. That is rare across languages. You do not find many languages which allow infixes, circumfixes and interfixes. And if a language has discontinuous affixing, it also has either prefixing or suffixing.

That means, these are the rare ones, these are the less frequent ones. These are the interlocking interlocked ones. If you can recall we did talk about 3 types of affixation first one was preceding affixes, following affixes and then we had interlocking affixes. The preceding affixes were prefixes, following affixes are suffixes and interlocking affixes will have 3 kinds we had infixes, circumfixes and interfixes.

So, what does this generalization say? These interlocking ones are not much common in world's languages; these are generally rare. Considering these are rare it says if a language has these discontinuous ones it must also have continuous ones like prefixing or suffixing or both. I hope I made it clear. So, the first 3 infix, circumfix, interfix are the rare ones. Most of the languages do not have it. But if the languages have any of these then it must have either the prefixing or the suffixing or both. So, that is about the order of the affixation.

Then we will move to the sixteenth generalization which talks about the suprasegmental affixing which is considered to be rare across languages. If a language has it, it also has segmental affixes. That means, suprasegmental affixes would be rare in some cases. However, if a language has suprasegmental affixes then it will surely have segmental affixes also. Let us talk about an example. When we were thinking about the ordering of affixes, we just discussed the fifteenth generalization that says when it is related to the interlocking affixes like infixing, circumfixing and interfixing, these are rare. However, if a language has this, it also has the prefixes, suffixes or both.

Now, let us move to the even minute features of affixes, the segmental and suprasegmental features. You can see here the segmental level means at the phonemic level. That means, you are actually talking about the feature level phonemic descriptions the stress, intonation and nasalization. So, these are the suprasegmental features, but when you are talking about the individual phonemes then that will be the segmental feature.

What is the relation between suprasegmental and segmental ones as far as typological generalizations are concerned? It says suprasegmental affixing is rare across languages. You do not find much of suprasegmental or the tonal, intonational or nasalization level features in most of the languages in the world. However, this is not impossible rather these are considered to be rare. What is the concern here? If a language has suprasegmental affixes then it must have segmental affixes too, but the other way round may not hold true.

That means, the suprasegmental affixation is rare and any language having suprasegmental affixes, affixes related to intonation, stress or nasalization, in such languages you must find the segmental affixes also. But if a language has segmental affixes, it may not have suprasegmental affixes. So, suprasegmental affixes are more exclusive than the segmental ones. Most of the languages have segmental affixes, very few languages will have suprasegmental affixes. Considering suprasegmental affixes are rare, it says that if a particular language has the suprasegmental affixes, it will surely have segmental affixes too.

That is about the 16th generalization related to morphological typology. Then we will see related to the order of affixes we have the precedence order. Precedence order means if x precedes y, x occurs before y, that is the simplest thing to understand. When I say unemployed, -un is the prefix that precedes the rest of the word. So, what does the generalization say about precedence? Let us have a look at it. That is the seventeenth morphological typological generalization and it says crosslinguistically suffixing is more frequent than prefixing.

Generally you do not find many prefixes in the world's languages rather you find more suffixes. The picture of this overall preference of suffixing becomes more differentiated if 2 factors are considered. And what are the 2 factors? One is the function of individual affixes. When I say the function of individual affixes I would like you to know I mean what kind of meaning do they express, what sort of case do they have, what kind of subject agreement do they follow. Do they follow object agreement, definiteness? These are the ones which are related to the function of individual affixes.

And what is the second factor? The second factor is the word order type. Which one is coming before what or which one is coming after what. In this case I would like to cite some



data from WALS project that is World Atlas of Languages by Dryer and Haspelmaths (2005). They found out of 466 languages, there are 431 which have case suffixes. Remember the statistics and refer to Moravcsik's book again. This is the WALS data and WALS data says the sample size of 466 languages that Dryer studied out of these, 431 languages have case affixes.

And these case affixes out of these 431, only 35 have case prefixes. Look at the statistics, look at the number, out of 431 only 35 have case prefixes. That is how the seventeenth generalization comes into existence. What it says? Crosslinguistically suffixing is more frequent than prefixing, again related to the number of occurrences of prefixes and suffixes from the sample that has been studied. So, 466 is the sample out of that, 431 languages have case affixes and out of this 431 affixes only 35 have prefixes the rest all of them have suffixes, that is how seventeenth generalization comes into existence.

Now, eighteenth is related to it. What is it? Case affixes tend to be suffixed. Again the same data can be deployed here too. So, this 446, 31 they have case affixes and only 35 have case prefixes. It is not out of 431. I am sorry I think I got the data wrong a bit. So, the total number of samples that they have studied is 466, 35 have prefixes, 431 have suffixes. That is how crosslinguistically case affixes tend to be suffixed.

It is not generally prefixed because the number of case prefixes only 35. So, seventeenth and eighteenth these are somehow sort of related typological generalizations. And the last but not the least, in case of crosslinguistic morphological typology, let us read it first. Languages that have verb final sentence order and postpositions are almost always exclusively suffixing. Again, it may not hold true for all the languages in the world, but almost all of them, like most of them.

So, what is it? If the language has a verb final sentence or a verb final order something like Hindi SOV maine khaanaa khaayaa I food ate. In case of this, the postpositions are almost always exclusively suffixing. Most of the South Asian languages follow the postpositions. So, if a language has a verb final sentence or verb final order then the postpositions are always exclusively suffixing, you do not really see in the prefix form.

So, that is all about the generalizations that we have had in morphological typology. My suggestion for you would be to read each of the generalizations and go back to the reference book that I have suggested Moravcsik's book *Introducing Language and Linguistics* published by Cambridge University Press. And when you look at the data given there and you tally it with the generalizations that we have listed, you will find out there is a huge empirical data available and then it will be easier for you to understand.

With this I would end this section of morphological typology with the introduction. So, let me just recap how I started and how I ended this particular unit. I did give you an idea about the basics of morphology. Why it is important, why is it relevant for us to know what morphology is, what are the basic terms used in the morphological system of natural language and typologically what are the possible patterns that we see in the morphology section? And, these are the 19 generalizations that have been identified so far by linguists who are working on functional typology.

Considering I am not focusing much on the formal typology here and because this is a basic level course, my focus is going to be primarily on function, but not exclusively on function, I have already talked about a bit about the formal theories plus I will go into the formal stuff. But as far as the generalizations are concerned, my suggestion for you would be to look at each of the generalizations carefully, each of the patterns that have been discussed in various sessions carefully and then find out the languages that you speak do they follow or these generalizations do they hold true for your language or your languages.

If you are a multilingual and you know the basic structure of your own language, just find out whether the generalizations fit into your language. Similar sort of generalizations are going to be discussed in all the typological sections: syntactic, phonological, lexical and others.

With this I end the morphological typology section. Do get back to me if you have any confusion about it.

Thank you.

Keywords: overt versus zero affixes, syntagmatic versus paradigmatic relation, free versus fixed order of affixes, discontinuous affix order, suprasegmental affixing, precedence order