

**Appreciating Linguistics: A typological approach**  
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**Lecture - 20**  
**Typology of Affixes**

Hi, hello everyone. Welcome to this session of our NPTEL course, Appreciating Linguistics: A typological approach. We are discussing morphological typology. In the previous session I did talk about how the stems, roots, and affixes they can be clubbed together following certain patterns to result in different kind of combinations of the words in natural languages.

So, since it is about typology and we are talking about morphological typology, we just cannot restrict ourselves only with the combination of roots, stems or let us say full-fledged morphemes or we can say the independent morphemes or the complete morphemes or you can say free morphemes. Rather we need to find out what are the typological combinations possible when you are talking about affixes which may not be an independent morpheme which could be a dependent one, something like a prefix or a suffix or a circumfix or an infix, there are also dupefix.

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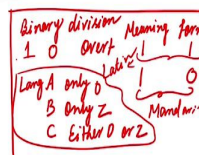
### Typology of Affixes

- Overt versus Zero Affixes

	SINGULAR	PLURAL
LATIN:	uxor 'wife'	uxor-es 'wives'
SOUTHERN BARASANO:	kahe-a 'eye'	kahe 'eyes'
SWAHILI:	ki-su 'knife'	vi-su 'knives'
MANDARIN:	ren 'man'	ren 'men'

- Overt or zero affixes
  - ❖ Overt affix: Form-1 – Meaning -1
  - ❖ Zero affix: 0 – Meaning-1

Reference: Introducing Language Typology by Edith A. Moravcsik



For today's discussion, my focus would be on typology of affixes. There are certain affixes which are overtly marked or which are overtly found in the words and there are certain affixes which do not manifest or which do not show up overtly when we are talking about the words. The first typological distinction or the typological division in affixation would be overt versus zero affixes. When I say zero affixes, I am primarily talking about the affixes which are not overtly manifested.

This typological difference can be understood from the examples that you see on the slides. We have four different languages here. We have Latin, we have Southern Barasano, then we have Swahili and then we have Mandarin. When I discuss the data over here, you need to find out which language has overt affixes and which language has covert affixes or the zero affixes.

Let us look at Latin first. Look at the singular form of wife and then the plural form of wife. So, this is *u x o r* – *uxor*. In the plural form, there is an addition of an *es*. Generally that is how in English also we have the *-s* marker, and the *-en* marker or sometimes, it is the *-es* marker. So, if you look at the counterpart of the word wife, the Latin counterpart compared the singular with the plural. You can clearly see there is an overt plural marker here.

Similar is the case with Southern Barasano, here you see the singular form has an overt marker, but the plural form does not have it. So, *kahe-a* is singular eye and *kahe* is the plural eyes. It is just the other way round. So, in Latin, singular does not have a marker, plural does have it. In Barasano, singular has a marker, but the plural does not have it.

What happens in Swahili? In Swahili it is a different story altogether. So here, look at the word given for knife, it is *ki-su* and when it is knives, it becomes *vi-su*. The phonological form changes. So, *ki-* seems to be the singular marker and *vi-* seems to be the plural marker. So, that is a Swahili type affixation. Finally, we have Mandarin, where the word for man is *ren*, and the word for men is also *ren*. In this connection, we see there are four different types of language that we have in hand as far as the pluralization is concerned or the plural affixes are concerned.

Let us recap, let us recall what we have discussed. The first type is Latin type. In Latin, the plural noun is overtly marked. There is an overt affix in Latin for the plural marking. Just the

other way round, for Southern Barasano, there is an overt marking for the singular one, but not for the plural, for the plural it gets dropped. And, in Swahili, there are phonologically two different forms, also two different morphemes. So, in this case, the singular has a ki- marker and the plural has a vi- marker. This is a different kind of affixation.

And, finally, in Mandarin, we do not see any difference. So, man is ren and men is also ren. So, what does it say? The fourth type or the mandarin type is primarily related to the zero affix form. Then the question arises how do we find out which one is plural, which one is singular just by looking at the words given here? Ren could be man, ren could be men. But, then the concern here is, it is not about just the words, rather it is about the way it has been used in the context. You can easily find out from the context itself the way it agrees with the verb can help you to find out whether this is a singular noun or a plural noun.

The example I can give let us say sheep. When I say the sheep are grazing; that means I am considering it as the plural form. But when I say the ship is sailing, the plural would be ships in that sense. Here you can say that the way it agrees with the predicate or with the verb can help you to identify the singular or the plural property of the morpheme.

So, you could see now overt affix at least in Latin and in Swahili, also in Southern Barasano with a different order, with a different form. In this case, the singular noun has an overt marker, but the plural noun does not have. But, in case of languages like Mandarin, the affixes are zero affixes as far as pluralization is concerned.

Now what are we supposed to understand when we are trying to represent in a simplistic manner what is an overt affixes and what is a zero affix. When we are trying to understand the typological difference between the overt and the zero affix simplistically, we can put it in this way.

When the affix is overt, if we do the binary division, form would get 1, meaning would also get 1. When it is zero affixes, form would get 0, but meaning would get a 1. So, this is the binary division and why we would call it a binary division? My concern here is that when I am talking about the overt versus zero affixes, I am going to put it in the binary division.

Considering it is binary division, we will give either 1 or we are going to give 0. So now, let us do the division of the overt versus 0 ones. When the affix is overt, meaning is also getting 1, form is also getting 1. How to explain this? Let us look at the example in Latin. When it is *uxor* that is wife and when it is *uxores* that is wives. This -es has been overtly manifested. It is getting 1 for the form and it is also getting 1 for the meaning because the meaning is also getting changed because of the presence of this affix.

In case of Mandarin, obviously the meaning is changed, because when it is singular, it indicates like quantity 1; when it is plural it indicates quantity 2. So, for the meaning part, it is getting 1, but for the form part, there is no such distinction. So, this would be Mandarin and this would be, let us say, Latin. So, typologically these are the two different categories when we are trying to discuss overt and zero affixes.

Now, my question for you would be, can you think about your own language and how does pluralization work? Do you think you have overt affixes or you have zero affixes or there are certain instances where the plural affixes are overt? There are certain instances where it is zero. There are three different types that we can have. Let us say language A would have only overt, language B will have only covert or only Z I will write, language C could be either O or Z. So, these are the three possible types which emerge when we are thinking about morphological typology.

Besides that, if you look at the manifestation differences, you can also find out languages like Southern Barasano where the singular morpheme actually is overtly manifested, but not the plural one. And, in case of Swahili, there is a separate morpheme for singular, there is a separate morpheme for plural. So, now see how you are trying to do or how you can actually find out a lot of inferences or a lot of types when you are thinking about morphological divisions or the morphological typology.

At least one instance we have here the Swahili example where you can see the morphological as well as the phonological features. They together decide the singular versus plural markers. There are instances where only the morphology takes care of the work, there are instances where both the morphological division and the phonological division that decides whether the argument is going to be singular or plural.

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## Crosslinguistic Differences.



- Crosslinguistic synonyms with differing affix order.

(a)	ENGLISH	HUNGARIAN	
	<i>im-patient</i>	tűrelm-etlen	(tűrelm 'patience')
	<i>im-probable</i>	valószínű-tlen	(valószínű 'probable')
(b)	ENGLISH	TAGALOG	
	beauti-ful	ma-ganda	(ganda 'beauty')
	oil-y	ma-langis	(langis 'oil')
(c)	ENGLISH	KIRUYU	
	teacher-s	a-rutani	(-rutani 'teacher')
	buyer-s	a-guri	(-guri 'buyer')

The order of morphemes  
Q: How are the affixes  
sequenced within the words  
Ordinal marker - ten-th

# Morpheme order is varia-  
ble both across languages  
and within languages.

# Uneducated  
pre  
suf

Reference: Introducing Language  
Typology by Edith A. Moravcsik



With this difference in the overt versus zero affixes, now let us see what are the crosslinguistic differences in the order of morpheme. When I say crosslinguistic differences, here I am primarily talking about crosslinguistic differences in the order of morphemes. All these let us say prefixes, suffixes and let me tell you it is already written there. So, all this data that I have got it from this book Introduction to or Introducing Language Typology or you can say Introduction to language linguistics by Edith Moravcsik published by Cambridge University Press.

So, we will see when we are talking about the crosslinguistic differences, what kind of crosslinguistic differences we are looking for or we are trying to find out? The crosslinguistic differences here are related to the order of morphemes. Whether the prefixes come first and then the suffixes or the other way round, or they are attached together, there is an infix. Considering there are different kinds of prefixes and suffixes or for that matter, to put it in a broader term affixes, so, how we are going to find out the crosslinguistic generalization.

We will start analyzing or we will try to observe some data from different languages like English to begin with, because that is the language we consider as the lingua franca and then most of my examples are going to be from there. Then, we have a language like Hungarian,

then we have Tagalog and then we have a language like Kikuyu. Now, let us see how the affixes are organized here, how they are sequenced within a word.

So, this is the question that we have in hand. The question here is how are the affixes sequenced within the word. This is the question that we are going to discuss in a few minutes. In case of English, what we see in most of the cases the ordinal markers that were shown to be suffix. Let us say tenth; so, th is the ordinal marker in fifth or let us say tenth. This is the ordinal marker.

This ordinal marker generally occurs in the suffix position, that is after the root word. But in case of Malay, it is generally a prefix form. So, there is a typological difference here. In some cases, the affixes occurring at the end of the word or after the root morpheme and the other one the other language like Malay it is occurring at the beginning of the word or before the root word. So, how do we find out a typological pattern or is it actually possible to find out a typological pattern when you are thinking about or when you are discussing the order of morphemes in case of morphological typology.

Let us look at the examples here. Let us keep aside the ordinal markers for a while and then we will come back to it later if we have time, but otherwise, now here for the moment we are going to focus on different other kinds of words. I would like to have your attention on the examples given here. Compare Hungarian with English.

So, let us look at the English word impatient and check the Hungarian word for that. Look at the English word impossible and check the Hungarian word for that. What do you find? How is the difference? How is this kind of affixation typologically different? Hungarian affixation for this word is different from English type of affixation? No wonder it has been highlighted.

So, here we have written or the data is given; the word for patience and the word for probable. So, when it is impatient, im- is the prefix; in case of Hungarian, etlen. So, that is the suffix and the word for patient is this turelm, if I can read it correctly. Pardon me, I am not a Hungarian speaker. So, this is the root word and etlen is the suffix. In case of English, impatient, im- is the prefix. Similar is the case with the improbable, probable is the root word im- is the prefix and valoszinu and t l e n – tlen is the suffix.

So, in this case, you can see the same kind of morphemes, be it im- or tlen, their function is the same, their meaning is the same and what is the meaning? It is the antonym. They are making the antonym of the root word. If impatient is the antonym of patient. improbable is the antonym of probable; what function does the morpheme im- play here? Im- is the antonym maker or it changes the meaning of the word entirely in that sense, diametrically opposite meaning. So, im- and -tlen they are similar kind of morphemes, but im is a prefix and tlen is a suffix.

Now, come to the second category which is related to how the adjective becomes a noun. So, when it is be in English, we have beautiful and in Tagalog, there is ma-ganda and in Oily, it is ma-langis. So, what kind of a morpheme is ful here in English beautiful? The ful is a suffix and what kind of a morpheme is y in Oily? In Oily, the y morpheme is also a suffix. So, when a noun becomes an adjective, we see the morphemes are attached at the end of the word. So, these are the suffixes.

In case of Tagalog, it is just the other way round. In this case, the morpheme is attached before the root word. That is the difference between English and Tagalog. Similar kind of difference we also see in the third example; example number c. In English and Kikuyu, teachers that is a plural marker, buyers again the plural marker. So, -s is the plural marker in both words and in both instances these are suffixes. In case of Kikuyu, -a is the plural marker, but they are used before the word. So, they are prefixes.

So here, what is the pattern that we found out? The concern here is that or you need to remember the morpheme order is variable, not only across languages, but also language internally as English shows. So, what is the take home? So, this is what you need to remember. The order of the morphemes is not uniform across languages.

This is what you need to remember is variable. This variability is not found only across languages, but also within languages; is variable both across languages and within languages.. So, this is what you need to remember. Look at the English example. So, across languages the differences are highlighted English versus Hungarian. In English, it is prefix, in Hungarian it is suffix.

But, even within English, we have both prefixes and suffixes. And there also occur words like uneducated. I am going to write the word uneducated. In this case, what is the root word? Can you think about what is the main word? It is educate; -ed is the suffix, -un is the prefix. So, that means, there are instances where it is not very clear to identify the pattern that this is how it works. There could be languages which allow only prefixes, there could be languages which allow only suffixes, and there could be languages which allow both.

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### Crosslinguistic Differences.



- Infixing.

(a)	gap	'to cut'	g-an-ap	'scissors'	Katu
	panh	'to shoot'	p-an-anh	'crossbow'	
	piih	'to sweep'	p-an-ih	'broom'	
	(Merrifield 1987: #19)				
(b)	gafutan	'grab'	g-in-afut	'grabbed'	Agta
	hulutan	'follow'	h-in-ulut	'followed'	
	(Merrifield 1987: #18)				

Reference: *Introducing Language Typology* by Edith A. Moravcsik



Besides that, we also have other kinds of affixes like infixes, where you cut open like you are inserting another morpheme within the word. So, this is also another typological feature or this is also another typology of affix. I will not spend much time on this slide, I would like you to have a look at it how does infixing work and infixation is not a very common phenomenon in world's languages, at least languages like Katu and Agta, I think these are spoken in some of the African countries. I will get back to you. Let me check it again.

So, in this case, let us do the analysis of the data o the languages spoken in the Philippines. Look at the data here. When you say gap; that means, to cut, that is the Katu data and g and ap becomes scissors. So, something to cut and something which is going to be scissor; something to shoot and something which is crossbow; something to sweep and the instrument used for sweeping is broom.



This is the verb the left side gap, panh and piih, something like that. So, these are what? On the left, you have the verbs, on the right you have the nouns. Which do that verb? These are the action verbs – cut, shoot, sweep these are the action verbs and on the right, with the insertion of infix like -an-, they become the instruments with which we do that work.

Similar is the case with another language like Agta. Here you see the verbs are gafutan, hulutan. So, that is grab and follow, and when it becomes past tense grabbed and followed, you see the insertion of an infix. The data that you have in hand here, -an- could be an infix and -in- could be an infix. So, this is one type of affix. When we are talking about typology of affix or typology of affixes, we had the zero morpheme, we had the overt morpheme, then the overt morpheme can also have different kinds of types. Sometimes it could be prefixes, sometimes it could be suffixes, sometimes it could be both prefixes and suffixes; they can occur together and then we can also have infixes.

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## Crosslinguistic Differences.

- Circumfixing.

- |   |                                |
|---|--------------------------------|
| <p>(a) a. <i>chokma</i> 'he is good'<br/> <i>ikchokm-o</i> 'he is not good'<br/>         b. <i>lakna</i> 'it is yellow'<br/> <i>ikelakn-o</i> 'it is not yellow'</p> <p>(b) a. <i>ždat'</i> 'to wait'<br/> <i>doždat'-sja</i><br/> <i>up.to-wait.INF-REFL</i><br/>         'to wait for a long time (with success)'<br/>         b. *<i>doždat'</i><br/> <i>up.to-wait.INF</i><br/>         *<i>ždat'-sja</i><br/> <i>wait.INF-REFL</i></p> | <p>Chikasaw</p> <p>Russian</p> |
|---|--------------------------------|

Reference: Introducing Language  
 Typology by Edith A. Moravcsik



The next category which very quickly I am going to talk about is the circumfixing and in the circumfixing, what happens, this is also not really a very commonly found linguistic phenomenon. Like infixing, circumfixing is also not much widely available. Look at the data.

So, this is the language Chikasaw and then the other language that we have is Russian. So, these two languages they have circumfixation. What does it mean? When I say

circumfixation, the question comes here is that when look at the data then we can easily understand what is happening here. In case of the circumfixing, *chokma* I think; that means he is good and in the second one *ik-chokm-o chokm o* that is he is not good.

So, how is circumfixing different from infixing? In infixing, what you are doing? You are breaking the word into two parts and you are inserting the infix into it. In case of circumfixing, you are primarily breaking the morpheme itself; one part of the morpheme is used before the root word, one part of the morpheme is used after the root word. So, can you identify what is the circumfix in Chikasaw? That is mainly *ik-o*. And, in *ik-o*, you see *ik-* is at the beginning of the word and *-o* is at the end of the word.

Similar is the case with Russian. In this case also, this means to wait for a long time with success. This is *do* and *sja*. *Do* would be one part and *sja* would be the other side. Considering the morpheme itself has been broken into two parts and remember these are not free morphemes, these are bound morphemes, which are not supposed to be broken further. However, this is a special category of affix in which we see that this morpheme has been broken into two parts and one part is used at the beginning and the other part is used in the end.

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## Crosslinguistic Differences.

- Circumfixing.

- (c) a. *geledig-t* 'settled'  
*geschrieb-en* 'written'  
b. \**geledig*  
\**geschrieb*  
\**ledig-t*  
\**schrieb-en*

German



Reference: *Introducing Language Typology* by Edith A. Moravcsik



So, that is also another type of affix. Circumfixes are also found in German as the data shows here. So, this is ge-t; that means, settled and written; you see ge like the one part of the morpheme ge- would be on the other side and -t would be on the other side and the -t morpheme or the -t part of the morpheme is at the end and ge- part of the morpheme is at the beginning.

And, how we would know that this is a circumfix? You need to compare the German data a and b. So, when you are deleting the -t marker, the word becomes unacceptable. So, without -t, since this is unacceptable, we call ge-t together as a circumfix. Look at the example and then you can easily understand that.

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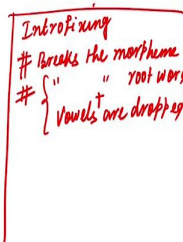
## Crosslinguistic Differences.



- Introficing.

qara? 'read'	hi-q-r-i? 'make read'
raqad 'dance'	hi-q-id 'make dance'
sa?al 'borrow'	hi-s?-il 'lend'

Hebrew



Reference: Introducing Language Typology by Edith A. Moravcsik



Hebrew has a different kind of morpheme altogether. After circumfixing, the next type of affix that we have here is Hebrew. So, what happens in Hebrew? This is the third order pattern. The first order pattern was affixation or you can say prefix or suffix; the second order pattern is infixation. And, then the third order pattern is the circumfix. And now we have the introfix. I think I made a mistake in ordering this.

Let me repeat. Prefix and suffix we are keeping it together that comprises of one category and then we had infix. Of all the rare forms of affixation, first category is infixing, second category is circumfixing and the third category is introfixing. So, these are all not much

commonly found types in affix. So, in introfixing what happens? Look at the data and it is very interesting. This data comes from Hebrew.

Here look at the Hebrew word for read and look at the Hebrew word for make read; look at the Hebrew word for dance and the Hebrew word for make dance and Hebrew word for borrow and then Hebrew word for lend; that means, to make borrow. Here, not only the affix is broken into two parts, but also the main word that has been broken and then some part of the main word is also missing. So, if you check the data carefully, it will be easier for you. I think the simplest data you should analyze is the second one, if I can read it correctly. I apologize in advance for the wrong pronunciation.

So, this is raqad; in case of raqad when that is dance and when it becomes make dance, it becomes hi-rq-i-d. In that case, what is the introfix here? It is hi. So, hi one part of h i; like one part of hi, that is h i is kept in the beginning of the word then the other one only i sound only the i-marker or the i-morpheme; part of the morpheme that is there in the middle of the word. And in case of raqad, which was the root word that has also been broken and then there has been some change.

So, we have rq and d, but then the vowel sound that is a sound that has been dropped. Similar is the case with the first one and the third one. So, primarily what happens in the introfixing, now let us sort of point it up. In case of introfixing, what we do? I think I need to explain it a bit otherwise it will be difficult for you.

So, introfixing what it does, it breaks breaks the morpheme as well as root word plus what else vowels are dropped. Two things are happening here in case of introfixing and Hebrew is the right example for that. Follow these rules and look at the data that we have. These are the three linear arrangement of affixes related to the step.

So, what are the three patterns here? Since we are talking about the typological organizing or the typological organization of patterns, let us see how does it work. When we are thinking about the typology of affixes, three types we are getting. The first type is preceding, second type is following and the third type is interlocking. These three types are important to understand morphological typology.

When it is preceding, what would it be? Prefixes and when it is following, it will be suffixes; when it is interlocking, either it could be infixes or it could be circumfixes or it could be introfixes. This particular box summarizes everything as far as morphological typology is concerned. Either you see affixes that precede the main word or the root word or you see affixes which follow the main word or you can see the affixes which get interlocked. And, in case of interlocking, either they can be infixes, they can be circumfixes or they can be introfixes.