Appreciating Linguistics: A typological approach
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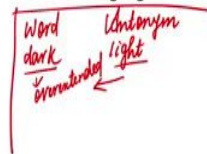**Indian Institute of Technology, Madras**

Lecture – 61
Typology and word change: Child language Acquisition – Part 2

Hi; hello everyone. Welcome to this session of our NPTEL course Appreciating Linguistics: A typological approach.

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The study or the discussion should start from the understanding or the acquisition of antonyms. So, with this information or the semantic overextension information, let us try to find out how do children acquire the meaning of antonyms.

Since we realize that the overextension is not random, rather they follow a particular pattern, our concern is ike how to find out the acquisition pattern of antonyms in English. These are the three points. Look at the slides. These are the three points that have emerged as the study done by Moravcsik. Please refer to the book Introducing Language Typology.

So, what are the points? The first point is that in acquiring antonyms children frequently overextend the meaning of one of the two terms. The frequency or the statistics says that when the child is acquiring antonyms in English very frequently the overextension of the

meaning happens, at least one of the two terms if not both. So, let us say if the word is X and the antonym is Y then the child is going to extend either the meaning of X or the meaning of Y.

Maybe I will draw a small box here. This is word, this is antonym; let us say this is dark, and this is light. So, when the child is acquiring the antonym of dark, following the first point what it will be? Either the meaning of dark would be overextended or the meaning of light would be overextended, one of these things is going to happen. Either the word or the antonym that is going to be the extension, that is one claim. Let us see how the claims have been taken into account,. Then the second claim, overextension is consistently unidirectional across examples and across subjects.

This overextension has been unidirectional. So, if the child is going to overextend any of these semantics, it does not approach it from the other way around. If the dark has been overextended, it will never be coming from the other side, it is always unidirectional. If there is an asymmetry between the two terms; it is not entirely due to the differential frequency of the use of the terms in the ambient language.

This sounds to be a little clumsy if you read, but let me explain it to let it sound simple. The asymmetry between the two terms, let us say dark and light; obviously, there is an asymmetry between these two which is why these are opposite to each other, these are antonyms to each other. For a child, this asymmetry is not entirely due to the differential frequency of the use. That means, it is not related to how dark is used in the discourse or how light is used in the discourse, rather it depends what kind of ambient language that it has or that hoss these two terms.

So, instead of focusing on the frequency, the child has to find out the semantic overextension. Now let us take up these issues one by one; so that we can understand how a child acquires the antonym. The three points that I have mentioned just now, one is related to the overextension which is the point 1. The children frequently overextend the meaning and then the second one is related to the asymmetry of overextension, it is always unidirectional. Then the third one, the unidirectionality of the semantic overextension. And finally, we will talk

about how does the effect of frequency impact the meaning or the antonym acquisition process in case of the children.

Let us start it from overextension. A lot of research has been done and the researchers have noted that in the course of acquiring the meaning of antonyms, mainly the English speaking children they learn to understand and use one of the two terms before they understand and use the other. That means, if it is dark and light, the child does not acquire both at a time. The child acquires dark first then tries to find out the antonym of dark, which is light; or she will first acquire light and then eventually she will get to know that the antonym of light is dark.

It never happens that the child is acquiring both the things at the same time. One example that Clark's study would talk about is the word like after; before and after. Before is the word which has been acquired before the word after. So, if it is before and after, which one has come first? Before has come first, and after has been used later. Similar is the case with tall and short, big and and small.

The other antonymic pair is something like this, in this case also one of the two terms is privileged. Sometimes tall would be privileged than short, or big would be privileged from small But the child never gives equal importance to both the pairs at the same time; it does not work in that way. The child has to acquire one of these two first and then in the due course she will acquire the other one. Because of this sort of an acquisition process, the first word which has been acquired by the child, the meaning then extended to the other term.

That means, if we say big and small, let us say the child has acquired big first. So, the semantic extension of big would cover a lot let us say an elephant is going to be the extended form because it is big. So, when the child acquires small, the child already has this thing in mind that small is anything, but big. The acquisition of small is related to the acquisition of big. So, the concept of small has to be anything, but big.

That is why this is considered to be a one way or the unidirectional process. Because of this semantic overextension, we see there is an asymmetry. That means, when the child is acquiring the pair, it is not that both the things are happening simultaneously or the

overextension has been uniform, not really. The term that refers to the larger extension is generalized to the other one.

Let us say big which has a larger extension and this larger extension has been generalized to the other. Maybe I will give you an example to understand the asymmetry of overextension. When you say more, more means something additional. And what is the opposite of more? It is going to be less. So when the child is acquiring more, this has been adapted by less. But more is not used to mean less; that means, less would be anything but more. Short would be anything, but tall.

That is why the semantic overextensions are asymmetric. We cannot really say which one has been acquired first, which one has been acquired later and let us say all children are going to acquire tall first short later, not really. There is no symmetric relation between this; anything might be acquired at any point of time for the human children. So, now, the concern is what should be the reason for this kind of an asymmetry.

The first point semantic overextension we see that the children would learn or acquire word meanings by associating the general semantic properties of the word before getting more specific ones. So, we agree with that. First the general property then we think about the specific ones and eventually they would go for the antonym. If there is a pair of words and out of this pair, one would be more privileged, the other one would be less privileged. The more privileged one is going to be acquired first and the less privileged one is going to be acquired later.

When you are talking about overextension, it is the more privileged one which has been overextended and that gets generalized to its antonym. That means, if the word x has certain features, the antonym of X will not have the features which X has, it has to be anything, but X. So, we realize that there is an asymmetry, what kind of asymmetry, and why is it always unidirectional? The observation here is that across all the pairs of antonyms, the direction of the overextension has been uniform.

It is always the meaning of the term that refers to the larger extension. So, if there is a particular word which the child can associate with more terms, that is what is going to be acquired more. Let us say big and small, apparently big can have more extensions and what

kind of extensions? Semantic overextensions; because of the frequency or because of the chances of having broader semantic overextensions big seems to be acquired first and small seems to be acquired later. Similar is the case with more and less; more seems to have broader semantic overextension, less seems to have less or smaller or less wide semantic overextension, that is why the child tends to learn more first and less later. The child tends to learn tall first and short later.

So what to understand, what sort of question should be asked? It is that the semantic overextensions are asymmetric and it is consistently done by favouring always the term expressing the larger extension. The term which has bigger extensions or bigger extension will be acquired first, would be more privileged, the one which is less wide extension is going to be less privileged and the frequency is also going to be less.

Now, the third question that we need to ask is that what could be the possible reason for such kind of asymmetry? First there is extension, then there is asymmetry, the third question that we need to address is what are the reasons for such kind of asymmetry. This kind of asymmetric patterns of overextension are also documented in other aspects of child language.

Let us say for example, morphology. For this I would ask you to think about the verbs, the regularized past tense verbs. When it is jump, the past tenses jumped, that is a regularized verb. When it is laugh, it is going to be laughed. But a lot of children would use it as comed c o m e d. Instead of saying came, they would say comed, instead of saying went they would say goed, and similar is the case with the plural forms; sheep which generally does not take the plural -s marking, children tend to use the term sheeps which is unacceptable, ungrammatical and this is what we call generalize; a overgeneralization.

This overgeneralization of certain words gives us an idea that morphological extensions are very common among the children. So, anytime they think about the past tense, they are going to associate the -ed thing; anytime they think about the plural morphological representation, they are going to add the -s. Slobin has actually done a wonderful study on this and he provides quite a rich evidence especially in Polish.

In Polish language, for the feminine gender, the plural marking is 0 for genitive cases and for the neutral nouns, the plural masculine genitive would have a suffix ov. So, for masculine

there is a marker, for feminine its 0. That is how Polish plural works, but when the children acquire the language, Polish for that matter, they tend to mess up with most of the overgeneralization stories. The children overuse the regular forms, at the expense of the irregular one.

So, the irregular ones also get overshadowed by the regular forms. So, if you talk about English, the children instead of saying feet they would say foots, instead of saying sheep they would say sheeps. That is also the same story in case of Polish. In a language like Polish also, since there is a gender difference in most of the children's speech, you do not really find it. In English though there are certain irregular verbs which do not take the -ed marker and there are certain plural nouns which do not take -s marker, the children seem to do it quite frequently.

So, what should be our concern? The concern here is that, if we check the frequency of use in the ambient language and if we consider it as a factor and what is a factor? The frequency of occurrence. If that is a factor to explain the asymmetry of overextension then probably such kind of an explanation would apply to the semantic overextensions. Because more frequent is the phrase, larger extension does it have in the morphological system. So, the extension would be larger in case of more frequency.

In other words, greater frequency of the positive antonym would cause its meaning to be extended to the negative pole. If the positive meaning is overextended, it is going to also affect the negative meaning of it or the negative pole of it. So, as far as antonymic pairs are concerned, when the child is acquiring this language there are a couple of things you need to remember.

These things would be put in the generalization format as we do for the other linguistic or the other kind of language phenomena. So, just like we did it for the diachronic study of articles and word orders, here also we will see what sort of generalization can be done to identify the crosslinguistic pattern in the child's language at the developmental stage. We will go back to the initial stage, intermediate stage, and then the final stage.

So, what happens in the initial stage? Let us look at GEN-4. GEN-4 the internal initial stage is that the children do not understand or use either member of an antonymous pair. They do not understand either of this. They try to overextend as much as possible. If it is big and small, they do not understand what does big mean, what does small mean, whether they are in a relation or not.

To begin with, they do not have any idea. So, then what happens in the intermediate stage? In the intermediate stage they refer to the greater extension which has been acquired and the positive term has not yet been. They started without any understanding of any of the pairs, let us say big and small, the children do not know what is the meaning of big, what is the meaning of small.

So, that is the initial stage. Intermediate stage they refer to the greater extension. The word which has more wide extension is going to be acquired faster; the one which has less wide frequency or less wide extension is going to be acquired later. That is the intermediate stage.

Look at the intermediate stages and the two points associated with that. First, if there is a term that refers to greater extension then it has been acquired first and the opposite will come later. And when the child has acquired both, let us say first the wider extension base term has come then the antonym has also come in the due course of time now the child has both the words in the inventory. What happens? Both the terms are used, but one refers to the smaller extension, the other one refers to the bigger extension.

The bigger extension one has been the primary word and the smaller extension word is the word which has been acquired later. That means, the smaller extension is generally used in the sense of the other term. Let us say to understand small, the child has to understand big first, because big has a bigger extension. The child has understood the semantic components of big. Now, when the child understands small, she would get an idea that small is anything, but big. If that can be done then that would be considered as the intermediate stage And what happens in the final stage? Now the child has understood both big and small.

Both the terms are understood and it is used in the ambient language. So, the language which the child is acquiring, she can use it comfortably. Now let us try to put it in a summarized fashion. First, we have to think about the initial stage. What is the initial stage? The child does not understand anything and does not know how to use either member of an antonymous pair. Intermediate stage the child got to know about the privileged one first and which one is the privileged. The privileged one has the greater extension.

So, that has been acquired first and the opposite term has not come yet the opposite term will come later when the child understands that the opposite term is anything, but the root word or anything but the primary word. That is the intermediate stage. So, first came the word which has more generic extension, then came the word which has less generic extension. That is the intermediate stage. And final stage, the child has understood both the terms and the child has the ability to use it comfortably in the ambient language.

So, that is about the typological generalization in the child's development stage.

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Now since we got to know these are the three like the initial stage then the intermediate stage and then the final stage, what sort of implication does it have to understand the language acquisition process as far as antonyms are concerned? Then the question is, how do the children acquire the antonym and what sort of things have an impact or an effect from the environment, let us say the linguistic environment.

The indication here is that the children they acquire antonyms and the effect of the linguistic environment is definitely crucial, it does play a vital role, but there is also an indication that the children have innate biases. That is the reason when you are thinking about opposites, they can sometimes figure out that the opposite of big is small; nobody really teaches them that listen small has all these components that big does not have.

Besides the linguistic environment which surely plays a vital role, the children also have innate biases by which crosslinguistically it has been proven or crosslinguistically it has been identified that the acquisition of antonyms most probably that remains same for all the languages. So, both the forces play an equal role, the linguistic environment as well as the indebtedness like the innate biase.

Though this study has been done primarily in English, it seems to have crosslinguistic effects. Now the question is what is the initial stage and what has been the final stage? The initial stage, there was no idea about any of the antonymous pairs, the final stage is that the child is able to use both the words with equal efficiency or with equal subtle ability or you can say both the words have been used properly as per the semantic extension of the words that they are.

So, what should we understand from this process? It is that when there is something called nature versus nurture. This is something I want you to remember after you get to know about the generalization. In this nature versus nurture, that is the initial stage versus the final stage maybe or primarily the initial stage, the most convincing way of the effect of the ambient language on the acquisition process is that you have to take the languages that differ in a particular way. Otherwise the acquisition process is not that easy to compare and contrast.

So, let us consider the language acquisition of Hindi and language acquisition of English. They are two different languages with different word orders belonging to two different families. W when you study the grammatical patterns that the child has been following or the child has in her speech and when you find out the errors in the child speech as far as the grammaticality or acceptability is concerned, you can actually understand all the crosslinguistic patterns.

You may not have to study all the languages or you may not have to study the linguistic behaviour of children of all the languages in the world, but at least if you compare different languages from different families at least some of them, you would get an overall idea that crosslinguistically this could be a pattern. So, what are the two things which are affecting? One is the linguistic environment that has an impact on it, also the innate biases; both the things work simultaneously and they help the child acquire antonyms in case of children.

So, that is about the acquisition story. Then maybe we can move to the spatial terms. How the space or the terms related to space. I will just briefly talk about it. I am now going to discuss it in more detail. I will just give you an idea how the spatial terms are acquired by children. I am going to write it over here acquisition of spatial terms related to space.

If it is related to space then we need to find out the words like close, far, near, up, down, beneath. So what are the different ways by which the children acquire these kind of space related words? The space related words seem to be intuitively acquired in considering they know one like let us say they are standing here.

So, you have to find out when it is related to close, far, up, down. Intuitively these are obvious; when you say close, that means, the child would feel that it is near. When you say far, the child would definitely get an idea that it is going to be a little far from where she is standing. But in most of the languages semantically it should be obvious and it should be easy to understand. But even though genetically related languages they also show surprising differences as far as the spatial or the space related terminologies are concerned.

For this I would ask you to look at the Korean data that we have here. Look at the data number, I do not have the data number here. But just look at the slides and here we have let us say one of the differences that has been highlighted through this data is that there is what does it mean? Look at the data, look at the example, put the apple in a bowl. When you say put the apple in a bowl, that means, putting an apple into the bowl and it requires the verb nehta that is in Korean.

When you say put like putting a cup on the table, it requires a different word; look at the data a, it has nehta; nehta means putting it, where? Putting it in the bowl or into a bowl. When the verb is nohta, it means putting the cup on the table. Even in the same language, on the table and in the bowl, not only the prepositions are different, but also the verb form is different.

Korean is an interesting example. Ideally it should be complicated for the child to acquire more complicated because not only the adposition changes, it also changes the verb. It does not happen in the same way in English. It is always put the table in a bowl or put the cup on the table. So, what is difference? The difference here is the spatial marker or the space marker, that is in or on. But in case of Korean, it is not only the adposition difference but also there is a verbal difference.

That is the reason why Korean data is interesting. So, what happens in these situations, the objects have a loose contact with each other. Why the objects have a loose contact? Because

the postposition changes, the verb also changes. But if you look at let us say there is another set of data; let us go to the other set of data that we have.

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GEN-5
(A) INITIAL STAGE:
Children do not understand or use spatial terms. There does not appear to be an inborn bias either for containment versus support or the close-fit versus loose-fit distinction.
(B) INTERMEDIATE STAGES:
Children extend and possibly overextend words but these extensions still stay within the basic categories of the ambient language.
(C) FINAL STAGE:
Terms are understood and used as in the ambient language.
(D) CONDITIONS:
Frequency of exposure and biunique relationships between word forms and word meanings facilitate acquisition.

I do not; think I have it here. So,in both the situations as I just mentioned, the objects have a loose contact with each other. But there is a close fit between the two objects and the opposition then like the containment between the two objects or the support between the two objects it has been suspended.

Because the verb is same, keeping or putting that, the verb in English, the semantic interpretation is same, but because of the spatial reference or the space reference, this has been different. But on the other hand we have another set of Korean data, I have not written it here, but maybe for your reference. Now I am going to show the first set of data that we have seen so far in Korean where not only there is a difference in the space indicating phrase, but also there is a difference in the usage of the verb.

So, when you are putting the apple in the bowl, the verb is nehta; and when you are putting the cup on the table, the verb is nohta. But in the same language look at the example written in the red ink. The 2 a, in this case put the cassette in the box and put the lid on the jar. So, the cassette and then the lid in both the cases you see the verb is same it is k k k k I t I do not know how the Koreans would read it, but it is kita or whatever, there is no change in the verb.

So, what is the difference? The only difference is the space indicating phrase. Why in the first set of example the verb is different, but in the second set of example the verb is same? Because of the closefit between the two objects. In the first, the first object is apple, the second object is cup, there is no semantic relation between these two. The apple is a fruit and the cup is a container. If the child has got to acquire such things, it is difficult semantically also there has not been much connection.

But in case of the cassette and the lid, both are inanimate and both have a certain kind of semantic connection between the two and there is a containment on this verb. That is why the verb remains same, the same verb can be used both for placing an object into something or onto something. So, the meaning of these two when you are talking about the cassette or the lid; that means, you are putting something over there and both are inanimate things and unlike apple and cup, there is no edibility inedibility a difference here.

It is something like keeping the Lego pieces, keeping the earplugs, fitting a ring, all of them would have a similar kind of semantic relation, which is why the same verb can be used. My suggestion for you would be why don't you just go back and check the book there is a wonderful picture to give you the four different actions in Korean, how it is different and what sort of challenges does it pose for the child to acquire this. Let us compare the two verbs Korean and English, and we will try to find out what sort of typological generalization can be drawn.

Whether there has been any similarity between these two or there have been so much of difference that it is difficult for us to put them together. In case of English what happens, a child who is acquiring English, she does not have to struggle much for the different types of verbs which are used with spatial with different spatial relation mentioning words something like in and into or in or on and just we saw that when you say putting an apple into the bowl and putting a cup on the table, the verbs are also different, in Korean, not in English. However, what is the similarity between Korean and English?

If there are objects like a pin or a cassette or a lid or a ring, these kind of things when semantically they are closer with each other then there is no problem using the same verb for

all these objects. So, what should be our take home or what kind of generalization should we draw if we approach it from the typological perspective?

In English, conveying the idea of location or the space whether there has been a closefit between the two objects or not does not really matter. The verb put can be used with any of the objects; put in, put on, put into, put beside, all sort of things can be used and there has been no change in verb. But in Korean the distinction between the loose connection and closefit. So, apple and and the cup there is a loose connection between the two, and what kind of connection? Semantic connection, but lid and a cassette there is a closefit.

When the connection is loose, the verbs could be different; when there is a closefit between the semantic representation then the verbs need not be different; it is only the spatial indication or spatially indicating preposition or postposition can take care of the thing. So, what kind of generalization does it have? It shows languages differ not that much in what they can express, but in what they must express.

If they must express certain things, then the languages are different, but if you ask me what can the languages express, in that case there has not been much difference. Languages are generally similar. If they express the spatial relation, but what is that must thing? The must thing here is the loose connection versus closefit. If it is a closefit there is no problem with the verbs the same verb can be used, but if it is a loose connection Korea is going to behave differently from English. So, if it is a closefit both Korean and English are going to be similar in manner space referring where words are concerned.