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ARGUMENT STRUCTURE

This article is about argument structure and thematic structure. In this article we will see how certain constituents function as arguments of certain other constituents and also how these arguments are assigned thematic roles.

Это статья об аргументной и семантической структуре и их взаимодействие между собой.

To understand what is meant by argument structure let us consider the following sentence:

1. Daniyar teased Askar

In sentence (1) there are two arguments: Daniyar and Askar. The verb teased will be called a predicate. The terms argument and predicate have been taken from logic. By argument, we mean a referring expression: an entity, a person, a thing, etc. A predicate usually conveys some relation between the arguments or says something about an argument. We must note that, here, we are not using predicate as a functional label, as we do when we use terms like subject, object, complement, etc. For example, if we are using predicate as a functional label, we will say that in (1) Daniyar is the subject and teased Askar is the predicate. But when we are talking about the argument structure of (1), we will say that, here, the predicate teased takes two arguments: Daniyar and Askar.

The predicate tease will always take two arguments: not more, not less. This is because the number of arguments that a predicate takes usually depends on its meaning. For teasing to take place, we need two participants: one that will tease and the other that will be teased. We therefore cannot have a grammatical sentence if one or both of these participants are absent.

Daniyar teased.

Teased Askar

Teased

Since tease takes two arguments, we call it a two-place predicate. Some of the other verbs which are two-place predicates are meet, imitate, kick and destroy. In the following examples, where we have used these two-place predicates in sentences, the predicates have been underlined and the arguments have been put in italics.

He met *her*.

Albert imitates *his teacher*.

He kicked *the door*.

She destroyed *all his hopes*.

Notice that the arguments that tease, meet, kick and destroy have taken are all NPs. So we can represent the argument structure of these predicates in the following manner:

a. Tease: verb; 1 2
 NP NP

b. Meet: verb; 1 2
 NP NP

c. Imitate : verb; 1 2
 NP NP

d. Kick: verb; 1 2
 NP NP

e. Destroy: verb; 1 2
 NP NP

Notice that some of predicates in (9) can also be used as nouns. But, here, we are talking about only verbs as predicates. Later we will see that lexical items of other categories can also be

predicates. Notice further that we have used numerals 1 and 2 against each predicate. We have used these numerals to talk about the two arguments of each predicate. In each case 1 stands for the first argument, i.e. the subject argument and 2 stands for the other argument and the second argument are NPs, we have written NP below 1 and 2 in each case.

Although in each of our examples (i.e. 1, 5, 6, 7 and 8) we have a verb and two NPs, we know that other constituents can also occur in these sentences. For example, we can add a PP to sentence (5);

10. He met her in Bishkek.

Now the questions: Will the PP in Bishkek be also an argument of the predicate met? The answer is: No. Here, we make a distinction between obligatory constituents, i.e. constituents without which the sentence cannot stand on its own. Here he and her are obligatory constituents, because without them the sentence will be ungrammatical. But, as we saw in (5) we can have a good sentence without in Bishkek. The optional constituent is called an adjunct. So, here in Bishkek will be an adjunct, but he and her will be the arguments of the predicate met.

Now, having made the distinction between arguments and adjuncts, let us go back to our discussion on two-place predicates. We saw that verb like meet, kick, imitate, destroy and tease are two-place predicates. All verbs, however, are not two-place predicates. Verbs like snore and doze are one-place predicates. These are called one-place predicates because they require only one argument

11. He was snoring.

12. She is dozing.

In (11) the subject he is the only argument of the predicate snore, similarly in (12) the subject she is the only argument of the predicate doze. So the argument structure of the verbs snore and doze will be something like the following:

13a. snore: verb; 1
NP

b. doze: verb; 1
NP

There are also verbs like give and put, which require three arguments:

14a. He gave Aizada a present.

b. he gave a present to Aizada

15. She put the book on the table

In (14) the verb give takes three arguments; he, Aizada and present. In (14b) also give takes three arguments; he, a present and to Aizada. And in (15) put takes three arguments: she, the book and on the table. We therefore call these verbs three-place predicates. The argument structure for the verbs give and put can be represented in the following manner:

16a. give: verb; 1 2 3
NP NP NP
NP PP NP

b. put: verb; 1 2 3
NP NP PP

Notice that the argument structure for give in (16a) indicates that the second argument (the indirect object) of give can be realized either as an NP (as in (14a)) or as a PP (as in (14b)).

With some verbs an argument may not be explicitly stated. We call such an argument an implicit argument. Consider, for example, the following sentences:

17. Asan bought Alina a ring.

18. Asan bought a ring.

In (17) buy takes three arguments: Asan, Alina and a ring. In (18) only two arguments are explicitly present: Asan and a ring. We however, know that the action of buying involves three

entities: (i) the buyer, (ii) the person for whom it is bought and (iii) the thing that is bought. In (18) although the second argument is not explicitly stated, we know that Asan bought the ring for somebody, maybe for himself. We call such an argument an implicit argument. When we represent the argument structure of buy, we will mention all the three arguments, but we will put the second argument within round brackets to indicate that it is an implicit argument and may not be explicitly expressed:

19. buy: verb; 1 (2) 3
NP NP NP

Sometimes the same predicate may have two different meanings and correspondingly may have two different argument structures. Consider, for example, the following:

20. She is sleeping.

21. This holiday cottage sleeps six.

Notice that the meaning of sleep in (20) is different from its meaning in (21). The predicate also has different argument structures, as exemplified in the two sentences. So we will represent the argument structure for the two meanings of sleep separately:

22a. sleep: verb; 1
NP

b. sleep: verb; 1 2
NP NP

One may ask why we do not treat the second argument of sleep as an implicit argument, as we did in the case of buy. The point is in the case of buy in one sentence (I.e.(18)) one argument was not explicitly stated. But the meaning of buy remains the same in the two sentences. If one wishes, one can also make the implicit argument explicit in (18):

18a. Asan bought himself a ring.

The case, however, is different with sleep in 20 and 21. As we have said, here, the meanings of sleep are different in the two sentences. The second argument of sleep is not implicitly there in 20. On the other hand, without the second argument, 21 will be incomplete:

21a. ? This holiday cottage sleeps.

We therefore cannot treat the second argument of sleep as an implicit argument and must have two different argument structures for the two meanings of sleep.

AUXILIARY VERBS. So far we have considered only main verbs as predicates. Now the question is: Do auxiliary verbs also take arguments? The answer is: No. Consider, for example, the following:

1. Aidar passed the examination.
2. Aidar has passed the examination.
3. Aidar can pass the examination.

Notice that in 1 the main verb pass has taken two arguments: Aidar and the examination. In 2 and 3 also it takes the same two arguments. In 2 the verb has been used in the perfective aspect and therefore the verb is preceded by the auxiliary verb has. In 3 it is preceded by the modal auxiliary verb can. These auxiliary verbs do not require any additional arguments. We therefore conclude that auxiliary verbs do not take any arguments on their own.

Non-verbal predicates. So far we have looked at only verbs as predicates. But as we said earlier, other lexical categories can also function as predicates.

1. Alina envies Aizada
2. Alina is envious of Aizada

In 1 we find that the verb envy takes two arguments: Alina and Aizada. We can also say that in 2 the adjective envious takes two arguments: Alina and of Aizada.

What about is? You may ask. We will assume that be verbs, whether they function as auxiliaries or main verbs, do not take any arguments. For example, consider the following:

3. Aruuke is innocent.

Here , we will say that Aruuke is an argument of the adjective innocent. Since innocent takes only one argument we will call it a one-place predicate. The argument structure of innocent can be represented in the following manner:

4. Innocent: adjective; 1
NP

Now going back the sentences 1 and 2 notice that the second argument in 2 may not be explicitly expressed, but in 1 it has to be explicitly stated.

5. Alina envies.
6. Alina is envious.

The second argument of envious may therefore be regarded as an implicit argument. The argument structure of the verb envy and the adjective envious will thus be represented in the following manner:

7. envy: verb; 1 2
NP NP
b. envious: adjective; 1 2
NP PP

Now let us consider nouns as predicates:

8. The professor criticized the book.
9. The professor`s criticism of the book was premature.

In 8 the verb criticize takes two arguments: the professor and the book. In 9 the noun criticism also takes two arguments: the professor`s and of the book. One important difference between the two is that the arguments of the noun need not be explicitly expressed:

10. Criticized the book.
b. The professor criticized.
c. Criticized
11. The criticism of the book was premature.
b. the professor`s criticism was premature.
c. the criticism was premature

The two arguments of the noun will therefore be treated as implicit arguments. The argument structure of criticize and criticism will thus be represented in the following manner:

- 12a. criticize: verb; 1 2
NP NP
Criticism: noun; (1) (2)
NP PP

It also claimed that preposition can take arguments. For example, consider the following:

13. He is in the library.

Here, in takes two arguments: he and the library. So the argument structure of in will be something like the following:

14. in: preposition; 1 2
NP NP

Clausal arguments. So far we have considered only phrases as arguments. However , clauses also function as arguments:

- 1a. She knows a secret.
b. She knows that the teacher loves Alina.
2a. He asked a question.
b. He asked whether anybody had seen Alina.
3a. The news surprised everybody.
b. That the teacher had scolded Alina surprised everybody.

Notice that know, ask and surprise are two-place predicates. In the (a) sentences cited

above each verb takes two NP arguments. However in the (b) sentences one of these two arguments is a clause. We will call these arguments *clausal arguments*. Since know, ask and surprise can take either a noun phrase or a clause as one of their arguments their argument structure can be represented in the following manner:

4a. know: verb; 1 2
 NP NP/S

b. ask: verb; 1 2
 NP NP/S

c. surprise: verb; 1 2
 NP/S NP

Now consider the following sentences:

5a. I believe the story.

b. I believe that he is honest.

c. I believe him to be honest.

d. I believe him honest.

Notice that believe is a two place-predicate. In (5a) its second argument is an NP, in (5b) it is a finite clause, in (5c) it is a nonfinite clause and in (5d) it is a verbless clause (which is also called a small clause). Further, notice that we also have arguments within the embedded clauses. In (5a) we do not have any clausal arguments. The two arguments of believe are: I and the story. In (5b) the two arguments of believe are: I and that he is honest. Within the embedded clause (i.e. that he is honest) he is an argument of honest. In (5c) the two arguments of believe are I and him to be honest, and within the embedded clause (i.e. him to be honest) him is an argument of honest. Similarly in (5d) the two arguments of believe are I and him honest, and within the small clause (i.e. him honest) him as an argument of honest.

(Note: The examples of verbless clauses cited in the Grammar course are different from the one in (5d). Some of you might be wondering why we are treating him honest as a clause. We are treating it as a clause, because in many ways it is like the embedded clauses in (5b) and (5c). We, however, wish to make it clear that we are treating him honest in (5d) as a clause in a very loose, semantic sense. At this stage, we will not claim that a small clause like him honest is one constituent. We will continue to treat him honest as two constituents. It is of course, anomalous to say that him honest is one semantic unit but that syntactically they are two units. Let us, however, ignore the anomaly right now.)

Expletives. In this section we will see whether it and there, which function as empty subjects, can be regarded as arguments. Consider, in this connection, the following sentences:

1. The incident surprised everybody
2. That the teacher had scolded Alina surprised everybody
3. It surprised everybody that the teacher had scolded Alina

Sentences (1) and (2) tell us that surprise is a two-place predicate. The two arguments of surprise in (1) are: the incident and everybody and in (2) they are: that the teacher had scolded Alina and everybody. In (3) both these arguments, i.e. that the teacher had scolded Alina and everybody are present. We also have the expletive it as the subject of (3). Can it be also considered to be an argument of surprise? But the problem is if this it is treated as an argument then there will be three arguments in the sentence. But from (1) and (2) we know that surprise is a two-place predicate. Since the meaning of surprise remains the same in all the three sentences we cannot say that in the first two sentences it functions like a two-place predicate, but in the third one it functions like a three-place predicate. Intuitively, we also know that surprise requires two participants/ arguments: something surprise somebody. We also notice that the expletive it in (3) does not contribute anything significant to the meaning of the sentence. The difference between (2) and (3) is that the subject of (2) has been extraposed (moved from the pre-verbal

position) in (3) and the empty subject position has been filled by the expletive it. We will therefore conclude that the expletive it is semantically empty and is not an argument.

Consider also the following syntactic evidence in support of the claim that the expletive it is not an argument : It has been observed that all arguments can be questioned. For example:

- 4a. The teacher met Alina
- b. Who met Anima?
- c. Who did the teacher meet?

Notice that (4b) questions the first argument of meet and (4c) questions the second argument of meet . The expletive it of (3), however cannot be questioned:

- 5 . What surprised everybody that the teacher had slapped Alina?

We must, however, distinguish the expletive it (which is also known as the pleonastic it or dummy it) from the non-expletive it. The non-expletive it can be used as an argument:

- 6. Asan give it to Aizada.

In (6) it is an argument. Notice that, here it can be questioned:

- 7. What did Asan give to Aizada?

Like expletive it, expletive there is not considered to be an argument. Consider, in this connection, the following sentences:

Example (8) shows that escape is a one-place predicate. In both (8) and (9) the argument it takes is: three thieves. Therefore, the expletive there which occurs in the empty subject position of (9), is not an argument. Like the expletive it, the expletive there is semantically empty and cannot be questioned. The expletive there can be contrasted with the adjunct there, which is not semantically empty. It has the meaning of location and it can be questioned:

- 10a. He saw her there.
- b. Where did he see her? There.
- 11a. There are three thieves escaping.
- b. Where are three thieves escaping? There.

Literature:

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