

TUTORIAL
5.13

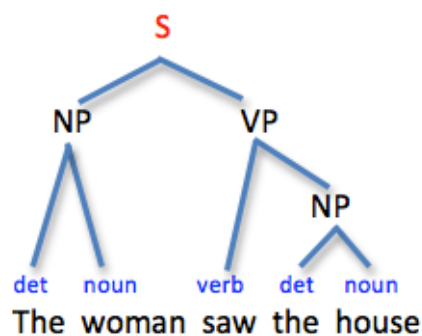
Syntax 2

This tutorial continues to discuss syntax - the unconscious principles people use to put words together into sentences.

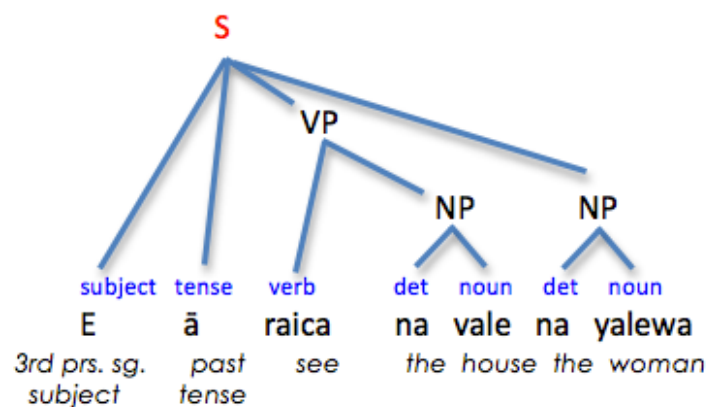
Phrase structure in other languages

Every language has its own grammar, so phrase structure is different in different languages. The basic *principles* of how phrase structure works are universal and so are true for all languages. But the actual phrase structure in the syntax of different languages is what differs. Because the structure of sentences in different languages differs, the tree diagrams that represent those structures look very different:

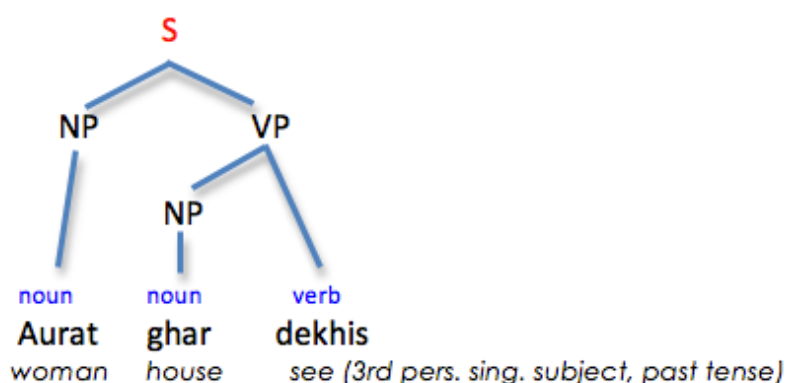
English:



Fijian:



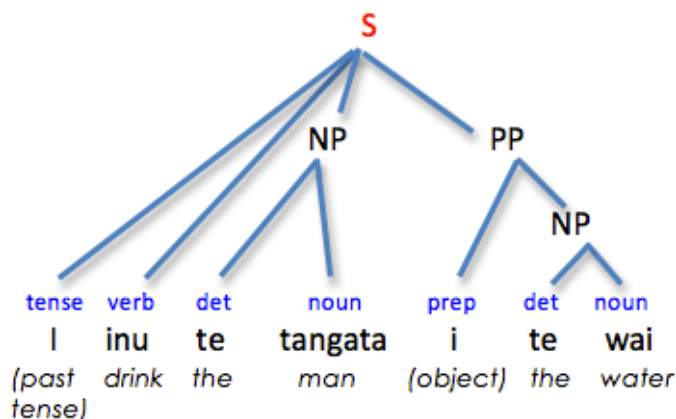
Fiji Hindi:



Most of the similarities between these trees relate to the way syntax works universally. The differences are to do with facts about the phrase structure of individual languages. One of the similarities between these different languages is that in each the verb and object are together in a Verb Phrase. Remember in the last tutorial we saw that over 90% of languages put the verb and object together, so they can form a Verb Phrase.

Remember also that language has a hierarchical structure. Constituents join together to build bigger constituents. A Verb Phrase consists of a verb and its object. A verb can join together with its object to build a Verb Phrase. But... only if the verb and object are next to each other. The verb and object Noun Phrase join together to form a larger constituent - the VP - before that then joins with the subject NP to make an even bigger unit - the sentence.

If the subject comes *between* the verb and the object there can't be a VP, like in the VSO language Maori. The Maori sentence below is - 'The man drank the water.'



The fact that nearly 92% of languages are not like Maori, and instead put the verb and object together in a VP, shows us that languages prefer to combine constituents into larger constituents and have a hierarchical, nested structure.

Phrase structure rules

Phrases and sentences are constructed by speakers as they are speaking. Speakers generate phrases and sentences using the syntactic principles of the language they speak. These principles are unconscious rules stored in the minds of the speakers. We represent these principles as phrase structure rules. Together, the phrase structure rules of the language comprise the phrase structure grammar of the language.

As well as the phrasal rules, there is also a sentence rule – the rule about how to build a complete sentence out of these phrases. Traditionally linguists say that for English the sentence rule is basically this:

$$S \rightarrow NP VP$$

This means that a sentence consists of a NP (the subject) and a VP.

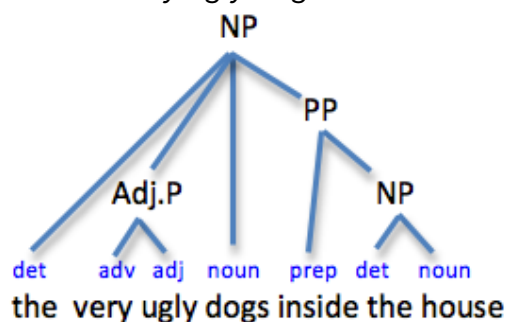
These rules are used to generate sentences. Believe it or not, every time we speak, our minds are going through a process - applying the phrase structure rules of our language and building phrases and sentences as they come out of our mouths. It is online generation of language. It takes a lot of mental processing power.

Heads and complements

You might remember in the last tutorial we said that in a phrase, we *must* have a word which is called the **head**. This is the core of the phrase, what the phrase can't exist without. It is the most important part of any phrase, because it is the part that gives the phrase its most important component of meaning.

So, in the phrase, *the really very ugly cat*, the head of the phrase is *cat* - the phrase is talking about a kind of cat, not a kind of ugliness. The head is where the phrase gets its category from - this is a NP because the head is a noun, *cat*.

Look at the phrase below: *the very ugly dogs inside the house*



- *the very ugly dogs inside the house* is a Noun Phrase because its head is *dogs*, which is a noun;

- *very ugly* is an Adjective Phrase because its head is *ugly*, which is an adjective;
- *inside the house* is a Prepositional Phrase because its head is *inside*, which is a preposition.

Phrases have two main parts: a *head*, and a *complement* (this can also be called a *modifier*). The head is the part of the phrase that must be there (it's obligatory). You can have phrases without a complement, but you can't have a phrase without a head. A phrase is still a phrase even if it only has one word (its head) in it.

A phrase can also contain a complement, which is a phrase in itself, that tells us more about the head. Complements have to be there, but sometimes they are just implied - they complete the meaning of the head, and make the phrase grammatical. In the examples below, the example phrases are in brackets, and the head is in bold type.

Head *does not* need a complement

NP his [**appearance**]
 VP The dog [**barked**].
 AP Tom was [**happy**].
 PP The monkey climbed [**in** house].

Head *does* need a complement

[his **reliance** on email]
 The dog [**bit** the cat].
 Tom was [**fond** of Mary].
 The monkey climbed [**into** the house].

It is important to understand this concept of complements, because now we are going to talk about *argument structure*, which you will remember is the other important area of syntax along with phrase structure. Together, these two areas overlap and work together to provide the framework of principles that build meaning into sentences.

Argument Structure

Argument structure is all about how verbs relate to their complements and their subjects. Some constituents like Noun Phrases or Prepositional Phrases are complements – they are required by the verb. These are called *arguments* of the verb. The area of grammar that deals with this relationship is called argument structure.

Transitivity

Some verbs refer to events that involve only one participant. These verbs only require one argument. A verb like *sleep* only needs one argument, e.g., *Mary slept*. Other verbs, like *bite*, need two arguments, e.g., *The cat bit the dog*.

Then there are some verbs, like *give*, that need three arguments: *Mary gave the book to Tom*.

A sentence like 'Mary gave' is ungrammatical because it is incomplete – it's missing two of its arguments. Likewise, 'Mary gave the book', or 'Mary gave to Tom' or 'gave the book to Tom' are all ungrammatical because they are missing one of the three arguments they need.

This issue - how many arguments certain verbs need - is called *transitivity*.

Verbs like *sleep* that need only one argument are **intransitive**.

Verbs like *bite* that need two arguments are **transitive**.

Verbs like *give* that need three arguments are **ditransitive**.

Grammatical Relations

Each argument has a different *grammatical relation* – the job it has in relation to the verb in the sentence.

All verbs need a **subject**. So, if there is only one argument (as with an intransitive verb), that argument will be the subject. In an intransitive sentence like *Mary slept* the one argument is the subject (*Mary*). In a transitive sentence (where there are two arguments) like *The cat bit the dog*, one of the arguments (in this case *the cat*) is the subject, and the other (in this case *the dog*) is the **object**.

In a ditransitive sentence (where the verb needs three arguments) like *Mary gave Tom the book*, one of the arguments (in this case *Mary*) is the subject. The other two (*Tom* and *the book*) are both kinds of objects: *Tom* is an **indirect object**, and the book is a **direct object** (because it is having the verb *gave* done to it directly).

Other kinds of ditransitive sentences have different grammatical relations. In the sentence, *Mary gave the book to Tom*, *Tom* now has the preposition *to* in front of him. *Mary* is still a subject, and the book is still a direct object. But *Tom* is now not an object, he's an **oblique**. Why? Because an object is a complement that is a Noun Phrase on its own (like *Tom* or *the book*). But an oblique is a complement that is a Prepositional Phrase (like *to Tom*).

So in summary, the *Grammatical Relations* are:

- subject
- object: direct object
 indirect object
- oblique

Coding grammatical relations

The most important thing the grammar of a language has to be able to do is tell us which participant mentioned in a sentence is the subject, which is the

object, etc. This is obviously a key to clearly communicating who is doing what to whom. This means a language has to have a way of expressing (or coding) the grammatical relation of each argument in a sentence.

In an intransitive sentence there is never any trouble working out who is the subject - there's only one argument, so that has to be the subject. We always know who the subject is in *Mary slept*, because there's only Mary.

But, in a transitive sentence how do we know which of the arguments is the subject and which is the object? In *The cat bit the dog*, how do we know that *the cat* is the subject, and not *the dog*? There are three ways languages can code grammatical relations so we know which is the subject and which is the object:

- word order
- case marking
- agreement

We will look at each of these three and explain how languages use them.

Word order

In English the main way grammatical relations are coded is by word order. The subject comes before the verb, and the object comes after it. That's why we say that English has the basic sentence structure SVO:

The cat bit the dog.
S V O

Other languages also use word order to show grammatical relations, but the order is different to English. For example, in Arabic, the sentence structure is VSO:

Qara'a al-mudarrisu al-kitaba
read det-teacher det-book
V S O
'The teacher read the book.'

Case

Case involves attaching an affix or an adposition (a preposition or a postposition) to the noun to tell us its grammatical relation. In Latin it doesn't matter what order the nouns are in – instead the nouns have a suffix that tells us their grammatical relation:

Domin-us vidit lup-um.
master-SUBJ see wolf-OBJ
'The master sees the wolf.'

Domin-um vidit lup-us.
master-OBJ see wolf-SUBJ
'The wolf sees the master.'

The noun that is the subject has the case marker *-us*, the noun that is the object has the case marker *-um*. All of the following sentences mean 'The

master sees the wolf in Latin, it doesn't matter that the word order is switched, as long as the case markers are correct the meaning is clear.

Lup-um domin-us vidit.
 wolf-OBJ master-SUBJ see
 'The master sees the wolf.'

Domin-us lup-um vidit.
 master-SUBJ wolf-OBJ see
 'The master sees the wolf.'

Vidit domin-us lup-um.
 see master-SUBJ wolf-OBJ
 'The master sees the wolf.'

English has no case marking on nouns. For example, *The cat bit the dog* and *The dog bit the cat*. In both sentences *the cat* is just *the cat*, whether it's the subject or the object, it doesn't change form at all. The same is true with *the dog*. But, English does have case marking on pronouns:

I saw her.
She saw me.

We only say *I* or *she* if the person is the subject.

We only say *me* or *her* if the person is the object.

Agreement

Agreement involves attaching something to the verb to tell us which argument is the subject and which one is the object. In English we don't have much verb agreement, only the suffix **-s**:

I see her.
She sees me.

The suffix **-s** tells us that the subject is third person singular (*he, she* or *it*). The suffix agrees with the subject.

In some other languages agreement is much more important than in English and does all the work. In a language like that, word order might not matter, like in Latin, where the case markers did all the work of making the subject and objects clear. Look carefully at the example sentences below from Yimas (Sepik, Papua New Guinea). All of these sentences mean "*The men saw the woman*":

pay-um narman na-mpu-**tay**
 man-PL woman femSG.OBJ-mascPL.SBJ-see

narman pay-um na-mpu-**tay**
 woman man-PL femSG.OBJ-mascPL.SBJ-see

pay-um na-mpu-**tay** **narman**

man-PL femSG.OBJ-mascPL.SBJ-see woman

narmanj na-mpu-**tay** **pay-um**
 woman femSG.OBJ-mascPL.SBJ-see man-PL

na-mpu-**tay** **narmanj** **pay-um**
 femSG.OBJ-mascPL.SBJ-see woman man-PL

na-mpu-**tay** **pay-um** **narmanj**
 femSG.OBJ-mascPL.SBJ-see man-PL woman

In Yimas all nouns belong to a noun class. In the example sentences the first prefix attached to the verb agrees with the noun class and the number (singular or plural) of the argument. The order of the actual nouns in relation to the verbs doesn't matter.

Semantic roles

All arguments have a grammatical relation. But all arguments also have a *semantic role* - or a role in the *meaning*. The most important semantic roles are: *actor* and *undergoer*.

An actor 'does' the action, and is directly responsible for the event. An undergoer has the action happen to them.

Actors

There are three kinds of actors:

- agent
- force
- cause

The most important kind of actor is **agent**. An agent does something on purpose. They are usually human, but can sometimes be an animal:

The boy killed the cobra.

The cat caught the bird.

Agents often do something that affects a second argument (e.g., *the cobra*, *the bird*). They can also perform an act that does not involve a second argument: e.g. The boy hurried.

A **force** performs the action, but not intentionally:

Malaria killed the boy.

The storm destroyed the crops.

A **cause** doesn't perform an action, it causes the action to happen:

The delay disrupted the schedule.
The rain kept the boys indoors.

Undergoers

Here are some examples of sentences with undergoers marked - the undergoer is the person or thing having the action done to it. Undergoers can also be undergoing a change of state or location, or be described as being in a particular state or location.

The boy killed the cobra.
Tom cooked the chicken.
The cobra is dead.
The chicken is cooked.
The pen is on the desk.
The book is on the ground.
Tom put the pen on the desk.
The book fell onto the ground.

Some other important semantic roles

There are quite a few other *semantic roles*, and not all linguists agree on them all. Your goal is only to understand that these kinds of relationships between words and meaning exist, and that they differ in the way they work in different languages.

We will look at some of the most important and generally accepted ones, giving a short explanation and a few examples.

Benefactive and recipient (Dative):

A *benefactive* is someone or something who benefits from the event. In English benefactives are marked with the preposition *for* (*for* also has other jobs).

Tom cooked a meal for Mary.
The boys bought a book for their sister.

A *recipient* is someone or something who receives something as a result of the event. In English recipients are marked with the preposition *to* (it too also has other jobs).

Nick passed a note to Melissa.
The salesman gave a brochure to the customer.

Many languages treat benefactives and recipients in the same way. This is called *dative*.

Experiencer

An *experiencer* experiences or senses a mental, emotional, physical or sensory state. Experiencers are always animate (alive), usually human:

Alfredo likes *chips*.

The old man feels *sick*.

We thought *they had left*.

English has some pairs of sensory verbs, one with an agent, one with an experiencer:

AGENT

Mary watched the fight.

Tom listened to the announcement.

The visitor smelled the rotten fish.

EXPERIENCER

Mary saw the fight.

Tom heard the announcement.

The visitor smelled the rotten fish.

(The last example, *smelled*, fits both categories as an agent and an experiencer)

Stimulus

A *stimulus* is the counterpart to an experiencer – it is the cause of the experience.

Mary saw the fight.

Tom heard the announcement.

The visitor smelled the rotten fish.

Instrument

An instrument is used by an actor to perform the action:

The hammer broke the window.

The key opened the door.

The bullet killed Tom.



In English instruments can be paraphrased with a Prepositional Phrase using 'with'.

Locationals

There are several different locationals. The four most important types are:

- **locative** (the location where an event happens) *Louisa waited in the pub*.
- **goal** (the end point of an event) *Nick drove to the shop*.
- **source** (the starting point of an event) *The robbers left the bank*.
- **temporal** (location in time when an event happens) *I arrived last week*.

In English locationals can be expressed by Noun Phrases, Prepositional Phrases, or adverbs. English uses different prepositions to express different kinds of locationals.

Semantic Roles and Grammatical Relations

Semantic Roles are not the same thing as grammatical relations. Grammatical relations can't be defined on the basis of meaning.

Actors are usually subjects and undergoers are usually objects, but they don't *have* to be.

Subjects can have a range of semantic roles (roles in the meaning of a sentence):

- The boy killed the cobra. (agent)
- The boy enjoyed the film. (experiencer)
- The storm destroyed the house. (force)
- Rain stopped the game. (cause)
- The cobra was killed by the boy. (undergoer)
- The cobra is dead. (undergoer)
- The coconut fell to the ground. (undergoer)
- The key unlocked the door. (instrument)
- Bats inhabit these caves. (undergoer)
- Louisa received a parcel. (recipient)

Objects can have a range of semantic roles too:

- The boy killed the cobra. (undergoer)
- The boy enjoyed the film. (cause)
- The boy dropped the coconut. (undergoer)
- The delay upset Louisa. (experiencer)
- The train approached the station. (goal)
- The bus left the university. (source)

Passive and active sentences

Languages have quite a few ways of changing the argument structure of a sentence. One important way is by using a *passive construction*.

In sentences with an ordinary transitive verb like *kill* or *bite* the subject is an actor. The object also has a semantic role: it is an undergoer.

For example, in a sentence like *John killed the mosquito*:

- John has the semantic role of agent, and the grammatical relation of subject;
- The mosquito has the semantic role of undergoer, and the grammatical relation of object.

But, this changes if we switch the sentence around. Let's have a look:

The mosquito was killed by John.

- The mosquito still has the semantic role of undergoer, but now it has the grammatical relation of subject.
- John still has the semantic role of actor, but now he isn't even an object – because he has a preposition (*by*), he is now an oblique.



We can even leave the oblique (*John*) out completely: *The mosquito was killed.*

The issue here is what we call **voice**.

The sentence *John killed the mosquito* is in *active voice*.

The sentence *The mosquito was killed (by John)* is in *passive voice*.

Active sentences are more basic than passive sentences because:

- the actor is the subject (they are functionally more basic); and
- they are grammatically less complicated.

Passive sentences are grammatically more complicated:

- they have an auxiliary verb *be* (actually also often *got*); and
- the actor is in a prepositional phrase with *by*, instead of just being a noun phrase.

So, if a passive sentence has basically the same meaning as an active sentence, why do languages have a passive structure at all? Basically, passives exist so we can manipulate the way information is presented. Passives are used for two reasons:

- 1) To emphasize the undergoer: e.g., *Tom was run over by a car* - we say it that way because we are interested in Tom and not in the car. We make Tom the subject and the car is demoted to an oblique. We may even get rid of the car altogether and just say, *Tom was run over*.
- 2) To push the actor into the background. We might want to do this because we don't know who the actor is: *My car was stolen* (I don't know who stole it); or maybe we don't care who the actor is: *The parcel was delivered* (I don't care who delivered it); or maybe we don't want to say who the actor is: *Your application was rejected* (by me, but I don't want to tell you that).



ACTIVITIES

Syntax 2

1. Change each of the passive voice sentences below to active voice:
 - a. A piece of wood had been swallowed by the dog.
 - b. Two separate customers were given rides on the new motorbikes by the designer.
 - c. Our child is frightened by loud fireworks.
 - d. The old door was painted bright red by the woman's daughter.

- e. Finances for the project were not included in the budget by the committee.
- f. The vibrant colours of the sculpture are immediately noticed by art gallery visitors.

2. Fill in the blanks in the following notes to review what you have learned in the last two Tutorials.

Syntax: study notes

1. The unconscious principles which people use to put words together into sentences are called the _____ of a language.
2. The two main areas of syntax which overlap and connect are _____ and _____.
3. The _____ of a language is the set of principles about how words are put together to make phrases, and how words and phrases are put together to build sentences.
4. _____ is about the way the participants are expressed in the grammar of a sentence.
5. The main parts of a sentence are the _____ (S), _____ (O) and _____ (V).
6. There are _____ possible orders for these parts to be arranged in a sentence.
7. The combinations _____ and _____ occur in 88.2% of the world's languages.
8. Languages overwhelmingly like to have the _____ first.
9. 91.6% of languages have the _____ and _____ occurring together.
10. When the verb and object occur together there can be a _____.
11. _____ are the most basic building blocks that are used to build sentences.
12. They are the component parts, or _____ of a sentence.
13. Words group together into larger units called _____.

14. There are several different types of phrase that can be used in a sentence, but the two phrases which *must* be used in a sentence for it to make sense are a _____ and a _____.
15. In a phrase, we *must* have a word which is called the _____. This is the core of the phrase, what the phrase can't exist without.
16. Words join together to form larger _____.
17. There are various ways to test whether or not a series of words form a single constituent:
- _____ – Create the same sentence but take away the word/words we are testing.
 - _____ – Can we replace the word/words with just a single word?
 - _____ – Can we form a question using the sentence, and the answer be the word/words being tested?
 - _____ – Can we move the position of the word/words in the sentence and have the sentence still make sense without changing the meaning?
18. Speakers generate _____ and _____ using the syntactic principles of the language they speak.
19. These unconscious principles are called _____.
20. The most basic phrase structure rules generate the basic phrase structure of head, followed by _____.
21. Some constituents such as Noun Phrases or Prepositional Phrases are complements – they are required by the _____.
22. These are called _____ of the verb.
23. Some verbs refer to events that involve only one participant. These verbs only require one _____ (e.g. *Mary went to sleep*)
24. Other verbs require _____ arguments (e.g. *The cat bit the dog*)
25. Some verbs require _____ arguments (e.g. *Mary gave the book to Tom*)
26. This issue is called _____.
27. Verbs like *sleep* that need only one argument are _____.

28. Verbs like *bite* that need two arguments are _____.
29. Verbs like *give* that need three arguments are _____.
30. There are three ways languages can code grammatical relations so we know which is the subject and which is the object: _____, _____, _____.
31. The most important semantic roles are _____ and _____.
32. An _____ 'does' the action, and is directly responsible for the event.
33. An _____ has the action happen to them.
34. *The mosquito was killed by John*, is a sentence using the _____ voice.

(Answers on next page)

Answers:

1. Passive voice sentences changed to active voice:
 - a. The dog had swallowed a piece of wood.
 - b. The designer gave two separate customers rides on the new motorbikes.
 - c. Loud fireworks frighten our child.
 - d. The woman's daughter painted the old door bright red.
 - e. The committee did not include finances for the project in the budget.
 - f. Art gallery visitors immediately noticed the vibrant colours of the sculpture.

2. Syntax: study notes answers

1. **syntax**
2. **phrase structure, argument structure**
3. **phrase structure**
4. **Argument structure**

5. **subject (S), object (O) and verb (V)**
6. **six**
7. **SOV, SVO**
8. **subject**
9. **verb, object**
10. **Verb Phrase**
11. **Words**
12. **constituents**
13. **phrases**
14. **noun phrase, verb phrase**
15. **head**
16. **constituents**
17.
 - a) ***Omission***
 - b) ***Replacement***
 - c) ***Standalone***
 - d) ***Movement***
18. **phrases, sentences**
19. **phrase structure rules**
20. **complement**
21. **verb**
22. **arguments**
23. **argument**
24. **two**
25. **three**
26. **transitivity**

- 27. **intransitive**
- 28. **transitive**
- 29. **ditransitive**
- 30. **word order, case marking, agreement**
- 31. **actor, undergoer**
- 32. **actor**
- 33. **undergoer**
- 34. **passive**