

# Syntactic Theory Assignment 4

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## 1 Argument Structure

### 1.1 donate

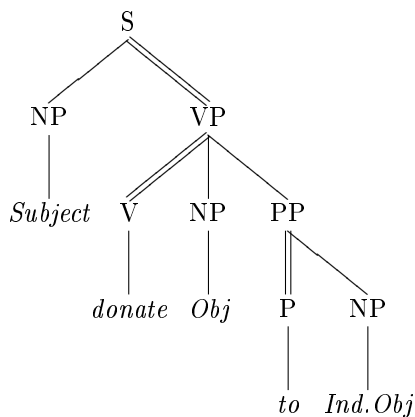
Donate takes 3 arguments, as can be seen below:

- John donated five dollars to the fundraiser
- Jill donated her clothes to the clothing drive
- I donated my leftover non-perishable food.
- Bob donated to the charity fundraiser.

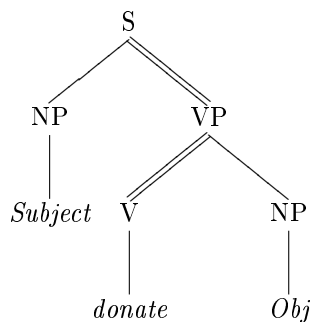
The 3 argument CS looks like  $DONATE(DONOR : X; DONATION : Y; RECIPIENT : Z)$ .

Either one of the second (donation) or third (recipient) arguments can be omitted, but not both. To indicate this, I'll use square brackets around the two arguments that can be exclusively-ORed, like so:

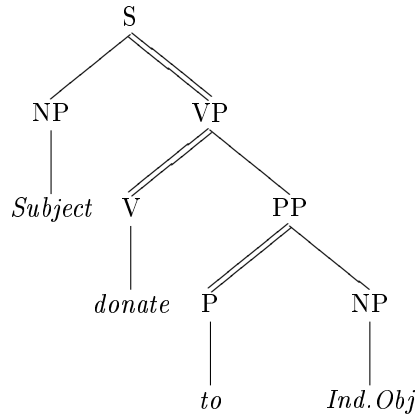
$DONATE(DONOR : X; [DONATION : Y; RECIPIENT : Z])$ .



$DONATE(DONOR : X; [DONATION : Y; RECIPIENT : Z])$



$DONATE(DONOR : X; [DONATION : Y; RECIPIENT : Z])$



$DONATE(DONOR : X; [DONATION : Y; RECIPIENT : Z])$

I make the distinction, as is made on page 156 of the text, that sometimes prepositions are included in the verb, rather than provided in the CS itself. I find the book a bit unclear on this point, but in some verbs such as *look for*, the preposition does not contribute to the meaning of the sentence but is rather “syntactic glue” to allow the following phrases to fit in the sentence. For that reason, *for* is not present in the CS but rather is linked with the main verb *look*. However, with verbs such as *go into*, the preposition *into* provides meaning, so is represented in the CS like so:  $INTO(X)$ .

## 1.2 drizzle

*Drizzle* can take 0 or 3 arguments, depending on its meaning.

When talking about the weather:

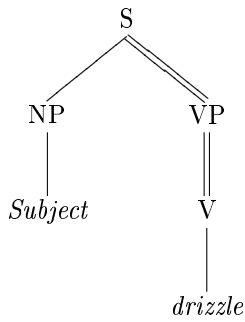
- It was drizzling
- It drizzled
- $DRIZZLE()$

and when talking about the act of covering an object with something else:

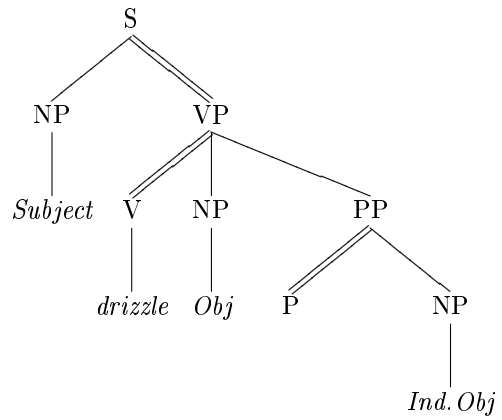
- John drizzled some chocolate on the cake.
- Jill drizzled some toppings over the pizza.

- $DRIZZLE(ACTOR : X; THEME : Y; LOCATION : \left\{ \begin{array}{l} ON \\ ONTO \\ OVER \\ etc \end{array} \right\} (Z))$

Here the prepositions  $\left\{ \begin{array}{l} ON \\ ONTO \\ OVER \end{array} \right\}$  are integral to the meaning of the sentence, so they are a part of the CS.



*DRIZZLE*()



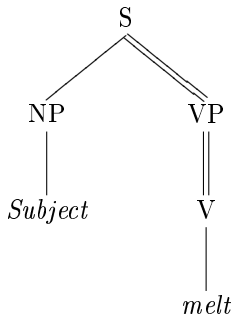
*DRIZZLE*(*ACTOR* : *X*; *THEME* : *Y*; *LOCATION* :  $\left\{ \begin{array}{l} \textit{ON} \\ \textit{ONTO} \\ \textit{OVER} \\ \textit{etc} \end{array} \right\}$  (*Z*))

### 1.3 melt

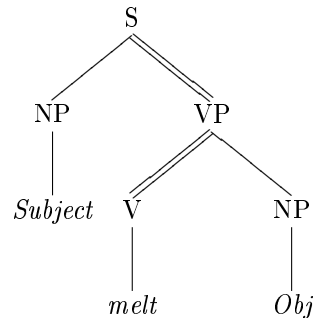
Melt can take one or two arguments:

- The snow is melting.
- That wax melts.
- The rain melts the snow.
- Billy melts the chocolate.

The two CS are then *MELT*(*THEME* : *X*) and *MELT*(*MELTER* : *X*; *THEME* : *Y*)



*MELT*(*THEME* : *X*)



*MELT*(*MELTER* : *X*; *THEME* : *Y*)

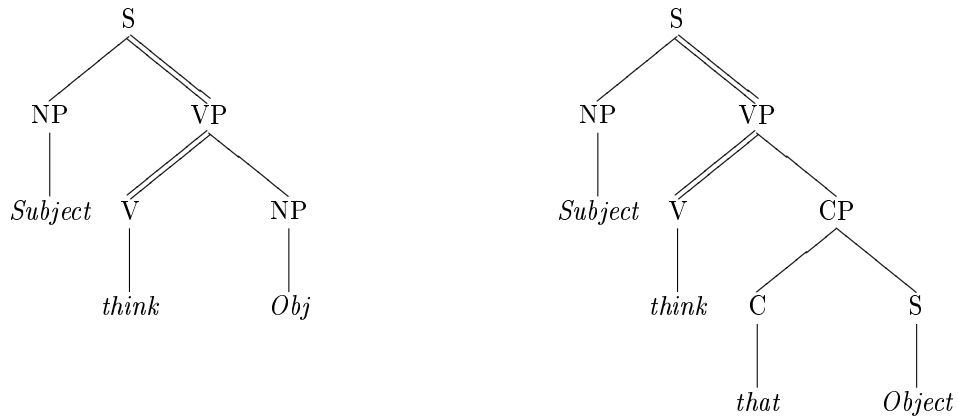
### 1.4 think

Think takes two arguments.

- Bill thinks of Joan.
- The dog thinks of the bone.
- John thinks about his mother.
- Bob thinks that his his cat is hungry.

- Devon thinks that he went to the store too early.

Like (1.1) above, the prepositions *of* and *about* do not contribute meaning to the sentence beyond what is already present in the verb *think*. So we do not represent them in the CS as prepositions, but rather link them directly to the verb. The construction with *that + S* needs a different tree as well, as it is different in structure to the other sentences.



*THINK*(*THINKER* : *X*; *THOUGHT* : *Y*)

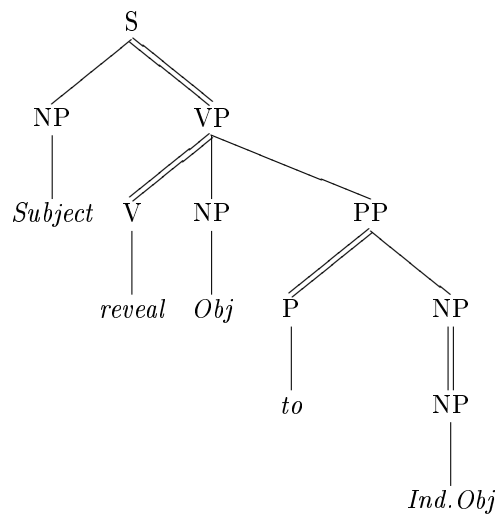
*THINK*(*THINKER* : *X*; *THOUGHT* : *Y*)

## 1.5 reveal

Reveal takes three arguments.

- Tom reveals the answer to John.
- I revealed my work to the public.
- The characters revealed themselves.

Again like (1.1) and (1.4), *to* serves no purpose in meaning that is not contained in *reveal*.



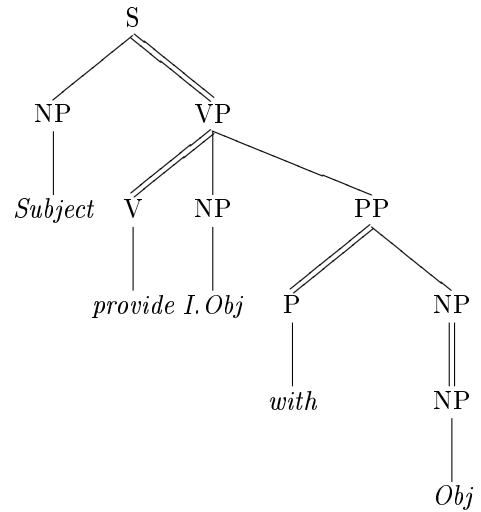
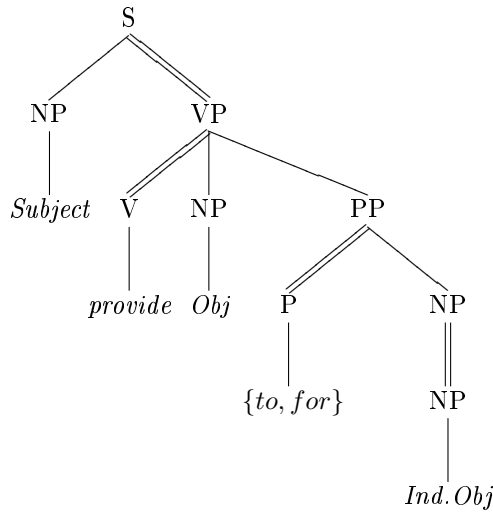
*REVEAL*(*AGENT* : *X*; *THEME* : *Y*; *EXPERIENCER* : *Z*)

## 1.6 provide

Provide takes 3 arguments, however, in some cases they can be implicit.

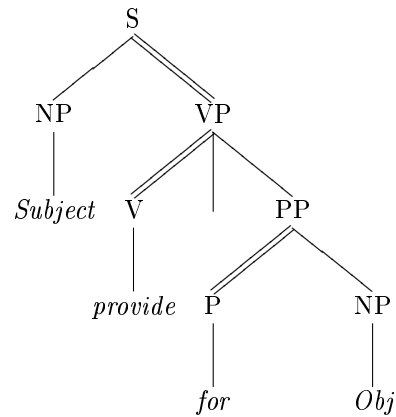
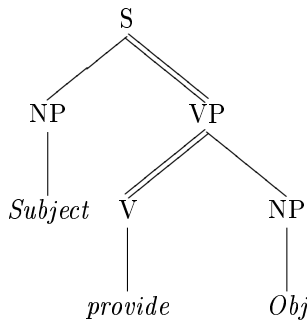
- Billy provides food to the children.
- \*Billy provides food.
- \*Billy provides to the children.
- The man provided spare parts to the operation.
- David provided the children with the information.
- Betsy provided the food.
- Jill provided for the newcomers.

If the preposition used is *for*, then the direct object can be omitted, as it is optional. However, if it is *in* or *with*, all three arguments are needed. The preposition *with* switches the order of the indirect and direct objects, but does not change the CS. For clarity and simplicity, I omit this information from the CS, but it should be shown with some new notation that means “optional only if P is ‘for’” or something along those lines.



*PROVIDE*(ACTOR : X; PROVIDED : Y; THEME : Z)

*PROVIDE*(ACTOR : X; PROVIDED : Y; THEME : Z)



*PROVIDE*(ACTOR : X; PROVIDED : Y)

*PROVIDE*(ACTOR : X; THEME : Y)

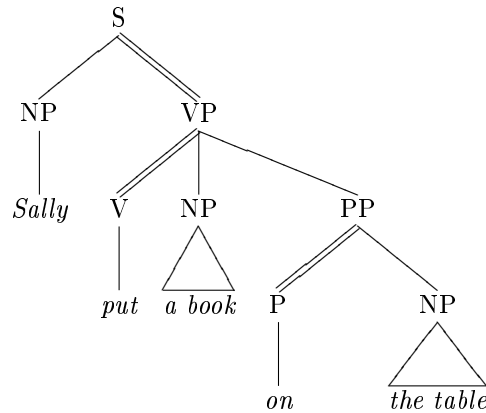
## 2 Linking verb arguments in sentences

### 2.1 a

Sally put a book on the table.

*PUT*(*ACTOR* : *X*; *THEME* : *Y*; *LOCATION* : *ON*(*Z*))

Here, unlike in previous examples, the preposition *on* does add meaning to the sentence. Omitting it from the CS would not encapsulate all the meaning, so it can't be left out. It will rather take its place in the CS in specifying the location of the verb.



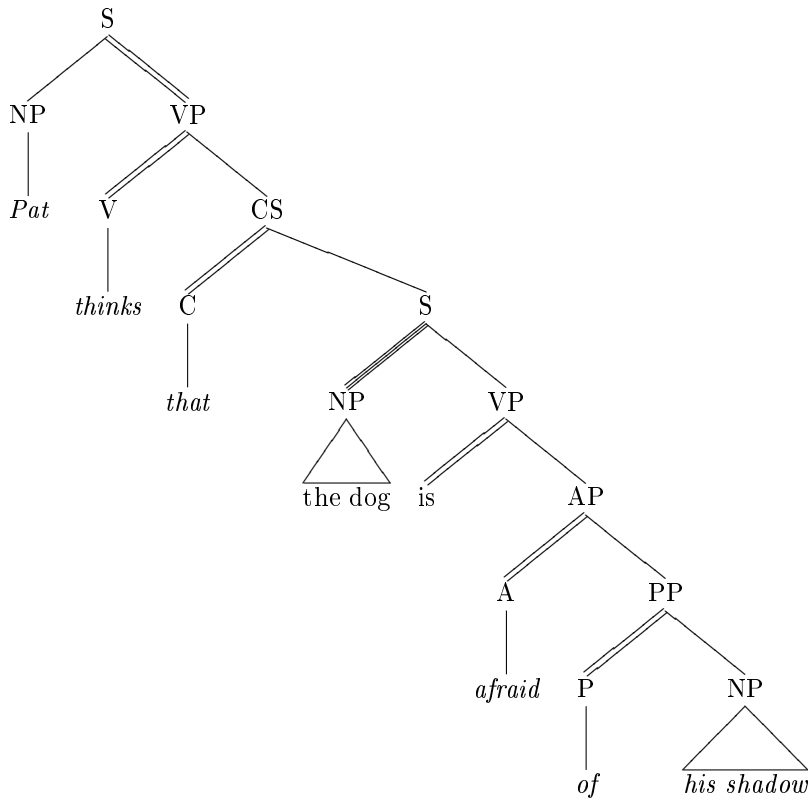
*PUT*(*ACTOR* : *SALLY*; *THEME* : *BOOK*; *LOCATION* : *ON*(*TABLE*))

### 2.2 b

Pat thinks that the dog is afraid of the dark.

*THINK*(*THINKER* : *X*; *THOUGHT* : *Y*)

This sentence contains an embedded conjunction phrase, followed by a complete sentence in itself. So, we diagram it as follows

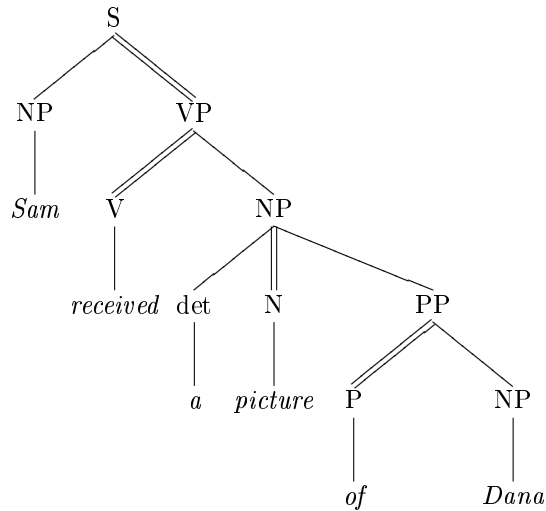


*THINK(: THINKER : PAT; THOUGHT : BE(PATIENT : DOG; STATE : AFRAID(SHADOW)))*

**2.3 c**

Sam received a picture of Dana.

*RECEIVE(RECIPIENT : X; THEME : Y) PICTURE(DANA)*

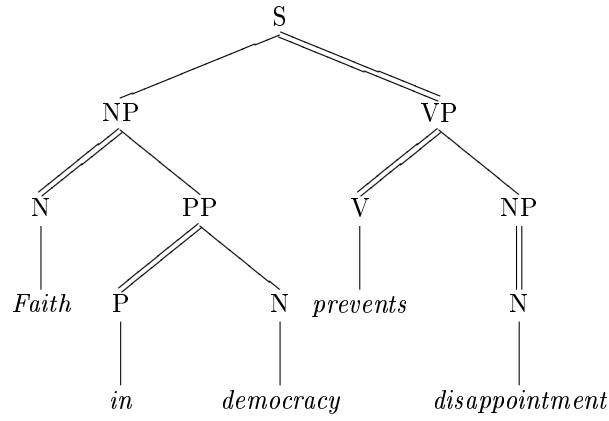


*RECEIVE(RECIPIENT : SAM;THEME : PICTURE(DANA))*

## 2.4 d

Faith in democracy prevents disappointment.

*PREVENT(PREVENTER : X;THEME : Y) FAITH(DEMOCRACY)*



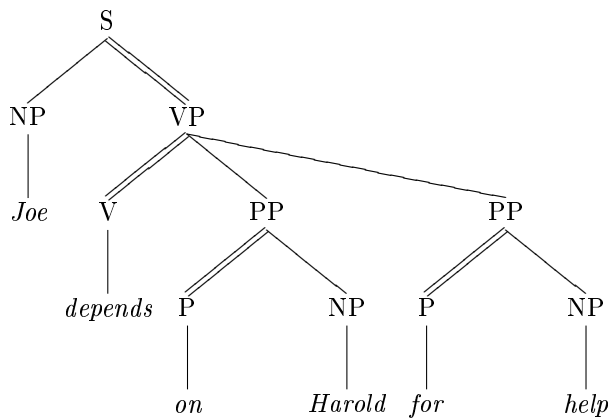
*PREVENT(PREVENTER : FAITH(DEMOCRACY);THEME : DISAPPOINTMENT)*

## 2.5 e

Joe depends on Harold for help

*DEPENDS(ACTOR : X;DEPENDEE : ON(Y);REASON : Z)*

Here *on* is in the CS, while *for* is not. *On* provides more information to the meaning of the sentence, so is required to capture the full meaning, while *for* is a syntactic helper.



*DEPENDS(ACTOR : JOE;DEPENDEE : ON(HAROLD);REASON : HELP)*



### 3 Idioms in the lexicon

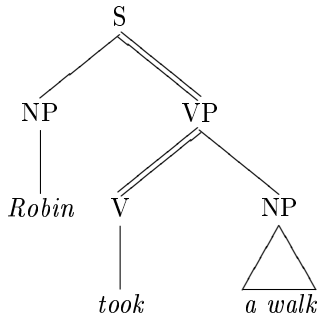
As shown in the text, idioms (for example *kick the bucket*) are in the lexicon. However, we want them to retain similarity to other phrases that have the same meaning. Therefore, their lexical entry have a very similar CS to other lexical entries that mean the same. In this example, the phrases are:

- Robin walked.
- Robin took a walk.
- Robin went for a walk.

The idioms here are *took a walk* and *went for a walk*. The CS that we are trying to express is  $WALK(AGENT : X)$ , so each entry is:

- *take a walk*

[ SYNTAX            [vp [vtake] [np [det a] [n walk]] ]  
 CS                    WALK(AGENT : X) ]



- *went for a walk*

[ SYNTAX            [vp [vwent] [[pp [p for] [np [det a] [n walk]]]] ]  
 CS                    WALK(AGENT : X) ]

