

October 26, 2020 v1.4.

v1.4: allowed NP complement of D to be optional (for pronouns).  
 v1.3: fixed a V' expansion I missed in v1.2.  
 v1.2: fixed a couple of typos (V' expansions, fixed "decl" in the lexicon).  
 v1.1: updated many of the rules here for where adjuncts attach.

## 1 Previously, in Syntax

Here's where we are, basically:

<p>CP → C'          C' → C TP          TP → DP T'          T' → T VP          DP → D'          D' → D (NP)          NP → NP PP          NP → AdjP NP          NP → N'          N' → N (PP)</p>	<p>V' → V (DP)          V' → V CP          V' → V DP CP          PP → P'          P' → P DP          VP → V'          VP → VP PP          VP → VP AdvP          VP → AdvP VP          AdvP → Adv'          Adv' → Adv          AdjP → Adj'          Adj' → Adj</p>	<p><i>believe</i>, V, [+ __ CP<sub>[+decl]</sub> ]  <i>ask</i>, V, [+ __ CP<sub>[+q]</sub> ]  <i>know</i>, V, [+ __ CP<sub>[+q]</sub> ], [+ __ CP<sub>[+decl]</sub> ]          :  <i>whether</i>, C, [+q]  <i>if</i>, C, [+q]  <i>for</i>, C, [+decl], [+ __ TP<sub>[-fin]</sub> ]  <i>that</i>, C, [+decl], [+ __ TP<sub>[+fin]</sub> ]  <math>\emptyset_{decl}</math>, C, [+decl], [+ __ TP<sub>[+fin]</sub> ]  <i>to</i>, T, [-fin]  <i>will</i>, T, [+fin, -past]  <i>would</i>, T, [+fin, +past]          :  <i>must</i>, T, [+fin, +past]  <math>\emptyset_{past}</math>, T, [+fin, +past]  <math>\emptyset_{nonpast}</math>, T, [+fin, -past]          :</p>
--	--	---

- (1) Pat left.
- (2) Pat will leave.
- (3) Pat leaves.

## 2 Silent elements

### 2.1 Imperatives

- (4) Leave.
- (5) Kick the ball.
- (6) Put the ball on the table.

These seem to have no subjects. But don't they? Who will have left, kicked the ball, put the book on the table. What does a verb like *kick* mean anyway?

- (7) a. John kicked himself.  
 b. \* John kicked myself.  
 c. \* I kicked himself.  
 d. You kicked yourself.  
 e. \* You kicked myself.
- (8) a. Express yourself.  
 b. \* Express myself.  
 c. Put yourself on the table  
 d. \* Put myself on the table

We have a similar issue with embedded infinitive clauses.

- (9) a. Marge expects to win the race.  
 b. Marge expects for herself to win the race.  
 c. Marge wants to win the race.  
 d. Marge wants Bart to win the race.

Who is winning? Who is wanting/expecting? It seems like the winner is sometimes missing—or silent? It's simpler if it's just silent. The rest of the grammar can remain unchanged.

The silent subject is known as **PRO**. That's all capital letters.

**PRO** is not possible everywhere, but it is often possible as the subject of an infinitive clause (or imperative clause).

**I expect to persuade you to adopt this analysis.**

Much of what comes next depends on the **thematic structure** of different verbs.

We've talked about this informally somewhat, but a verb is generally either a **property** of something or a **relation** between things.

- (10) a. Bart slept. Bart was among those who sleep in the past.  
 b. Bart kicked the ball. Bart is he agent, the ball is the theme, of a kicking.

*Intransitive, transitive, ditransitive* are terms describing how many participants are in a given verb-ing. (1, 2, and 3, respectively.)

So, our semantic knowledge of *expect* is something like this:

1. expect(X, Y)
2. X is the experiences of the state (the “expecter”)
3. Y is the theme of the state (the thing that is expected)

There are a few verbs that don't have any participants at all. *Weather verbs*.

- (11) a. It stole my lunch. [Pointing at a robot]  
 b. It snowed.

In (11b), *it* is **pleonastic pronoun**. It doesn't refer to anything. It's actually there mainly because a tensed clause in English isn't allowed not to have a subject (and the silent **PRO** is not available in tensed clauses). *There* in *There is a fly in my soup* is similar pleonastic.

**Pleonastic Pronoun Principle:** Pleonastic pronouns occur only in subject position.

- (12) a. Homer expected Marge to win the race.  
 b. Homer persuaded Marge to win the race.
- (13) a. Homer expected it to rain.  
 b. \* Homer persuaded it to rain.

Why would (13b) be bad?

1. persuade(X, Y, Z)
2. X is the agent of the action (the “persuader”)
3. Y is the theme of the action (the individual that is persuaded)
4. Z is the goal of the action (what the theme is persuaded of)

What kind of thing can one expect? What kind of thing can one persuade someone of? The books says “Theme” and “Goal” for these things, but I’d prefer to say “Proposition.” How is a proposition expressed in syntactic terms?

The clause in (12) that is being expected or that someone’s being persuaded of is the one that has *win* as its verb. And in (13a), it has *rain* as its verb. It’s an infinitive clause.

So in (12a), who is the winner? Is *Marge* a subject? In (12b), who is the winner? Who is being persuaded? Is *Marge* a subject?

Ah, but **PRO** is allowed to be the subject of an infinitive clause.

Thus:

- (14) a. Homer expected [Marge to win the race].  
 b. Homer persuaded Marge [PRO to win the race].

cf.

- (15) a. Homer expected [that Marge would win the race].  
 b. Homer persuaded Marge [that she would win the race].

## 2.2 Idioms

- (16) a. Bart tossed his cookies.  
 b. Bart expected to toss his cookies.  
 c. Lisa expected Bart to toss his cookies.  
 d. Lisa persuaded Bart to toss his cookies.
- (17) a. The cat is out of the bag.  
 b. Lisa expected the cat to be out of the bag.  
 c. Lisa persuaded the cat to be out of the bag.  
 d. The cat expected to be out of the bag.