

AM2 — Syntax: theories and models

Week 5(2): applicatives

1 Overview

At the end of last week, we saw that one can increase the valency of transitive verbs by means of an *applicative* argument, which denotes the beneficiary of the action being carried out. In the European languages we are used to, applied arguments often take the form of datives:

- (1) a. She baked a cake \Leftrightarrow She baked *me* a cake.
b. Sie hat einen Kuchen gebacken \Leftrightarrow Sie hat *mir* einen Kuchen gebacken.

However, certain languages, such as Venda, require the addition of specific verb morphology to mark the addition of an applied argument.

- (2) a. Mukasa o-nok-is-a muhada.
Mukasa AGR.melt.CAUSE.FV SNOW
"Mukasa melted the snow"
b. Mukasa o-nok-is-el-a Katonga muhada.
Mukasa AGR.melt.CAUSE.APPL.FV Katonga SNOW
"Mukasa melted the snow for Katonga's benefit"

Today, we will see that there are (at least) three different types of applicatives (high, low recipient, and low source), each one with its own array of properties. The most important difference is the following:

- *High applicatives* denote a relation between an individual and an event.
- *Low applicatives* denote a relation between two individuals.

So, high applicatives have largely the same semantics we saw last week for *v*, with the change from causation to beneficiary.

- (3) $[[\text{HIGH APPL}]] = \lambda e \lambda x [\text{BEN}(e, x)]$

However, low applicatives will have to be different.

- (4) $[[\text{LOW APPL}]] = \lambda x \lambda y \lambda e [\text{THEME}(e, x) \wedge \text{transfer-of-possession}(x, y)]$

In order to distinguish low from high applicatives, we can make use of the following two diagnoses.

- *Transitivity restrictions*: high applicatives can combine with unergative verbs, but low applicatives cannot always.
- *Verb semantics*: low applicatives require predicates that imply transfer of possession, but high applicatives can combine with any predicate.
- *Depictives*: an argument introduced by a high applicative can be targeted by depictive modification, but one introduced by a low applicative can't.

2 Transitivity restrictions

The following are examples from languages with high applicatives, which show that a combination with unergative predicates is unproblematic.

(5) *Albanian*

I vrapova.
him.DAT run.1SG
"I run for his benefit"

(6) *Venda*

Ndi-do-shum-el-a musadzi.
AGR.FUT.WORK.APPL.FV lady
"I work for the lady's benefit"

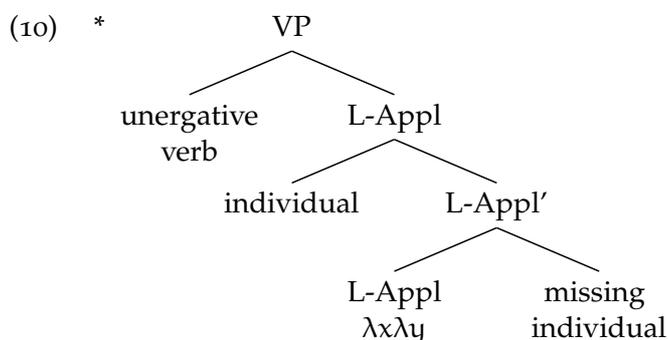
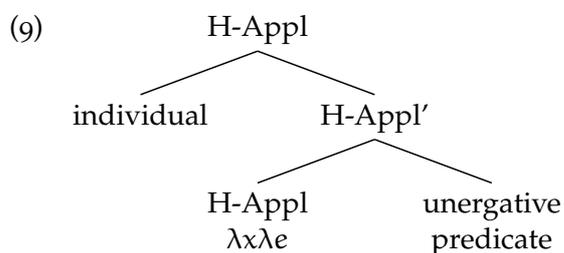
Compare these examples to similar ones in English or Japanese, where applicatives are low. These are ungrammatical, at least in the intended reading.

(7) * Alice ran Bob.

(8) *Japanese*

* Taroo-ga Hanako-ni hasi-tta.
Taroo.NOM Hanako.DAT run.PAST
"Taroo ran for Hanako's benefit"

Pylkkänen (2003), who first studied these correlations, hypothesizes that they are due to the different semantic requirements of each type of applicative. A high applicative is a function that takes an individual as its specifier and an event as its complement; since unergative verbs are still events, they can occur in the complement position of a high applicative. In contrast, a low applicative is a relation between two individuals, one of which has to be the object of the verb. Since unergatives don't have explicit objects (or have very unspecified objects), ungrammaticality results.



3 Verb semantics

The following examples show that high applicatives can combine with stative verbs like *hold*, which (by definition) don't imply any transfer of possession (because their meaning doesn't include any notion of change).

(11) *Albanian*

Agimi i mban Drites çanten time
Agimi CL.DAT holds Drita.DAT bag.ACC my
"Agimi holds my bag for Drita's benefit"

(12) *Venda*

Nd-o-far-el-a Mukasa khali.
ARG.PST.hold.APPL.FV Mukasa pot
"I held the pot for Mukasa's benefit"

Again, compare to languages where applicatives are low.

(13) * Alice held Bob her bag.

(14) *Japanese*

* Taroo-ga Hanako-ni kanojo-no kaban-o mo-tta.
 Taroo.NOM Hanako.DAT she.GEN bag.ACC hold.PAST
 "Taroo held Hanako's bag for her benefit"

Pylkkänen's explanation is based on the hypothesis that low applicatives necessarily imply a relation of transfer of possession holding of the two individual entities. Therefore, they are incompatible with predicates, such as *hold*, that don't entail change across time (note that this presupposes that transfer of possession itself entails change across time, which seems correct). In contrast, a high applicative only requires that one of its arguments be an event; whether its an event that implies change across time or not is irrelevant. Therefore, nothing blocks stative verbs like *hold*.

4 Depictives

Depictives are secondary predicates that describe a state in which one of the arguments of the verb is during the event described by the verb. Normally, we can distinguish at least between subject-oriented and object-oriented depictives. The following example, for instance, is ambiguous between the two readings (although in languages with adjectival agreement, we could use gender agreement to disambiguate between the subject and the object reading).

(15) Alice saw Bob naked.

- a. *Subject-oriented reading*: Alice was naked when she saw Bob.
- b. *Object-oriented reading*: Bob was naked when Alice saw him.

The following examples show that languages with high applicatives allow a third reading, in which the depictive is predicated of the applied argument.

(16) *Albanian*

Drita i poqi Agimit të lodhur.
 Drita it baked Agim.DAT DET tired
 "Drita baked it for Agim, and Agim was tired"

(17) *Venda*

Nd-o-shum-el-a Katonga a khou lwala.
 AGR.PST.work.APPL.FV Katonga 3SG STATE sick
 "I worked for Katonga's benefit, and Katonga was sick"

However, this possibility is not available for languages with low applicatives.

(18) Alice baked Bob a cake tired.
 [cannot mean "Bob was tired"]

(19) *Japanese*

Taroo-ga hadaka-de Hanako-ni hon-o yon-da.
 Taroo.NOM naked Hanako.DAT book.ACC read.PAST
 "Taroo read a book for Hanako, and Taroo was naked."
 [cannot mean: "Hanako was naked"]

To capture this distribution, Pylkkänen resorts to the more-or-less standard analysis of depictive adjectives, where they are related to the rest of the structure by a functional head Dep. The semantics of Dep are as follows. Don't be intimidated by this semantic representation. It simply means that Dep takes an event e , an individual x , a state f (contributed by the adjective), and returns the meaning that x is in state s during event e (the last part is notated $e \circ s$). Formally:

$$(20) \quad \llbracket \text{Dep} \rrbracket = \lambda f \lambda x \lambda e \exists s [f(s, x) \wedge (e \circ s)]$$

When we combine Dep with an adjective like *tired*, we obtain a function that relates an event e to an individual x , and entails that x was tired during e .

$$(21) \quad \begin{array}{c} \text{DepP} \\ \lambda x \lambda e \exists s [\text{tired}(s) \wedge \text{tired}(x, s) \wedge (e \circ s)] \\ \text{tired} \quad \text{Dep} \end{array}$$

At this point, DepP can only attach to constituents that are eventive and still require an individual. Bare verbs are one of these. If DepP intervenes between a verb and its object, we derive the meaning that the object was in the state of being tired (or drunk, or naked, or...) during the event described by the verb.

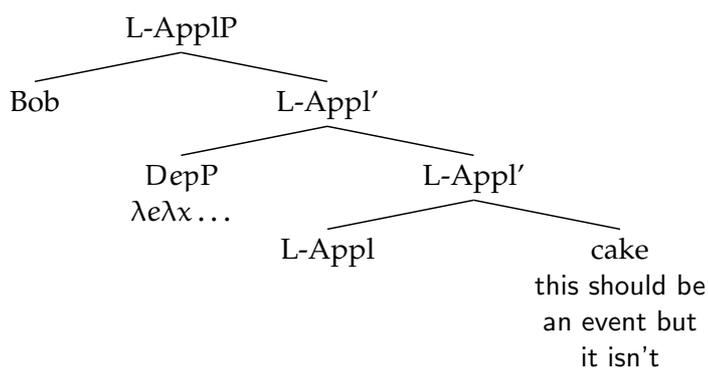
$$(22) \quad \begin{array}{c} \text{VP} \\ \text{Bob} \quad \lambda x \exists e \exists s [\text{tired}(s) \wedge \text{see}(e) \\ \wedge \text{THEME}(e, x) \wedge \text{tired}(x, s) \wedge \text{tired}(e \circ s)] \\ \text{DepP} \quad \text{V} \\ \text{tired} \quad \text{Dep} \quad \text{see} \\ \lambda x \exists e [\text{see}(e) \wedge \text{THEME}(e, x)] \end{array}$$

vPs (or VoicePs, depending on your views) are another position that we can attach a DepP to, as it fulfils the requirements. In this case, we derive the subject oriented reading.

$$(23) \quad \begin{array}{c} \text{vP} \\ \text{Bob} \quad \lambda x \exists e \exists s [\text{tired}(s) \wedge \text{see}(e) \\ \wedge \text{AGENT}(e, x) \wedge \text{tired}(x, s) \wedge \text{tired}(e \circ s)] \\ \text{DepP} \quad \text{v}' \\ \text{tired} \quad \text{Dep} \quad \text{v} \quad \text{VP} \\ \lambda x \lambda e [\text{AGENT}(e, x)] \end{array}$$

Given this much, DepP can attach to a high applicative, because a high applicative is also a constituent that relates an individual to an event. You can draw the tree yourself as an exercise. In contrast, DepP cannot attach to a low applicative, because it provides the wrong kind of relation. A low applicative is a relation between two individuals, but DepP is something that requires a relation between an individual and an event. Therefore, the structure is semantically deviant.

(24) *Illicit attachment of DepP: no event available.*



5 This lecture block in review

The question that has driven the last few lectures is: what is the internal structure of verbal constituents? The answer we have arrived at is that verbal constituents are very articulate in their syntax. A “verb” is not a lexical item, pulled as such from the lexicon, but rather a composite of different lexical items (each expressing a different piece of information) and put together in syntax.