

What Applicative Heads Apply To*

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1 Introduction

While applicative constructions appear to have similar meanings across languages, their syntactic properties differ. For example, both English and Chaga have a double object construction with an applied, benefactive, argument, but only in Chaga can such a benefactive participant be added to an unergative verb:

- (1) English:
- | | | | |
|----|-----------------|----|--|
| a. | I baked a cake. | b. | I baked him a cake. |
| c. | I ran. | d. | *I ran him . (i.e. I ran for him) |

- (2) Chaga:
- | | | | |
|----|---|-----------------|--------|
| a. | N-ǎ-í-lyì-í-à | ni-kà | k-élyá |
| | FOC-1s-PR-eat-APPL-FV | 1-wife | 7-food |
| | <i>'He is eating food for his wife'</i> | | |
| b. | N-ǎ-i-zrìc-í-à | mbùyà. | |
| | FOC-1s-PR-eat-APPL-FV | 9 friend | |
| | <i>'He is running for a friend'</i> | | |

(Bresnan and Moshi 1993: 49-50)

In this paper I argue that the semantic similarity between the English and the Chaga benefactives is only apparent. Specifically, I argue that in Chaga, the applicative head relates an individual to the event described by the VP, following Marantz (1993), while in English, the applicative head relates an individual to the direct object (cf. Pesetsky 1995). I argue that applicative constructions crosslinguistically split into these two different

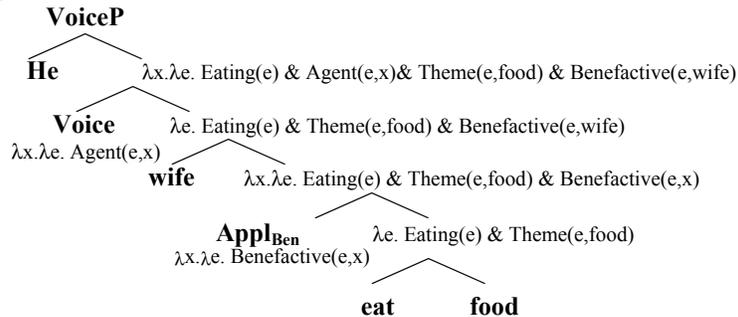
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types and show how this proposal derives a host of applicative asymmetries of the sort in (1) and (2). I also apply the theory to adversity constructions in Japanese and show how it accounts for famous asymmetries between so-called adversity passives and adversity causatives.

2 High and Low Applicatives

Since applicative affixes add an argument to the verb, the most straightforward hypothesis for their semantics is to say that they are elements which take an event as their argument and introduce an individual which is thematically related to that event. This, in essence, was the proposal in Marantz 1993. Combining Marantz's theory with current assumptions about external arguments gives us a tree where both Appl and the external argument introducing head Voice (Kratzer 1994) are functional elements above the V/RootP which combine with it via Event Identification. The Chaga benefactive in (2b), for example, receives the structure in (3).

(3) Marantz 1993, in the framework of Kratzer 1994:



Here the wife stands in a benefactive relation to the event of eating but bears no relation to the object of eating, i.e. the food. This seems correct since the wife could not plausibly enter into, say, a possessive relation with the food as a result of somebody eating it. The same holds for instrumental applicatives, such as the Chicheŵa one in (4), where the knife bears an instrumental relation to the event of molding but no relation to the waterpot:

(4) *Chicheŵa Instrumental:*

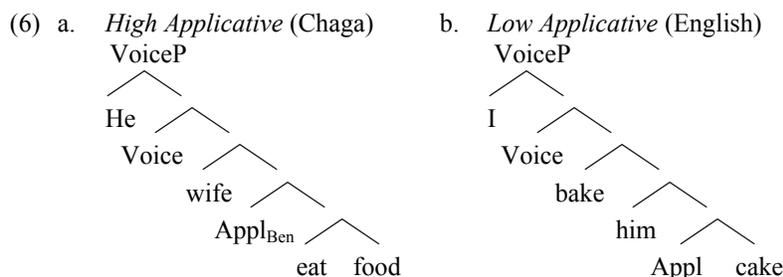
Mavuto a-na-umb-ir -a mpeni mtsuko Mavuto
 Mavuto SP-PAST-mold-APPL-ASP knife waterpot
 'Mavuto molded the waterpot with a knife' (Baker 1988: 354)

An interpretation where the applied argument bears no relation to the direct object is, however, impossible in the English double object construction. The sentence *Jane baked Bill a cake*, for example, cannot mean that Jane did the baking for Bill so that he wouldn't have to. Jane has to at least intend that Bill gets the cake.

Since a relationship between the applied object and the direct object is obligatory in English, examples where no such a relationship can be construed are ungrammatical. Hence the Chaga benefactive in (2a) cannot be expressed as an English double object construction: it is not possible that the food enters into a possessive-like relationship with the wife as a result of the husband eating it. Similarly in (5b), John's holding a bag does not plausibly result in a relationship between Mary, the applied argument, and the bag and therefore the sentence is ungrammatical.

- (5) a. *He ate the wife food. b. *John held Mary the bag.

The main claim of this paper is that the English and the Chaga applicatives illustrate a general typology of applicative constructions. Specifically, I propose that there are two different types of applicative heads: high applicatives, which denote a relation between an event and an individual and low applicatives, which denote a relation between two individuals. High applicative heads attach above the Root and low applicative heads below it, as shown in (6):



Low applicative heads modify the direct object. They are interpreted as directional possessive relations: [him[TO-THE-POSSESSION OF[*cake*]]].¹ The English double object construction, however, illustrates only one type of low applicative: crosslinguistically, we find not only the *to-the-possession-of* relation but also a *from-the-possession-of* relation. These two possibilities receive different spell-outs in Finnish, where the case of the

¹ Cf. Pesetsky's (1995) characterization of English applied objects as Possessor-Goals.

applied argument depends on the directionality of the applicative relation. Furthermore, Finnish transparently shows that the low applicative relation is *both* directional *and* possessive since the cases assigned to low applied arguments come from the locative-possessive paradigm. In the Finnish locative case system, the adessive, ablative and allative cases are interpreted as possessive when combined with a potential possessor (generally [+human]), as shown in the table below:

(7) *The Finnish locative cases*

Purely locative	Possessive when noun is human
Inessive:	Adessive:
<i>talo-ssa</i> ‘in the house’	<i>pöydä-llä</i> ‘on the table’
	<i>Mari-lla</i> ‘in the possession of Mari’
Elative:	Ablative:
<i>talo-sta</i> ‘from the house’	<i>pöydä-ltä</i> ‘from the table’
	<i>Mari-lta</i> ‘from the possession of Mari’
Illative:	Allative:
<i>talo-on</i> ‘into the house’	<i>pöydä-lle</i> ‘onto the table’
	<i>Mari-lle</i> ‘to the possession of Mari’

The adessive case is purely possessive without directionality, as is shown in (8a). The ablative and allative cases, on the other hand, imply transfer of possession and appear in double object constructions such as the ones in (8b) and (c):

- (8) a. Minu-lla on koira.
 I-ADE is dog
 ‘I have a dog’
- b. Liisa kirjoitti Mati-lle kirjee-n.
 Liisa.NOM wrote Matti-ALL letter-ACC
 ‘Liisa wrote Matti a letter’
- c. Liisa myi Mati-lta talo-n.
 Liisa.NOM sold Matti-ABL house-ACC
 ‘Liisa sold a house from Matti’

From now on, allative case is will be glossed as TO_p (i.e. possessive ‘to’) and ablative case as FROM_p, according to their meanings. The data given in (9) and (10) verify that both the TO and the FROM-applicatives have the c-command and scopal properties of canonical double constructions. In other words, the applied object both c-commands the

direct object (Barss and Lasnik 1986, Larson 1988) and necessarily scopes over it (e.g. Larson 1988, Aoun and Li 1989, Bruening 1999):²

(9) *Applied object c-commands the direct object (variable binding)*

a. TO-applicative

Minä näyti-n jokaise-lle opiskelija-lle hänen arvosana-nsa
I.NOM show-1SG every-TO_P student-TO_P his/her grade-PossCl
'I showed every student their grade'

b. FROM-applicative

Minä keräsi-n jokaise-lta opiskelija-lta hänen lopputyö-nsä
I.NOM collect-1SG every-FROM_P student-FROM_P his/her
final.project-PossCl
'I collected every student's final project from them'
(Lit: 'I collected every student their final project')

(10) *Applied object scopes over the direct object (inverse scope impossible)*

a. TO-applicative: ✓Applied₃ > Direct_v, *Direct_v > Applied₃

Pekka antoi jollekin tytö-lle jokaisen kirja-n.
Pekka.NOM gave some.TO_P girl-TO_P every book-ACC
'Pekka gave some book to every girl' (Kaiser 2000)

b. FROM-applicative: ✓Applied₃ > Direct_v, *Direct_v > Applied₃

Pekka keräsi joltakin tytöltä jokaisen kirja-n.
Pekka.NOM collected some.FROM_P girl-FROM_P every book.ACC
'Pekka collected all the books from some girl'
(Lit: 'Pekka collected some girl all the books')

The proposal then is there are two basic types of applicatives: high applicatives, where Appl is a relation between an event and the applied object, and low applicatives, where Appl is a relation between the direct and the applied objects. In the next section I show how various interactions between transitivity and applicativization follow from this classification.

3 Applicatives and Transitivity

A straightforward prediction of the proposal outlined above is that deriving a low applicative from an unergative should be impossible since the low applicative relation is a relation between the direct object and an applied argument. High applicatives, on the hand, should have no problem combining with an unergative since high applicative heads simply relate

² For a more data and discussion of the c-command and scopal properties of the Finnish double object construction and its PP alternant (whose properties match those of its English correspondent), see Kaiser 2000.

another participant to the event described by the V/RootP. Thus we predict that English and Finnish double object constructions should not be possible from unergatives while Chaga benefactives and Chicheŵa instrumentals should be, and this is what we observe:

(11) *Low applicative from unergatives

- | | |
|-------------------------------|---|
| a. English | b. Finnish |
| *I ran him. ('I ran for him') | *Minä juoksi-n Pekka-lle.
I.NOM ran-1SG Pekka-TO _P
'I ran for Pekka' |

(12) ✓High applicative from unergatives

- | | |
|--|---------------------------------|
| a. Chaga benefactive | |
| N-ǎ-i-zrìc-í-à | mbùyà. |
| FOC-1s-PR-eat-APPL-FV | 9 friend |
| 'He is running for a friend' | (Bresnan and Moshi 1993: 49-50) |
| | |
| b. Chicheŵa instrumental | |
| Msangalatsi a-ku- yend-er-a ndodo. | |
| <i>entertainer SP-PRES-walk-APPL-ASP stick</i> | |
| 'The entertainer is walking with a stick' (Baker 1988: 379, ex 49) | |

Another much discussed applicative asymmetry has to do with the possibility of adding an applied argument to a predicate with an implicit object. Again the prediction of the theory argued for here is clear: since implicit objects cannot be modified, (13), low applicatives should not combine with them. High applicatives, on the other hand, should show no sensitivity to the implicitness or explicitness of the direct object since their meaning makes no reference to it. This, in fact, is how the data pattern:

- (13) a. *I ate raw. (i.e. *I ate something that was raw*)
 b. *I read John's. (i.e. *I read something that was John's*,
 OK only if elliptical)

*Low Applicative with an Implicit Object.

- (14) a. Last night, I baked.
 b. *Last night, I baked him. (i.e. *I baked him something*)

✓High Applicative with an Implicit Object.

- (15) b. ✓Chaga High Applicative with an implicit object
 N-ǎ-í-lyì-í-à m-kà
 FOC-1s-PR-eat-AP-FV 1-wife
 'He is eating for the wife' (Bresnan and Moshi 1993:53)
 c. ✓Chicheŵa Instrumental

mleŋje a-ku-lémb-ér-á nthe ~~ŋ~~nga
 1-hunter 1S-PRES-write-AP-FV 9feather
 ‘The hunter is writing an essay with a feather’
 (Alsina and Mchombo 1993:36)

The core of my proposal then is that from the interpretation of an applicative head we can predict its distribution, i.e., whether it shows sensitivity to the transitivity of the structure it attaches to.³ In the applicative literature, the constructions that are here classified as high applicatives have traditionally been called *symmetric* applicatives and the low applicatives *asymmetric* applicatives (e.g. Baker 1988, Mchombo 1993, Seidl 1999). This terminology describes another applicative asymmetry; namely that with symmetric (i.e. high) applicatives both the applied and the direct object behave as true objects with respect to passivization and other tests, while with asymmetric (i.e. low) applicatives only the applied argument shows a full range of object properties. Since the focus of this paper is transitivity restrictions, I won’t discuss these other asymmetries here. However, for current work on these topics within the present framework, see McGinnis 2000.

The last section of this paper is devoted to showing how the classification of applicative constructions proposed here also accounts for famous transitivity asymmetries between Japanese adversity passives and adversity causatives, which I argue to be applicative constructions.

4 Japanese Adversity Constructions

Japanese has two types of adversity constructions. One is the adversity passive, where the verb occurs with the passive morpheme (*r*)*are*, and the other is the adversity causative, where the verb occurs with the causative morpheme (*s*)*ase* (e.g. Oehrle and Nishio 1981, Miyagawa 1989, Kubo 1992, Kuroda 1979, 1993, Shibatani 1994, Harley 1995). The causative in (16b), is thus ambiguous between the regular causative interpretation shown in (16b,i) and the adversity interpretation in (16b,ii):

- (16) a. Taroo-ga musuko-ni sin-are-ta.
 Taroo-NOM son-DAT die-PASS-PAST
 ‘Taro’s son died on him’ (*adversity passive*)
 b. Taroo-ga musuko-o sin-ase-ta.

³ Previous explanations of the transitivity restrictions of some applicatives have relied on the assumption that unergatives cannot assign case, which, however, is not tenable (e.g. *I ran a mile, I laughed him out of the room*) (Marantz 1984, Baker 1988).

- Taro-NOM son-ACC die-CAUSE-PAST
 (i) 'Taro caused his son to die'
 (ii) 'Taro's son died on him' (adversity causative)

These constructions raise the following questions: (i) what is the source of the affected argument, (ii) what is the relationship between the morphology we see and the meaning we get and (iii) what is the relationship between the adversity passive and the adversity causative.

Starting with (iii), we know that the adversity causative and the adversity passive are not the same structure since the distribution of the adversity causative has well-known restrictions that do not apply to the adversity passive. First, the adversity causative is possible only if there is a possessive-like relation between the affected argument and the direct object while the adversity passive has no such restriction (Oehrle and Nishio 1981). Thus it is impossible to derive an adversity causative from a predicate such as the one in (18), *rain fall*, where the affected participant could not possibly stand in a possessive-like relationship to the object. The corresponding adversity passive is, however, fully grammatical.

(17) *No plausible relationship between affected argument and the object:*

- a. *Adversity Causative
 *Taroo-ga ame-o hur-ase-ta.
 Taroo-NOM rain-ACC fall-CAUSE-PAST
 'Taro was rained on'
- b. ✓Adversity Passive
 Taroo-ga ame-ni hur-are-ta.
 Taroo-NOM rain-DAT fall-PASS-PAST
 'Taro was rained on'

Second, the adversity causative cannot be derived from unergatives, while the adversity passive can (Harley 1995):

(18) *Unergative root:*

- b. *Adversity Causative
 *Taroo-ga musuko-o soba-de sob-ase-ta
 Taroo-NOM son-ACC near-LOC play-CAUSE-PAST
 'Taro was adversely affected by his son playing near by'
- a. ✓Adversity Passive
 Taroo-ga musuko-ni soba-de asob-are-ta
 Taroo-NOM son-DAT near-LOC play-PASS-PAST
 'Taro was adversely affected by his son playing near by'

These distributional differences are our first clue to the structures of the two constructions: the restrictions on the derivation of the adversity causative are exactly the same as the restrictions on the derivation of low applicatives. Hence we can construct examples parallel to the grammatical (16b) and to the ungrammatical (17a) and (18a) with Finnish low from-applicatives:

- (19) a. ✓Unaccusative:
 Minu-lta kuoli poika.
 I-FROM_P died son
 'My son died on me'
- b. *No relationship:
 *Minu-lta satoi lunta.
 I-FROM_P fell snow
 'It snowed on me'
- c. *Unergative:
 *Minu-lta juoksi lapsi.
 I-FROM_P ran child
 'My child ran on me'

My proposal then is that the affected argument of adversity causatives is always introduced by a low applicative head. Adversity passives, on the hand, split into two different structures, as Kubo 1992 also argues. Some of them are high applicatives and others low. The difference between low adversity passives and adversity causatives is that adversity causatives include a causative head scoping over a low applicative structure. Thus Japanese has all of the three structures in (20):

- (20) a. Low adversity construction
 (adversity passive)
-
- b. High adversity construction
 (adversity passive)
-
- c. Adversity causative
-

For reasons of space, the structure in (20a) is motivated here only by the existence of the adversity causative: for the structure in (20c) to be possible, the structure in (20a) must be possible. In other words, causativization

forces a low analysis on an adversity passive.⁴ The structure in (20b) is motivated by the fact that adversity passives can be built on unergatives and that examples such as the one in (17b) are possible. What I haven't shown yet, is semantic evidence for the causativity of the adversity causative.

There are at least three types of evidence pointing to the conclusion that the adversity causative asserts the existence of a causing event while the adversity passive does not. First, the adversity causative combines with a by-phrase naming the causing event while the adversity passive does not:⁵

- (21) a. Taroo-ga sensoo-ni-yotte musuko-o sin-ase-ta
 Taroo-ga war-by son-ACC die-CAUSE-PAST
 'Taro's son was caused to die on him by the war'
- b. *Taroo-ga sensoo-ni-yotte musuko-ni sin-are-ta
 Taroo-ga war-by son-DAT die-PASS-PAST
 'Taro's son died on him by the war'

Second, the adversity passive, but not the adversity causative, is compatible with situations where there is no cause. For example, in a context where Taro's father dies of old age, only the adversity passive is natural:

- (22) a. Taroo-ga titioya-ni sin-are-ta.
 Taro-NOM father-DAT die-PASS-PAST
 'Taro was affected by his father dying'
 Context: Taro's father dies of natural causes.
- b. #Taroo-ga titioya-o sin-ase-ta.
 Taro-NOM father-ACC die-CAUSE-PAST
 'Taro was affected by his father dying'
 Context: Taro's father dies of natural causes.

⁴ For additional diagnostics for forcing the low analysis, see Kubo 1992, and for arguments in favor of an applicative analysis and against the possessor raising that Kubo pursues, Pylkkänen 2000.

⁵ There is, however, one type of by-phrase, namely the *de*-phrase, which combines with adversity passives, but this is irrelevant since the *de*-phrase also combines with unaccusatives and hence does not specify an implicit argument but rather *adds* a cause.

<p><i>Adversity Passive:</i></p> <p>(i) Taroo-ga hune-ni taihuu-de sizum-are-ta. Taro-NOM ship-DAT typhoon-by sink-PASS-PAST 'Taro was affected by the ship sinking due to typhoon'</p>	<p><i>Unaccusative:</i></p> <p>(ii) Yasai-ga ame-de kusatta. vegetable-NOM rain-by rotted 'The vegetable rotted due to the rain'</p>
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Third, the adversity passive combines with a phrase such as *katteni* ‘by itself/on one’s own’, thus patterning with unaccusatives, while the adversity causative does not:

- (23) a. Taroo-ga katteni koronda.
 Taro-NOM by.self fell.down
‘Taro fell down all by himself’
- b. Taroo-ga musuko-ni katteni korob-are-ta
 Taro-NOM son-DAT by.self fall.down-PASS-PAST
‘Taro was affected by his son falling down all by himself’
- c. ??Taroo-ga musuko-o katteni korob-ase-ta
 Taro-NOM son-ACC by.self fall.down-CAUSE-PAST
‘Taro was affected by his son falling down all by himself’

Thus there is evidence that the causative morphology of the adversity causative, in fact, spells out a causative head. No implicit agent is, however, introduced, which is confirmed by the inability of a by-phrase to specify a *participant* of the causing event, rather than the causing event itself.

- (24) *Taroo-ga Hanako-ni-yotte yasai-o kusar-ase-ta
 Taroo-ga Hanako-by vegetable-ACC rot-CAUSE-PAST
‘Taroo was affected by Hanako’s causing the vegetable to rot’

Thus *(s)ase* in the adversity causative introduces a causing event but no external argument, which Pytkäinen 1999 argues to be the universal interpretation of CAUSE on independent grounds (see also Baker and Stewart 1999). The morphology *(r)are*, on the other hand, can be taken as the default spell-out of the verbal category feature of nonactive verbal functional heads.⁶ Both low and high applicative heads are spelled out as *(r)are*, since they are both verbal heads which do not introduce an agent. Since a passive Voice head does not introduce an agent into the syntax either (Kratzer 1994, Embick 1997), it also gets the spell-out *(r)are* but this is all that adversity passives share with “real” passives.⁷

⁶ Here I adopt the Distributed Morphology view that verbs and nouns are structures rather than entities we insert in terminal nodes from the lexicon (Halle and Marantz 1993 and subsequent work).

⁷ The lack of *(r)are* inside *(s)ase* in the adversity causative is here left unaccounted for but I would take this to parallel cases where reflexive morphology, which can also be taken to spell out a nonactive *v*, is deleted under CAUSE. See Marantz 1984, Pesetsky 1995 and Lidz 1999.

5 Conclusion

In this short paper I have argued that universally there are two different types of applicative heads: high applicatives, which denote a relation between an event and an individual, and low applicatives, which denote a relation between two individuals. High applicatives can in principle combine with any constituent that describes an event. Low applicatives, on the other hand, relate an additional participant to the direct object and hence require transitivity from their base predicate. Low applicatives also imply transfer of possession, and therefore do not combine with predicates that are fully static (such as *hold a bag*). In the final section of this paper I showed how this theory not only accounts for contrasts between Chaga and English type applicatives, but also for previously unexplained asymmetries between Japanese adversity passives and adversity causatives.

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