

Unselected OBJECTS in Moro¹

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Moro Language Project
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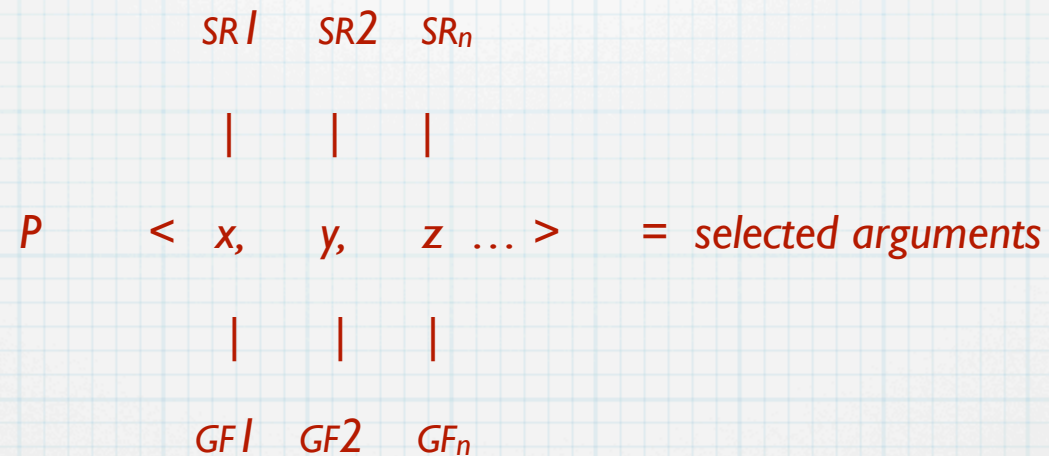
1. This is collaborative research with John Moore. Special thanks are owed to Sharon Rose for her insights and assistance as well as to George Gibbard. We express continued gratitude and appreciation to our consultant Elyasir Julima. Please do not cite or use data without permission from the author(s).

The basic issues

I. Conventional among formal theories to

a) distinguish between arguments and adjuncts;

b) assume a one-to-one mapping between semantic roles and grammatical functions (or equivalents), e.g., FUNCTIONAL UNIQUENESS (or its equivalent).



Previous results

2. Ackerman (2010) and Ackerman and Moore (2011) argue that Thetogovela Moro basic three place predicates and predicates with benefactive applicative and causative valence-increasing extensions,

a) have multiple OBJ arguments and, posit,

b) OBJ* PARAMETER: Universal grammar permits transitive predicates to select for multiple OBJ arguments.

Observation: arguments are selected by predicates, so OBJ status is associated with multiple selected arguments.

Present goals

Argue that evidence from Thetogovela Moro suggests that,

- 1) OBJ* PARAMETER extends to adjuncts,
- 2) adjuncts are not selected by the predicate.
- 3) these are unselected OBJs.
- 2) the argument versus adjunct distinction is less categorical than is often assumed.

Shona Bliss and Storenko on passivization of adjuncts,

Organization

Part 1: The basic patterns and theoretical challenges

Part 2: Verbs and benefactive/recipient constituents

Part 3: Verbs and locative constituents

Part 4: Verbs and instrumental constituents

Part 5: Interactions

Part 5: Moro and syntactic government

Part I: The basic patterns and theoretical challenges

Two common assumptions in formal linguistic theories

(1) **Argument** versus (locative & instrumental) **adjunct** distinction

(2) FUNCTIONAL UNIQUENESS: Each G(rammatical)F(unction), however characterized, is associable with a single argument.

Complement vs. Adjunct distinction: Notional Characterization

The distinction between COMPLEMENTS and ADJUNCTS has a long tradition in grammatical theory, and it is also included in some way or another in most current formal linguistic theories. But it is a highly vexed distinction for several reasons, one of which is that no diagnostic criteria have emerged that will reliably distinguish adjuncts from complements in all cases - too many examples seem to fall into the crack between the two categories, no matter how theorists wrestle with them. Dowty 2003:34

Arguments

Adjuncts

(1) *Mary cuts out paper dolls (with her embroidery scissors for her children on the porch every week-end).*

The intuition behind this classification of schematic participant information contributed by verbs is that the required presence of two schematic participants – and two NPs which express them – is a property of cut. In contrast, the presence of other participants in the situation (and PPs which express them, italicized in sentence (1)) is neither required nor depends on the particular verb the speaker chose. These participants could co-occur with most other verbs. J-P Koenig et. al. 2003:68

Verbal arguments are selected constituents
Verbal adjuncts are unselected constituents

Complement vs. Adjunct distinction: Notional Characterization

Typically cited distinguishing criteria: (adapted from Culicover and Jackendoff 2005:173)

As part of its meaning, a verb specifies a certain number of semantic arguments - entities intrinsically involved in the situation that the verb denotes. Which are semantically obligatory, and which are semantically optional? (i.e., in order for the verb to be selected to express the intended message, is the semantic argument required or not?)

If an argument is semantically present, is it expressed in syntax **obligatorily** or only **optionally**? (i.e., is the argument required in the syntactic context?)

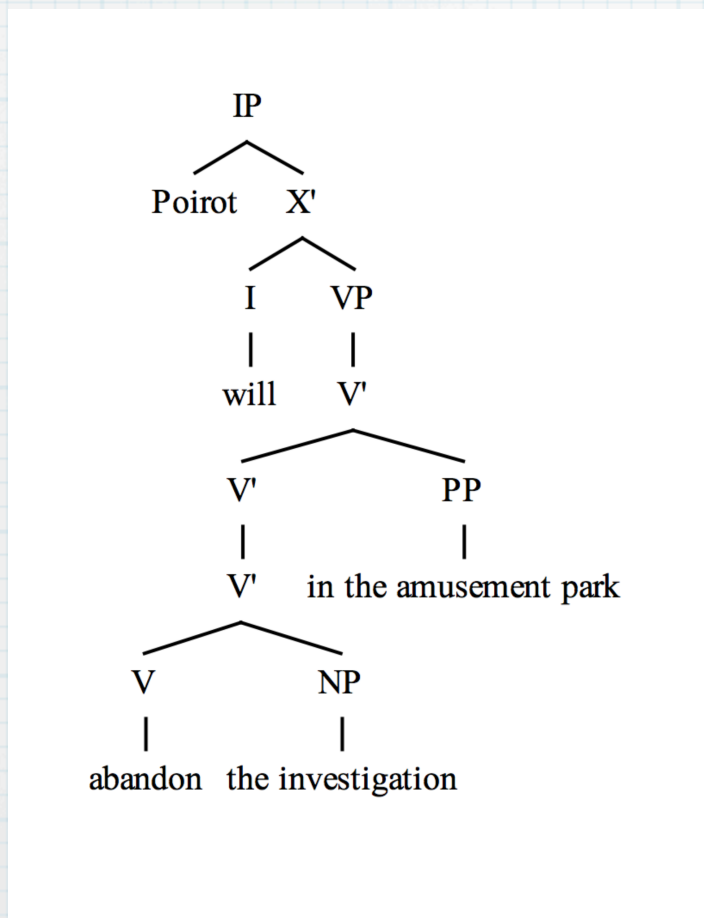
If a semantic argument is expressed syntactically, does the verb have to stipulate anything about its syntactic category, and if so, what?

If a semantic argument is expressed syntactically, does the verb have to stipulate anything about its position and/or morphological form?

Argument vs. Adjunct distinction: Realization

“There is a common and generally unquestioned assumption in much of contemporary linguistics that there is a syntactic distinction between complements (= arguments FA) and adjuncts, and that these two classes of dependents occupy different tree-configurational positions (e.g., sister of X^0 complements vs. sister of X^1 for adjuncts.” Kathol et. al 2011:58.

Configurational encoding I: GF equivalents derived (adapted from Haegeman 1994:139)¹

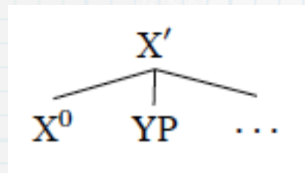


Adjunct

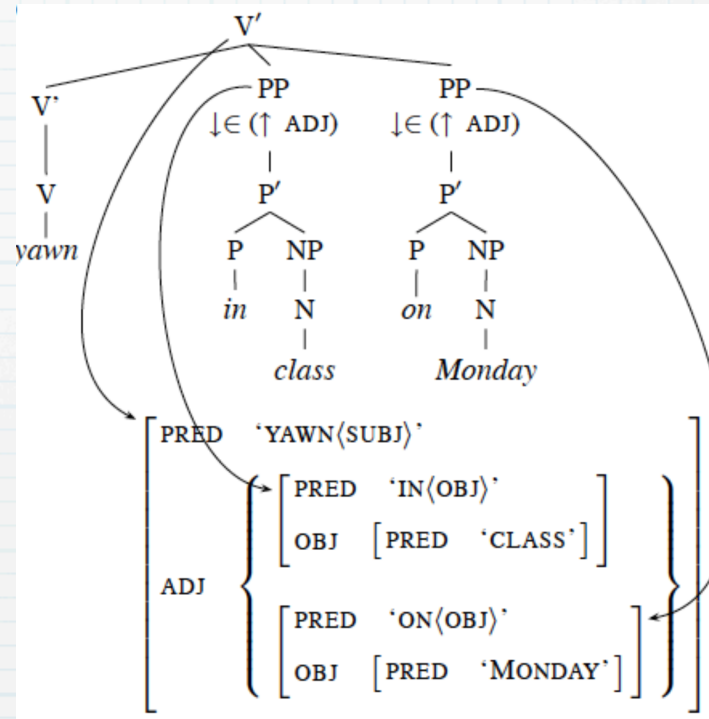
Argument

Argument vs. Adjunct distinction: Realization

Configurational encoding 2: GFs are primitives (or feature bundles)



We further assume that a lexical item of category X^0 is sister to a series of complement and adjunct phrases (YP...) and forms a constituent of category X^0 whose phrasal head is X^0 . Dalrymple 2003

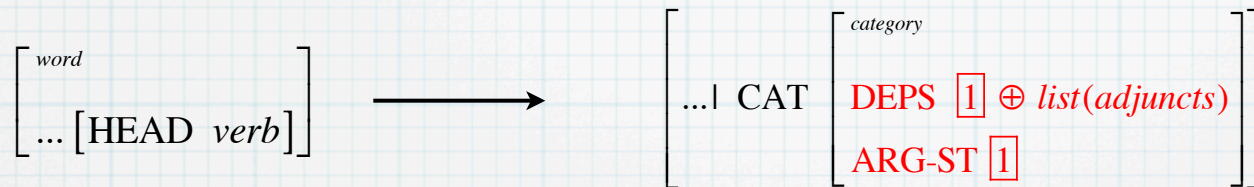


Distinction between argument and adjunct is encoded in F-structures, where a set of multiple adjuncts can be the value of the ADJ attribute.

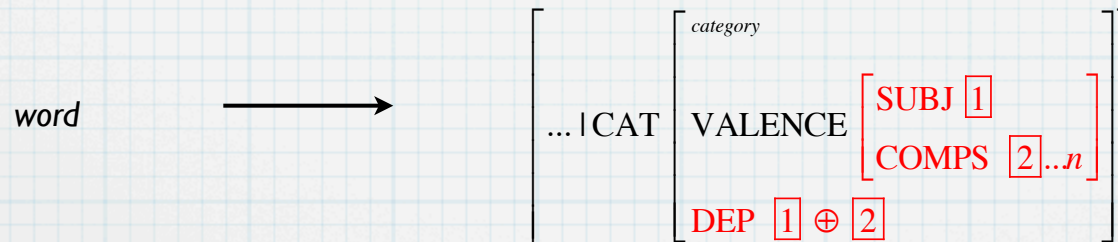
Adjuncts-as-complements approach

“The central idea of all these analyses is that (at least a class of) adjuncts must be added to the verb’s subcategorization frame at the lexical level and are thus indistinguishable from complements in syntax... ARG-STR encodes the “core” argument structure, that is, information about dependents that is more or less idiosyncratically required by the word. This information is eventually mapped into the word’s VALENCE attributes, responsible for the syntactic realization of these dependents.” Kathol et. al. 2011:58.

Argument structure extension:



Argument realization:



This proposal still distinguishes the two types, but permits (subsets of) adjuncts to participate in the same syntactic behaviors as arguments by having the same status as dependents (evidence from...)

Argument vs. Adjunct distinction: Realization

Observations about encoding: (adapted from Sells 2000)

There is no necessary morphological difference between arguments and adjuncts.

The same case markers can mark arguments or adjuncts.

The same adpositions can mark arguments or adjuncts.

No language specifically marks argument/adjunct distinctions, though there may be particular forms (e.g. comitatives) which only ever express adjunct meanings.

Functional Uniqueness

Each **argument** can bear only a single grammatical function or bear a single structural relation to the verb, with every grammatical relation/syntactic role itself restricted to a single appearance in a clause.

- Follows from fundamental Principles or architectures:

STRATAL UNIQUENESS (Relational Grammar)

FUNCTIONAL UNIQUENESS (Lexical Functional Grammar)

UNIFORM THETA ASSIGNMENT HYPOTHESIS / BINARY BRANCHING (P&P/Minimalism)

Where selected arguments intersect with GFs

Grammatical functions can be cross-classified in several different ways. The governable grammatical functions SUBJ, OBJ, OBJ, COMP, XCOMP, and OBL can be subcategorized, or required, by a predicate; these contrast with modifying adjuncts ADJ and XADJ, which are not subcategorizable. Dalrymple 2001:10

Functional uniqueness only applies to arguments.

Crucial on previous accounts that,

(1) arguments are distinct from adjuncts (either reflected in structural configurations or not),

(2) only arguments are associated with governed or selected grammatical functions (either derived configurationally or primitive), and

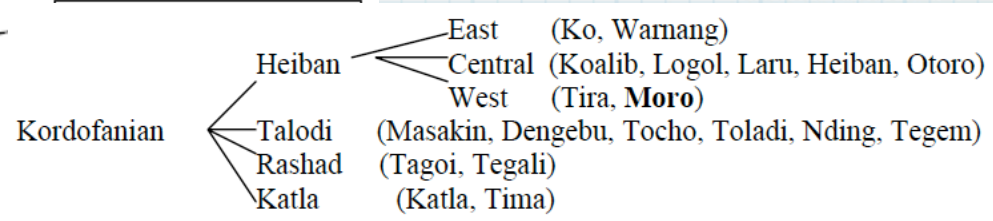
(3) any governed GF (or equivalent) can only be associated with a single argument.

Part 2: Verbs with benefactive/ recipient complements

Part I: The basic patterns and theoretical challenges

Thetogovela Moro

Kordofanian (Niger-Congo) language (West-Central Heiban subgroup), spoken in the Nuba Mountains of Sudan. All data are from the Thetogovela dialect of Moro based on consultation with Elyasir Julima & Ikhlas Elahmer.



Relevant basic grammar properties

Basic Word Order:

SUBJECT PREDICATE OBJECT*

NP_{AG} V {NP_{BEN/REC/CASUEE} NP_{THEME}} NP_{LOC} NP_{INST} (default order)

Partial verbal morphotactics:

{SM_{1ST&2ND-}}CM_{3RD-CLAUSE-}[OM-ASP-ROOT-EXT-ASP/MOOD] MACROSTEM-OM-OM-OM.INST-OM.LOC

Morphotactics:

The position of OM (i.e., before or after verb stem) depends on various conditions, including value of Aspect/Mood, P(erson)/N(umber) of OM and tone

Noun class:

Approximately 24 classes, with singular/plural reflected in prefixes (and suffixes) on nouns and concord markers on agreeing categories such as verbs and adjectives (Gibbard, Rhode, and Rose 2009).

Phonology:

Two tone system (with few lexical minimal pairs) and height harmony (Rose and Jenks 2011)

Monotransitive predicates in Moro

Observations:

Construction Split: (Malchukov et. al. 2007)

- 1) lexical NP_{PATIENT} immediately after the predicate.
- 2) All OMs are pronominals incorporated into the verb

Morphology

- (3) Form of OM does not reflect gender class of nominal, unlike (often) in Bantu.

Object properties: Monotransitive verbs

Simple transitive clause:

1. kúku g-a-ləvətʃ-ó ɲ-ogopájá V NP_{TH}
Kuku CM-MAIN-hide-PFV CM_{PLURAL}-cup
`Kuku hid the cups`

Pronominal objects realized by inflectional markers on verb; these reflect person/number, but not noun class of object; they are in complementary distribution with lexical NPS:

2. kúku g-a-ləvətʃ-ó-lo *(ɲ-ogopájá) V-3PL.OM *(NP_{TH})
Kuku CM-MAIN-hide-PFV CM_{PLURAL}-cup
`Kuku hid them (cups)`

Object arguments can passivize, indicated on the verb by the passive suffix -ən and vowel raising in the stem; the SUBJ is a bare NP and the verb agrees with it in class.

3. ɲ-ogopájá ɲ-ʌ-ləvətʃ-ən-ú
CM_{PLURAL}-cup CM-MAIN-hide-PASS-PFV
`The cups were hidden`

Object properties: Monotransitive verbs

Simple transitive clause with ta NP constituent:

4. $\text{í-g-}\Lambda\text{-bug-ú}$ ðamala ta $\text{órá}\eta$
Isg-CM-MAIN-hit-PFV camel because man
'I hit the camel because of the man'

5. ðamala $\text{ð-}\Lambda\text{-bug-}\Theta\eta\text{-ú}$ ta $\text{órá}\eta$
camel CM-MAIN-hit-PASS-PFV because man
'The camel was hit because of the man'

(i) ta - NP constituents cannot passivize:

(ii) ta - NP constituents do not participate in pronominal incorporation

(iii) ta - NP constituents are adjuncts

(iv) Given contrast between monotransitive OBJ arguments versus ta - NP constituents Moro displays the familiar argument/adjunct distinction.

Object properties: Polytransitive verbs

Simple di-transitive clause: note the semantic role ambiguity among OBJs

6. é-g-a-natʃ-ó óráŋ ŋerá V NP_{θ1} NP_{θ2}
1SG.SM-CM-MAIN-give-PFV man girl
'I gave the man to the girl/girl to the man'

Pronominal incorporation:

7. é-g-a-natʃ-ó-lo ŋerá V-3PL.OM_{θ1} NP_{θ2}
1SG.SM-CM-MAIN-give-PFV-3PL.OM girl
'I gave them to the girl/girl to them'

Passivization:

8. óráŋ g-Λ-nAtʃ-ən-ú ŋerá NP_{θ1} V-PASS-PFV NP_{θ2}
man CM-MAIN-give-PASS-PFV girl
'The man was given to the girl/The girl was given to the man'

Simultaneous expression of OBJ properties associated with *symmetrical* OBJs (Bresnan and Moshi 1990, among others): passivization and OM

9. óráŋ g-Λ-nAtʃ-ən-ú-ŋó NP_{θ1} V-PASS-PFV-3SG._{θ2}
man CM-MAIN-give-pass-PFV.3SG.OM
'The man was given to her/She was given to the man'

Object properties: Beneficiary applicative

Simple intransitive:

10. $\acute{\epsilon}$ -g-alaŋ-ó
1SG.SM-CM-sing-PFV
'I sang'

Dedicated APPL(ICATIVE)_{BEN} marker: -ə́t- and vowel raising in verb stem

11. $\acute{\epsilon}$ -g-ʌʌŋ-ə́t-ú ŋerá V-APPL_{BEN} NP_{BEN}
1SG.SM-CM-give-APPL_{BEN}-PFV girl
'I sang to the girl'

Pronominal incorporation:

12. $\acute{\epsilon}$ -g-ʌʌŋ-ə́t-ú-ŋó V-APPL_{BEN}-3SG.OM
1SG-CM-sing-APPL_{BEN}-PFV-3SG.OM
'I sang to/for her'

Passivization:

13. ŋerá ŋ-ʌʌŋ-ətʃ-ən-ú NP_{BEN} V-APPL_{BEN}-PASS
girl CM-sing-APPL_{BEN}-PASS-PFV
'The girl was sung to/for'

Object properties: Beneficiary applicative

Applicativized transitive:

14. Kuku k-ʌkʌl-t-ɪə ɲera eða $V_{\text{BEN}} \text{ NP}_{\text{BEN}} \text{ NP}_{\text{TH}}$
Kuku CM-cut-APPL_{BEN}-IMPF girl meat
'Kuku is cutting the meat for the girl'

Object properties: Polytransitive verb

Applicativized di-transitive:

Since ditransitive predicates select two objects and applicative constructions add an additional object, the two can be combined to yield a total of three object arguments:

14. $\acute{\iota}$ - g - λ - $n\lambda\delta\zeta$ - $\text{\textcircled{a}}\text{\textcircled{t}}$ - $\acute{\upsilon}$ $al\acute{j}as\acute{a}r$ - o $k\acute{u}ku$ - η $\eta\acute{a}llo$ - η
1 SG.SM-CM-MAIN-give-APPL_{BEN}-PFV Elyasir-ACC Kuku-ACC Ngallo-ACC

Any of the three objects can be aligned with each of the three semantic roles associated with the verb's arguments: theme, goal, and beneficiary:

- a. 'I gave Elyasir to Kuku for Ngallo.'
- b. 'I gave Elyasir to Ngallo for Kuku.'
- c. 'I gave Kuku to Elyasir for Ngallo.'
- d. 'I gave Kuku to Ngallo for Elyasir.'
- e. 'I gave Ngallo to Kuku for Elyasir.'
- f. 'I gave Ngallo to Elyasir for Kuku.'

Summary

The syntactic constituents associated with simple three place predicates show the same syntactic behaviors as the syntactic constituents of beneficiary applicative predicates: they are all arguments.

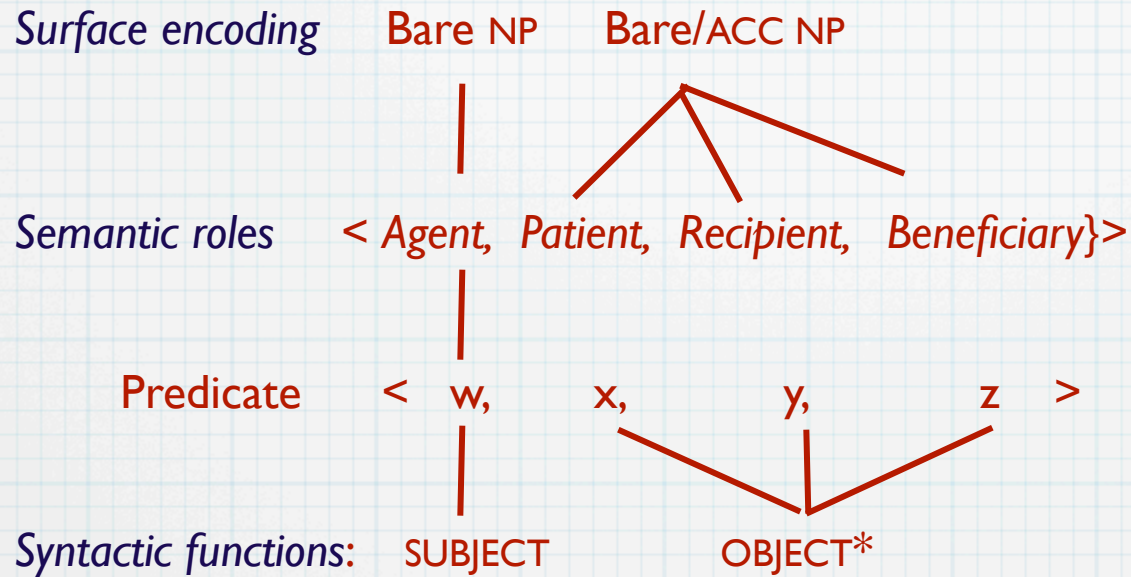
They show usual OBJ behaviors: : pronoun incorporation, passivization, and semantic ambiguity.

Predication formation operations standardly alter verb valence, so that the beneficiary applicative is interpretable as a valence increasing operation that adds an OBJ argument.

Moro beneficiary applicative formation can create predicates with multiple OBJ arguments.

Multiple OBJ arguments

- 1) Account for ambiguity of semantic role interpretation (Duranti 1979 (Haya); Hyman & Duranti (Haya) 1982; Lamoureaux 2004 (Maasai); Haspelmath 2007 (Cape Verdian Creole & Hausa); McKay & Trechsel 2008 (Misantla Totonac); Beck 2006a, 2006b (Upper Necaxa Totonac), among others)
- 2) Account for behaviors indicative of multiple OBJECTS. (Bresnan & Moshi 1990; Alsina 1996; Donohue 1996, 2001; Beck 2006a, 2006b; Kibort 2008, among others)



- Q1: Can other semantic roles share the OBJ function?
- Q2: Can the OBJ function be associated with adjuncts?

Part 3: Verbs and locative constituents

Object properties: locative constituents

Simple three place verb:

15. k-λ-v-ákk-λg-iə eða í-ðódí V NP_{TH} LOC-NP
CM-MAIN-ITR-put-IMPF meat LOC-hole
'He is putting the meat in the hole'

Pronominal incorporation:

16. k-λ-v-ákk-λg-iə-u eða V-IMPF-LOC
CM-MAIN-ITR-put-IMPF-LOC meat
'He is putting the meat in it'

Passivization: Bare NP SUBJ and verb agreement for class of the SUBJ.

17. eða j-λ-v-ákk-λg-ən-iə í-ðódí NP_{TH} V-PASS-IMPF
meat CM-MAIN-ITR-put-PASS-IMPF LOC-hole
'The meat is being put in the hole'

18. ðódiə ð-λ-v-ákk-əg-ən-iə-u eða NP_{LOC} V-PASS-IMPF-LOC
hole CM-MAIN-ITR-put-PASS-IMPF-LOC meat
'The hole is being put the meat into'

Since 'put' is three place predicate, -u does not mark valence increase, but simply registers locative pronoun incorporation, (here ø for 3RDSG inanimates) and passivization of locative argument.

Object properties: locative constituents

Locatives are passivized, rather than topicalized (as argued for some similar Bantu distributions - ref), since they participate in Moro's subject extraction strategy:

19. $\eta^w\acute{\epsilon}'\check{\delta}\acute{\delta}\acute{\iota}\lambda\text{-}\check{\delta}i$ $\check{\delta}\text{-}i\text{-}v\text{-}\acute{\lambda}kk\text{-}\lambda g\text{-}\acute{\epsilon}n\text{-}i\acute{\epsilon}\text{-}u$ $e\check{\delta}a$
CLEFT-hole-CM CM-SUBJ.EX-ITR-put-PASS-IMPF-LOC meat
'This is the hole that was put the meat into'

Simultaneous expression of OBJ properties:

20. $e\check{\delta}a$ $j\text{-}\lambda\text{-}v\text{-}\acute{\lambda}kk\text{-}\lambda g\text{-}\acute{\epsilon}n\text{-}i\acute{\epsilon}\text{-}u$ NP_{TH} V-PASS-LOC
meat CM-MAIN-V-ITR-put-PASS-IMPF-LOC
'The meat is being put in it'

The locative argument exhibits the OBJ behaviors previously demonstrated for theme and beneficiary/recipient arguments: pronominal incorporation, passivization, simultaneous OBJ behaviors for theme and locative.

Object properties: Locative adjuncts?

Simple transitive verb:

21. k-a-kál-á oṭeá (í-lúgi) V NP_{TH} NP_{LOC}
CM-MAIN-cut-IMPF branches LOC-tree.
`He is cutting the branches (from the tree).

Pronominal incorporation:

22. k-a-kál-á-l-u oṭeá V-IMPF-LOC NP_{TH}
CM-MAIN-cut-IMPF-3PL.OM.LOC branches
`He is cutting the branches from it.

Passivization:

23. oṭeá k-λ-kál-n-iə (í-lúgi) NP_{TH} V-PASS (NP_{LOC})
branches CM-MAIN-cut-PASS-IMPF branches
`The branches are being cut (from the tree)

24. lugi l-λ-kál-n-iə-u oṭeá NP_{LOC} V-PASS NP_{TH}
tree CM-MAIN-cut-PASS-IMPF-LOC branches
`The branches are being cut (from the tree)

Despite not being a semantic entailment of e.g., `cut', these locative constituents display the same OBJ properties as locative arguments.

-u registers pronoun incorporation and passivization; -u does increase valence.

Object properties: Locative adjuncts?

41. He is cutting the meat in the tree/beside the tree

ka-kəl-a eða i-lugi/ lugi k^árél

42. eða j-λ-kəl-n-iə í-l-úgi

meat CM-cut-IMPFV in-CM. PLURAL-tree

'The meat is being cut in the trees'

43. lugi l-λ-kəl-n-iə-u/*l-λ-kəl-n-iə-l-u eða

CM. PLURAL -tree CM-cut-PASS-IMPFV-(*3PL.OM-)LOC meat

'The trees are being cut the meat in'

44. lugi l-λ-kəl-n-iə-u eða ék^árél

tree CM-cut-PASS-IMPFV-LOC meat beside

'The trees were cut meat beside'

45. lugi ék^árél l-λ-kəl-n-iə-u eða

tree beside CM-cut-PASS-IMPFV-LOC meat

'The tree was cut meat beside'

-u registers locative pronominalization and passivization, in conjunction with locative applicative: -u is not a valence-increaser, but a marker of various locative semantic relations.

Plural locative SUBJ in passive cannot co-occur with plural pronoun * l-u in (43).

Some adpositions are passivized along with NP, but verb agreement is with the NP.

Locative adjuncts: Semantic ambiguity

25. $\acute{\iota}$ -g- $\acute{\lambda}$ -ss Λ t $\acute{\jmath}$ -i \eth η ndr $\acute{\iota}$ \eth d $\acute{\iota}$ \eth $\acute{\epsilon}$ δ $\acute{\epsilon}$ p $\acute{\epsilon}$ V NP NP on top
ISG-CM-MAIN see-IMPFV bull cow on-top-of
'I see the bull on top of the cow/cow on top of the bull'
26. $\acute{\iota}$ -g- $\acute{\lambda}$ -ss Λ t $\acute{\jmath}$ -i \eth -u η ndr $\acute{\iota}$ $\acute{\epsilon}$ δ $\acute{\epsilon}$ p $\acute{\epsilon}$ V_{LOC} NP on top
SG-CM-MAIN-see-impfV-LOC bull on-top-of
'I see the bull on top of it'
27. η ndr $\acute{\iota}$ η - $\acute{\lambda}$ -ss Λ t $\acute{\jmath}$ -in-i \eth -u \eth d $\acute{\iota}$ \eth $\acute{\epsilon}$ δ $\acute{\epsilon}$ p $\acute{\epsilon}$ NP θ_1 V-PASS-LOC NP θ_2 on top
bull CM-MAIN-see-PASS-IMPFV-LOC cow on-top-of
'the bull is being seen on top of the cow'
'The cow is being seen on top of the bull'
28. η ndr $\acute{\iota}$ η - $\acute{\lambda}$ -ss Λ t $\acute{\jmath}$ -in-i \eth \eth d $\acute{\iota}$ \eth $\acute{\epsilon}$ δ $\acute{\epsilon}$ p $\acute{\epsilon}$ NP_{THEME} V-PASS NP_{LOC} on top
bull CM-MAIN-see-PASS-PFV cow on-top-of
'The bull is being seen on top of the cow'

Ambiguity in active is maintained in the passive when the locative role marker -u is present (27),

when this marker is absent (28), there is no ambiguity: expected, since marks

Locative applicatives

Dedicated APPL(ICATIVE)_{LOC} marker: -áṭ- no vowel raising in verb stem

29. k-a-kǎl-áṭ-a eḏa ugi ékǎrél/ík-úgi
CM-ITR-cut-APPL-IMPF meat tree beside/in-tree

‘He is cutting the meat beside the tree/in the tree’

(Entire activity is located beside/in the tree or the cutting action is directing the meat beside or into the tree)

30.* k-a-kǎl-áṭ-a eḏa
CM-ITR-cut-APPL-IMPF meat

Locative applicative is a valence increaser that adds an obligatory locative argument.

Locative applicative alters the semantics of the base verb: frequently associated with telic aspect.

(A)telic effects

Simple verb: Non-telic

31. k-abə́t^w-a (n-alé̄ṭa/ík-úgi)
CM-climb-IMPF on-wall/loc-tree
`He is climbing (on the wall/in the tree) = he is simply climbing

Pronominal incorporation

32. k-abə́t^w-á-u
CM-climb-IMPF-LOC
`He is climbing on/in it'

Passive:

33. alé̄ṭa j-ʌbətʃ-in-íə-u
wall CM-climb-IMPF-LOC
`the wall is being climbed'

The non-telic variant contains a locative *adjunct*, which displays diagnostic OBJ behaviors.

(A)telic effects

Locative applicative verb: Telic

34. k-abód^w-a_ṯ-a n-aléta
CM-climb-APPL_{LOC}-IMPF on-wall
`He is about to clamber over up the wall/tree'
(He is avoiding danger; his intention is to get over the wall)

Pronominal incorporation:

35. k-abód^w-a_ṯ-iə-u
CM-climb-APPL_{LOC}-IMPF-LOC
`He is about to clamber over it'

Passive:

36. aléta j-Abúdz-Atʃ-in-iə-u
wall CM-climb-APPL_{LOC}-PASS-IMPF-LOC
`The wall is about to be being clamber over'

The telic variant contains a locative *argument* that displays diagnostic OBJ behaviors.

Distribution of locative applicatives

46. k-a-dáŋ-á (ík-úgi/í-ðódí) V NP_{LOC}
CM-MAIN-sit-IMPF LOC-tree/LOC-hole
'He is sitting in the tree/hole'

47. *k-a-dáŋ-át-a ík-úgi *V-APPL_{LOC} NP_{LOC}
CM-MAIN-sit-APPL_{LOC}-IMPF LOC-hole
'He is sitting in the tree'

There are some verbs that cannot take an APPL_{LOC} marker with locative constituents.

48. *g-a-v-áláŋ-a ík-úgi/í-ðódí *V NP_{LOC}
CM-MAIN-v-sing-impf LOC-tree/LOC-hole
'He is singing in the tree'

49. g-a-v-áláŋ-at-a ík-úgi/í-ðódí V-APPL_{LOC} NP_{LOC}
CM-MAIN-v-sing-APPL_{LOC}-IMPF LOC-tree/LOC-hole
'He is singing in the tree/hole'

There are some verbs that must take a APPL_{LOC} marker with locative constituents.

Summary

The syntactic constituents associated with simple three place predicates show the same syntactic behaviors as the syntactic constituents of locative applicative predicates: they are all arguments.

They show usual OBJ behaviors: : pronoun incorporation, passivization, and semantic ambiguity.

Predication formation operations standardly alter verb valence, so that the locative applicative is interpretable as a valence increasing operation that adds an OBJ argument.

Moro locative applicative formation can create predicates with multiple OBJ arguments.

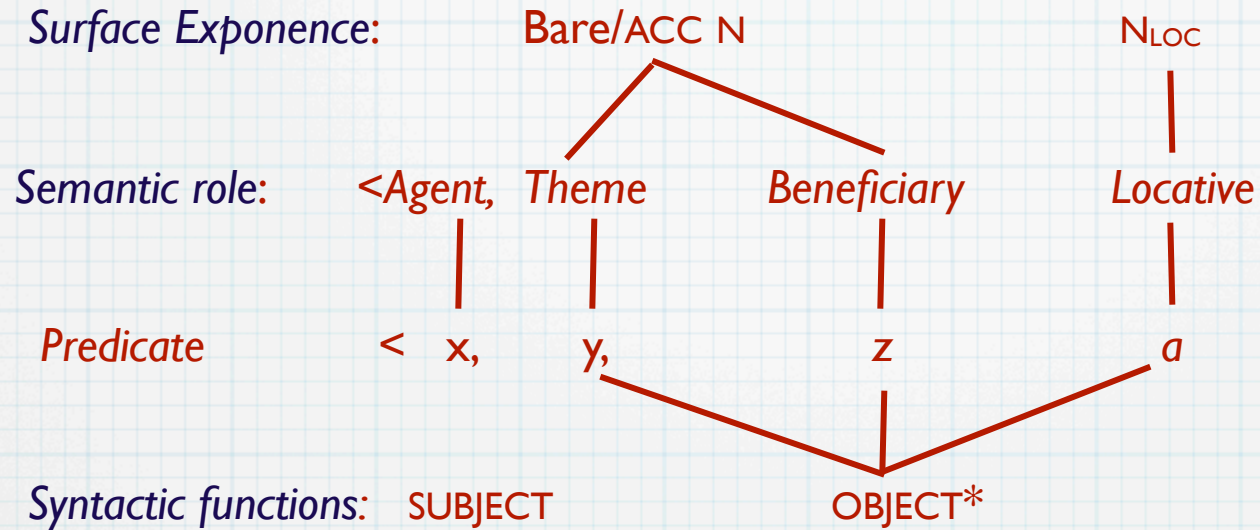
There are telic aspectual contrasts between verbs can occur either with or without locative applicative markers, but their locative constituents behave identically: the constituents co-occurring with simple variants adjuncts?

There are simple verbs that cannot take locative applicative markers, but their locative constituents exhibit all relevant OBJ behaviors: are these adjuncts?

Locative objects

Correspondence Architecture:

Surface Exponence:



I. Proper nouns inflect for ACCUSATIVE case.

Part 4: Verbs and instrumental constituents

Instrumental arguments

54. eða j-Λww-Λ
meat CM-hot-IMPF
'The meat is hot'

55. k-ΛwwΛ ηerá-ηά V NP-CM
CM-hot-IMPF girl-INSTR.CM
'he loves the the girl'

56. k-ΛwwΛ-ηό-ja V-IMP-3SG.OM-INSTR
CM-hot-IMPF-3SG.OM-INSTR
'He loves her'

57. ηerá η-Λβ-ən-iθ-ja
girl CM-hot-PASS-IMPF-INSTR
'the girl is loved'

'hot' governs an instrumental argument in the meaning 'love'.

-ja markers registers the instrumental constituent for pronominalization and passivization (cf. the use of -u for locatives).

The person/number of the pronoun is realized as an OM preceding -ja and modified by it.

Instrumental adjuncts?

58. k-a-kəl-a eđa nd-ərṭə-na V NP NP-CM
CM-MAIN-cut-IMPF meat CM_{PLURAL}-knife-CM
'he is cutting the meat with a knives'

Pronominal incorporation:

59. k-a-kəl-á-li-ja eđa V-IMPF-3PL.OM-INSTR NP
CM-MAIN-cut-IMPF-3PL.OM-INSTR meat
'he is cutting the meat with them'

Passive:

60. eđa j-Λ-kəl-n-iə nd-ərṭə-na
meat CM-MAIN-cut-PASS-IMPF CM_{PLURAL}-knife-CM
'the meat is being cut with the knife'

61. nd-ərṭi n-Λ-kəl-ə́n-iə́-li-ja eđa
CM_{PLURAL}-knife CM-MAIN-cut-PASS-IMPF-INSTR meat
'the knife is being cut the meat with'

*nd-ərṭi *n-Λ-kəl-ə́n-iə́-ja eđa
CM_{PLURAL}-knife CM-MAIN-cut-PASS-IMPF-INSTR meat

-ja registers semantic role instrumental for the instrumental adjunct.

Plural pronoun for plural SUBJ, is evidently obligatory, i.e., contrast between () and () (cf. locative where plural is not permitted with plural)

Summary

There are some predicates that govern instrumental arguments.

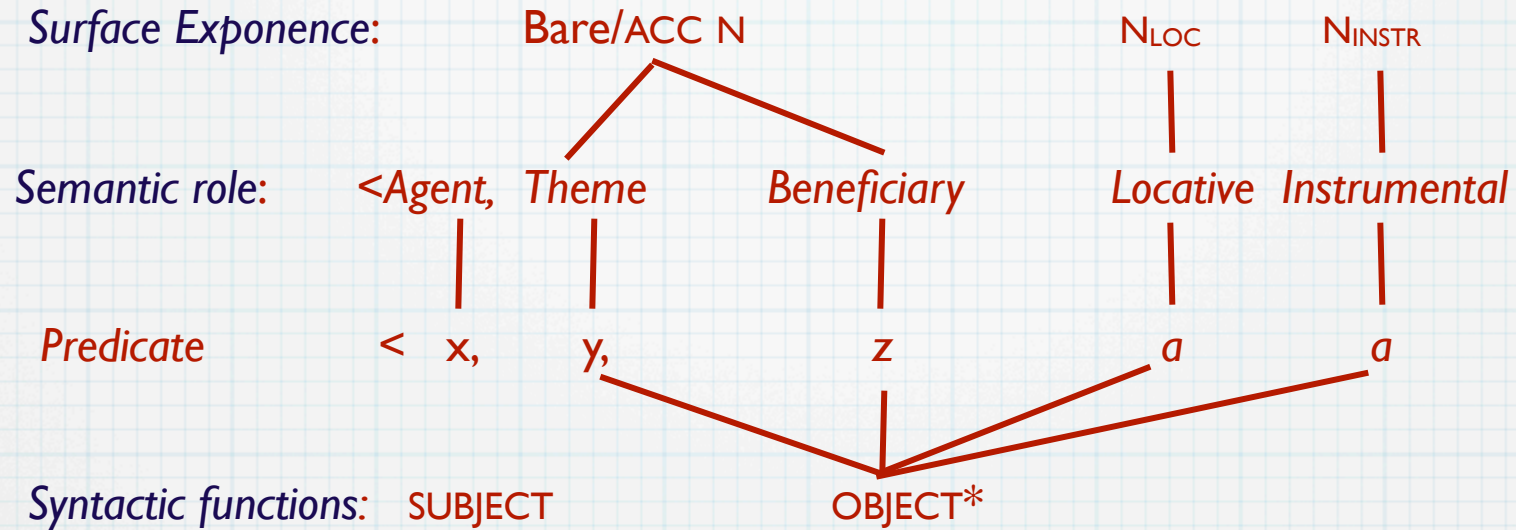
There is no dedicated verbal morphology that add instrumental arguments, so the relevant instrumentals are adjuncts.

All Moro instrumental constituents are objects.

Instrumental objects

Correspondence Architecture:

Surface Exponence:



I. Proper nouns inflect for ACCUSATIVE case.

Part 5: Interactions between OBJs

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62. k-a-ńdr-a (í-r^ədí) (ŋi-vérðia-ŋa) V NP_{LOC} NP_{INSTR}
CM-MAIN-sleep-PFV LOC-crevice blanket-INSTR
'the thief is sleeping in the crevices with the blankets'

63. rdía r-ń-ndr-ən-iə'-u (ŋi-vérðia-ŋa) NP_{LOC} V-PASS-LOC NP_{INSTR}
crevice CM-MAIN-sleep-PASS-IMPFV-LOC blanket-CM.INSTR
'The crevices are being slept in with the blanket'

64. ŋi-vérðia ŋ-ń-ndr-ən-iə-(li)-ja (í-r^ədí) NP_{INSTR} V-PASS-3PL.OM.INSTR NP_{INSTR}
blanket CM-MAIN-sleep-IMPFV-INSTR LOC-crevice optional plural.
'The blankets are being slept with in the crevices'

65. rdía r-ń-ndr-ən-iə-li-já-u NP_{LOC} V-PASS-3PL.OM.INSTR-LOC
crevice CM-MAIN-sleep-PASS-IMPFV-INSTR-LOC
'The crevices are being slept in with the blankets'

66. ŋi-vérðia ŋ-ń-ndr-ən-iə-já-l-u NP_{INSTR} V-PASS-INSTR-LOC
blankets CM.SG-MAIN-sleep-PASS-IMPFV-INSTR-LOC
'The blankets are being slept with in them'

*ŋ-ń-ndr-ən-iə-li-já-l-u

Interactions with APPL_{BEN}

67. $\acute{\iota}$ -g- λ - $\eta\lambda$ -ndr- $\text{\textcircled{t}}$ -i $\text{\textcircled{a}}$ (í-r^ədí) ($\eta\text{\textcircled{a}}\nu\text{\textcircled{e}}\text{\textcircled{r}}\text{\textcircled{d}}\text{\textcircled{i}}$ -la) SUBJ-CM-2SG.OM-MAIN-APPL_{BEN}
 1SG.SM-CM-MAIN-2SGOM-sleep-APPL-IMPV LOC-CM_{PL} CM_{PL}-blankets-CM_{PL}.CM.INST
 ‘I am sleeping for you (in the)’

68. $\acute{\lambda}$ -g- $\acute{\lambda}$ -ndr- $\text{\textcircled{t}}$ -in-i $\text{\textcircled{a}}$ SUBJ-CM-MAIN-APPL_{BEN}-PASS
 2SGSM-CM-MAIN-sleep-APPL-PASS-IMPV
 ‘You are being slept for’

69. $\eta\text{\textcircled{a}}\nu\text{\textcircled{e}}\text{\textcircled{r}}\text{\textcircled{d}}\text{\textcircled{i}}$ η - $\acute{\lambda}$ - $\eta\lambda$ -ndr- $\text{\textcircled{t}}$ -in-i $\text{\textcircled{a}}$ -li-já SUBJ-CM-2SG.OM-MAIN-APPL_{BEN}
 blankets CM-MAIN-2SG-sleep-APPL-PASS-IMPV-INSTR-LOC MUST CONTAIN PLURAL
 ‘The blankets are being slept with for you.’ * η - $\acute{\lambda}$ - $\eta\lambda$ -ndr- $\text{\textcircled{t}}$ -in-i $\text{\textcircled{a}}$ -já

70. $\text{\textcircled{d}}\text{\textcircled{e}}\text{\textcircled{d}}\text{\textcircled{i}}$ $\text{\textcircled{d}}$ - $\acute{\lambda}$ - $\eta\lambda$ -ndr- $\text{\textcircled{t}}$ -in-i $\text{\textcircled{a}}$ -li-já-u³
 hole CM-MAIN-2SG-sleep-APPL-PASS-IMPV-3PL.OM-INSTR-LOC
 ‘The hole is being slept in for you with them’

71. $\acute{\lambda}$ -g- $\acute{\lambda}$ -ndr- $\text{\textcircled{t}}$ -in-i $\text{\textcircled{a}}$ -li-já-u
 2SG-CM-MAIN-sleep-APPL-PASS-IMPV-3PL.OM-INSTR-LOC
 ‘You are being slept for with them in it’

The simultaneous participation of beneficiary, locative, and instrumental in passive and pronominal incorporation indicate that they are all OBJs.

Part 5: Moro and Syntactic Government

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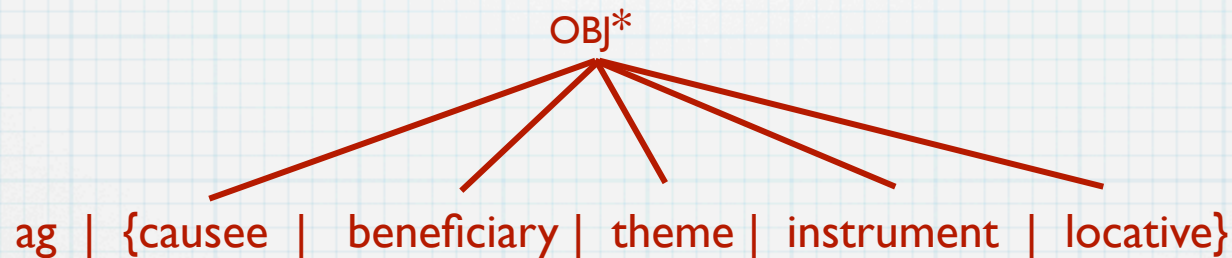
Theotogovela Moro contains:

1. Simple verbs that select for theme, recipient, locative and instrumental arguments.
2. Two types of applied verbs:
 - (i) APPL_{BEN} adds a beneficiary/recipient argument
 - (ii) APPL_{LOC} adds a locative argument.
3. Simple verbs that can co-occur with locative and instrumental adjuncts.
4. All of these semantic relations display OBJ properties:
 - (i) pronominal incorporation
 - (ii) passive
 - (iii) semantic ambiguity.
5. Moro verbs display dedicated locative (-u) and instrumental (-ja) semantic markers for pronominal incorporation and passive.
6. Usual theoretical distinction, as well as formal ways to distinguish between argument and adjunct seems irrelevant, except for ta NP.

OBJ* and Semantic roles

OBJ* PARAMETER: Universal grammar permits predicates to occur with multiple OBJ arguments and this leads to a potential cross-linguistic typology of grammatical function realization – from multiple objects to a single object.

Function Expression Continuum: With respect to the grammatical function expression of semantic roles, languages range from less restrictive, where multiple OBJs are permitted, to more restrictive where they are sometimes permitted, to most restrictive, where they must always be distinct (Functional Uniqueness).



Contrary to usual theoretical assumptions the argument/adjunct bifurcation seems largely irrelevant to Moro syntax with respect to OBJ assignment:

- (i) OBJ can be associated with a presumptive argument or adjunct,
- (ii) OBJ can be associated simulatenously with multiple presumptive argument or adjuncts.