

Optionally obligatory object marking in Tigrinya

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1 Background on Tigrinya

1.1 Ethnographic

- **Classification.** Tigrinya is an Ethio-Semitic language in the Afro-Asiatic branch. It is closely related to Tigré and Amharic and more distantly to Arabic and Hebrew.
- **Population.** There are approximately 7 million speakers world-wide. Tigrinya is not currently endangered.
- **Distribution.** Tigrinya is spoken predominantly in central highland Eritrea and the Tigray region of Northern Ethiopia on the Horn of Africa. Large immigrant populations exist world-wide.

1.2 Basic Verbal Morphosyntax

- **Nonconcatenative Root Morphology.** Tri-consonantal roots with a base meaning acquire their category and TAM information through transfixes vowel templates

(1) *Gerundive verb form*
səbir-u
GER.break-S.3MS
'It broke.'

(2) *Perfect verb form*
səbər-ə
PRF.break-S.3MS
'It had broken.'

- **Agglutinating Synthetic Morphology.** Verbs commonly carry morphology marking finiteness, valency alternations, and agreement with the subject, objects, and applied arguments.

(3) Yonas n-ət-a t'irmuz səbir-u-wa
Yonas N-that-FS bottle GER.break-S.3MS-O.3FS
'Yonas broke the bottle.'

(Nazareth 2011:56, (55a))

(4) ?ət-a t'irmuz tə-səbir-a
that-FS bottle DT-GER.break-S.3FS
'The bottle broke.'

(Nazareth 2011:56, (55b))

- **Basic Word Order.** The default word order is SOV with a strongly head final verbal domain.

- **Prepositions.** Adpositions precede their nominal complements.

(5) ?ət-i məmħir n-ət-a mətshaf **bi**-biro tsihif-u-wa
that-MS teacher N-that-FS book by-pen GER.write-S.3MS-O.3FS
'The teacher wrote the book with a pen.'

(adapted from Nazareth 2011:187, (189a))

- **Nominative-Accusative Alignment.** Subjects of transitive and intransitive predicates are morphologically aligned.

1.3 Differential Object Marking

- **The Prefix *N*.** Object DPs may surface with the prefix [n(i)-], identified as case in recent literature on Tigrinya (Weldeyesus 2004, Nazareth 2007, 2011, Kievit & Kievit 2009).

- (6) ?it-i səbaj **n**-ət-a dəbdabe tsihif-u-wa
 that-MS man N-that-FS letter GER.write-S.3MS-O.3FS
 ‘The man wrote the letter.’

- **Differential Object Marker (DOM).** *N* is descriptively a differential object marker (e.g., Aissen 2003). It obligatorily appears on definite DPs, including definite descriptions, proper names, pronouns.

- **DOM Indefinites.** *N* on quantified DPs provides a specific (i.e., epistemically familiar) interpretation.

- (7) **ni**-hadə səbaj ki-ħigiz-ə-ni hatit-ə-jo
 N-one.M man INFIN-IMPRF.help-S.3MS-O.1S PRF.ask-S.1S-O.3MS
 ‘I asked a certain man to help me.’ (adapted from Nazareth 2007:9, (4a))

N cannot appear on a bare nominal Theme regardless of the interpretation.

- (8) *?it-i səbaj **ni**-dəbdabe tsihif-u-wa
 that-MS man N-letter GER.write-S.3MS-O.3FS
 ‘The man wrote a (certain) letter.’

- **DOM and Object Shift.** Object with DOM undergo Object Shift.

- (9) ?it-i səbaj [**n**-ət-a dəbdabe]₁ sənuj x₁ tsihif-u-wa
 that-MS man N-that-FS letter Monday write-GER-S.3MS-O.3FS
 ‘The man wrote the letter on Monday.’

1.4 Verbal Object Marking

- **Cross-referencing with Object Marking (OM).** Objects of transitive predicates with DOM are obligatorily cross-referenced by OM.

- (10) a. ?it-i səbaj **n**-ət-a dəbdabe tsihif-u-**wa**
 that-MS man N-that-FS letter GER.write-S.3MS-O.3FS
 ‘The man wrote the letter.’
 b. *?it-i səbaj **n**-ət-a dəbdabe tsihif-u
 that-MS man N-that-FS letter GER.write-S.3MS
 ‘The man wrote the letter.’

Objects of transitive predicates without DOM cannot be cross-referenced by OM.

- (11) a. *?it-i səbaj dəbdabe tsihif-u-**wa**
 that-MS man letter GER.write-S.3MS-O.3FS
 ‘The man wrote a letter.’
 b. ?it-i səbaj dəbdabe tsihif-u
 that-MS man letter GER.write-S.3MS
 ‘The man wrote a letter.’

- **Uniqueness.** Only one object per clause can be cross-referenced by OM, regardless of order.

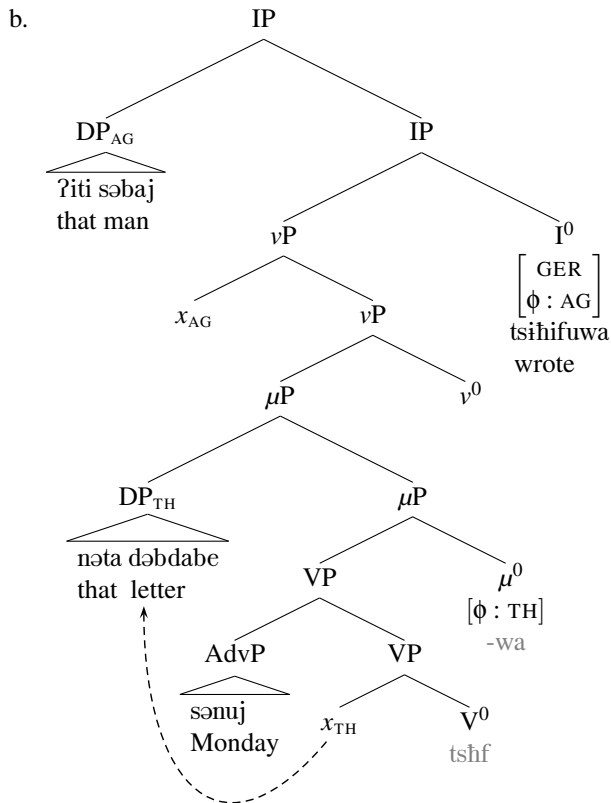
- (12) a. *ʔit-i g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-ta-to
 that-FS girl N-that-FS letter N-that-MS boy give-GER-S.3FS-O.3FS-O.3MS
 ‘The girl gave the boy the letter.’
- b. *ʔit-i g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-to-ta
 that-FS girl N-that-FS letter N-that-MS boy give-GER-S.3FS-O.3MS-O.3FS
 ‘The girl gave the boy the letter.’

- **Restricted Affixation.** The OM morpheme is realized only on the verb and cannot be realized on auxiliaries.

- (13) a. ʔit-i səbʔaj n-ət-a dəbdabe tsihif-u-wa ʔal-o
 that-MS man-s N-that-FS letter write-GER-S.3MS-O.3FS Aux-S.3MS
 ‘The man has written the letter.’
- b. *ʔit-i səbʔaj n-ət-a dəbdabe tsihif-u-wa ʔal-o-wa
 that-MS man-s N-that-FS letter write-GER-S.3MS-O.3MS Aux-S.3MS-O.3FS
 ‘The man has written the letter.’

- **Agreement.** OM is the obligatory realization of the AGREE relationship established between a verbal functional head μ^0 that probes for a DP and triggers Object Shift (e.g., Chomsky 2001).

- (14) a. ʔit-i səbʔaj [n-ət-a dəbdabe]₁ sənuj x₁ tsihif-u-wa
 that-MS man N-that-FS letter Monday write-GER-S.3MS-O.3FS
 ‘The man wrote the letter on Monday.’



2 Setting up the Puzzle

2.1 The Issue: (A)symmetrical Objects

- **Bantu (A)symmetricality.** Bantu languages famously come in two flavors on the basis of the behavior of objects in ditransitive constructions (e.g., Bresnan & Moshi 1990, van der Wal 2018).
- **Asymmetrical Object Languages.** Only the Goal/Recipient argument of ditransitive predicates can surface as an OM on the verb.

(15) *Swahili asymmetric object marking*

- a. A-li-**m**-pa kitabu
S.1-PAST-O.1-give 7.book
'She gave him a book.'
- b. *A-li-**ki**-pa Juma
S.1-PAST-O.7-give 1.Juma
'She gave it to Juma.'

(van der Wal 2018:123, (18))

- **Symmetrical Object Languages.** Either of the internal arguments of ditransitive predicates can surface as an OM on the verb.

(16) *KiLuguru symmetric object marking*

- a. Chibua ko-**w**-eng'-a iwana ipfitabu
1.Chibua S.1-O.2-give-FV 2.children 8.books
'Chibua is giving children books.'
- b. Chibua ko-**pf**-eng'-a iwana ipfitabu
1.Chibua S.1-O.8-give-FV 2.children 8.books
'Chibua is giving children books.'

(van der Wal 2018:122, (15))

2.2 The Empirical Domain: Tigrinya Ditransitives

- **Apparent Symmetry in Tigrinya.** When the conditions for OM are met by both arguments, either the Goal or Theme can be cross-referenced by OM.
- **Cross-referenced Goal.** OM is able to cross-reference the **Goal** of lexically ditransitive predicates.

- (17) ?it-a g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-**to**
that-FS girl N-that-FS letter N-that-MS boy GER.give-S.3FS-O.3MS
'The girl gave the letter to the boy.'

- **Cross-referenced Theme.** OM is able to cross-reference the **Theme** of lexically ditransitive predicates.

- (18) ?it-i g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-**ta**
that-FS girl N-that-FS letter N-that-MS boy GER.give-S.3FS-O.3FS
'The girl gave the boy the letter.'

- **Superficially Symmetrical.** With respect to the distribution of OM Tigrinya superficially behaves like a symmetrical object language.

2.3 The Puzzle: Unexpected Optionality in Ditransitives

- **Optional Object Marking of Ditransitive Goal.** When only the conditions for cross-referencing the **Goal** with OM are met, it is *optionally* cross-referenced by OM.

- (19) a. ʔit-a g^wal n-ət-i wədi dəbdabe hib-a-to
that-FS girl N-that-MS boy letter GER.give-S.3FS-O.3MS
‘The girl gave the boy a letter.’
- b. ʔit-a g^wal n-ət-i wədi dəbdabe hib-a
that-FS girl N-that-MS boy letter GER.give-S.3FS
‘The girl gave a letter to the boy.’

- **Obligatory Object Marking of Ditransitive Theme.** When only the conditions for cross-referencing the **Theme** with OM are met, it is *obligatorily* cross-referenced by OM.

- (20) a. ʔit-i g^wal n-ət-a dəbdabe n-wədi hib-a-ta
that-FS girl N-that-FS letter N-boy GER.give-S.3FS-O.3FS
‘The girl gave the letter to a boy.’
- b. *ʔit-i g^wal n-ət-a dəbdabe n-wədi hib-a
that-FS girl N-that-FS letter N-boy GER.give-S.3FS
‘The girl gave the letter to a boy.’

- **The Question.** Why does otherwise obligatory OM become optional on Goals in lexical ditransitive constructions?

2.4 The Idea: Masked Asymmetry

- **Tigrinya is Asymmetric.** The apparent optionality betrays the availability of two asymmetric ditransitive frames.
- **The Status of the Goal.** The goal varies across the two argument structures as a direct or indirect argument.
- **OM is Obligatory.** μ^0 obligatorily probes and realizes the ϕ -features of the highest *direct* argument.

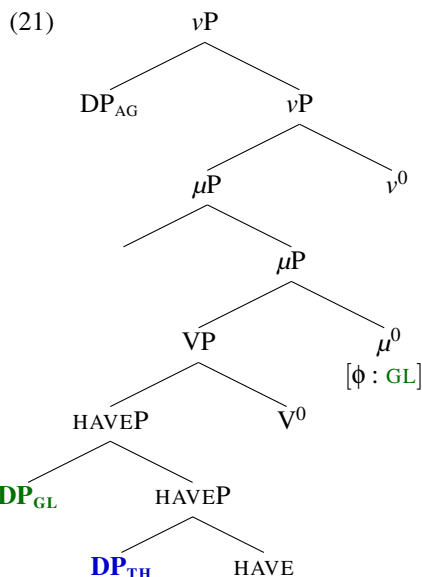
- **The Answer.** Obligatory OM cross-references the Goal as a function of the “choice” between the two ditransitive frames.

3 Hidden Argument Structure Alternations

3.1 Asymmetric Ditransitive Frames

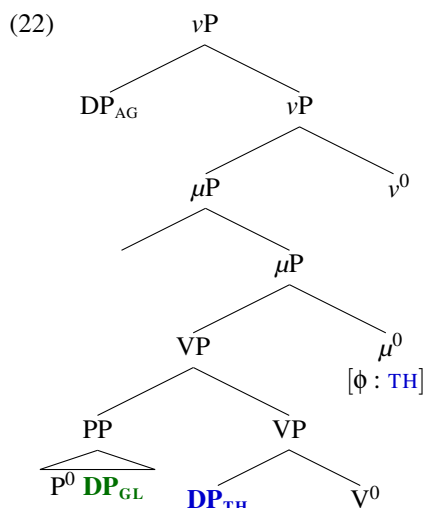
- **Multiple Ns.** The two ditransitive frames are masked by a surface ambiguity of the *N*-marker.
 - *Differential Object Marker.* The *N*-marker is DOM on direct arguments (N_K).
 - *Preposition.* The *N*-marker is a preposition introducing indirect arguments (N_P).

- **Double-Object Construction.** The verb embeds a small clause with possessive semantics (Green 1974, Kayne 1984, Beck & Johnson 2004).



- N -marking is DOM (N_K) on the Goal and Theme.
- The Goal and Theme arguments are both direct arguments.
- The Goal, as the highest direct argument, is probed first by μ .
- The Goal is cross-referenced by OM.

- **PP-Object Construction.** The verb takes the DP-Theme and PP-Goal as arguments (Miyagawa & Tsujioka 2004).



- N -marking is a preposition (N_P) on the Goal and DOM (N_K) on the Theme.
- The Goal is an indirect argument and the Theme is a direct argument.
- The Theme, as the highest direct argument, is probed by μ .
- The Theme is cross-referenced by OM.

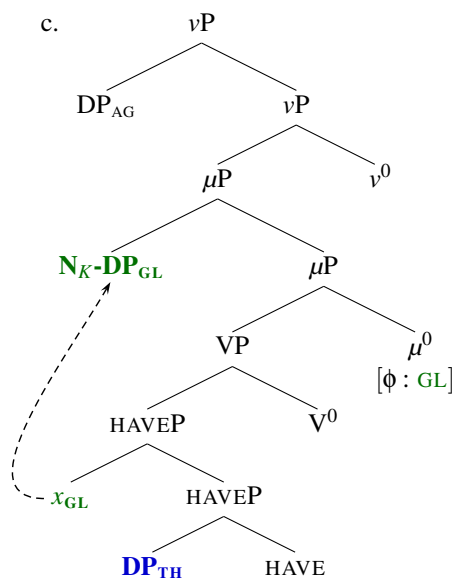
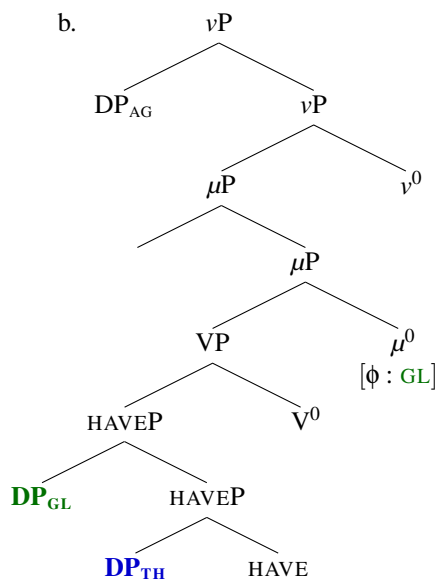
3.2 Predicting OM Patterns

- **Apparent Optionality of the Goal.** Whether the Goal is cross-referenced by OM is a function of the underlying argument structure.

- (23) a. ?it-a g^wal n-ət-i wədi dəbdabe hib-a-to
 that-FS girl N-that-MS boy letter GER.give-S.3FS-O.3MS
 ‘The girl gave the boy a letter.’
- b. ?it-a g^wal n-ət-i wədi dəbdabe hib-a
 that-FS girl N-that-MS boy letter GER.give-S.3FS
 ‘The girl gave a letter to the boy.’

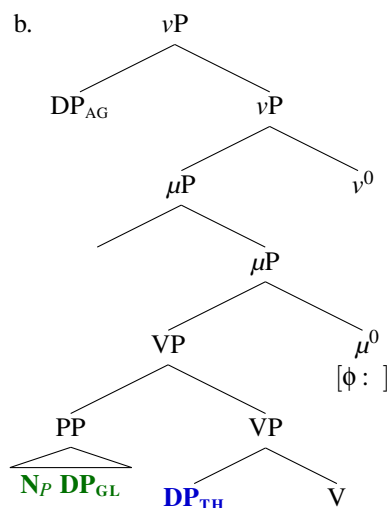
- *Cross-referencing the Goal*. The Goal is the highest direct argument in the double-object frame and will be probed by μ^0 .

- (24) a. ʔit-a g^wal n-ət-i wədi dəbdabe hib-a-to
 that-FS girl N_K-that-MS boy letter GER.give-S.3FS-O.3MS
 ‘The girl gave the boy a letter.’



- *Not Cross-referencing the Goal*. The Goal is an indirect argument in the PP-object frame and will not be probed by μ^0 .

- (25) a. ʔit-a g^wal n-ət-i wədi dəbdabe hib-a
 that-FS girl N_P-that-MS boy letter GER.give-S.3FS
 ‘The girl gave a letter to the boy.’



- **Obligation of the Theme.** The Theme can only be cross-referenced in the PP-object configuration, in which case it will always be the highest direct argument.

- (26) a. ʔit-i g^{wal} n-ət-a dəbdabe n-wədi hib-a-ta
 that-FS girl N-that-FS letter N-boy GER.give-S.3FS-O.3FS
 ‘The girl gave the letter to a boy.’
- b. * ʔit-i g^{wal} n-ət-a dəbdabe n-wədi hib-a
 that-FS girl N-that-FS letter N-boy GER.give-S.3FS
 ‘The girl gave the letter to a boy.’

- *Cross-referencing the Theme.* The Theme is the highest direct argument in the PP-object frame and will be probed by μ^0 .

- (27) a. ʔit-i g^{wal} n-ət-a dəbdabe n-wədi hib-a-ta
 that-FS girl N_K -that-FS letter N_P -boy GER.give-S.3FS-O.3FS
 ‘The girl gave the letter to a boy.’
- b.
- c.

- *Not Cross-referencing the Goal.* OM is obligatory realized on μ^0 when possible.

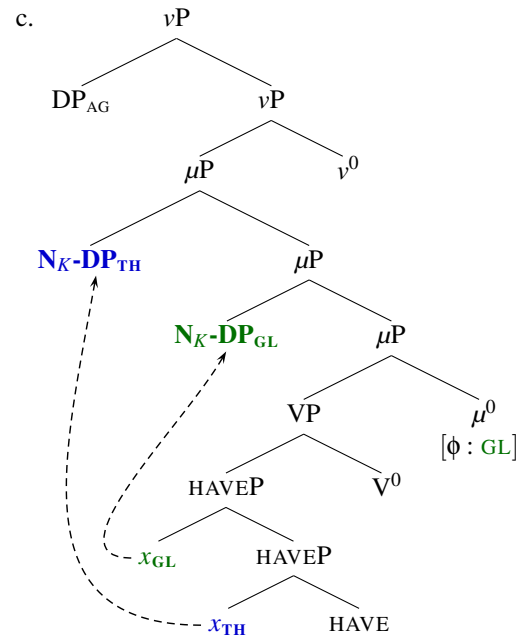
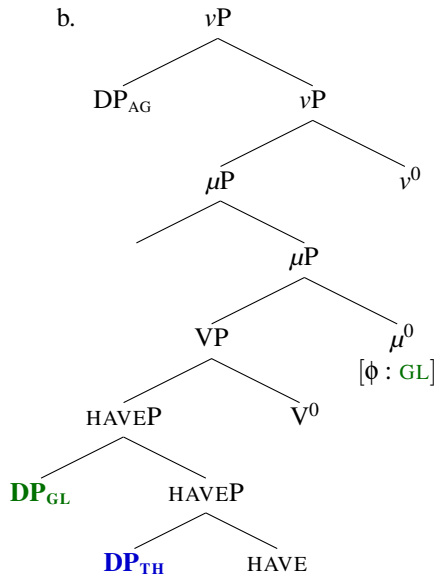
- (28) * ʔit-i g^{wal} n-ət-a dəbdabe n-wədi hib-a
 that-FS girl N_K -that-FS letter N_P -boy GER.give-S.3FS
 ‘The girl gave the letter to a boy.’

- **Optionality between the Goal and the Theme.** Which argument is cross-referenced by OM is a function of the underlying argument structure.

- (29) a. ʔit-a g^{wal} n-ət-a dəbdabe n-ət-i wədi hib-a-to
 that-FS girl N-that-FS letter N-that-MS boy GER.give-S.3FS-O.3MS
 ‘The girl gave the letter to the boy.’
- b. ʔit-i g^{wal} n-ət-a dəbdabe n-ət-i wədi hib-a-ta
 that-FS girl N-that-FS letter N-that-MS boy GER.give-S.3FS-O.3FS
 ‘The girl gave the boy the letter.’

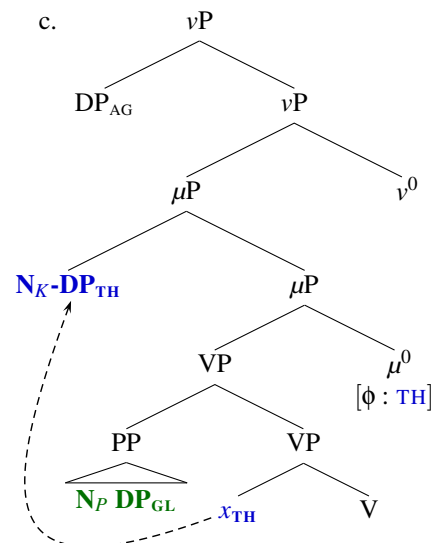
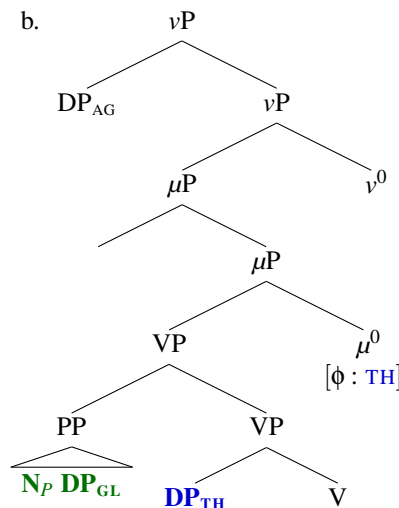
- *Cross-referencing the Goal*. The Goal is the highest direct argument in the double-object construction and will be probed first by μ^0 .

- (30) a. ʔit-a g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-to
 that-FS girl N_K-that-FS letter N_K-that-MS boy GER.give-S.3FS-O.3MS
 ‘The girl gave the letter to the boy.’



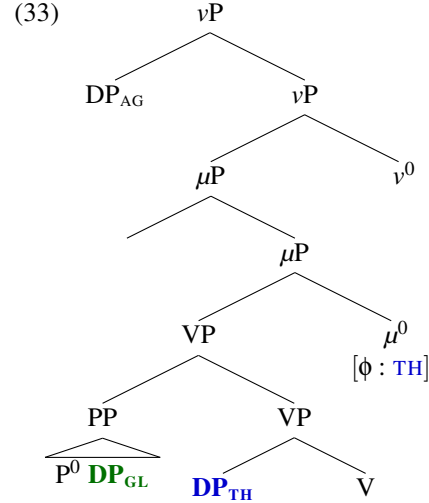
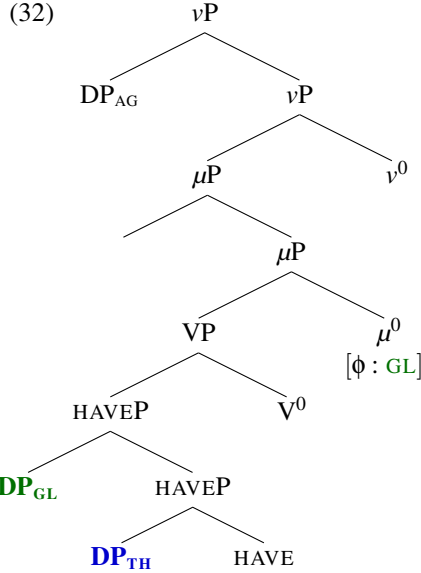
- *Cross-referencing the Theme*. The Theme is the highest direct argument in the PP-object construction and will be probed by μ^0 .

- (31) a. ʔit-i g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-ta
 that-FS girl N_K-that-FS letter N_P-that-MS boy GER.give-S.3FS-O.3FS
 ‘The girl gave the boy the letter.’



4 Structure Sensitive Predictions

- **Asymmetries Predicted.** This analysis correctly predicts interpretive and structural asymmetries that correlate with the observed OM pattern.



4.1 Goal-Marking Gates Theme-Marking

- **A Prediction.** The Theme cannot be *N*-marked and cross-referenced by OM unless the Goal is *N*-marked.
- **Demoting the Goal.** *N*-marking the Goal ensures it can be generated as an indirect PP argument.

- (34) a. ?it-i g^wal n-ət-a dəbdabe n-ət-i wədi hib-a-ta
 that-FS girl N_K-that-FS letter N_P-that-MS boy GER.give-S.3FS-O.3FS
 ‘The girl gave the boy the letter.’
- b. * ?it-a g^wal n-ət-a dəbdabe wədi hib-a-ta
 that-FS girl N_K-that-FS letter boy GER.give-S.3FS-O.3FS
 ‘The girl gave a boy the letter.’

4.2 Goal Specificity

- **A Prediction.** Only a Goal that is not cross-referenced by OM can be either definite or indefinite.
- **P⁰ and Non-specificity.** A Goal that is not cross-referenced by OM is *N*-marked by a preposition, which does not enforce definiteness/specificity constraints.

- (35) a. ?it-a g^wal n-ət-i wədi dəbdabe hib-a
 that-FS girl N_P-that-MS boy letter GER.give-S.3FS
 ‘The girl gave a letter to the boy.’
- b. ?it-a g^wal ni-wədi dəbdabe hib-a
 that-FS girl N_P-boy letter GER.give-S.3FS
 ‘The girl gave a letter to a boy.’

- **DOM and Definiteness.** A Goal that is cross-referenced by OM is necessarily *N*-marked with DOM, which enforces definiteness/specificity constraints.

- (36) a. ʔit-a g^wal n-ət-i wədi dəbdabe hib-a-to
that-FS girl N_K-that-MS boy letter GER.give-S.3FS-O.3MS
‘The girl gave the boy a letter.’
- b. *ʔit-a g^wal ni-wədi dəbdabe hib-a-to
that-FS girl N_K-boy letter GER.give-S.3FS-O.3MS
‘The girl gave a (certain) boy a letter.’

4.3 The CAUSE-HAVE Interpretation

- **Interpretive Asymmetry.** The English double-object constructions has a possessive component to its meaning that is not necessarily found in the PP-object construction (Green 1974, Beck & Johnson 2004).

- (37) *English PP-object construction*
- a. Sam sent the letters to Kim.
- b. Sam sent the letters to Minneapolis.

- (38) *English double-object construction*
- a. Sam sent Kim the letters.
- b. # Sam sent Minneapolis the letters.

- **A Prediction.** If the OM pattern betrays the proposed asymmetrical ditransitive constructions, an inanimate Goal cross-referenced by OM should be infelicitous.
- **CAUSE-HAVE in Tigrinya.** Inanimate Goals that are cross-referenced by OM lead to infelicity.

- (39) a. ʔit-a g^wal ni-ʔasməra dəbdabe sədid-a
that-FS girl N_P-Asmara letter GER.send-S.3FS
‘The girl sent a letter to Asmara.’ (No OM; PP-object frame)
- b. # ʔit-a g^wal ni-ʔasməra dəbdabe sədid-a-ta
that-FS girl N_K-Asmara letter GER.send-S.3FS-O.3FS
Literally: ‘The girl sent Asmara a letter.’ (Goal OM; Double-object frame)
- (40) a. ʔit-a g^wal n-ət-ən dəbdabe ni-ʔasməra sədid-a-tən
that-FS girl N_K-that-FP letter N_P-Asmara GER.send-S.3FS-O.3FP
‘The girl sent the letters to Asmara.’ (Theme OM; PP-object frame)
- b. # ʔit-a g^wal n-ət-ən dəbdabe ni-ʔasməra sədid-a-ta
that-FS girl N_K-that-FP letter N_K-Asmara GER.send-S.3FS-O.3FS
Literally: ‘The girl sent Asmara the letter.’ (Goal OM; Double-object frame)

- **HAVEP.** The asymmetry can be understood as an effect of the semantic contribution of the small clause headed by HAVE⁰ in the double-object frame of both languages.

4.4 Condition A

- **Binding Asymmetry.** The Goal c-commands the Theme in the English double-object construction, but not in the PP-object construction (Barss & Lasnik 1986).

- (41) a. Tom gave Sue₁ the pictures of herself₁.
 b. * Tom gave the pictures of herself₁ to Sue₁.

- **A Prediction.** If the OM pattern betrays the proposed asymmetrical ditransitive constructions, the Goal will not c-command the Theme when the Theme is cross-referenced by OM.

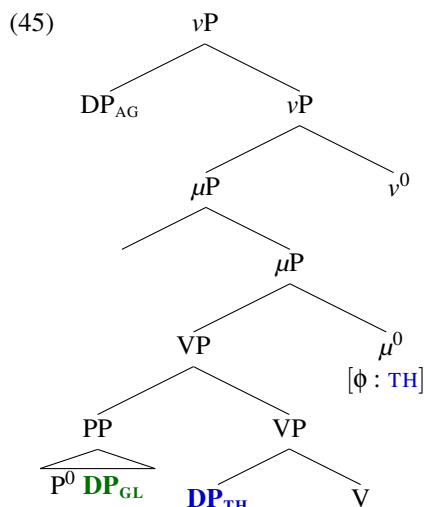
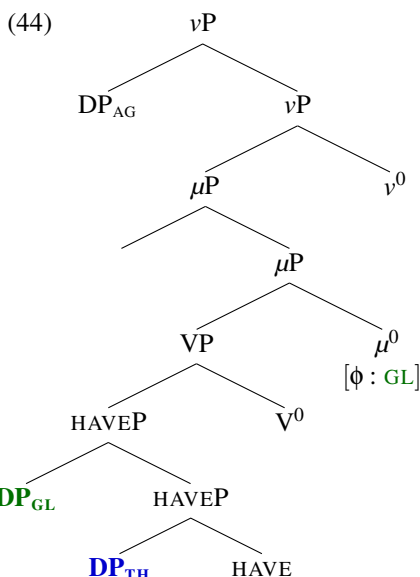
- **Condition A as a Function of OM.** The Goal fails to bind the Theme when the Theme is cross-referenced by OM, giving rise to Condition A effects.

- (42) * ?it-a g^wal ni-kefi₁ n-ət-ən naj [gəza? ri?isu]₁ si?ilt-at hib-a-tən
 that-FS girl N_P-Keffy.M N_K-that-FP of self-3MS picture-P GER.give-S.3FS-O.3FP
 *‘The girl gave the pictures of himself₁ to Keffy₁.’ (Theme OM; PP-object frame)

- (43) ?it-a g^wal ni-kefi₁ n-ət-ən naj [gəza? ri?isu]₁ si?ilt-at hib-a-to
 that-FS girl N_K-Keffy.M N_K-that-FP of self-3MS picture-P GER.give-S.3FS-O.3MS
 ‘The girl gave Keffy₁ the pictures of himself₁.’ (Goal OM; Double-object frame)

5 Conclusion

- **Tigrinya is Asymmetrical.** Tigrinya is an asymmetrical object language, despite superficial appearances.
- **A Masked Ambiguity.** The two ditransitive frames below are masked by the surface ambiguity between an DOM and a P⁰.



- **Obligatory OM.** OM is uniformly obligatory across the language.

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Glosses

1	1st person	N _K	differential object marker
3	3rd person	N _P	preposition
DT	detransitivizer	O	object marker
F	feminine	P	plural
GER	gerundive	PRF	perfect
IMPRF	imperfective	S	subject marker
M	masculine	S	singular
N	N-marker		