Dependent accusative case and caselessness in Moro[*]

Peter Jenks[1] & Hannah Sande[1,2]

UC Berkeley[1], Georgetown University[2]

1.   Introduction

This paper provides evidence that accusative case in Moro (Kordofanian) [Sudan] should be analyzed as a dependent case (Marantz 1991, Baker 2015). More specifically, we demonstrate that accusative case occurs wherever a DP is c-commanded by another DP within a phase, regardless of whether it is local to agentive *v*. The strongest arguments for this conclusion come from the occurrence of accusative case in DP coordination and DP-internally.

While agentive *v* does not play a role in case assignment, we show syntactic and morphological asymmetries within the *v*P exist, which we attribute to articulated probes located on *v*. In this sense, we demonstrate the independence of accusative case and Agree with *v*. The morphological component also plays an important role in accusative case realization in Moro, as only proper nouns and kinship surface with accusative case, a restriction that we argue is morphological in nature (Legate 2008).

We begin by providing an overview of the distinction between dependent and agree-based case assignment systems (§2). We then introduce the arguments for adopting the dependent case approach in Moro (§3). Afterwards, we demonstrate that an articulated *v* probe is nevertheless needed to account for the syntactic order of objects in Moro (§4), which are ordered according to their person and animacy irrespective of their thematic role. We then show that overt accusative case surfaces on nouns bearing the feature PROPER (§5), which we model morphologically. We end with a more general discussion (§6).

2.   Dependent case vs. Agree-based case

Standard Minimalist analyses of structural case assume that it is assigned by a specific functional head under Agree with a local DP. Accusative case, for example is assigned to a

---

DP when that DP undergoes Agree with an agentive *v* head, which values its uninterpretable Case feature as ACC (Adger 2003, Chomsky 2004). We call this approach to case 'Agree-based case' in the discussion below.

An alternative view of structural case is that it is a *dependent case*, a view first articulated by Marantz (1991) and more recently defended at length by Baker (2015). Under this view, certain morphological cases are not assigned by a functional head but arises instead due to the presence of another c-commanding DP in the same phase. For Baker, once c-command between DPs is established in a phase (=ϕ), case is assigned either 'up' or 'down' at Spell Out. One benefit of this approach is that it derives the distinction between ergative and accusative case systems without further stipulation.

(1)   If there are two DPs in ϕ, and DP1 c-commands DP2,

       a.   value DP1 as ergative.   = "assignment up"
       b.   value DP2 as accusative.   = "assignment down"

In this paper we argue that accusative case in Moro is best characterized as a dependent case of the kind described by Baker and Marantz. In particular, we propose that accusative case in Moro is assigned by the following simple rule, which we follow Baker in assuming applies as part of the mapping from syntax to PF:

(2)   *Moro accusative case rule*
       If there are two DPs in ϕ, and DP_1 c-commands or contains DP_2, value DP_2 as accusative.

The following section provides evidence that accusative case is assigned by the rule in (2).

3.   Evidence for dependent accusative case in Moro

Moro is a agglutinating SVO language with two case categories, nominative, which is unmarked, and accusative, which occurs primarily on proper names (see §5). In a normal transitive clause, the subject is nominative while the object is accusative. As accusative case marking is always optional, the discussion below should be interpreted as articulating where it is possible. While more investigation is needed, we take the optionality of accusative case to be attributable to the optional application of the dependent case rule.

This section presents the following pieces of evidence that accusative case in Moro is a dependent case rather than assigned under Agree with *v*:

(3)   *Evidence for dependent accusative case in Moro*

       i.   When DPs are coordinated, all conjuncts but the first show accusative case.
       ii.   In a genitive construction, the lower noun shows accusative case.
       iv.   Both internal arguments of a ditransitive verb show accusative case.
       iv.   The passive of ditranstives assign accusative case.
       v.   Ā-movement bleeds accusative case.

While the first two arguments provide direct evidence against the role of *v* in accusative case assignment, the last three arguments rely on assumptions about the mechanics and timing of case assignment. As such, the last three points might be better viewed as observations which are broadly compatible with a dependent case analysis rather than persuasive arguments for it. However, the final point does provide evidence that Moro accusative case is not a default case.

3.1   Argument 1: DP Coordination

The first argument for accusative case assignment comes from coordination: when DPs are coordinated, accusative case can occur on the second argument, even in subject position. In object position, both arguments are marked accusative:

(4)   *Dependent case under coordination*[1]

    a.   [kúkːu   na ŋálːo-**ŋ**]   l-aŋer-á
            Kuku-ACC and Ngalo-ACC CLl.RTC-good-ADJ
            'Kuku and Ngalo are nice.'

    b.   éga-bwáɲ-á   [kúkːu-**ŋ**   na ŋálːo-**ŋ**]
            1SG.RTC-like-IPFV Kuku-.acc and Ngalo-ACC
            'I like Kuku and Ngalo.'

The distribution of case above follows from a dependent case account as long as we assume that coordination is asymmetrical. We adopt the analysis of coordination in Kayne (1994) where coordinate structures occupy the specifier and complement of a ConjP:

(5)   *Dependent case assignment in coordination*
    [ConjP [DP kúku] [Conj′ na [DP ŋalo-**ŋ**]]]

The coordination data could not be explained under an Agree-based analysis of case, because accusative case can be assigned even in subject position (4), where there would no reason to expect the lower conjunct to have its case feature valued by *v*.

    DP coordination is some languages is marked with a preposition meaning *with*. Were *na* a preposition, it could be assigning accusative case under Agree. Yet *na* is not a preposition. First, it can coordinate clauses and VPs in addition to DPs, so its distribution is not linked to case. Second, there is a separate instrumental/comitative case marker *-Ca*, where C agrees in number and gender with the noun it attaches to, e.g. *udʒí-gí* 'with the person', *ŋíní-ŋí* 'with the dog.' The coordinating conjunction *na* never occurs in these contexts, but is restricted to coordination.

---

[1]The data presented throughout include both data elicited from two native speakers of Moro and data from the Moro Story Corpus: http://linguistics.berkeley.edu/moro/.

3.2 Argument 2: Bare nominal complements of relational nouns

Kinship nouns in Moro display possessor agreement, where the noun describing the *referent* agrees with their single argument, their *relatum*, which is genitive. For some kinship terms, possessor agreement is optional. When possessor agreement does not occur, accusative case is possible on the relatum. This alternation is illustrated for two nouns below:

(6) a. ləŋge   kúk:u-**ŋ**
         mother Kuku-ACC
         'mother of Kuku'

   b. ləŋ-en   gɔ́-kúk:u
      mother-3.POSS CLg.GEN-Kuku
      'Kuku's mom'

   c. et̠ɔ́   kúk:u-**ŋ**
       father Kuku-ACC
       'father of Kuku'

   d. et̠-en   gɔ́-kúk:u
      father-3.POSS CLg.GEN-Kuku
      'Kuku's dad'

We analyze possessor agreement as the realization of a Poss head which is restricted to relational nouns. Genitive is an inherent case assigned to a DP in [Spec, PossP], which the relatum must move to when it receives genitive case. As nouns in Moro undergo head-movement to D (Jenks 2014), possessor movement has no effect on linear order:

(7) a. *Possessor movement for genitive case assignment* (solid line)
         [DP ləŋ-en [PossP gɔ́-kúk:u [Poss′ ⟨⟨ ləŋg⟩-en⟩ [nP ⟨ ləŋg⟩ ⟨kúk:u⟩]]]]

   b. *Absence of PossP for dependent accusative case assignment*
       [DP ləŋge [nP ⟨ləŋge⟩ kúk:u-**ŋ**]]

Yet PossP must be optional for relational nouns which can occur without agreement. When PossP is absent, the relatum stays in its merged position as the complement of the referent noun. The presence of accusative case in the configuration in (7b) provides a compelling argument that accusative case need not be assigned under Agree with *v*, as there is no *v* to assign accusative case inside the DP.

The above facts are inconsistent with a claim made by Baker (2015) to the effect that accusative case does not occur internal to DP. To save a dependent case account of these data, we suggest that accusative case in Moro can be licensed by containment as well as c-command (see (2)), because the second DP in (7a,c) is contained in the first. Alternatively, the presence of N-to-D head movement might license dependent case in this configuration, as the complex N-Poss-D head in D does c-commands the relatum. As this complex head can undergo long head movement to argument positions, stranding nominal modifiers (see again Jenks 2014), there is no reason to think it could not qualify as a full DP for the purposes of case assignment in this position as well.

3.3 Argument 3: Case in ditransitives

Both objects of ditransitive verbs in Moro surface with accusative case:

(8) éga-nac-ó   ŋállo-**ŋ**   kója-**ŋ**
     1SG.RTC-give-PFV Ngallo-ACC Koja-ACC
     'I gave Ngallo to Koja.' / 'I gave Koja to Ngallo.'

In Moro, objects are symmetrical, as seen in the ambiguity of (8) (Ackerman et al. 2015). Multiple accusative case marking is predicted by the dependent case account as both objects are c-commanded by a higher DP, here the null subject *pro*.

     These data could be modeled in a Agree-based account under Multiple Agree with *v* (Hiraiwa 2001, a.o.), and indeed there is good evidence that all object DPs are probed by *v* (§4). As such, the strongest conclusion we can draw from multiple accusatives is that it is consistent with a dependent case account of accusative case.

3.4 Argument 4: Passives of ditransitives

Passive voice is marked on verbs by the suffix *-ən*; passives in Moro eliminate the external argument completely. The symmetry of Moro objects discussed in §4 carries over to the passive, such that any object can be passivized, leading to ambiguity. Focusing on case, it is relevant that when a ditransitive verb is passivized, whichever argument remains in object position can be marked with accusative case:

(9) ŋállo   gɜ-nɜc-ən-ú   kója-**ŋ**
     Ngallo CLg.RT-give-PASS-PFV Koja-ACC
     'Ngallo was given to Koja' / 'Ngallo was given Koja'

These facts favor a dependent case account to an Agree-based case account. This is because the dependent case analysis accounts for the examples above without further stipulation: regardless of which object is passivized, the remaining object will be c-commanded by the new subject.

     In contrast, if accusative case were assigned under Agree by agentive *v*, accusative case should disappear in the passive. The inability to express the demoted agent is relevant, as it is expected if agentive *v* is altogether absent in the passive. To save the Agree-based story, an additional case assigner could need to be present to assign accusative case in the passive, such as an applicative head, as suggested, for example in Bruening 2010. Yet while Moro has an overt applicative suffix, it does not occur with normal ditransitive verbs nor does it emerge in their passives.

3.5 Argument 5: Focused objects

Finally, clefted objects do not surface with accusative case:

(10) ŋ^ẃ-kúk:u-(*ŋ)=ki₁   n=égɔ́-bwáɲ-á   t₁
      FOC-Kuku-(ACC)-CLg.REL.OP λCOMP-1SG.DPC-like-IPFV
      'It's Kuku that I like.'

Because the clefted object is not c-commanded by another DP, a dependent case account of accusative case correctly predicts that it should be absent in these cases.

Admittedly, other languages which been argued to have dependent accusative case preserve accusative case under A-bar movement, such as Cuzco Quechua (Baker 2015, p. 270). What could account for this difference? One possibility is that the clefted objects in Moro are base generated in that position, so that they are never c-commanded by another DP. While more work is needed on this issue, it is worth noting that clefted objects from transparent clauses do not trigger resumptive pronouns, which do occur with islands and D-linked questions, suggesting the absence of resumption implies movement. This leaves us without an explanation for the difference between Moro and Cuzco Quechua.

Whatever the explanation for this puzzle, the absence of accusative case on a focused object is relevant for another reason: it provides evidence against a default case analysis of accusative case in coordination (4) and internal to noun phrases (6).[2] As there is no obvious case-assigner for initial noun phrase in (10), we might expect it to surface with default case; compare English *Me, I don't like beans*.

4.   Multiple [PERSON] object shift

In light of the conclusion that accusative case is a dependent case in Moro, it is relevant that there is nevertheless independent evidence that *v* does Agree with objects in Moro. We review this evidence to demonstrate simply that dependent accusative case in a given language can exist alongside important interactions between objects and *v*. Additionally, this discussion will help clarify the mechanics of case assignment and the internal structure of Moro clauses.

Ackerman et al. (2015) demonstrate that while objects in Moro are radically symmetric, human objects always precede non-human ones:

(11) a.   éga-nac-ó   kója-ŋ   diə
           1SG.RTC-give-PFV Koja-ACC cow
           'I gave the cow to Koja/ Koja to the cow.'
      b.   *éga-nac-ó diə kója-ŋ

Additionally, pronominal object markers are subject to an ordering effect, such that 1/2 must precede 3 (Jenks & Rose 2015):

(12) a.   ga-nac-ɔ́-ɲɔ́-ŋo   1SG>3SG
           CLg-give-PFV-1SG.OM-3SG.OM   'She gave him to me'
      b.   *g-a-nac-ɔ́-ŋɔ́-ɲe   *3SG>1SG

---

[2]See Schütze 2001 for a discussion of default case.

In cases of multiple human objects, whose order is free, semantic binding must track linear order, indicating that linear order implies c-command:

(13) a. ígʒ-ŋʒc-ú   [lʒmiə ododo]$_1$ ləŋg-en$_1$-andá
         1SG.RTC-show-PFV boys all   mother-3.POSS-ASSOC.PL
         'I showed all boys to their mothers.'/'I showed their mothers to all the boys.'
    b. *ígʒ-ŋʒc-ú   ləŋg-en$_1$-andá   [lʒmia ododo]$_1$
         1SG.RTC-show-PFV mother-3.POSS-ASSOC.PL boys all

We model the syntactic ordering of objects in Moro by adopting the notion of an articulated probe from Béjar & Rezac (2009). Specifically, we model human-before-non-human object order in Moro as instances of multiple object shift due to an articulated uPARTICIPANT (u2) probe on *v*. We propose that human nouns in Moro bear the feature PERSON (3), a point which finds evidence in that third person pronouns (such as *-ŋo* in (12a)) can only refer to humans. Because PERSON is entailed by PARTICIPANT, the *v* probe will Agree with human nouns in addition to first and second person pronouns. Finally, we propose that the probe on *v* has the feature [+MULTIPLE] (Collins 2002), which permits it to probe multiple times, first finding participant-valued DPs and then person-valued DPs, with subsequent instances of movement tucking in below the highest specifier:

(14) *Objects specified 3 (= [*PERSON*]) undergo object shift*
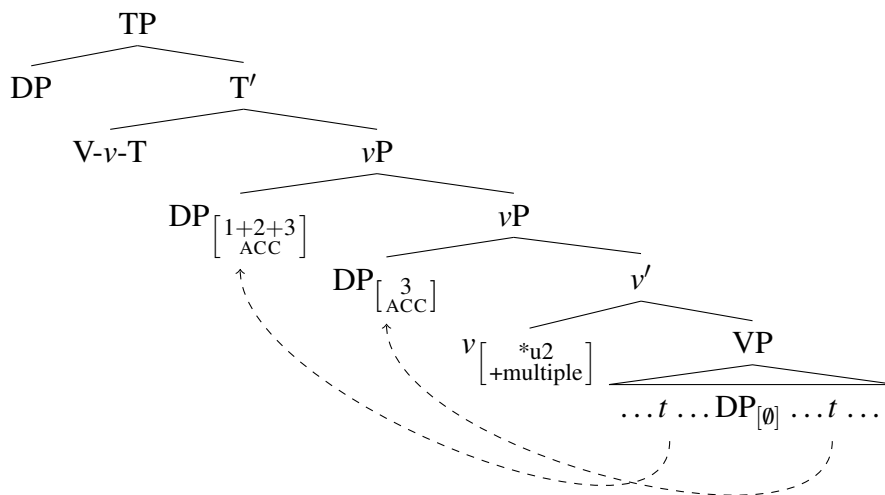
The result is that all [PERSON]-valued objects shift to [Spec,*v*P], where they occur after local persons but before non-human objects, yet still external to the *v*P phase. We assume that the CP phase is the domain of accusative case assignment, as subjects moving to [Spec, TP] in passivization must not receive accusative case before moving. Finally, verbs undergo head-movement to T, resulting in a strict SVO order.

5. [PROPER] morphological case

This section addresses the generalization that overt accusative case marking only surfaces on proper names and some kinship terms in Moro:

(15)   a.   éga-nac-ó   kója-**ŋ**   ŋera(*-**ŋ**)
             1SG-give-PFV Koja-ACC girl(-*ACC)
        b.   éga-nac-ó ŋera(*-**ŋ**) kója-**ŋ**
             'I gave a girl to Koja/Koja to a girl.' (both exx.)

We propose that Moro names and kinship terms share the feature [PROPER] (Matushansky 2006, Broad et al. 2016). A similar category ('Class 1a') has been noted to resist augments in Luganda (Hyman & Katamba 1991, 1993). We now review additional evidence that a morphological [PROPER] feature is motivated in Moro which comes from the associative plural suffix and third-person object-marking clitics.

Like accusative case marking, the associative plural suffix is restricted to kinship terms and names, i.e., nouns with the feature [PROPER]:

(16)   *Associative plural suffix restricted to [*PROPER*] nouns*

        a.   orn **lorlda-ɲ-anda**
             but brothers-1SG.POSS-ASSOC.PL
             n-ldə-ɲ-əbərəjɔc-i   . . .
             COMP2-CLL.INF-1SG.OM-loose-CONS.PFV
             'But my brothers let it go . . .'
        b.   . . . **Koja-ŋənda**   l-a-f-o   eg-al
                 Koja-ASSOC.PL CLL-RTC-be.loc-PFV LOC-place
             y-i-b-ərn-ia   Alufra
             CLY-DPC-PROG-be.called-IPFV Alhufra
             'And he told them that Koja's family was in Alhufra.'

Second, third-person object clitics are can only refer to [PROPER] antecedents.

(17)   *Third-person object clitis restricted to [*PROPER*] nouns*

        a.   g-war-ó   ŋalló na nɔ́ŋ-**ŋú**-bug-i
             CLg-insult-PFV Nalo and 3SG.INF-3SG.OM-punch-CPFV
             'He yelled at Ngallo*ᵢ* and then punched him*ᵢ*.'
        b.   kuku g-war-ó   ŋera na nɔ́ŋɔ́-búg-í
             kuku CLg-insult-PFV child and 3SG.INF-punch-CPFV
             'Kuku yelled at the child*ᵢ* and then punched him*ᵢ*.'

Given that kinship terms and names pattern together with respect to three morphological asymmetries in Moro, we take [PROPER] to be an active morphological feature in the language, a feature which vocabulary insertion rules can refer to.

Returning to the accusative case marker, we claim that the accusative case marker: *-ŋ* is inserted only in the environment of a proper feature.

(18)　　*Accusative case rule*
　　　　-ŋ ↔ [Acc]/[PROPER]__

Nouns lacking the [PROPER] feature fail to show accusative case marking even when they surface in a case-assigning syntactic environment. The rule above derives this asymmetry, as only kinship terms and names, which have the feature [PROPER], have an associated accusative case vocabulary item in Moro. With all other nouns, no vocabulary item for accusative case is available, so they do not show a case alternation.

6.　　Discussion

The Moro case marking facts presented in this paper have implications for animacy-based case splits cross-linguistically. The distribution of [ACC] in Moro resembles object marking in nominal-based split ergative languages. For example, in Diyari, a Pama-Nyungan language spoken in Australia, only high animacy objects, including names, receive accusative case. Low animacy objects are unmarked/absolutive, despite being syntactically indistinguishable from high animacy objects (Baker 2015, 22-23). Baker (2015) concludes that animacy-based splits tend to be morphologically conditioned, following Legate (2008).

Moro serves as a reminder that animacy-based splits are not always morphological. This is because there are two concurrent animacy-based splits on Moro: one split based on the feature [PERSON] is syntactic, but another split based on the feature [PROPER] is morphological. Human objects with the feature [PERSON] move to the specifier of *v*, only objects with the [PROPER] feature show morphological accusative case. This is illustrated below:

(19)　　*Syntactic and morphological animacy-based splits in Moro*
　　　　Syntactic　　　　　　　　　　　[PERSON]　>　[ANIMATE]
　　　　Morphological　[PROPER]　>　[PERSON]

In (19) we see a schematic representation of the fact that there is an syntactic split in Moro that depends on the feature [PERSON], which requires human objects to precede non-human ones. Yet there is also a morphological split dependent on the feature [PROPER], which results in only human nouns with this feature receiving accusative case.

In light of this fact, we can ask the question if there exists a language in which an animacy-based case split is purely syntactic. Merchant (2006) argues that this is the correct analysis of many types of languages, including cases of nominal-based split ergativity and what is traditionally called differential object marking. These languages look like Moro, only features on objects play the determining role in their syntactic position which can directly correlate with case marking.

7. Conclusion

Moro is a language with dependent accusative case, where accusative occurs in the presence of a c-commanding DP within a case domain. Independently, syntactic differences between objects exist alongside a morphologically restricted case realization rule.

References

Ackerman, F., R. Malouf, & J. Moore. 2015. Symmetrical objects in Moro: Challenges and solutions. *Journal of Linguistics* 1–48.

Adger, David. 2003. *Core syntax: A minimalist approach*. Oxford University Press.

Baker, M. 2015. *Case*. Cambridge University Press.

Béjar, S., & M. Rezac. 2009. Cyclic agree. *Linguistic Inquiry* 40:35–73.

Broad, Rachel, Brandon Prickett, Elliott Moreton, Katya Pertsova, & Jennifer L Smith. 2016. Emergent faithfulness to proper nouns in novel English blends. *Proceedings of WCCFL 33* 77–87.

Bruening, Benjamin. 2010. Double object constructions and a theory of idiom formation. *Linguistic Inquiry* 41:519–562.

Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond*, ed. Adriana Belletti, 104–131. Oxford University Press.

Collins, Chris. 2002. Multiple verb movement in Hoan. *Linguistic Inquiry* 33:1–29.

Hiraiwa, K. 2001. Multiple agree and the defective intervention constraint in Japanese. *MIT working papers in linguistics* 40:67–80.

Hyman, L., & F. Katamba. 1991. The augment in Luganda tonology. *Journal of African Languages and Linguistics* 12:1–46.

Hyman, L., & F. Katamba. 1993. The augment in Luganda: syntax or pragmatics. *Theoretical aspects of Bantu grammar* 1:209–59.

Jenks, Peter. 2014. Head movement in Moro DPs: Evidence for a unified theory of movement. In *Proceedings of WCCFL 31*, ed. Robert E. Santana-LaBarge, 248–257.

Jenks, Peter, & Sharon Rose. 2015. Mobile object markers in Moro: The role of tone. *Language* .

Kayne, Richard. 1994. *The antisymmetry of syntax*. MIT Press.

Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39:55–101.

Marantz, A. 1991. Case and licensing. Ms.

Matushansky, O. 2006. Why rose is the rose: On the use of definite articles in proper names. *Empirical issues in syntax and semantics* 6:285–307.

Merchant, J. 2006. Polyvalent case, geometric hierarchies, and split ergativity. *Proceedings of CLS 42* 2:57–76.

Schütze, Carson. 2001. On the nature of default case. *Syntax* 4:205–238.

Peter Jenks, Hannah Sande
jenks@berkeley.edu, sande.hannahleigh@gmail.com