Bundling ϕ- and δ-features: The impact information structure on Agreement

Johannes Mursell, Goethe-University Frankfurt, j.mursell@lingua.uni-frankfurt.de

Summary: In this talk, I offer a uniform analysis for two superficially distinct phenomena: long distance agreement (LDA) and object marking (OM) in Swahili. I argue that each phenomenon depends on an information-structural head in the phasal left periphery, CP for LDA and vP for OM, respectively. These heads host an unvalued information-structural feature (δ) bundled with unvalued ϕ-features. The features are interdependent: the valuation of the ϕ-features depends on a goal that carries the appropriate valued information-structural feature.

LDA: LDA refers to a phenomenon in which a probe in the matrix clause, usually a verb, agrees with a goal in an embedded clause. For this talk, I focus on cases in which the goal is part of a finite CP, as this presents a challenge to phase theory due to the agreement dependency crossing a phase boundary. The most frequently discussed case of LDA involves Tsez, a Nakh-Daghestanian language (Polinsky and Potsdam, 2001). In (1) the matrix verb agrees in noun class with the absolutive argument of the embedded clause. Importantly, the possibility of LDA depends on the agreement target being the topic of the embedded clause. Otherwise, the matrix verb shows (default) agreement with the embedded CP (2). This type of LDA can be found in other Nakh-Daghestanian languages (Hinuq, Forker 2012; Khwarshi, Khalilova 2009), as well as in Algonquian languages (Innu-aimûn, Branigan and MacKenzie 2002; Passamaquoddy, Bruening 2001).
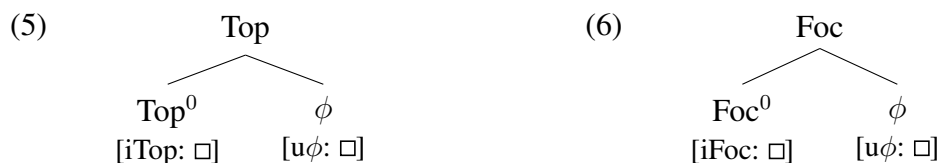
(1)   *Enir   [užā magalu   b-āc'ruɬi] **b**-iyxo*
        mother [boy bread.**III**.ABS ate   ] **III**.know
        'The mother knows that, as for the bread, the boy ate it.'

(2)   *Enir   [užā magalu   b-āc'ruɬi] **r**-iyxo*
        mother [boy bread.**III**.ABS ate   ] **IV**.know
        'The mother knows that the boy ate the bread.'

Ughyur, a Turkic language, shows a different kind of LDA. In this language, certain finite relative clauses and noun complement clauses host subjects in genitive case that, according to Asarina and Hartman (2011), is assigned by the clause external nominal D head which also shows agreement with the genitive subject. Again, this is possible only if the embedded subject has a specific IS status; without it, the subject is unmarked and no agreement surfaces on the clause-external D head. The embedded subject can be a topicalized element, as the authors claim for (3), or a focus (4).

(3)   *[men-**ɨŋ** ji-gen]   tamaq-**im**   jaχʃi*
        I-**GEN**   eat-RAN food-**1SG.POSS** good
        'The food that I ate is good.'

(4)   *[Ötkür-**nɨŋ**-la   kel-gen-liq   ] χever-**i**   muhim*
          Ötkür-**GEN**-only come-RAN-LIQ   news-**3.POSS** important
        'The news that only Ötkür came is important.'

As the cases above show, LDA crosses a phase boundary, similar to long-distance wh-movement. Also similar to long-distance wh-movement, it is amenable to a cyclic analysis (Legate, 2005; Bjorkman and Zeijlstra, 2014). This of course raises the question of the intermediate agreement step, i.e. which head in the periphery of the embedded CP provides the goal for the probing higher V or D. I argue that information structure plays the crucial role. Based on the observation that in all languages that show LDA discussed above, the agreement target in the embedded clause needs to have a specific information-structural interpretation, either topic or focus (depending on the language). Consequently, I assume that the first agreement step, agreement in the embedded clause, is based on IS and involves a topic or focus head in the left periphery of the embedded CP (Rizzi, 1997). This left-peripheral head does not only host IS-features, but

IS-features bundled with ϕ-features (cf. (5) for topics and (6) for focus).

(5)　　　　Top
　　　┌──────┴──────┐
　　Top^0　　　ϕ
　[iTop: □]　　[uϕ: □]

(6)　　　　Foc
　　　┌──────┴──────┐
　　Foc^0　　　ϕ
　[iFoc: □]　　[uϕ: □]

Once the topic/focus head agrees with its goal, it not only values its topic/focus feature but also its ϕ-features, crucially by agreement with the same argument. These ϕ-features then serve as agreement goal for the matrix V/D, simply by being the closest appropriate goal.

OM: If an information-structural head bundled with ϕ-features can be found in the periphery of the CP phase, the question arises whether something similar can be found in the vP. I argue that OM in Swahili presents such a case. Object marking in Swahili, and many other Bantu languages, surfaces as an optional prefix immediately preceding the verb stem, the *-ki-* affix in (7).

(7)　*Mwanamke a-li-**ki**-vunja　　　kikombe.*
　　1.woman　3SG.S-PST-**7.O**-break 7.cup
　　'The woman broke the cup.'

There is a long lasting discussion in the literature concerning the determining factors for OM and its syntactic status (Wald, 1979; Bresnan and Mchombo, 1987; Seidl and Dimitriadis, 1997; Marten and Kula, 2012; van der Wal, 2018). It can be shown that OM in Swahili does not depend on animacy or definiteness (8), as *-tembela* does not show OM even though the object is definite. OM becomes obligatory if the object is pre-posed (cf. first sentence of (9)) or *pro* dropped (cf. second sentence on (9)).

(8)　*Tu-li-po-kwenda　Dar tu-li-tembela　chuo-kikuu.*
　　1PL.S-PST-REL-go Dar 1PL.S-PST-visit university
　　'When we were in Dar we visited the/*a (only) university.'　　(Nicolle 2000:684)

(9)　***Maneo** haya a-li-**ya**-sema　　kwa sauti　kubwa. Rosa a-li-***(ya)**-sikia.*
　　6.words these 3SG.S-PST-**6.O**-say with 9.voice 9.big　Rosa 3SG.S-PST-**6.O**-hear
　　'He said the words loudly. Rosa heard them.'　　(Seidl & Dimitriadis 1997:376)

Based on Belletti (2004) and subsequent work, I assume that vP also hosts a left periphery containing discourse related projections/features, due to its status as a phase. These projections differ from those in the CP-periphery regarding the type of topics. Whereas topics in the CP encode properties like Aboutness or Familiarity, I argue that vP topics encode Givenness, the complement of new information (Kallulli, 2000). Similar to the analysis for LDA, I assume that the topic head in the vP periphery in Swahili hosts unvalued ϕ-features that are bundled together with an unvalued topic feature that encodes Givenness (10).

(10)　　　v
　　　　Top
　　┌──────┴──────┐
　Top^0　　　ϕ
　[iTop: □]　　[uϕ: □]

This head then agrees with a Given object, valuing topic feature and ϕ-features at the same time. Thus, OM in Swahili depends on a particular information-structural interpretation of the object and also requires the presence of a set of ϕ-features. I will show how this analysis can account for the behavior of OM in Swahili in various contexts, e.g. wh-questions, ECM-constructions, and contrastive focus.

Conclusion: Both LDA and OM in Swahili can be analyzed by bundling δ-features together with ϕ-features on the same head in the phasal periphery, CP for LDA, vP for OM. Following the feature inheritance approach (Chomsky, 2008; Miyagawa, 2010, 2017), ϕ-features and δ-features enter the derivation on the same head, so that it is actually expected to find them bundled together in the way discussed in the abstract. Once bundled together, the two usually independent probes act as one, and the goal has to fulfil the requirements contributed by each feature.

References

Asarina, A. and J. Hartman (2011). Genitive subject licensing in Uyghur subordinate clauses. In *Proceedings of the 7th Workshop on Altaic Formal Linguistic (WAFL)*.

Belletti, A. (2004). Aspects of the low IP area. In L. Rizzi (Ed.), *The Structure of CP and IP*, Volume 2 of *The Cartography of Syntactic Structures*, pp. 16–51. Oxford: Oxford University Press.

Bjorkman, B. and H. Zeijlstra (2014). Upward agree is superior. Ms.

Branigan, P. and M. MacKenzie (2002). Altruism, A-movement, and object agreement in Innu-aimûn. *Linguistic Inquiry 33*, 385–407.

Bresnan, J. and S. A. Mchombo (1987). Topic, pronoun, and agreement in Chicheŵa. *Language 63*, 741–782.

Bruening, B. (2001). *Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy*. Ph. D. thesis, MIT.

Chomsky, N. (2008). On phases. In R. Freidin, C. P. Otero, and M. L. Zubizarreta (Eds.), *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, pp. 133–166. Cambridge, MA: MIT Press.

Forker, D. (2012). *A Grammar of Hinuq*. Berlin: de Gruyter.

Kallulli, D. (2000). Direct object clitic doubling in Albanian and Greek. In F. Beukema and M. den Dikken (Eds.), *Clitic Phenomena in European Languages*, pp. 209–249. Benjamins.

Khalilova, Z. (2009). *A grammar of Khwarshi*. Utrecht: LOT.

Legate, J. A. (2005). Phases and cyclic agreement. *MIT Working Papers in linguistics 49*, 147–156.

Marten, L. and N. C. Kula (2012). Object marking and morphosyntactic variation in Bantu. *Southern African Linguistics and Applied Language Studies 30*(2), 237–253.

Miyagawa, S. (2010). *Why Agree? Why Move: Unifying Agreement-Based and Discourse Configurational Languages*. Cambridge, MA: MIT Press.

Miyagawa, S. (2017). *Agreement beyond phi*. MIT Press.

Polinsky, M. and E. Potsdam (2001). Long-distance agreement and topic in Tsez. *Natural Language & Linguistic Theory 19*, 583–646.

Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (Ed.), *Elements of Grammar*, pp. 281–337. Dordrecht: Kluwer.

Seidl, A. and A. Dimitriadis (1997). The discourse function of object marking in Swahili. In K. Singer, R. Eggert, and G. Anderson (Eds.), *CLS 33: Papers from the Main Session, April 17–19, 1997*, pp. 373–389.

van der Wal, J. (2018). The AWSOM correlation in comparative Bantu object marking. Ms., Leiden University Centre for Linguistics.

Wald, B. (1979). The development of the Swahili object marker: A study of the interaction of syntax and discourse in discourse and syntax. *Syntax and Semantics 12*, 505–524.