

DP Positions in African Languages
 Vicki Carstens, University of Missouri
 Michael Diercks, Pomona College
 Loyiso Mletshe, University of the Western Cape
 Juvenal Ndayiragije, University of Toronto
 Justine Sikuku, Moi University

A central concern of syntactic theory has long been to explain and predict the distribution of nominal expressions, henceforth D(eterminer) P(hrases), and their involvement in morpho-syntactic relations: where can they licitly occur? When can they move, control agreement, and bear Case? The study of Indo-European languages has yielded strong generalizations upon which much of the theory is based:

- (1) *A DP cannot appear as subject of a bare infinitive:*
 - a. *[John to leave] would surprise Mary
 - b. *It is possible [John to leave]
- (2) *A DP can raise out of an infinitive, but not out of a tensed clause:*
 - a. John is known [<John> to like ice cream]
 - b. *John is known [(that) __ likes ice cream]
- (3) *DP objects of passive verbs generally cannot appear in situ:*
 - a. *It was believed [the story]
 - b. [The story] was believed.
- (4) *A DP can control just one instance of full-featured agreement:*
 - a. John has been eating candy
 - b. *John has beens eatings candy (see also (2) above)

As (1'-4') illustrate, a number of African languages in which such phenomena have been explored seem to turn these generalizations more or less on their heads.

- (1') *A DP can appear as subject of a bare infinitive:*
 I-na-wezakana (*kwa) Maiko ku-m-pig-i-a Tegani simu
 9SA-PRS-possible for Michael INF-1OA-beat-APPL-FV Tegan phone
 'It is possible (for) Michael to call Tegan.' [Swahili; Diercks to appear]
- (2') *A DP can raise out of a tensed clause. Raising out of infinitives is often dispreferred:*
 - a. Chipo a-no-fungidzir-w-a kuti a-noda doro
 3rdS-HAB-believe-PASS-FV that 3rdS-like beer
 LIT: 'Chipo is believed that s/he likes beer'
 - b. ? Chipo a-no-fungidzir-w-a ku-noda doro
 3rdS-HAB-believe-PASS-FV INF-like beer
 'Chipo is believed to like beer.' [Shona]
- (3') *DP objects of passive verbs freely appear in situ:*
 kw-á-uray-iw-a murúmé né-shumba ku-rukova
 17SA-PAST-kill-PASS-FV 1man by-9lion 17-11river
 Lit: 'There was killed a man by a lion at the river.' [Shona; Harford-Perez 1985]
- (4') *DPs generally control full-featured agreement on every verbal element.*
 Juma a-li-kuwa a-me-pika chakula
 Juma 1SA-PST-be 1SA-PERF-cook 7food
 'Juma had cooked food.' [Swahili; Carstens 2001]

While (1'-4') are taken from Bantu languages, subsets of these phenomena have been reported for Igbo, Ibibio, and Yoruba (see Ura 1998 on Igbo hyper-raising, = raising from tensed clauses; Baker 2010 on Ibibio multiple agreement; Carstens in preparation on hyper-raising in Yoruba and Igbo).

Case theory and the notion of Activity in Agree relations are core aspects of syntactic theory and the primary means for explaining Indo-European DP positions, but they are tailored to match the generalizations in (1-4). Variations like (1'-4') are inconsistent with them, and unexpected. Carstens (to appear a, b); Diercks (to appear); and Carstens & Diercks (to appear) propose for modifications to Minimalist theory to accommodate the facts of (1'-4') in Bantu. But their works need to be supplemented in a number of ways.

First, they are based on a small sample. Assembly of a larger database would determine whether the generalizations in (1'-4') are broad and robust for Bantu or whether significantly divergent (sub)patterns exist. We already know that there is variation within and across Luyia languages in the availability of hyper-raising. Within a single language this appears to depend on whether the source clause is TP or CP, and if the latter, what complementizer is involved; see Carstens & Diercks (2009). But Swahili seems to disallow raising out of tensed clauses, and we wonder why; and certain inversion constructions sharing some properties with (3') vary in availability across languages for reasons that we have yet to determine.

Second, we have preliminary results from Luyia indicating that an alternative hyper-raising construction combines A' movement in the embedded clause with A-movement from Spec, CP to the matrix clause. How common this is in Bantu and what its properties and analysis might be are yet to be determined.

Third, we have obtained some results suggestive of licit super-raising of objects (*The food seems that Mary has cooked (it)* with a reconstructed reading). These should be integrated into the project and explored in as many languages as possible.

Fourth, it is not at all clear how or whether the proposals in the above-cited works can be extended to languages like Igbo and Yoruba which have hyper-raising but lack many of the other properties in (1'-4'); they also lack grammatical gender, a key component of the Diercks/Carstens approach to Bantu. And Baker (2010) shows that a language can have multiple subject agreement superficially like that of Bantu but with subtle yet crucial differences motivating a radically different analysis. A larger database would permit us to test our hypothesis that the Bantu facts in (1'-4') are a significant cluster, deriving from a single set of underlying causes, and to find out if, for example, Ibibio on the one hand and Yoruba/Igbo on the other will turn out to manifest distinct clusters of inter-related phenomena for DP positions.

Fifth, there are additional questions highly relevant to the goal of constructing accurate generalizations on DP positions and a theory restrictive yet supple enough to reflect them. These include the following:

- (i) Are there ECM constructions like *John believes Mary to have left; John saw Mary leaving?* Why (not)?
- (ii) What are the properties of infinitives, as opposed to subjunctive and simple finite clauses? What can they tell us about the modest distribution of subject to subject raising from infinitives?
- (iii) What are DP positions in adjunct clauses?

Carstens and Diercks have considerable experience constructing questionnaires on many of these issues, and are confident that they can adapt them to the Afranaph style. The expertise of Mletshe and Sikuku and their affiliations with programs in languages and linguistics in Africa make them very valuable partners in this enterprise. Mr. Mletshe already has a manuscript in progress on NP-movement in Xhosa.

Selected References: Carstens (to appear) "Hyperactivity and Hyperagreement in Bantu"; in *Lingua*; Carstens & Diercks (to appear) "Parametrizing Case and Activity: Hyper-raising in Bantu", *Proceedings of NELS 40*; Diercks (to appear) "Parametrizing Case: Evidence from Bantu", in *Syntax*; Mletshe 2010 Constraints and Flexibilities on NPs in Xhosa Syntax, Ms., University of the Western Cape.

Appendix: Sample Questionnaire Items

Part I. DP subjects of infinitives

Please translate the following items literally, taking care to use an infinitival verb form in the bracketed clause. Is the result well-formed?

1. It is believed [John to like Mary].
2. It is possible [Mary to see John].
3. [Mary to see John] would surprise me
4. [Our friends to hear this] would be embarrassing.
5. There is a rumor [Mary to like beer].

Part II.A Raising

Please translate the following items taking care to use a tensed or infinitival verb form in the bracketed clauses to match the sentences you are translating. Are the results well-formed in the scenarios described?

A. *You are a detective investigating a crime scene. You know that Mary wears shoes that leave a specific pattern on the ground. Upon seeing footprints with this pattern, can you say the following?*

1. It seems [that Mary was here].
2. Mary seems [was here].
3. Mary seems [that was here].
4. Mary seems [to have been here].

B. *You are reading tomorrow's weather forecast in the newspaper. Can you say:*

1. Rain will fall tomorrow.
2. It seems that rain will fall tomorrow.
3. Rain seems [will fall tomorrow].
4. Rain seems [that will fall tomorrow].
5. Rain seems [to be going to fall tomorrow].

C. *The watering hole that cows usually drink from is dry. Without seeing the cattle, can you say:*

1. It seems [that the cows have drunk all the water].
2. The cows seem [to have drunk all the water].
3. The cows seem [have drunk all the water].
4. The cows seem [that have drunk all the water].

If native speaker linguists on this project can think of expressions with idiomatic subjects to try in raising constructions like (*The cat seems to be out of the bag*), it would be great, though these are language particular and hard for people to come up with on demand.

Part II.B Passive raising. Please provide literal translations and grammaticality judgments.

1. It is known that Mary likes coffee.
 2. Mary is known [likes coffee].
 3. Mary is known [to like coffee]
-
1. It is known that John will leave.
 2. John is known [will leave].
 3. John is known [to be going to leave].

1. It is believed that the rabbit is hiding in the forest.
2. The rabbit is believed that is hiding in the forest.
3. The rabbit is believed to be hiding in the forest.

Part III. DP objects of passive verbs. Are these sentences licit? Please translate and comment.

1. There was seen a car here yesterday.
2. There was built a house in the field.
3. There will be given the students a test tomorrow.
4. There fell a tree.
5. There spoke two women at the conference.

Part IV. Multiple subject agreement. In compound tense constructions involving auxiliaries, does subject agreement appear only once, or is it repeated on every verbal element?

1. The farmers will be harvesting the maize tomorrow.
2. The farmer will be harvesting the maize tomorrow.

3. The bird was singing in the tree yesterday.
4. The birds were singing in the tree yesterday.

5. We will have eaten already when you get home.
6. She had been working for 2 hours.

Part V. ECM. Are there constuctions in which a DP that is thematically part of a lower clause behaves syntactically as a constituent of a higher clause?

I. Perception verb complements. Is OM possible (or required) on the matrix verb below?

1. I saw John leaving.
2. We heard the girls singing
3. We saw him leaving
4. We heard them singing

II. How do English ECM infinitival constructions translate?

1. I want John to leave
2. I want that John to leave.
3. I want that John should leave.

4. I want very much John to leave
5. I want John very much to leave
6. I want very much that John should leave.
7. I want John very much that should leave.
8. I want very much that John to leave
9. I want John very much that to leave
10. I want very much John that should leave.

11. I want him to leave [OM on matrix verb]
12. I want him that to leave [OM on matrix verb]
13. I want-him very much that to leave [OM on matrix verb]
14. I want him very much that should leave. [OM on matrix verb]

Part VI. Wh-agreement in source clause of subject raising

1. John cooked the chicken.
2. Who cooked the chicken?
3. The student read the book.
4. Who read the book?

Is there any special agreement form that appears in 2 and 4 that does not appear in 1 and 3? If not, move on to the next section. If so, please consider these additional questions. Recall the questions from section IIA above:

1. Mary seems [was here].
2. Mary seems [that was here].

Is it possible to form the sentences which you gave for the examples listed above with the special agreement forms that appear in 2 and/or 4?

Part VII. Super-raising

A. Subject of deeply embedded clause

1. It seems like the students know that the teacher is sick.
2. The teacher seems like the students know he is sick.

Additional question: If you can say a sentence like in #2, can you use this in a context where you are not actually looking at the teacher, for example, if you are talking to the students but the teacher is absent? Or is it only appropriate if you are actually looking at the teacher?

3. It seems like her husband wants the woman to leave.
4. The woman seems like her husband wants her to go.

Additional question, like above: If you can say a sentence like in #4, can you use this in a context where you are not actually looking at the woman, for example, if you are talking to the husband but the woman is absent? Or is it only appropriate in reaction to the woman or evidence of her behavior?

B. Object super-raising

Is it possible to say 1? Please translate and provide a grammaticality judgment. If you answer “yes”, please consider what are felicitous contexts for this utterance. Can you say (1) in circumstances (2-4)?

1. The food seems that Mary cooked (it).
2. You taste the food and recognize her favorite ingredient? YES/NO
3. You see Mary in an apron and deduce from this that she did the cooking? YES/NO
4. Mary is an incredibly messy cook, and from the state of the kitchen you can't imagine anyone else being responsible? (the food isn't there; just the mess she usually makes) YES/NO