Sources of (A)symmetry in Bantu Double Object Constructions

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1. The puzzle: asymmetry in a symmetrical language

For more than thirty years, symmetrical and asymmetrical object constructions have been a classic topic in the syntax of Bantu languages and beyond, at least since controversies in the Relational Grammar literature over whether clauses must have a unique direct object or not. In these terms, the Lubukusu language, from the Luyia group of Western Kenya seems to be a rather canonical "symmetrical object language" (Diercks and Sikuku, 2011), much like Kinyarwanda (Kimenyi, 1980) and Kichaga (Bresnan and Moshi, 1990). For example, (1) illustrates a double object construction (DOC) that results from adding the causative suffix –*esy* to a transitive verb root. (1) also shows that either the causee object or the theme object can come first in such a construction. (2) shows that either the causee or the theme can become the subject of the passive of the causative verb. (3) shows that either the causee or the theme argument (but not both) can be expressed as an object marker (OM)—a kind of pronominal clitic prefixed before the verb stem.[1]

(1) a. Wafula   a-nyw-esy-a   Wekesa   ka-ma-lwa.   (Causative word order)
         Wafula   SM.c1.TNS-drink-CAUS-fv   Wekesa   c6-c6-beer
         'Wafula made Wekesa drink beer.'

     b. Wafula   a-nyw-esy-a   ka-ma-lwa   Wekesa.
         Wafula   SM.c1.TNS-drink-CAUS-fv   c6-c6-beer   Wekesa
         'Wafula made Wekesa drink beer.'

(2) a. Wekesa   a-nyw-esy-ebw-a   ka-ma-lwa.   (Passive of causative)
         Wekesa   SM.c1.TNS-drink-CAUS-PASS-fv   c6-c6-beer
         'Wekesa was made to drink beer.'

     b. Ka-ma-lwa   ka-nyw-esy-ebw-a   Wekesa.
         c6-c6-beer   SM.c6.TNS-drink-CAUS-PASS-fv   Wekesa
         'Beer was made to be drunk by Wekesa.'

(3) a. Wafula   a-mu-nyw-esy-a   ka-ma-lwa.   (Causative object marking)
         Wafula   SM.c1.TNS-OM.c1-drink-CAUS-fv   c6-c6-beer
         'Wafula made him/her drink beer.'

     b. Wafula   a-ka-nyw-esy-a   Wekesa.

[1] Abbreviations used in the glosses include: AFOC, antifocus; APPL, applicative; CAUS, causative; cX, noun class X (X ranging from 1 to 20); FUT, future; fv, final vowel; INSTR, instrumental; LK, linker; LOC, locative; OM, object marker; PASS, passive; PRF, perfective; PST, past; RFM, reflexive marker; SBJV, subjunctive; SM, subject marker; TNS, tense.

Wafula   SM.c1.TNS-OM.c6-drink-CAUS-fv   Wekesa
'Wafula made Wekesa drink it.'

Examples (4)-(6) show similar data for the other productive source of double object constructions in Lubukusu, namely benefactive applicatives formed by attaching the applied affix *–el/-er* to a transitive stem.[2]   Here too we find symmetrical behavior: either the benefactee argument added by the applicative morpheme or the theme argument can be the first object in linear order ((4)); either can become the subject in a passive ((5)); either can be expressed as an object marker on the verb ((6)).

(4) a. Wekesa   a-a-tekh-el-a   Sara by-akulia.   (Applicative word order)
         Wekesa   SM.c1-TNS-cook-APPL-fv Sara c8-food
         'Wekesa cooked food for Sara.'

     b. Wekesa   a-a-tekh-el-a   by-akulia Sara.
         Wekesa   SM.c1-TNS-cook-APPL-fv c8-food   Sara
         'Wekesa cooked food for Sara.'

(5) a. Sara   a-a-tekh-el-w-a   by-akhulia.   (Passive of applicative)
         Sara   SM.c1-TNS-cook-APPL-PASS-fv c8-food
         'Sara was cooked some food.'

     b. By-akhulia   by-a-tekh-el-w-a   Sara.
         c8-food   SM.c8-TNS-cook-APPL-PASS-fv Sara
         'The food was cooked for Sara.'

(6) a. Wafala   a-mw-ir-ir-a   li-khese.   (Applicative with OM)
         Wafula   SM.c1.TNS-OM.c1-kill-APPL-fv c5-sheep
         'Wafula killed a sheep for him/her.'

     b. Wafula   a-li-ir-ir-a   Wekesa.
         Wafula   SM.c1.TNS-OM.c5-kill-APPL-fv Wekesa
         'Wafula killed it for Wekesa.'

In these respects, Lubukusu differs systematically from asymmetrical object languages of the Bantu family like Swahili and Chichewa, in which the equivalents of the (b) sentences are all ungrammatical (for Chichewa, see Baker 1988 and Mchombo 2005).

There is a systematic exception to this, however, which provides the focus of this paper. The exception appears in causative constructions in which one of the nonsubject arguments is a *local* (1st or 2nd person) pronoun. In this special situation, Lubukusu behaves like an asymmetrical language, favoring the causee over the theme. Specifically, a local pronoun that is right-adjacent to the verb can be understood as the goal but not as the theme ((7)); a local pronoun in the subject position of the passivized clause can be a goal but not a theme ((8)), and a local pronoun expressed as an OM on the verb can be a goal but not a theme ((9)).[3]

(7) a. Okesy-a   ese Wekesa.
         SM.c1.TNS.show-fv   me Wekesa

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[2] Lubukusu also uses the applied affix *–el* to make instrumental applicatives, another type of double object construction (Diercks and Sikuku 2011). However, first and second person pronouns cannot be used as instruments for semantic reasons, so our primary new probe into the syntax of DOCs cannot be used with this construction. We therefore do not consider it here.

[3] In contrast, there seems to be no particular problem in Lubukusu with having a local pronoun functioning as the theme if it is the second object of a DOC, or the postverbal argument in the passive of a DOC, or an overt pronoun following the verb when the other object is expressed as an OM. (Lubukusu is apparently different in this respect from Sambaa, Limbum, Nyaturu, and Swahili, according to Reidel (2009:141, 149, 151)).

'He showed me Wekesa' NOT 'He showed me to Wekesa.'

    b.   A-kh-er-esy-e   ese Wafula.
            SM.c1-FUT-kill-CAUS-SBJV me Wekesa.
            'He will make me kill Wekesa' NOT 'He will make Wekesa kill me.'

(8)   a.   Ese   n-okesy-ebw-a   Wekesa/e-m-bwa.
            I   SM.c1.1st-show-PASS-fv   Wekesa/c9-c9-dog
            'I was shown Wekesa/the dog.' Not: 'I was shown to Wekesa/the dog.'
            (OK: Ese n-okesy-ebw-a **khu** mbwa, 'I was shown *to* the dog.')

    b.   E-kh-er-esy-ebw-e   Wekesa.
            SM.c1.1st-FUT-kill-CAUS-PASS-SBJV Wekesa
            'I will be made to kill Wekesa.' Not: 'I will be made to be killed by Wekesa.'

(9)   a.   A-nch-ir-isy-a   Wafula.
            SM.c1.TNS-OM.c1.1st-kill-CAUS-fv   Wafula
            'He made me kill Wafula.' Not: 'He made Wafula kill me.'

    b.   A-khu-sim-isy-a   Wafula.
            SM.c1.TNS-OM.c2.1st-like-CAUS-fv   Wafula
            'He made us like Wafula.' Not: 'He made Wafula like us.'

    This curious fact becomes all the more mysterious when one learns that applicatives are different from causatives in this respect: applicatives behave symmetrically even with a local pronoun. Hence, (10) shows that a local pronoun after the applicative verb can be interpreted as the benefactee or (slightly marginally) as the theme; (11) shows that a local pronoun as the subject of a passive applicative can be understood as the benefactee or the theme; (12) shows that a local pronoun as object marker can express the benefactee or the theme.[4]

(10)   E-r-er-a   ese Wekesa.
        SM.c1.TNS-kill-APPL-fv me Wekesa
        'He killed Wekesa for me' *or* (?)'He killed me for Wekesa.'

(11)   a.   E-kh-er-er-ebw-e   Wekesa.
            SM.c1.1st-FUT-kill-APPL-PASS-SBJV Wekesa
            'I will be killed for Wekesa' *or* 'For me Wekesa will be killed.'

    b.   Ese n-a-fum-is-il-w-a   mayi.
           I   SM.c1.1st-TNS-praise-CAUS-APPL-PASS-fv   mother
           'I was praised for the mother' *or* 'For me, the mother was praised.'

(12)   a.   Wafula a-kha-nch-ir-ir-e   Wekesa.
            Wafula SM.c1-FUT-OM.c1.1st-kill-APPL-SBJV   Wekesa
           'Wafula will kill Wekesa for me' *or* 'Wafula will kill me for Wekesa.'

    b.   Wekesa a-khu-fum-is-il-a   mayi
           Wekesa SM.c1.TNS-OM.c2.1st/c1.2nd-praise-CAUS-APPL-fv   mother.

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[4] Note that the examples in (12) under the interpretation where the 1st or 2nd OM is interpreted as the theme argument violate some formulations of the so-called Person Case Constraint (PCC). In this respect, Lubukusu seems to be different from Sambaa and Haya, discussed by Riedel (2009:ch.5), which observe the PCC in applicatives as well as causatives. (Note, however, that Sambaa and Haya are different from Lubukusu in allowing more than one OM on a verb, making comparison more complex.) See note 6 for a remark on how this apparent variation might fit in.

'Wekesa praised mother for us' *or* 'Wekesa praised us for the mother.'
'Did Wekesa praise the mother for you?' *or* 'Did Wekesa praise you for the mother?'

In light of this data, we consider questions like the following: Why is there a difference between causative and applicative in Lubukusu?[5] Given that there is a difference, why does it only show up only with local pronouns, not with third person nominals, in a rather obscure corner of grammar? Finally, what do these new facts tell us about the nature of (a)symmetry in double object constructions?

Our proposal in a nutshell is as follows. First we claim that the causative affix takes a vP as its complement, whereas the applicative affix selects a VP (section 2). Then we argue that, since vP is a phase (but VP is not), Chomsky's Phase Impenetrability Condition constrains movement within the greater verb phrase of a causative construction but not in an applicative—a difference that shows up more clearly in Sesotho (section 3). Finally, we claim that special person restrictions appear when two nominals occur at the edge of the same (vP) phase. Our formulation of this constraint is general enough so that it also restricts so-called Object-Subject Reversal in some Bantu languages, and we conjecture that it may be behind Person-Hierarchy effects in languages like Southern Tiwa as well.

2. The difference between causative and applicative

Applicative constructions and causatives superficially look very similar in Bantu languages: both are commonly described as valence-increasing processes in which an affix (*-el* or *-esy*) is suffixed to the verb stem, between the verb root and the final vowel *-a*, and the derived verb seems to take one more internal argument than the simple verb did. However, there is a clear difference between the two when it comes to thematic roles. Causative constructions typically have two agents: the agent of the causing event (the causer) and the agent of the caused event (the causee). In contrast, applicative constructions have only one event and one agent; the extra argument has a distinct role, here benefactee (or goal).

Now in minimalist style work, thematic roles are taken to be assigned in certain characteristic syntactic positions. In particular, the agent role is taken to be assigned in Spec,vP (also known as VoiceP (Kratzer, 1996)). It seems natural, then, to say that the causative morpheme is a head (presumably verb) that takes a vP as its complement, whereas the applicative morpheme simply takes a VP as its complement, the only v node in an applicative structure appearing higher (compare, for example, Pylkkänen 2008:14 on benefactive applicatives in Bantu with Pylkkänen 2008:105 on causatives in Bantu; see also McGinnis (2001) on applicatives and Harley (to appear) on structural differences between applicatives and causatives in Hiaki).[6] Assuming this, we have a representational difference like the following.

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[5]Perhaps surprisingly, the only morphologically simple verb in Lubukusu that takes two internal arguments, *-w-* 'give' behaves like a causative rather than like an applicative. We tentatively assume that this verb decomposes into a causative structure meaning 'X causes Y to have X', and that our analysis for causatives thus applies.

[6] These approaches are, however, more fine-grained then we need for present purposes. Pyllkänen, for example, draws a rather delicate distinction between causatives that embed a vP projection and ones that embed a phase, which she takes to be something slightly larger than a vP. We do not draw this distinction here, (at least) for simplicity. Harley (to appear) distinguishes between v and Voice, claiming that these are distinct heads, both of which are present in many structures. In her terms, the causative morpheme takes a VoiceP complement, whereas the applicative selects only a vP complement, but the difference is essentially equivalent to ours in (13). We are inclined to accept Harley's view on this matter, but it is not crucial here so we stick to more familiar terms.

(13)   Applicative   Causative

[Tree diagram — Applicative:
TP → NP, T'
T', → T, vP - phase 1
vP → NP (agent), vP
vP → v, ApplP
ApplP → NP (ben), Appl'
Appl' → Appl (-il-), VP
VP → V, NP (theme)

Tree diagram — Causative:
TP → NP, T'
T' → T, vP   phase 2
vP → NP agent (causer), v´
v´ → v, CausP
CausP → Caus, vP   Phase 1
vP → NP agent (causee), v´
v´ → v, VP
VP → V, NP (theme)]

These structures lead to the expectation that a passive voice head could appear below, hence inside of a causative morpheme, but not inside of a benefactive applicative morpheme. This follows directly from (13) if passive is a different choice for the v head—one that does not license an agent in its specifier, but (unlike active voice in most languages) does tend to be morphologically overt. And indeed, there is known to be a difference in this respect. For example, Baker (1988:414-415) observes that causatives of passives are possible in certain languages, including Chamorro, Labrador Inuttut, and Japanese.[7] However, he claims (Baker 1988:407-408) that (benefactive) applicatives of passives are impossible crosslinguistically, as can be observed in in Chichewa, Kinyarwanda, Chimwiini, Huichol, Nahuatl, and Mapudungun … and also Lubukusu.

Another source of converging evidence for the structural difference in (13) is the fact that, in many languages, the causee of a morphological causative can act as the antecedent for subject-oriented anaphors (see Baker 1988:210-212 for an overview), but the applied object of an applicative never can. This difference is observable in Lubukusu. For example, (14a) shows that the reflexive anaphor, expressed as the morpheme *i-* prefixed to the verb stem, can be interpreted as the theme argument of the base verb, and its antecedent can be the causee (the agent of the base verb). In contrast, (14b) shows that a reflexive anaphor interpreted as the theme cannot take the applied argument as its antecedent, but only the surface subject.

(14)   a.   N-e-siing-isy-a   Wekesa   mu-luuchi.
              SM.c1.1st-TNS-**RFM**-wash-CAUS-fv Wekesa   LOC-river
              'I made Wekesa wash himself in the river.'

        b.   Wekesa a-kh-ey-ir-ir-e   Wafula.
              Wekesa SM.c1-FUT-**RFM**-kill-APPL-SBJV   Wafula
              Not: 'Wekesa will kill Wafula for himself.' (a case of euthanasia)
              OK: 'Wekesa killed himself for Wafula' (suicide) or 'Wekesa will kill Wafula for self'

This difference also follows from (13) plus the assumption that an NP in Spec,vP is a valid antecedent for a certain class of anaphors (for whatever reason). Reciprocal anaphors also show this same difference between causatives and applicatives in Lubukusu (Safir and Sikuku, 2011).

This then gives us a structural difference between the two types of DOC that we can build on.

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[7] There are also plenty of languages that do not allow causatives of passives, and Lubukusu (like many Bantu languages) happens to be one of these. In current terms, we can simply say that the causative morpheme in these languages happens to select for a vP headed by active voice, not just any old vP.

3. The Phase Impenetrability Constraint applied to DOCs

Now within the phase theory of Chomsky (2000, 2001) and related work, active vPs are special in that they count as phases, and phases restrict how movement can happen. Let us take advantage of this.

First, it is clear that some Bantu languages provide a landing site for an NP that is below the subject but above everything else in VP. This is explicit in Kinande, for example, which has an overt particle inside the verb phrase, the so-called linker, and either the applied object or the theme of an applicative construction can move into its specifier, as shown in (15) (Baker and Collins, 2006). This results in a word order alternation as to which argument immediately follows the verb.

(15) a. Kambale a-hek-er-a   omw-ami   *y'*   obw-abu.
          Kambale SM.c1.TNS-carry-APPL-fv c1-chief   *LK.c1* c14-drink
          'Kambale carried drink for the chief.'

      b. Kambale a-hek-er-a   obw-abu   *b'*   omw-ami.
          Kambale SM.c1.TNS-carry-APPL-fv c14-drink *LK.c14* c1-chief
          'Kambale carried drink for the chief.'

The Lubukusu word order alternation in (4) is very similar, except no Lk is realized. Despite this difference, let us assume that, in Lubukusu too, the theme argument comes to be before the benefactee in (4b) by moving to the specifier of LkP, where LkP is generated below vP but above the rest of the greater verb phrase.

Moreover, it is plausible to say that if a given NP can reach SpecLkP in (say) Lubukusu or Kinande, then it can also reach higher positions with no problem. For example, from SpecLkP the theme can cliticize to v (or move to Spec vP) as an object marker without any locality problem caused by crossing the benefactive. Similarly, from SpecLkP the theme can move to Spec, TP in a passive where no agent is generated, again without worrying about crossing the benefactive. The difference between an asymmetrical language like Chichewa and a symmetrical language like Lubukusu can then be thought of as a difference in whether LkP is present (or available) in the language or not. From this perspective, the key to the symmetrical object paradigm is whether the "short movement" of the theme past the causee or the applied object in (1b) and (4b) is possible or not. If it is, then (2b), (3b), (5b), and (6b) naturally become possible too, but not otherwise. In this, we follow the general insight of Ura (2000) and McGinnis (2001), although not the details about what the landing site of this short movement of the theme is.[8]

Now we can return to the comparison between the applicative and the causative. The two structures are compared in (16), which is like (13) but with LkP added and the "short movement" of the theme past the higher argument indicated. Note that the PIC draws a difference between the two structures. For the applicative, the movement is all within a single phase, the sole vP. Hence it is unrestricted by Chomsky's Phase Impenetrability Condition (PIC). Not so for the causative. Here the complement of the causative morpheme is also an active vP, hence also a phase. Therefore the PIC says that direct movement of the theme past the causee to SpecLkP should not be possible in this construction. And if the theme cannot get to SpecLkP in the causative, then it also cannot get to SpecTP in the passive or to v when it is an object marker. Thus, it is not unexpected in these terms that movement in a causative would be more constrained than movement in an applicative.

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[8] Note that, in terms of the traditional distinction between A and A-bar movement, movement to SpecLkP should count as A-movement, because an NP can move from there to SpecTP (a known A-position) in passives. Indeed, Carstens (2012) shows that this movement does have the properties of A-movement, in that a quantified theme can bind a pronoun inside the goal/benefactee if and only if it moves (in our terms) to SpecLkP.

(16)
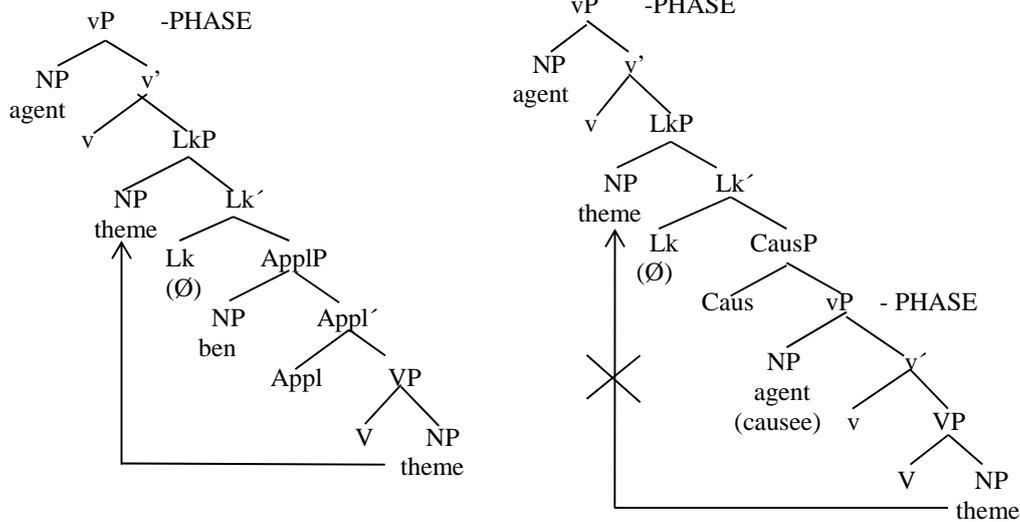
If nothing else is added to this account, then we expect applicatives to be fully symmetrical but causatives to show asymmetrical behavior in languages that have LkP available. And, in fact, this pattern is found within the Bantu family. In particular, it is found in Sesotho (Machobane, 1989) as can be seen by comparing the applicative data in (17)-(19) with the causative data in (20)-(22).

(17) Sello o-shap-el-a   Lineo ba-shanyana.   (Applicative word order)
      Sello SM.c1-beat-APPL-fv   Lineo c2-boys   (Machobane 1989:23)
      'Sello beats Lineo for the boys' *or* 'Sello beats the boys for Lineo.'[9]

(18) a. 'Me   o-pheh-ets-o-e   nama.   (Passive of applicative)
          mother SM.c1-cook-APPL-PASS-fv   meat   (Machobane 1989:24)
          'My mother was cooked the meat.'

      b. Nama   e-pheh-ets-o-e   'me.
          cX-meat   SM.cX -cook-APPL-PASS-fv mother
          'The meat was cooked for my mother.'

(19) a. Ba-nana   ba-mo-pheh-el-a   nama   (Applicative with OM)
          c2-girls   SM.c2-OM.c1-cook-APPL-fv   meat   (Machobane 1989:24)
          'The girls are cooking meat for her.'

      b. Banana   ba-e-pheh-el-a   'me.
          c2-girls SM.c2-OM.cX-cook-APPL-fv   mother
          'The girls are cooking it for my mother.'

(20) Sello o-shap-is-itse   ba-shanyana Lineo.   (Causative word order)
      Sello SM.c1-beat-CAUS-ASP   c2-boys   Lineo   (Machobane 1989:30)
      'Sello made the boys beat Lineo.' *Not* "Sello made Lineo beat the boys.'

(21) a. Bana   ba-bal-is-o-a   buka ke-ntate.   (Passive of causative)
          c2-children SM.c2-read-CAUS-PASS-fv   book by-father   (Machobane 1989:31)
          'The children are made to read the book by my father.'

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[9] Machobane shows, however, that word order in applicatives is fixed as verb-benefactee-theme if one or both of the internal NPs is inanimate. We take this extra condition to be independent of the factors discussed here.

b. *Buka   e-bal-is-o-a   bana   ke-ntate.
cX-book   SM.cX-read-CAUS-PASS-fv c2-children by-father
'The book is made to be read by the children by my father.'

(22)   a.   Ntate o-ba-bal-is-a   buka.   (Causative object marking)
father SM.c1-OM.c2-read-CAUS-fv cX.book   (Machobane 1989:31)
'My father makes them read the book.'

b.   *Ntate   o-e-bal-is-a   bana.
father   SM.c1-OM.cX-read-CAUS-fv c2.children
'My father makes the children read it.'

We take this as showing that our difference between causatives and applicatives is on the right track. But of course the direct analogs of (20), (21b), and (22b) are grammatical in Lubukusu, causatives in this language being asymmetrical only if the theme is a local pronoun. So we are not done yet.

4. Person Restrictions at a Phase Edge

Standard phase theory allows an element properly contained in a phase to move out of that phase under one condition: it must first move to the "edge" of that phase. In Chomsky's terminology, this is made possible mechanically by associating an EPP/Edge feature with the phase head. Presumably this is what happens in Lubukusu causatives (and in Kinande, and other uniformly symmetrical languages). From there the theme argument could move on to Spec,LkP or higher, by a derivation like that in (23).

(23)
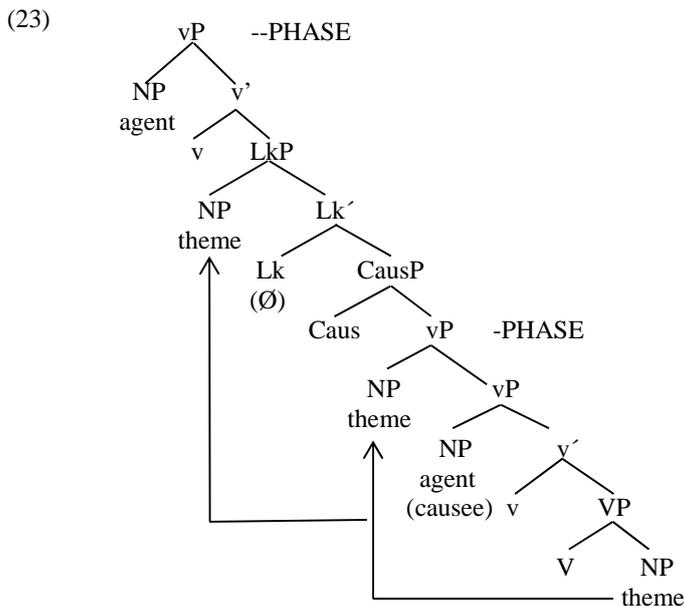
Sesotho could be a language which (unusually?) does not allow an NP to the move to the edge of vP in this way (its causative morpheme has no EPP/edge feature), so there is no escape hatch in causatives. In contast, Lubukusu apparently allows it *except for a certain combination of person features*.
    Our proposal is that this qualification is akin to certain other person hierarchy effects found in natural languages. In particular, we suggest that the edge of a phase cannot contain two nominals with competing claims to prominence, where +local NPs and +agent NPs are both prominent along different dimensions. This is stated somewhat more precisely in (24).

(24)   Phase Edge Prominence Constraint (PEPC):
        *[NP1 NP2 ….] if […] is a phase, and both NP1 > NP2 and NP2 > NP1.

(X > Y if person of X is less than Y; X>Y if X is higher on thematic hierarchy than Y, etc.[10])

A straightforward consequence of this is that a 1st or 2nd person theme cannot occupy the edge of vP together with an agent NP in the structure in (23). (We assume that (24) is violated even if one of the NPs at the edge of vP moves on.) As a result, the escape hatch needed to create symmetrical object behavior in a causative is not open to these pronouns, and Lubukusu becomes like Sesotho in this special situation.

The PEPC is a rather specific condition, designed to have a particular effect within our set of assumptions. But it is not so specific that it fails to make interesting predictions for other constructions. Consider, for instance, the phenomenon of Object-Subject Reversal (OSR) found in some central Bantu languages. For example, Kirundi (Ndayiragije, 1999) and Kinyarwanda (Kimenyi, 1980) productively allow the theme to move past the agent generated in SpecvP into the SpecTP position, even when the verb is in active voice. An example is (25b), to be compared to (25a) in Kirundi. (25c) shows that even an animate human pronoun (here pro) can undergo this movement.

(25)   a.   Abanyeshule   ba-á-ra-bonye   uwo   mwarimu.
                c2.students   SM.c2-PST-AFOC-see.PRF that   c1.teacher
                'Students saw that teacher.'

         b.   Uwo mwarimu   a-a-bonye   abanyeshule.   (Kirundi, Ndayiragije 1999:423)
              that   c1-teacher   SM.c1-PST-see.PRF c2-students
              'The students (not the dean) saw that teacher.'

         c.   A-a-bonye   abanyeshule.   (Kirundi, Ndayiragije p.c.)
              SM.c1-PST-see.PRF c2-students
              'The students (not the dean) saw him.'

But our PEPC correctly predicts that a local (1st or 2nd) pronoun cannot move to Spec,TP in this way:

(26)   #n/u-a-bonye   abanyeshule.   (Kirundi, Ndayiragije p.c.)
          SM.c1.1st/2nd-PST-see.PRF   c2-students
          Not: 'The students (not the dean) saw me/you.' (Only: 'I/you saw the students.')

We predict this because the OSR structure is very much like the causative structure in relevant respects. The matrix vP counts as a phase. In order to escape this vP phase and reach Spec,TP, the theme argument must stop at the edge of vP, where the agent resides. If the theme is a third person argument, this is possible, but if it is a local pronoun when the other argument is an agent, the PEPC is violated. The structure is sketched in (27). Hence, the PEPC productively reveals this nonobvious similarity between symmetrical object properties in causatives and Object-Subject Reversal.

(27)   *[$_{TP}$ I/you T [$_{vP}$ <I/you> children v [$_{vP}$ see <I/you>]]
              (OK with 'teacher' or 'he' in the place of 'I/you')

Somewhat further afield—and more tentatively—the PEPC could be behind (some) more classic Person-Hierarchy effects of the sort discussed by Aissen (1999), Rezac (2011) and others. For example, consider the Southern Tiwa (ST) paradigm in (28) (Allen et al., 1990:331-332). (28a) is an ordinary transitive construction with third person subject and object (the object happens to be

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[10] We wish to leave open the possibility that the details of what counts as more prominent than something else might be more extensive than this, and might vary somewhat from language to language. For example, preliminary observations suggest that in Lubukusu even third person pronouns rank higher than nonpronominal NPs, and hence create similar asymmetrical effects. Furthermore, Jelinek and Demers 1993 (for one variety of Straits Salish) and Chung 1998 (for Chamorro) discuss cases in which second person outranks third, but there is no interaction between first person and third. Although these variations are an interesting topic for further research, and might shed light on the ultimate nature of the PEPC, our present goal is only to show how a hierarchy condition might fit best into grammatical derivations, not to explore the details of that hierarchy.

incorporated). (28b) shows that passive can optionally apply in this situation. But (28c) indicates that it is impossible to have a third person subject and a local pronoun object in this language. ST has prefixes that agree with both the subject and the object, but there is simply no agreement form for this particular combination. (28d) shows the solution: the relevant notion is expressed by a passive clause, where the local pronoun becomes the subject, and the third person agent is expressed as an oblique 'by'-phrase (or not at all).

(28)   a.   Seuanide   Ø-liora-mu-ban.   Active: 3rd on 3rd
             Man   3:3ISG-lady-see-PST
             'The man saw the lady.'

       b.   Liorade   Ø-mu-che-ban   seuanide-ba.   Passive: 3rd on 3rd
             lady   3-see-PASS-PST   man-INSTR
             'The lady was seen by the man.'

       c.   *'The man saw me.' (ineffable, no agreement form) Active: *3rd on 1st (or 2nd)

       d.   Seuanide-ba   te-mu-che-ban.   Passive: 3rd on 1st (or 2nd)
             Man-INSTR   1sS-see-PASS-PST
             'I was seen by the man.' (i.e., 'The man saw me.')

We might then ask what general condition is violated by (28c) in ST, but not by (28a) or (28d). Our tentative answer is the PEPC. The steps could go like this. First, in ST local pronouns (at least) must be licensed by agreeing with the verb; this sometimes called the Person Licensing Condition (Bejar and Rezac, 2003). Second, we can asume that T agrees with more than one NP in ST, whereas v does not agree at all (see Bobaljik and Branigan (2006) and Baker (2008) for other languages in which this is true). However, if the object stays in situ inside VP, it is not close enough for T to agree with it, by the PIC. The solution would be for the local object to move to the edge of vP, so that it is accessible to Agree with T, and hence can be licensed. But if the thematic agent is also at the edge of vP, then the PEPC is violated. The offending structure for ungrammatical (28c) is sketched in (29).

(29)   *[TP The man T [vP <I/you> <the man> v [VP see <I/you>]]
                          ⌣⌣⌣⌣⌣⌣⌣⌣⌣↗ Agree   (OK with 'lady' in the place of 'I/you')
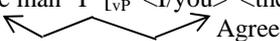
In contrast, (28a) is possible because both NPs are third person, so there is no conflict in relative prominence. And (28d) is possible because the passive agent is not generated in Spec, vP. Therefore the local pronoun theme is the only NP at the edge of vP, and there is no conflict in relative prominence here either. It then follows that passive is de facto obligatory if one wants to express the notion in question. The PEPC thus gives us a unified solution for OSR in Bantu and person hierarchy in ST, even though the two seem to be opposites in the sense that local pronouns are required to become the subject in ST (by passive) but are forbidden from doing so (by OSR) in Kirundi.[11] Although the final structures of (26) and (28c) are different in terms of what occupies the SpecTP position, the agent or the theme, they are similar in their intermediate structure in that both must have the theme at the edge of the vP for reasons related to the PIC. That serves to rule out both. Other languages in which T agrees with both subject and object, and this forces passive rather than active are Lummi (Aissen, 1999, Jelinek and Richard, 1983) and Chamorro (Chung, 1998), and our account might extend to these as well. It might also extend to languages with direct-inverse marking like Mapudungun and many Algonquian languages, if the so-called inverse marking found in those languages is a similar category to passive voice in relevant respects—a matter of considerable controversy among the experts on these languages.
       We conclude that the PEPC could prove to be more than an ad hoc stipulation, but may prove to be rather general—although a deeper conceptual understanding of the condition would be most

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[11] In contrast, we suspect that one could not get a unified analysis of the two phenomena within the terms of Aissen 1999, because the bad example in (26) does put the most prominent nominal in terms of person features in the most prominent grammatical position, and this is favored by her harmonic alignment constraints.

welcome, and we do not yet know much about how widespread this person condition is on causative constructions and OSR constructions in Bantu languages (and beyond).[12]

5. Conclusion

In this study, we have discovered that two distinct kinds of movement need to be distinguished in order to understand variation in double object constructions in Bantu languages: movement to phase edges (i.e., vP), and movement to extra positions (in our terms, Spec, LkP). These movements are subject to somewhat different restrictions thanks to Chomsky's PIC and our PEPC. We have also shown that causative constructions should always allow symmetry that is less than or equal to the symmetry applicatives, since the complement to causative morpheme is consistently a phase (if the causative applies to agentive verbs). This is seen to be true blatantly in Sesotho, and more subtly so in Lubukusu. Finally, we observe that rarely-collected data from local pronouns in double object constructions could be very useful to identifying the kinds of intermediate movement involved in double object constructions, given a constraint like the PEPC. Just how widespread the effects of the PEPC are could be an interesting topic for further research.

References

Aissen, Judith. 1999. Markedness and subject choice in Optimality Theory. *Natural language and linguistic theory* 17:673-711.

Allen, Barbara, Frantz, Donald, Gardiner, Donna, and Perlmutter, David. 1990. Verb agreement, possessor ascension, and multistratal representation in Southern Tiwa. In *Studies in Relational Grammar 3*, eds. Paul Postal and Brian Joseph, 321-384. Chicago: University of Chicago Press.

Baker, Mark. 1988. *Incorporation: a theory of grammatical function changing*. Chicago: University of Chicago Press.

Baker, Mark, and Collins, Chris. 2006. Linkers and the internal structure of vP. *Natural Language and Linguistic Theory* 24:307-354.

Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.

Bejar, Susana, and Rezac, Milan. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, eds. Yves Roberge and A.-T. Pérez-Leroux, 49-62. Amsterdam: John Benjamins.

Bobaljik, Jonathan, and Branigan, Phil. 2006. Eccentric agreement and multiple case checking. In *Ergativity: Emerging Issues*, eds. Alana Johns, Diane Massam and Juvenal Ndayiragije, 47-77. Dordrecht: Springer.

Bresnan, Joan, and Moshi, Lioba. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21:147-185.

Chomsky, Noam. 2000. Minimalist inquiries: the framework. In *Step by Step*, eds. Roger Martin, David Michaels and Juan Uriagereka, 89-155. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1-52. Cambridge, Mass.: MIT Press.

Chung, Sandra. 1998. *The Design of Agreement*. Chicago: University of Chicago Press.

Diercks, Michael, and Sikuku, Justine. 2011. Object marking as pronominal incorporation in Lubukusu. Ms. Pomona College and Moi University.

Harley, Heidi. to appear. External arguments and the Mirror Principle: On the independence of Voice and v. *Lingua*.

Jelinek, Eloise, and Richard, Demers. 1983. The agent hierarchy and voice in some Coast Salish languages. *International Journal of American Linguistics* 49:167-185.

Kimenyi, Alexandre. 1980. *A relational grammar of Kinyarwanda*. Berkeley, Calif.: University of California Press.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, eds. Johan Rooryck and Laurie Zaring, 109-138. Dordrecht: Kluwer.

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[12] We might also imagine the possibility of finding asymmetrical behavior with local arguments only even in applicatives in some languages. For example, Riedel (2009:ch.5) reports that constructions with 1st and 2nd person OMs behave asymmetrically in Sambaa in both causatives and applicatives (although she does not say if the asymmetry extends also to passives with local pronouns). If the contrast is systematic, it might be analyzed by saying that in a language like Sambaa (but not Lubukusu) ApplP counts as an "extra" phase head (cf. McGinnis 2001). Then theme arguments would only get past applied objects by moving to the edge of ApplP, and the PEPC will apply to applicative constructions in the same way as to causative ones.

Machobane, 'Malillo. 1989. Some restrictions on the Sesotho transitivizing morphemes, McGill University: Ph.D. Dissertation.

McGinnis, Martha. 2001. Variation in the phase structure of applicatives. *Linguistic Variation Yearbook* 1:105-146.

Mchombo, Sam. 2004. *The syntax of Chichewa*. Cambridge: Cambridge University Press.

Ndayiragije, Juvénal. 1999. Checking economy. *Linguistic Inquiry* 30:399-444.

Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge: MIT Press.

Rezac, Milan. 2011. *Phi-features and the modular architecture of language*. Dordrecht: Springer.

Riedel, Kristina. 2009. The Syntax of Object Marking in Sambaa: a comparative Bantu perspective, University of Leiden.

Safir, Ken, and Sikuku, Justine. 2011. Lubukusu anaphora sketch. Ms. Rutgers University and Moi University.

Ura, Hiroyuki. 2000. *Checking theory and grammatical functions in Universal Grammar*. New York: Oxford University Press.