On pseudo-applicatives

Javier Carol
Universidad de Buenos Aires

Andrés Pablo Salanova
University of Ottawa

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Applicativization is an operation that allows a peripheral (oblique) participant to become a core argument of a predicate. In the tradition of formal linguistics, applicative constructions are considered to be those where the applied argument has all the properties of a direct object, and can thus be passivized and trigger agreement on the verb (Aissen 1983, Marantz 1984, Baker 1988, a.o.).

The present article deals with applicatives in two languages of lowland South America. Contrary to what happens in the canonical cases, these applicatives apparently don't change verbal valency, and their main effect seems to be restricted to vary the ordering of syntactic dependents of the predicate. We contend that such applicatives may not be treated, as Baker (1988) does, as syntactically incorporated adpositions. Instead, we think that what is called applicative in these languages is simply a regular adposition, and the observed alternations are simply phonologically or morphologically-driven phenomena. We call such alternations *pseudo-applicatives*.

1 Introduction to applicatives

Applicatives are derivational morphemes that increase the valence of a verb by allowing an argument that would normally be expressed by means of a prepositional phrase to become a direct argument of the verb.

Applicativization is described by Baker as a process of "grammatical function changing", by which the following two changes happen simultaneously:

(1)   a.   oblique
             indirect object   →   object
                    null

      b.   object   →   second object
                                  (or oblique)

"Individual languages include different particular instances of this schema: some allow locative obliques to become objects; others allow goal or benefactive or instrumental obliques to become objects; still others allow combinations

of these" (op. cit., pp. 9-10). In particular, Baker argues, following Marantz (1984), that such a process corresponds with the incorporation of a P to the V, considering that incorporation consists of head-to-head movement, as in the following tree:

(2)

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            VP
          /    \
        V       PP
      /  \     /  \
    P_i   V  t_i   DP
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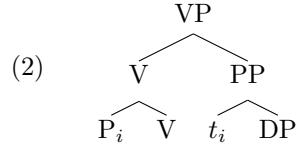
Consider the following example:

(3)   Kinyarwanda (Kimenyi 1980, apud Baker, op. cit.)

    a.   Umwaana y-a-taa-ye   igitabo **mu** maazi
        child   SP-PAST-throw-ASP book   in   water

        "The child has thrown the book into the water."

    b.   Umwaana y-a-taa-ye-**mo**   amaazi igitabo
        child   SP-PAST-throw-ASP-in water   book

        "The child has thrown the book into the water."

In (3a), a verb and a separate adposition occur, while in (3b), an overt adposition is lacking, at the same time that one sees an affix on the verb which may be identified with the adposition in (3a); this affix would be the adposition that has been incorporated into the verb stem.

The incorporation of P to V puts the complement of P in the government domain of V, allowing it to be treated as a direct object for the purposes of certain syntactic operations (i.e., A movement, agreement). In particular, if it's the closest governed XP with respect to a certain attractor (i.e., the passive morpheme), it may be treated as an object to the detriment of the original direct object of the verb.

2   Panará and Chorote pseudo-applicatives

Prima facie, data like the following from Panará (Jê, central Brazil) strongly support such a proposal (data are from Dourado 2004b):

(4)   a.   ka   hẽ   ka=ra=pĩase   prĩara   hɔw
        you ERG 2SG.ERG=3PL.ABS=quarrel children WITH

        "You quarrelled with the children."

    b.   ka   hẽ   ka=ra=hɔw=pĩase   prĩara
        you ERG 2SG.ERG=3PL.ABS=WITH=quarrel children

        "You quarrelled with the children."

The element **hɔw**, that appears as a postposition in (4a), becomes a part of the verb in example (4b), without any apparent modification in meaning. Something similar can be observed in the following data from Chorote (Mataco-Mataguayo, northern Argentina and Paraguay; data from the first author's own field notes):

(5) a. ha-hyo-yi   syupa tewuk
         PROSP.1S$_A$-go-P DEM   river

         "I'm going to that river."

     b. ha-hyo tewuk-i
         FUT-go river-P

         "I'm going to the river."

Though neither Panará nor Chorote have a passive construction, there is some evidence from relativization strategies in Panará that serves to show that there is formal identity between underived direct objects and applied objects:

(6)   pẽkə [ti=ra=sõri   ĩkyẽ mã] ĩki
         dress 3SG.ERG=1SG.ABS=give I   TO beautiful

         "The dress that she gave me is beautiful."

(7) a. ĩkiara   [ĩkyẽ hẽ   re=ra=kõ=kuəri]
         women.ABS I   ERG 1SG.ERG=3PL.ABS=WITH=do
         yɨ=ra=tɔ
         REAL.INTR=3S.ABS=go

         "The women that I helped left."

     b. tɔmaka [maira hẽ   ti=amã=yĩ=pũ]
         mirror Maira ERG 3SG.ERG=IN=REF=see

         "The mirror in which Maira saw herself."

As can be seen here, applicative objects can be relativized by the same strategy of simple fronting of the relative head, (7), as regular objects, (6). Other participants may not be relativized in the same way.

There is no evidence of this sort to characterize Chorote applied objects as direct objects.

Despite these typical applicative traits, however, in this paper we will argue that applicative alternation in both Panará and Chorote is epiphenomenal. What we suggest for both of these languages is that certain argument-like adpositional phrases are generated particularly close to the verb together with clitic agreement, and are extraposed under certain circumstances. Incorporation of the adposition, if it occurs at all, is a prosodic operation that does not affect the syntactic structure.

In other words, rather than comparing the Panará and Chorote alternations with (3), we wish to compare them to extraposition, of which the German sentence in (8) could constitute an example:

(8) Ich habe nie   **daran** gedacht, meine Bank zu wechseln.
     I   have never on.that thought my   bank to change

     "I have never thought of changing my bank."

In German, complement clauses are often extraposed to avoid center embedding. In this specific example, the verb "to think" governs a particular adposition *an*. When the complement clause is extraposed, the adposition is left behind, merging with a demonstrative or determinant to make a sort of resumptive or placeholding element.

Before discussing this solution in full and addressing some of the problems that it raises, we need to understand the Panará and Chorote data better.

3   Panará in detail

The data on Panará applicatives come from Dourado (2004b), with other data on the language extracted from Dourado (2001, 2004a).

Panará transitive verbs typically agree with direct objects, as in (9). Agreement with subjects occurs further out in the verbal word:

(9) ĩpɨarã ne=mẽ=pari   mĩ   pɨtira
     men   3PL.ERG=3DU.ABS=kill.PERF alligator two

     "The men killed two alligators."

Dourado further presents examples where verbs agree with certain types of oblique arguments:

(10) ĩkyẽ hẽ   re=(**a**)=ãpũ   prĩara **ka** kõ
      I   ERG 1.SG.ERG=2SG.ABS=see child   you WITH

      "I saw the children with you."

(11) ĩpɨarã   ne=mẽ=pari   mĩ   pɨtira ĩko kõ
      men.ERG 3PL.ERG=3DU.ABS=kill alligator two   river IN

      "The men killed alligators in the river."

(12) mara hẽ   ti=**a**=pɨri   sõsesua **ka** pe
      he   ERG 3SG.ERG=2SG.ABS=grab hook   you FROM

      "He grabbed the fishhooks from you."

(13) ĩpɨara   yɨ=ra=po   hatɨ pe
      men.ABS REAL.INTR=3PL.ABS=arrive woods FROM

      "The men arrived from the woods."

PPs that can sometimes have agreement on the verbal word include those headed by malefactive **pe**, comitative **kõ**, inessive (open containers) **amã**, instrumental-comitative **hɔw**, dative **mã**. All but the last of these are homophonous to other P's that don't allow their complements to be agreed with: ablative, inessive (water), locative, instrumental, respectively.

The P's that allow agreement on the verb can become incorporated into the verb; that can't happen with the P's that don't allow agreement:

(14) mara hẽ   ti=a=pe=pɨri   sõsesua ka
      he   ERG 3SG.ERG=2SG.ABS=FROM=grab hook   you

      "He grabbed the fishhooks from you."

(15) *ĩpɨara   yɨ=pe=ra=po   hatɨ
      men.ABS REAL.INTR=ABL=3PL.ABS=arrive woods

      "The men arrived from the woods."

The following are some more examples of this, taken from the same source:

(16) a. ka hẽ ka=ra=pĩase   prĩara hɔw
          you ERG 2SG.ERG=3PL.ABS=quarrel children WITH

          "You quarrelled with the children."

      b. ka hẽ ka=ra=hɔw=pĩase   prĩara
          you ERG 2SG.ERG=3PL.ABS=WITH=quarrel children

          "You quarrelled with the children."

(17) a. kamɛra   yɨ=ra=ria=tẽ   ĩkyẽ how kri
          you.PL.ABS REAL.INTR=1SG.ABS=2PL.ABS=go I   WITH village
          tã
          TO

          "You took me to the village."

      b. kamɛra   yɨ=ra=how=ria=tẽ   ĩkyẽ
          you.PL.ABS REAL.INTR=1SG.ABS=INSTR=2PL.ABS=go I
          kri   tã
          village TO

          "You took me to the village."

4 Discussion

Panará is essentially head-final like all of the northern Jê languages. Adpositions follow their complements and possessed nouns follow their possessors. Unlike other Jê languages, however, there is apparent SVO order in matrix clauses.

We contend that the order in the Panará clause is still SXOV, and deviations from that order are due to extraposition. Constituent order is identical when objects are pronominal. Compare the Panará clause in (18) with the Mẽbengokre clause in (19), which has the more typically Jê constituent order:[1]

(18) yɔwpɨ hẽ   ti=s-ãpũ
      jaguar ERG 3SG.ERG=3SG.ABS-see

      "The jaguar saw it."

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[1]Data for Mẽbengokre come from Salanova (2011). Note that in Mẽbengokre the nominal form of the verb is used, which in Mẽbengokre independent clauses is interpreted as a present perfect (see Salanova 2007). In our view, this is the form that best translates the verb forms used in Panará. In any case, the only difference between verbal and nominal/participial independent clauses with transitive verbs in Mẽbengokre is the presence of the ergative clitics.

(19) rop   nẽ   (ku)te omũnh
     jaguar NFUT 3ERG 3.see.N

     "The jaguar has seen it."

On the other hand, when a non-pronominal noun phrase is in object position, the contrasting order emerges, SOV in Mẽbengokre, and SVO in Panará:

(20) yɔwpɨ hẽ   ti=s-ãpũ   iãsɨ
     jaguar ERG 3SG.ERG=3SG.ABS-see deer

     "The jaguar saw the deer."

(21) rop   nẽ   (ku)te ngijadjy pumũnh
     jaguar NFUT 3ERG deer   see.N

     "The jaguar has seen the deer."

Note that in Panará, the third person object clitic stays on the verb as the object is expressed postverbally, while in Mẽbengokre it is substituted by the object.

A similar pattern may be observerd with oblique objects. When they are pronominal, the order is identical between Panará in (22), and Mẽbengokre in (23), as a representative of the standard Jê constituent order:

(22) maira hẽ   ti=   amã= yɨ= pũ
     Maira ERG 3SG.ERG IN   REF see

     "Maira saw herself in it."

(23) maira nẽ   (ku)te kam amĩ= pumũnh
     Maira NFUT 3ERG IN   REF   see.N

     "Maira has seen herself in it."

When a non-pronominal oblique object is present, the order is again object-final in Panará, as seen in (24), contrasting with the verb-final order of Mẽbengokre, exemplified in (25).

(24) maira hẽ   ti=   amã= yɨ= pũ **tɔmaka** amã
     Maira ERG 3SG.ERG IN   REF see mirror   in

     "Maira saw herself in it."

(25) maira nẽ   (ku)te **ixe**   kam amĩ= pumũnh
     Maira NFUT 3ERG mirror IN   REF   see.N

     "Maira has seen herself in the mirror."

Anticipating our analysis, and for the sake of consistency, we will say that the objects that appear to the right of the verb in Panará are *extraposed*.

We may sum up the difference between Mẽbengokre and Panará by saying that non-pronominal noun phrases in Panará need to be extraposed from their canonical position to the left of the verb. The extraposed noun phrase cooccurs with a pronominal clitic on the verb in Panará. Likewise, when dealing

with oblique objects, we note that the extraposed postpositional phrase coexists with a copy of the postposition next to the verb. In Dourado's analysis, the postposition in that location is taken to be an applicative morpheme.

In fact, the facts of rightward extraposition in Panará can be duplicated in Mẽbengokre, except that in this language extraposition is to the left. Consider the following Mẽbengokre example:

(26)   ngijadjy nẽ   rop   (ku)te omũnh
      deer   NFUT jaguar 3ERG 3.see.N

      "It is deer that the jaguar has seen."

Here, the order is OSV; the effect of fronting the object is nominally of contrastive emphasis on the object, but transitive sentences with this order are probably as frequent as those where the order is SOV.

Oblique objects and adjuncts may also be fronted in Mẽbengokre. A copy of the postposition may appear in the canonical position of a fronted oblique object, in addition to appearing with the fronted constituent:

(27)   a-bãm=mã nẽ   ba   (ku-m) i-kabẽn
      2-father=TO NFUT 1NOM 3-TO   1-talk

      "It is *to your father* that I spoke."

This has parallels in Panará, where the "incorporated" adposition may be doubled by a postposition on the oblique object:

(28)   Maira hẽ   ti=**amã**=yĩ=pũ   tɔmaka **amã**
      Maira ERG 3SG.ERG=3SG.in=REFL=see mirror   in

      "Maira saw herself in the mirror."

Dourado is right in pointing out that there are two groups of postpositional phrases according to whether they can or can't be duplicated by a free postposition next to the verb, and her calling those that can "arguments" seems intuitively correct. In Mẽbengokre contrastive fronting the facts are similar; while the locative adposition *kam* cannot normally be stranded, the adposition *o* is most often left in a position near the verb:

(29)   bà=kam nẽ   ba   (*kam) tẽ
      woods=IN NFUT 1NOM IN   go.V

      "It is *into the woods* that I went."

(30)   mry nẽ   ba   o   tẽ
      meat NFUT 1NOM WITH go.V

      "I took (went with) meat."

In fact, the set of postpositions that appear close to the verb in Mẽbengokre seems to be very similar to the set of applicativizable adpositions given by Dourado. The reason why this particular class of thematic roles is treated in a special way is something that we will discuss later in the paper.

To conclude this section, we have established a parallel between the "applicativization" facts of Panará and the constituent order alternations found in contrastive fronting in Mẽbengokre. Very broadly, these operations appear to be clitic-doubling constructions, where a phrasal constituent is placed at the beginning (in Mẽbengokre) or the end (in Panará) of a matrix clause, and is duplicated by person inflection. In the case of oblique arguments, adpositions are sometimes duplicated, and sometimes "stranded".

5 Chorote in detail

Data for Chorote come primarily from the first author's field notes. See also Carol (2011a).

Chorote has several different applicative morphemes, each associated with particular thematic roles.[2] We will call these applicative morphemes Ps, as they alternate with freestanding adpositions. Polysyllabic Ps are always freestanding words,[3] whereas monosyllabic ones are always bound, either to their complements (i.e., as adpositions) or to the V (as applicatives). Our focus in this paper is therefore on the monosyllabic ones. These are illustrated in the following examples:

(31)   **-eh**: instrumental, sociative, theme

   a. hi-syet   y-eh-e   hana pelota
       3POS-foot 3A-hit-P DEM ball

       "With his foot he hits the ball."

   b. y-am-is-i   hakya ahwenta
       3S-go.away-PL-P DEM   hen

       "He took/bought a hen." (lit., "He went away with a hen.")

   c. i-tyet-e   hana sisah
       3S-throw-P DEM stone

       "He threw a stone."

(32)   **-ey**: to, of, purpose

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[2] Panará and Chorote were chosen for this study because they illustrate a similar phenomenon in complementary ways. We do not wish to claim that the two languages are related, though see Viegas Barros (2005) for suggestive evidence linking Jê to Macro-Guaykuruan, a language family which would include the Guaykuruan and the Mataco-Mataguayan families, to which Chorote belongs. In particular, adpositions are cited by Viegas Barros as a domain of similarity between the two families.

[3] Here is an example of the behavior of a polysyllabic P:

   a-k'yu   (kyuʔ)   k'iye (kyuʔ)   (ha Hwanʔ)
   1S$_A$-wait (a.while) P   (a.while) DEM Juan

   "I'm waiting for him (for Juan) (for a while)."

a. i-hyo-yi na-pʊ iʔnyoʔ
   3S-go-P DEM-PL person

   "He went to the people."

b. tem-pa nam-is-i
   what-DEM 3S.come-3PL-P

   "What did you come for?"

(33) **-ham**: locative, destination, among other semantic roles

a. i-hyos-am ni-wa hi-kapiskiʔni wa hi-sihnaʔ
   3A-carry-P DEM-PL 3POS-bundle DEM-PL 3POS-roast.NMZ.PL
   siʔyus
   fish

   "They carried in their bundles the fish (that they had) roasted."

b. si-hwesye-ham na hwanʔ
   1S.SG-angry-P DEM Juan

   "I'm angry at Juan."

(34) **-hiy**: locative, inessive (concave receptacles, liquids)

a. syunye tewuk in-laye y-i-hiʔ
   DEM river INDEF.POS-danger 3S-be-P

   "There is danger in the river."

(35) **-ʔe**: locative (punctual contact with surface)

a. in-kiso-l ʔnehts'-eʔ ha hwanʔ
   INDEF.POS-pimple-PL 3S-sprout-P DEM Juan

   "Pimples appeared on Juan."

b. hwan y-i-ʔi na dario hi-ʔwet
   Juan 3S-be-P DEM Darío 3POS-place

   "Juan is in Darío's place."

(36) **-ah**: towards (without movement), in relation with

a. hʊski-ye pe na hwat
   be.careful-P ADV DEM fire

   "Always be careful with fire."

(37) **-k'i**: comitative, from, towards (with movement)

a. ak-k'i-ʔni kya-pʊ i-sihli-hyin mases
   1S$_A$.go.away-P-ITER DEM-PL 3S-grown-PL deceased

   "I used to go with the (now) deceased elders."

b. a-tat-k'i hana ohwoʔ
   1S$_A$-throw-P DEM dove

   "I throw something at the (moving) dove."

(38) **-hap**: locative, next to, beside

9

a. ʔwanhla-hap kya-pʊ ihyaʔ
3s.stay-P   DEM-PL other

"He stayed with the rest."

These morphemes appear after the last inflectional suffix of the verb, but they can additionally be used as postpositions; this typically happens when they have a locative or temporal value, whether they are introducing arguments or adjuncts:[4]

(39) a. ʔnes-is   pe   hiwek hi-ʔwet-e
3s-arrive-3PL DIST.PST finally 3POS-place-P

"Finally they arrived at their place."

b. i-ʔyen-k'i   syunye-ʔeʔ
3s-see-P.1SG that-P

"See me there."

As a general rule, in Chorote "applicativization" the heaviness or complexity of the NP introduced by P determines whether it will end up as a complement of an unincorporated P or as an applied object. The general requirement is that "heavy" complements (i.e., constituents made up of more than one word) follow the heads, whereas light ones precede them, with the caveat that heaviness is not a straightforwardly prosodic notion:

(40) a. pʊ   (pet) ni   siʔyus
3s.exist also   DEM fish

"There is (also) fish."

b. siʔyus pʊʔ(ʊ)
fish   NEG   3s.exist

"There is fish."

[4]In our data, there are other ordering possibilities beyond what we discuss here, which we will not address for considerations of space. Consider the following:

(1) a. hi-syet   y-eh-e   hana pelota
3POS-foot 3A-hit-P DEM ball

"With his foot he hits the ball."

b. At'es   i'nyo   i-hyum-e
alcoholic.beverage person 3s-be.drunk-P

"Alcoholic beverages intoxicate people." (from Drayson 1999).

Why is there this contrast in word order between (39a) and (1a)? In the latter, the complement of P does not appear adjacent to P and to the right of the verb as in (39a), but rather at the left. We conjecture that this follows from the fact that P here is an instrumental (cf. ex. (31)), and, as a consequence, it introduces an applied argument that is "higher" than that in (39a), as has been proposed for instrumentals by Pylkkänen (2002). Likewise note that *at'es* '[the] alcoholic beverage' in (1b) may also be interpreted as a causer, i.e., as an argument that is higher in the thematic hierarchy than what is the subject of the clause. The translation proposed by Drayson (1999) reflects this possibility.

(41) a. (na)   hi-nyaʔ   (X) ha-na Maria
            DEM.M 3POSS-father   F-DEM Maria

            "Maria's father"

     b. (na)   Maria (*X) hi-nyaʔ
            DEM.M Maria   3POSS-father

            "Maria's father"

(42) a. y-i   (X) apeʔe (X) ʔni ahnat
          3S-be   on   DEM earth

          "(He) is on earth" (= "he exists")

     b. y-i   (X) aʔlenta (*X) apeʔe
          3S-be   horse   on

          "He is on horse(back)."

To summarize the behavior of the Ps of Chorote, we can make the following three statements: (a) Ps always attach to a pronominal complement. If the resulting constituent is still monosyllabic (2PL is bisyllabic but acts as a monosyllable in this situation), the resulting string attaches to the verb:

(43) a. ∅-nam-e   (kyuʔ)
          3s-come-P(.3) (a.while)

          "He/she brought him/her/it."

     b. ∅-nam-k'i   (kypʔ)
          3s-come-P.1SG (a.while)

          "He/she brought me."

Secondly, (b) a P attaches to a lexical complement if it is light and locative:

(44) i-hyo (kyuʔ)   tewuk-i
      3S-go (a.while) river-P

     "S/he went to the river (for a while)."

Finally, (c) a P attaches to the verb otherwise, resulting in an apparent applicative:

(45) a. hi-syet y-eh-e   hana pelota
          his-foot 3s-hit-P DEM ball

          "He kicked (at) the ball."

     b. i-hyo   (*-kyuʔ)-yi (kyuʔ) syupa tewuk
          3S-go-(*a.while)-P (a.while)   DEM   river

          "S/he went to that/some river (a while)."

Note that the pronoun plus applicative clitic combination seen in (43) is not a direct object, as it doesn't compete against other inflection for the single agreement slot on verbs, doesn't make verb markings transitive, and so on. A similar point can be made for all of the chorote "applicatives" described.

6 Analysis: the trees

We do not believe there to be P incorporation to V, in the sense of Baker (1988), in either Panará or Chorote. Instead, we think that what is called the applicative are simply Ps with pronominal complements in their usual positions, and that Ps with non-pronominal noun phrases are clitic-doubled right-adjoined XPs.

To arrive at a precise phrase structure, we base ourselves in the work of Pylkkänen (2002) and Cuervo (2003), where the term *applicative* is used in a manner that is slightly different from the usage that is standard in descriptive studies and that is taken up by Baker and the works cited at the beginning of this paper. For Pylkkänen, applicative is simply a head in the syntactic spine that introduces an argument, much like Voice introduces subjects in Kratzer (1989), and v does so in more recent work. For concreteness, we will consider the treatment of Spanish ethical datives presented by Cuervo (2003).

In Spanish, certain dative PPs are duplicated by a clitic. Whether a PP headed by the dative adposition a will be duplicated by a clitic depends, manifestly, on the thematic role that this argument has with the main predicate. While it is impossible for the clitic to duplicate an allative PP, as in (46a,b), duplication of a malefactives and recipients (c,d) is obligatory in most dialects:
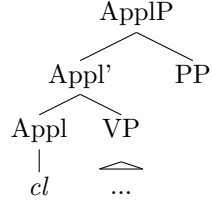
(46)   a.   (*Le$_i$) envían   todas sus ganancias al   exterior$_i$.
            3DAT   they.send all   his earnings   to.the outside

            "They send all his earnings overseas."

       b.   *(Le$_i$) fue   a   la   casa$_i$.
            3DAT   went to the house

            "He went to the house."

       c.   Se   *(le$_i$) rompió el   juguete al   niño$_i$.
            REFL 3DAT broke   the toy   to.the boy

            "The boy's toy broke on him."

       d.   *(Le$_i$) enviaron dinero a   Juan$_i$.
            3DAT   they.sent money to Juan

            "They sent money to Juan."

The structural distinction between the clitic-doubling and the non-clitic-doubling construction is that in the former, the PP is introduced as an argument by means of an argument-introducing Appl(icative) head, while in the latter the PP is attached as an adjunct to the VP. Thus, we have the following two structures:
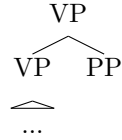
(47)   Argumental dative

```
        ApplP
        /  \
      PP   Appl'
            /  \
         Appl   VP
          |     /‿\
          le    ...
```
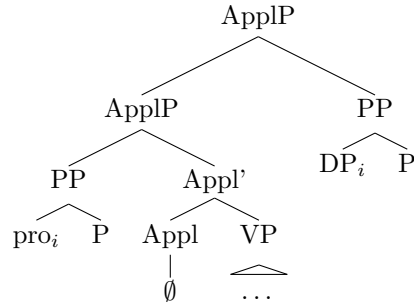
(48)   Allative (adjunct dative)

```
        VP
       /  \
      PP   VP
          /‿\
          ...
```

Crucially, the two structures are distinct already in the base component. There is no operation of *applicativization* that renders a PP argumental; rather, PPs that express specific thematic relations with the main predicate are already argumental to start with.

This is equivalent to claiming that the two sentences in (49) are not transformationally related, something which is plausible given the lack of synonymy that is apparent in (50):

(49)   a.   I sent John a package.

       b.   I sent a package to John.

(50)   a.   I sent a package to France.

       b.   # I sent France a package.

Just as we wouldn't say that (49a) is an applicativized version of (49b), we contend that the difference between the following two sentences in Panará is present in the base component. The same postposition is used in two different ways, as the two datives of Spanish:

(51)   ĩpɨara   yɨ=ra=po   hatɨ   pe
       man.ABS   REAL.INTR=3PL.ABS=arrive forest from

                                  (Ablative, no agreement)

       "The men arrived from the forest."

(52)   mara hẽ   ti=a=pɨri   sõsesua ka pe
       él   ERG 3SG.ERG=2SG.ABS=take fishhook you MALEF

                                  (Malefactive, agreement present)

       "He took the fishhook from you."

The structure that we propose for Panará is broadly as follows:

(53) Argumental dative

```
            ApplP
           /    \
        Appl'    PP
        /  \
     Appl   VP
      |      ⌢
      cl     ...
```

(54) Allative (adjunct dative)

```
        VP
       /  \
     VP    PP
      ⌢
      ...
```

In fact, we claimed that the clitic of Panará is a base-generated PP with a pronominal argument, that doubles a right-adjoined PP, so we should flesh out the structure in (53) as follows:

(55)

```
                    ApplP
                   /     \
               ApplP      PP
              /    \      /  \
            PP    Appl'  DP_i  P
           /  \   /   \
        pro_i  P Appl  VP
                  |     ⌢
                  ∅    . . .
```
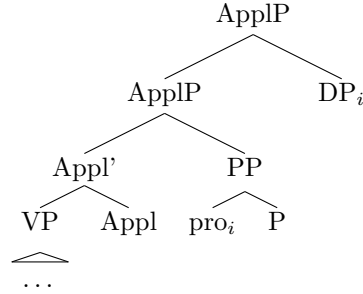
The structures required for Chorote are only minimally different, though the relevance of the contrast between PPs licensed by Appl and PPs introduced by adjunction is not crucial as in Panará. We will assume the following structure when the adposition is attached to a light noun phrase:

(56)

```
              ApplP
             /     \
          Appl'     PP
          /  \      /  \
        VP   Appl  DP   P
         ⌢
        . . .
```
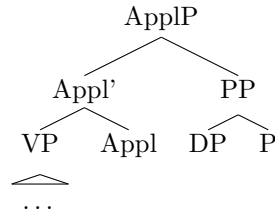
When the noun phrase is heavy, it is right-adjoined and clitic-doubled:

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(57)

```
                                    ApplP
                                   /      \
                              ApplP        DP_i
                             /     \
                        Appl'       PP
                       /    \      /   \
                    VP    Appl  pro_i   P
                    /\
                   ...
```

The adposition plus the pronominal prefix, if monosyllabic, then attaches phonologically to the verb.

In conclusion, we have argued that the order that each language has with pronominal arguments in oblique object constructions is basic, and the partly inverted order seen with non-pronominal arguments results from clitic-doubling of a right-adjoined XP. Details differ, insofar as in Panará it is a full PP that is adjoined, while in Chorote it's just the DP.

We now move to

7 Arguments for the analysis

The foremost virtue of the proposed analysis is that it captures the fact that applied objects in Panará and Chorote are added without intefering with the direct objects, and outside of them.

In Panará, even if there is absolutive agreement with the applied object, it is always added outside of the absolutive pronominal inflection for the direct object. In the case of an intransitive verb with an applied object, the agreement pattern is manifestly different from the agreement with direct objects of transitive verbs.

An advantange for Chorote of this approach to word order alternations is that it unifies what happens in adpositional phrases with a generalization about head-dependent ordering made in Carol (2011b), namely that dependents precede heads if they are "light", a notion whose sense is to be made precise below, while they follow them if they are "heavy".

This idea is also relevant for Panará. On the one hand, the analysis allows us to propose that Panará is essentially head-final, and the head-initial orders are derived under a mechanism analogous to that which derives them in Chorote. In Panará adpositions follow their complements, as in (58a), and possessed nouns follow their possessors, as in (58b). However, matrix clauses are SVO, as in (59a), countering the general tendency of the language:

(58) a. ĩkyẽ yɨ   ra=kuɨ   puu   tã
          I   REAL.TR 1SG.ABS=go garden to

          "I went to the garden."

b. tɔputũ   ũtɔ
old.man eye

'the old man's eye'

(59)   a. ĩkyẽ hẽ   re=waya-ni   pərikə
I   ERG 1SG.ERG=make-PERF canoe.ABS

"I made a canoe."

This aspect of the approach also highlights the parallelism between Panará and the other languages of the Jê family, which are all strictly head-final, and throws some light on certain word order alternations found in the matrix clauses of this language which we will not take into acount in this paper out of consideration for space.

More broadly, the word-order alternations that we describe in this paper seem to exemplify what we could call an emergent areal trait of the languages of the Chaco and the southern part of the Brazilian Highlands and Amazonia, wherein languages that are otherwise consistently head-final allow or require VO order matrix clauses.

Under the proposed analysis, the order in the Panará clause is still SXOV, and deviations from that order are due to extraposition, as we anticipated above. Compare the Panará clause in (60) with the Mẽbengokre clause in (61), given above as (22) and (23):

(60)   maira hẽ   ti=   amã= yĩ= pũ
Maira ERG 3SG.ERG IN   REF see

"Maira saw herself in it."

(61)   maira nẽ   (ku)te kam amĩ= pumũ
Maira NFUT 3ERG IN   REF see.V

"Maira saw herself in it."

The clauses in these two languages are identical when the object is pronominal; when a noun phrase is added in object position, the contrasting order emerges, SXOV in Mẽbengokre, and SOVX in Panará (as the O is still the reflexive clitic):

(62)   maira hẽ   ti=   amã= yĩ= pũ **tɔmaka** amã
Maira ERG 3SG.ERG IN   REF see mirror   in

"Maira saw herself in it."

(63)   maira nẽ   (ku)te **ixe**   kam amĩ= pumũ
Maira NFUT 3ERG mirror IN   REF see.V

"Maira saw herself in the mirror."

Let us now address two problems with the analysis. These come both from Panará.

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8 Problem 1: direct agreement

Consider Panará data such as the following:

(64) ĩkyẽ hẽ   re=(**a**)=ãpũ   prĩara **ka** kõ
      I   ERG 1.SG.ERG=2SG.ABS=see child you WITH

      "I saw the children with you."

It is somewhat puzzling, though not completely ruled out by our analysis, that the person clitic duplicating the left-adjoined PP be an absolutive clitic rather than a mini-PP, i.e., as in the following variant:

(65) ĩkyẽ hẽ   re=(**a**)-**kõ**=ãpũ   prĩara **ka** kõ
      I   ERG 1.SG.ERG=2SG.ABS-with=see child you WITH

      "I saw the children with you."

To explain (64), we propose that the "applicative" P's may fuse morphologically with their complements in such a way as to be indistinguishable from regular absolutive agreement. That is, **a** in this case is a portemanteau of **a** and **kõ**.

Fusion of pronominal inflection with adpositions occurs in several closely related Jê languages, where there are portemanteau forms for certain inflected postpositions; in Apinayé (cf. Oliveira 2005), for instance, the ergative postposition **be** becomes **kəp** in the third person (presumably related to accusative third person **ku**). The Panará case is admittedly more extreme, but not implausible.

9 Problem 2: relative clauses

A more serious potential problem for our analysis is Dourado's claim that direct objects cannot be relativized if there is an applied object:

(66) a. pẽkə [ti=ra=sõri   ĩkyẽ mã] ĩki
          dress 3SG.ERG=1SG.ABS=give I   TO beautiful

          "The dress that she gave me is beautiful."

      b. *pẽkə [ti=ra=mã=sõri   ĩkyẽ] ĩki
          dress 3SG.ERG=1SG.ABS=TO=give I   beautiful

          "The dress that she gave me is beautiful."

On the other hand, relativization of applied objects is possible, as seen in the example below ("do with" has the idiomatic meaning of "help").

(67) a. ĩkiara   [prẽ=mera kõ   ĩkyẽ hẽ   re=ra=kuəri]
          women.ABS REL=PL   WITH I   ERG 1SG.ERG=3PL.ABS=do
          yɨ=ra=tɔ
          REAL.INTR=3SG.ABS=go

          "The women that I helped left."

b. ĩkiara   [ĩkyẽ hẽ   re=ra=kõ=kuəri]
women.ABS I   ERG 1SG.ERG=3PL.ABS=WITH=do
yɨ=ra=tɔ
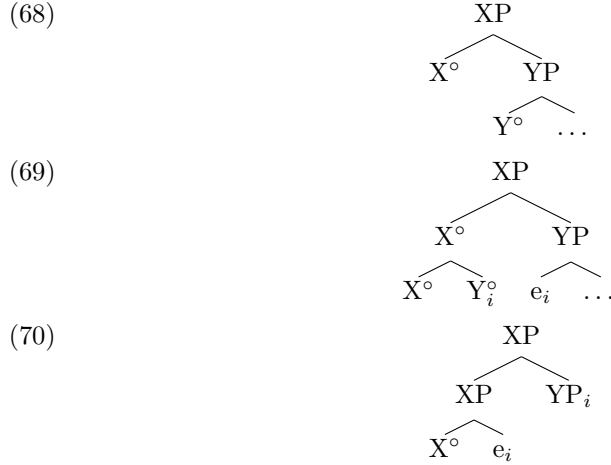REAL.INTR=3S.ABS=go

"The women that I helped left."

Note, however, that this latter case seems to present us with a different relativization strategy from (66).

Discussing the properties of relatives would take us too far afield, and should be left to another occasion. Regardless, we believe that the facts that we have in front of us do not seem to force us to conclude that "applicativization" in Panará has promoted an oblique to a direct object function.

10   Some implications

The larger question that serves as background for this paper is, of course, why we think that the basic order is what corresponds to the "incorporated" form, at the same time that we take the free form to be derived, rather than the other way around, and how can we tell in the general case when things are one way or another. This is not a question that we may fully answer now.

Schematically, a base-generated structure such as (68) may be related to the two structures in (69) and (70):

(68)

```
        XP
       /  \
      X°   YP
          /  \
         Y°   . . .
```

(69)

```
           XP
          /  \
        X°    YP
       /  \   /  \
      X°  Y°ᵢ  eᵢ  . . .
```

(70)

```
          XP
         /  \
       XP    YPᵢ
      /  \
     X°   eᵢ
```

Structure (68) is "in the middle", so to speak. It is related to (69) by incorporation of Y to X, and it is related to (70) by right adjunction of YP to XP. There is no straightforward way of relating (69) to (70) without passing first through (68).

If we were talking about the case where both X and Y are nouns, we could find in the literature examples where the opposition between (68) and (69) does the same work as the opposition between (70) and (68). The first case is, of

course, incorporation as discussed in Baker (1988) and much subsequent work, where an incorporated noun has certain properties that make it distinct from a free noun or noun phrase. In particular, it is often a narrow-scope indefinite.

The second case, i.e., where (70) is opposed to (68), is only slightly less famous. It is called upon to represent Germanic object shift (see, e.g., Holmberg 1999). The reader may recall that in most non-English Germanic languages, specific (i.e., non-narrow-scope) direct objects are moved out of VP, while narrow-scope indefinite objects remain in situ. It seems, therefore, that two quite opposite constructs are used to account for a similar contrast.

In this paper, we have shown that the question comes up again in the case where Y is an adposition. It remains to be seen whether there is a principled reason to distinguish applicatives where a P is incorporated to a verb from the pseudo-applicatives discussed in this paper, where the apparent incorporation is an epiphenomenon of XP extraposition.

11   Glosses

1, 2, 3	first, second, third person
A	subject of transitive verb
ABS	absolutive
ADV	adverb
DAT	dative
DEM	demonstrative
DU	dual
ERG	ergative
F	feminine
INDEF.POS	indefinite possessor
INTR	intransitive
ITER	iterative
M	masculine
N	nominal form
NEG	negation
NFUT	non-future
NOM	nominative
PL	plural
PRSP	prospective
P	adposition/applicative (chorote)
POS	possessive
REAL	realis
REF	reflexive
S	subject of intransitive verb
S_A	subject of intransitive verb realized as A
SG	singular
V	verbal form

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