Kotiria 'differential object marking' in cross-linguistic perspective

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This paper describes the system of differential object marking (DOM) in Kotiria (Wanano), one of the sixteen languages of the eastern branch of the Tukanoan language family.[2] §1 gives a brief overview of argument coding in Kotiria. It shows that, like other Eastern Tukanoan (ET) languages, Kotiria is typologically nominative-accusative and

[2] Kotiria is spoken by approximately 1500 people living on the Vaupés River. The other Eastern Tukanoan (ET) languages – spoken by an estimated 28,000 people living in the Brazilian state of Amazonas and in the Colombian departamento of Vaupés in northwestern Amazonia – are the Waimajã (Bará), Barasana, Desano, Karapana, Kubeo, Makuna, Waikhana (Piratapuyo), Pisamira, Siriano, Eduuria (Taiwano), Retuarã, Tatuyo, Tukano, Tuyuka, and Yuruti.

employs mixed head and dependent-marking strategies, though Kotiria displays important synchronic innovations in its coding of subjects that are shared only with its closest sister language Waikhana (Piratapuyo). This section also exemplifies the widespread use of the morpheme **-re** as a multi-functional case marker, used on objects, obliques, and some temporal constituents. §2 discusses differential marking of objects by the morpheme **-re** and shows that coding parameters include not only the syntactic roles of nouns, but also their status in discourse and their inherent semantic properties. §3 compares the Kotiria system with the DOM systems of several other languages in the region, identifying important contrastive features of the Kotiria system and speculating on issues related to diffusion and internal development. §4 offers thoughts on the diachronic development of Kotiria DOM and brief comments on the unresolved issue of 'labeling'.

1. Argument coding in Kotiria

Kotiria is typologically nominative-accusative and tends toward OV constituent order (with variable S positioning according to discourse pragmatic considerations, see §4). As with most other ET languages (see Gomez-Imbert forthcoming, Aikhenvald 2007), Kotiria generally employs dependent-marking strategies to indicate grammatical relations, though there is some limited head-marking of Subjects.

Subject nominals themselves take no overt marking, but within the VISUAL evidential paradigm (the primary sub-category of verb-final clause modality markers employed in everyday speech – see Stenzel 2008) we find that Subjects are cross-referenced on verbs by means of portmanteau agreement morphemes that conflate information related to person, aspect, and evidential sub-category. Indeed, the evidential paradigms in both Kotiria and Waikhana, its closest sister language, are synchronically far less complex than those of other ET languages, in which evidential markers (from the VISUAL as well as other categories) additionally conflate information related to gender and number of the Subject.[3] The neutralization of gender/number distinctions, overall leveling of evidential

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[3] See, for example, the full paradigms for Tukano (Ramirez 1997: 120) and Barasana (Gomez-Imbert 1997: 281).

paradigms, and development of a first/non-first person contrast in the VISUAL evidential category are a distinguishing characteristic of the KOT/WAI sub-branch of the family.[4]

Examples (1)-(4) show Kotiria's nominative-accusative alignment, and the limited head-marking of (S)ubjects (with person, but not number agreement) in the verb-final VISUAL evidentials. (2) and (4) also show that (O)bjects of transitive verbs generally occur pre-verbally, and are case-marked by the morpheme **-re**. Because of this limited agreement marking of S and complete absence of O-marking on verbs, overt NP arguments, such as those we see in (1)-(4), regularly occur in Kotiria sentences.[5]

(1)　**yʉ'ʉ　hiha koiro**[6]
　　　S　　V
　　yʉ'ʉ　hi-ha　　　　　**ko-iro**
　　1SG　COP-VIS.IMPERF.1　relative-NOM:SG

　　I am your/a relative.

(2)　**yʉ'ʉ a'rina kayare wahãi**
　　　S　　　　O　　　　　　　　V
　　yʉ'ʉ　a'ri-~da　ka-ya-re　　　~waha-i
　　1SG　DEM:PROX-PL black.monkey-PL-OBJ kill-VIS.PERF.1

　　I killed these monkeys.

(3)　**wakũmasiko mʉ'ʉ ñaka du'tira**
　　　　　　　　S　　　　　　V
　　~waku-~basi-ko　~bʉ'ʉ ~ya-ka　du'ti-ra
　　think-know-(3)FEM 2SG　be.bad-EMPH escape-VIS.IMPERF.2/3

　　You escaped, you evil clever woman.

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4 Nevertheless, in Kotiria and Waikhana, there is a second paradigm of subject agreement morphemes employed in the verbal words in IRREALIS statements, i.e. (7) and (9), and as nominalizers of dependent clauses (see (24) below) and clausal complements of verbs, i.e. examples (19)-(20), that is clearly a remnant of the general ET pattern; it retains information on gender and number and codes a third/non-third person contrast. For a more detailed discussion, see chapters 9 and 10 of (Stenzel forthcoming-a).

5 We should note, however, that in discourse, both subjects and objects can have Ø realization if reference can be construed from the context. Sentences that include Ø arguments include (17), (19)-(20), (22) and (24).

6 Examples have four lines of text: the first line gives the utterance using the orthography currently employed by the Kotiria, the second and third lines give morphological information and glosses, followed by a fourth line with a free translation. Nasalization, which is morphemic, is indicated in the second line by a tilde '~' preceding the morpheme.

(4)   **mɨ'ɨ sãre ma'ñore**
           S   O   V
       ~bɨ'ɨ   ~sa-re   ~ba'yo-re
       2SG   1PL:EXC-OBJ   lie-VIS.PERF.2/3

You lied to us.

Indeed, the pattern of dependent-marking on objects extends to other non-subject arguments and adjuncts, and the morpheme **-re** is the marker used on several such constituents. Not only does this morpheme occur on most patient/theme objects of simple transitive verbs, such as those in (2), with an animate, non-human O, and (4), with a human O, as well as (5), with an inanimate O, but its use is obligatory on second objects and oblique arguments of ditransitive verbs, as we see in (6)-(7), with patient and recipient/benefactive Os, and (8) below, with a patient O and a locative oblique.

(5)   **a'ri thure hoaha sã kotiria**
         ┌─────O─────┐   V   ┌────S────┐
         a'ri   thu-re   **hoa-ha**   *~sa*   **ko-ti-ri-a**
         DEM:PROX CLS:stacked-OBJ write-VIS.IMPERF.1 1PL:EXC water-VBZ-NOM-PL
         We Kotiria are writing *this book*. (kotiria=water people)

(6)   **mɨ'ɨ yahiripho'nare yɨ'ɨre waga**
         ┌────────O$_p$────────┐   O$_{rec}$ V
         ~bɨ'ɨ   yahiri~pho'da-re   *yɨ'ɨ-re*   **wa-ga**
         2SG(POSS) heart-OBJ   1SG-OBJ   give-IMPER
         Give *me your heart*.

(7)   **yɨ'ɨ wa'ire do'abosaita mɨ'ɨre**
          S   O$_p$ V   O$_{ben}$
         yɨ'ɨ *wa'i-re* **do'a-bosa-i-ta**   *~bɨ'ɨ-re*
         1SG   fish-OBJ   cook-BEN-(1/2)MASC-INTENT 2SG-OBJ
         I'm going to cook *the fish* for *you*. (male speaker)

Examples (6)-(7) show that the linear positioning of second objects O$_{rec/ben}$ is more flexible than that of first objects O$_p$, which tend to occur directly preceding the verb, as in (2), (4), (5) and (7). In (6) O$_{rec}$ occurs between O$_p$ and V and in (7), O$_{ben}$ occurs post-verbally. This flexibility is most likely due to the fact that second Os$_{rec/ben}$ are obligatorily coded by

-re; word order configuration cannot be construed to play any role in identifying their grammatical status, in contrast to first Os, as will be discussed in §2.

The linear order of clauses with ditransitive verbs requiring oblique locative arguments is more fixed. Locative constituents, marked only by the morpheme **-pʉ** if they are simple adjuncts (i.e. (18) below), or by **-pʉ-re** if their status is that of obliques, tend to occur post-verbally, as in (8).

(8)   **to   wa'ikiro wahãriroditare sã nathuai wʉ'ʉpʉre**

$$\overline{\quad\text{O}_\text{p}\quad}$$ S   V   OBL

to   wa'i-kiro ~waha-ri-ro-dita-re   ~sa   ~da-thua-i   *wʉ'ʉ-pʉ-re*
DEF animal-SG kill-NOM-SG-SOL-OBJ 1PL:EXC get-return-VIS.PERF.1 house-LOC-OBJ
We brought *home* only the dead animal.

We moreover find the morphological **-pʉ-re** combination used on oblique arguments in syntactically transitive clauses involving otherwise *intransitive* stative and motion verbs. Such constructions with motion verbs involve *telic*-type movement oriented toward a specific goal: the location one heads for, arrives at, or returns to, as in (8) above and (9)-(10), or the animate entity affected or targeted by the motion, as in (11)-(12).

(9)   **ã yo õpʉre yʉ'ʉ kho'awi'ikʉka**

          OBL   S   V~mot~
~a yo *~o-pʉ-re*   yʉ'ʉ   kho'a-wi'i-kʉ-ka
so do DEIC:PROX-LOC-OBJ 1SG   return-arrive-(1/2)MASC-PREDICT
That's how I'll get back *here*.

(10)   **ku'tukãpʉre phi'asʉa**

          OBL   V~mot~
ku'tu-~ka-pʉ-re   **phi'a-sʉ-a**
clearing-DIM-LOC-OBJ   MOV.out.into-arrive-ASSERT.PERF
He emerged (from the forest) into *a little clearing*.

(11)   **sʉ̃ tirore phichaba'a yoaa**

V~mot~   OBL   V   AUX
~sʉ   *ti-ro-re*   phicha-ba'a   yoa-a*
arrive   ANPH-SG-OBJ   shoot-do/be.after   do/make-ASSERT.PERF
He arrived/went over to *it (the snake)* and then shot (it).

(12)   **tiro ti phɨkoropɨre wi'i sɨ̃'aga**

    S   ┌──────── OBL ────────┐   V$_{mot}$ (and) V

    ti-ro   *ti*   *phɨk-o-ro-pɨ-re*   **wi'i** ~**sɨ'a-a**

    ANPH-SG 3PL.POSS parent-FEM-SG-LOC-OBJ arrive stick.onto-ASSERT.PERF

    He (an evil being) arrived/came up to *their mother* (and) stuck onto (her).

Finally, we regularly encounter **-re** suffixed to temporal adjuncts, which have adverbial functions and tend to occur at the beginnings of utterances. Temporal adjuncts marked by **-re** are generally built from inherently temporal nouns, such as ~**bicha** 'today', ~**bi** 'now', **dacho** 'day', and ~**yabi** 'night'. Such expressions are coded only by the marker **-re** when they refer to bounded or singular temporal referents (13)-(14) and by **-pɨ-re** when reference is to unbounded (imperfective) temporal space (15)-(16).

(13)   **michare**   (14)   **ti ñamire hi'na**

        ~**bicha-re**   **ti**   ~**yabi-re** ~**hi'da**

        today-OBJ   ANPH night-OBJ EMPH

        Today . . .   That very night . . .

(15)   **phanopɨre**   (16)   **mipɨre**

        ~**phado-pɨ-re**   ~**bi-pɨ-re**

        long.ago-LOC-OBJ   now-LOC-OBJ

        In the olden days . . .   Nowadays . . .

In sum, the morpheme **-re** is used to mark a wide variety of constituents in VPs: not only core object and locative oblique arguments of transitive and ditransitive verbs, but simple temporal adjuncts as well. Given this multi-functionality, it is not unusual to come across utterances such as (17), in which every nominal constituent has a **-re** suffix.

(17)   **tu'sɨ   ti ñamire hi'na kha'āropɨre tirore ya'ua**

    S   ┌── T.ADJ ──┐   OBL

    Ø tu'sɨ *ti*   ~*yabi-re*   ~**hi'da** ~*kha'a-ro-pɨ-re*

      finish ANPH night-OBJ   EMPH   dream-SG-LOC-OBJ

        O   V

    ti-ro-re   **ya'u-a**

    ANPH-SG-OBJ warn-ASSERT.PERF

    When (the man) was done, *that very night*, (something/one) warned/threatened *him in a dream*.

However, despite its multi-functionality, it is somewhat misleading to analyze **-re** as simply a marker of 'non-subject' case (i.e. Aikhenvald 2007). We have seen that Kotiria also has locative case, whose marker **-pɨ** occurs obligatorily on all spatial locative constituents, and on a subset of temporal locative nominals as well. Moreover, the two examples below show that Kotiria also has comitative/instrumental case, with nominals marked by **-~be're**. I will return to the question of 'labeling' in §4.

(18) **sã yoaropɨ yɨ'ɨ phɨkɨme're thɨ'oi**
  (S)   S   COM   V
 ~sa   **yoaro-pɨ** **yɨ'ɨ**   *phɨk-ɨ-~be're*   **thɨ'o-i**
1PL:EXC be.far-LOC 1sg   parent-MASC-COM/INST hear-VIS.PERF.1
We, from far away, I *with my father*, heard (the sounds).

(19) **a'riphĩ me're naro kha'mare.**
  S   Oₚ   INST   V
  Ø   Ø   *a'ri-~phi-~be're*   **~da-ro**   **~kha'ba-re**
          DEM:PROX-CLS:bladelike-COM/INST get-(3)SG want-VIS.PERF.2/3
(You) have to take (your heart) out *with this knife*.

The general features of the system described for Kotiria and close cognates of the **-re, -pɨ** and **-be're** morphemes are found in most languages of the ET family (see table 2 in §4 and the more detailed overview and discussion in Stenzel forthcoming b, as well as Zuñiga 2007). Indeed, argument coding systems with a reduced number of cases, or in which a single case marker occurs on a wide variety of constituents, are not all that typologically unusual (Blake 2005). Quechua, for example, has a system similar to that of Kotiria, with subject agreement morphology on verbs and a multi-functional accusative suffix **-ta** that occurs on all first objects (and in some dialects on second objects as well), on locative goals of motion verbs and on some types of temporal expressions. The same suffix also functions to form adverbials from adjectives or quantifiers (Cerrón-Palomino 1995 and p.c.). Closer to home, we will see in §3 that the Kotiria argument coding system also has elements in common with certain neighboring Nadahup languages, evidence strengthening analyses of the region as a 'linguistic area' in which reduced case systems and use of a few grammatical markers for multi-functional purposes is an areal feature (Aikhenvald 1999, Epps 2007)

2. Differential marking of objects in Kotiria

Although we saw in the previous section that in simple and complex transitive clauses in Kotiria there is a tendency for O nouns to occur pre-verbally with the morpheme **-re**, in fact, (20)-(22) clearly show that not all of them are so marked.

(20)   **bʉsarida yoaitai niha**
        S   O   ⌐————————— V ————————⌐
        Ø *bʉsa-ri-da* |*yoa-i-ta-i*   *~di-ha*|
           adorn-NOM-CLS:threadlike do-(1/2)MASC-INTENT-(1/2)MASC be.PROG-VIS.IMPERF.1
        I'll be making (I'm going to make) *a necklace*.

(21)   **mipʉre yʉ'ʉ   chʉa bokatu'sʉha thuai diha**
                       S   O   V
        ~bi-pʉ-re   *yʉ'ʉ* *chʉa* **boka-tu'sʉ-ha**   **thua-i**   *~di-ha*
        now-LOC-OBJ   1SG   food   find-finish-VIS.IMPERF.1 return-(1/2)MASC be.PROG-
                                                                               VIS.IMPERF.1

        Now I've found *food* (and/so) I'm going home.

(22)   **khʉbokʉri yoa**
        S   O   V
        Ø *khʉbo-kʉ-ri*   **yoa**
           soaked.manioc-CLS:tree-PL   do/make
        We make *soft manioc flatbread*.

Such examples lead us to speculate that there may be some other means of coding nouns as grammatical Os besides overt morphological marking. The adjacent sentences in (23), from a narrative describing festival days in a Kotiria community, can help us consider this possibility. (23a) has prototypical OV constituent order with an *unmarked* O **chʉa** 'food', while in (23b), the same noun occurs as the single O of a sequence of transitive verbs, occurring between **~da-~sa'a** 'take inside' and **chʉ** 'eat'. In this sentence **chʉa** is morphologically coded by **-re**.

(23)   a.   **hipitiro chʉa natara**
                     S   O   V
              hi-piti-ro   *chʉa*   **~da-ta-ra**
              COP-COLL-SG   food   get-come-VIS.IMPERF.2/3
              Everyone brings *food*.

b.   **tina nasa'ã chʉare chʉ yoara**

       S   V   O (and) V   aux

    ti-~da   ~da-~sa'a   *chʉa-re* chʉ yoa-ra

    ANPH-PL get-MOV.inside food-OBJ eat   do/make-VIS.IMPERF.2/3

    They take *the food* inside and eat (it).

These sentences suggest that word order configuration may play at least a secondary role in the coding of O arguments. Specifically, they suggest that a nominal constituent occupying the pre-verbal position in a syntactically transitive clause is interpreted as the O argument even if it is not morphologically case marked by **-re**, as in (20)-(22) and (23a). Indeed, there is no configurational slot other than *directly before the verb*, in which unmarked Os can occur; in any other position Os (whether animate or inanimate) are invariably coded by **-re**, as in (23b) and (24)-(25), with post-verbal Os, as well as (8) and (26), with Os that occur sentence-initially.

(24)   **wa'kãrukusʉ̃mʉa nia tirore**

    S   V   O

    Ø   ~wa'ka-ruku-~sʉ-~bʉ-a   ~di-a   *ti-ro-re*

       wake.up-stand-arrive-run-(3)SG say-ASSERT.PERF ANPH-SG-OBJ

    Waking and rising up quickly, (the *curupira*, an evil forest creature) said to *him* (the man).

(25)   **wisõa chʉka bʉtia ditare**

       S   V   O

    ~wiso-a   chʉ-ka   *bʉti-a   dita-re*

    squirrel-PL eat-ASSERT.IMPERF be.hard-PL SOL-OBJ

    Squirrels eat *hard things only*.

(26)   **yʉ me'remakainare yʉ'ʉ ñʉtinii wa'atii**

            O   S   V

    yʉ   ~be're-~baka-~ida-re yʉ'ʉ ~yʉ-~tidii   wa'a-ati-i*

    1SG.POSS COM-village-NOM:PL-OBJ 1SG   see-visit-(1/2)MASC go-IMPERF-VIS.PERF.1

    I used to go (travel) to see (visit) *my friends*.

We can moreover look to evidence from noun incorporation processes to strengthen the hypothesis that word order configuration is a factor in argument coding. In addition to the 'bare' nominals in (22)-(23a), which occur as phonologically independent but syntactically unmarked Os, we also find instances of verbs with incorporated nouns in Kotiria, for

example 'egg-laying' (27), 'flatbread-making' (28), 'animal-killing' or 'hunting' (29), and 'wife-making' (30).[7]

(27)　　　　　**die~ku** [**diékũ**]　　'egg-lay'

　　　a.　　　**diekũina tiroba'ro**
　　　　　　　die-~ku-~ida　　　**ti-ro-ba'ro**
　　　　　　　egg-lay-NOM:PL　ANPH-SG-KIND
　　　　　　　This kind (of fish, bass) are *egg-layers*.

　　　b.　　　**yʉkʉkʉ kopapʉ diekũ pho'natira tiro**
　　　　　　　yʉkʉ-kʉ　　　kopa-pʉ　*die-~ku*　~pho'da-ti-ra　　　　　ti-ro
　　　　　　　tree-CLS:tree hole-LOC egg-lay children-VBZ-VIS.IMPERF.2/3 ANPH-SG
　　　　　　　It (a toucan) reproduces (by) *egg-laying* in the hole of a tree.

(28)　　　　　**~daho-~sa [nãh̃ṍsã]**　　　'flatbread-spread' (bake in a wide flat oven)

　　　　　　　nahosãri hika
　　　　　　　~daho-~sa-ri　　　　　　**hi-ka**
　　　　　　　flatbread-spread-NOM(INFER)　COP-ASSERT.IMPERF
　　　　　　　Somebody is (apparently) *flatbread-making*.

(29)　　　　　**wa'i~kida-~waha [waʔík̃ṍnã́w̃ã́h̃ã́]**　　'animal-PL-kill' (hunt)

　　　　　　　mʉ'ʉ a'ritʉme're wa'ikinawahãga
　　　　　　　~bʉ'ʉ　a'ri-dʉ-~be're　　　　　　　*wa'i-~kida-~waha*-**ga**
　　　　　　　2sg　DEM:PROX-CLS:cylindrical-COM/INST　animal-PL-KILL-IMPER
　　　　　　　Go hunt (*animal-kill*) with this stick.

(30)　　　　　**~dabo-da're [nãm̃ṍdaʔre]** 'wife-make'

　　　　　　　tinare namoda'reataa phayʉ masakurua pho'nanumiare
　　　　　　　ti-~da-re　*~dabo-da're-a-ta-a*
　　　　　　　ANPH-PL-OBJ wife-make-AFFEC-REF-ASSERT.PERF
　　　　　　　phayʉ　　　~**basa-kuru-a**　~**pho'da-~dubi-a-re**
　　　　　　　many/a.lot　people-group-PL　children-female-PL-OBJ
　　　　　　　(They) *married* (*made wives of*) them, young women from many different groups.

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[7] These examples show that derivation of noun-incorporated verbs involves both semantic and phonological fusion: the N-V combination becomes a single phonological word, as evidenced, among other things, by a single tonal melody, as shown in the phonetic transcriptions. They also show that once a noun-incorporated verb has been derived, regular morphological processes apply as they would to any verb stem: for example, a noun-incorporated verb can be nominalized, as in (27a) and (28) or serialized with other verb roots, as in (29).

Comparing these examples of noun incorporation to (22)-(24) above, we note two striking similarities. First, all the O nominals occur pre-verbally and are *not* case marked by **-re**, and second, all the O nominals, whether inanimate (27)-(28) or animate (29)-(30), are generic or unspecific, in essence *indefinite*. Indeed, the fact that only *indefinite* or *non-referential* nouns – whether they be independent or incorporated – occur unmarked in the pre-verbal O position indicates that **-re**, in addition to coding a noun as grammatical O, also marks the noun as definite.[8]

A closer look at the patterns in the Kotiria data suggests that constructions such as those in (22)-(24), with phonologically independent 'indefinite' pre-verbal nouns occupy a transitional position on a continuum having, at one extreme, completely independent, definite or fully referential 'case-marked' O nouns and, at the other, phonologically fused, indefinite 'incorporated' O nouns. Such patterns of O-marking are cross-linguistically common and reflect not a binary definite/indefinite split, but varying 'degrees of definiteness' as defined by Comrie (1989: 135-6) and exemplified for Kotiria in table 1.

The highest degree of definiteness presupposes the unique identification of the entity by both the speaker and hearer. In this light, it is clearly unsurprising that proper noun and pronominal first or second Os require coding by **-re** in Kotiria (30b)-(30c); indeed, according to this criterion, we can assume such Os to be *inherently* referential. Moreover, specifically determined (5) and possessed Os such as those in (6), (26), and (30c) would also fall into this category. Nouns that are less uniquely specified but are coded in such a way as to indicate that they belong to a certain identifiable set – Comrie's term is 'definite superset' – also regularly take the **-re** suffix, an example being the quantified noun phrase O in (30a). The obligatory coding of Os from either of these categories – inherently referential nouns or partially identifiable nouns from a 'definite superset' – allows any such marked O to occur in non-canonical (i.e. post-verbal or pre-subject) positions, i.e. (30c).

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[8] Gómez-Imbert reaches the same conclusion for Tatuyo (1982: 63-65) and Barasana (1997: 10, 2003: 182), as does Miller for Desano (1999: 57-59), though the term used is that of discourse 'specificity'.

Characteristics of O		Examples (31)

DEFINITE / REFERENTIAL	•marked by **-re**
	•phon. independent
	•flexible position
		a) **tiro tiaro kayare wahã**
		  ti-ro *tia-ro* *ka-ya-re* ~**waha-a**
		  ANPH-SG three-SG monkey-PL-OBJ kill-ASSERT.PERF
		  He killed *three monkeys*.

		b) **mɨ'ɨ sãre ma'ñore**
		  ~**bɨ'ɨ** *~sa-re* ~**ba'yo-re**
		  2SG 1PL:EXC-OBJ lie-VIS.PERF.2/3
		  You lied to *us.* repetition of (4)

		c) **to yahiripho'nare sinia tirore**
		  to *yahiri~pho'da-re* ~**sidi-a** *ti-ro-re*
		  3SG.POSS heart-OBJ ask.for-ASSERT.PERF ANPH-SG-OBJ
		  (The curupira) asked *him* (the man) for *his heart*.

INDEFINITE / NON-REFERENTIAL	•marked by **-re**
	•pre-verbal
		d) **wa'ikinre makasitotaa**
		  wa'i-~kida-re ~**baka-sito-ta-a**
		  animal-PL-OBJ look.for-MOV.circular-come-ASSERT.PERF
		  (He) went around looking for *animals*.

	•phon. independent
	•unmarked by **-re**
		e) **mipɨre yɨ'ɨ chɨa bokatu'sɨh.**
		  ~**bi-pɨ-re** **yɨ'ɨ** *chɨa* **boka-tu'sɨ-ha**
		  now-LOC-OBJ 1SG food find-finish-VIS.IMPERF.1
		  Now I've found *food*.

	•unmarked by **-re** •pre-verbal •phon. fused •seman. incorporated	f) **die-~ku** 'egg-lay' g) ~**dabo-da're** 'wife-make' (marry) h) **wa'i-~kida-~waha** 'animal-kill' (hunt)

Table 1. The syntactic, phonological, and semantic characteristics of objects

Moving along the continuum, the more *indefinite* or *less referential* the O noun is, the less likely it is to be marked by **-re**. Absence of morphological coding not only indicates "that identification of the referent is neither possible nor relevant" (Comrie 1989: 136), but it brings coding by word order configuration back into play, creating a tighter OV bond (30e), which, in cases of extreme frequency can lead to the kind of phonological and semantic fusion that characterize cases of full noun incorporation (30f)-(30h).

The marking criteria noted so far for Kotiria conform to two of the prototypical parameters in DOM systems cross-linguistically, those identified by Bossong as relating to *constituence* – where 'independent' object nouns are marked and nouns 'integrated' or 'connected' to the verbal predicate are unmarked – and to *reference* – where marking is determined by interrelated notions of 'individuality' and 'discourse-related definiteness' (1991: 158-159). We should, however, note the transitional area in the middle of the Kotiria continuum exemplified in table 1. Our observations up to this point would predict that if an O is *indefinite* and in *pre-verbal* position, where it can be coded by word order configuration, it should not require use of **-re**. Yet we find the indefinite pre-verbal noun 'animals' in (30d) marked by **-re** while the indefinite preverbal 'food' in (30e) is unmarked. To explain this differential marking, we need to return to Bossong's discussion and consider the third domain he identifies, that related to *inherence* – where differential object marking is determined by semantic features inherent to the noun, feature such as ± human, ± animate, and ± discrete. Such features are often grouped together under the term 'animacy hierarchy', and are identified as one of the parameters of 'prominence' that typically trigger the development of DOM systems (de Swart 2007: ch. 4).

One analysis of 'animacy' as the primary determining feature of DOM in ET languages can be found in Ramirez's description of Tukano (1997: 224). The suffix **-re**, he claims, is (potentially) a marker of 'all non-subject complement constituents'; however, its actual usage is linked to the noun's position on a 'scale of individuation'. Nouns at the higher end of the scale, those that can take some kind of 'individualizing' morphology

– proper nouns, pronouns, animate humans, animate non-humans, and inanimate countable nouns – are all candidates for coding by **-re**, while generic or mass nouns are not. Considerations of 'animacy' in addition to those of 'definiteness/referentiality' might help explain the transitional area in Table 1. Though both 'animals' and 'food' are indefinite, 'animal' – a non-human animate noun with both singular and plural forms – would be classed higher on the 'individuation' scale and be a more probably candidate for **-re** marking than the mass noun 'food' would be.

Still, the 'scale of individuation' alone cannot explain the examples in (23), where we see that even a mass noun such as **chɨa** 'food' can be marked with **-re** if it becomes definite in the discourse (or occurs in non-canonical position, both of which occur in 23b). We should moreover recall that animate nouns and even nouns with human referents, such as 'animal' and 'wife' can occur as entirely non-referential incorporated nouns (29)-(30). This suggests that for Kotiria, in the sense they have been defined here, the 'definiteness/referentiality' parameter takes precedence over that of 'animacy', though it is debatable whether or not the two can be truly conceptually separated. As Comrie states:

> "The animacy hierarchy cannot be reduced to any single parameter, including animacy itself in its literal sense, but rather reflects a natural human interaction among several parameters, which include animacy in the strict sense, but also definiteness […] and various means of making an entity more individuated– such as giving it a name of its own, and thereby making it also more likely as a topic of conversation" [Comrie 1989: 199]

It is also extremely likely that additional pragmatic parameters, such as discourse relevance or topicality, are at play, as the extension of -**re** use to temporal constituents suggests. Zuñiga's overview of DOM in a select group of Eastern and Western Tukanoan languages calls attention to the fact that "it is topical O's that favor **re**-marking" (2007: 220); Miller specifically discusses this function of **-re** for Desano (1999: 58-59), and Aikhenvald categorically states that "overt non-subject case marking of locative and temporal constituents [in ET languages] is based **entirely** on their pragmatics" (2007: 251, emphasis added), though a more thorough discussion of the syntactic and semantic differences between locative adjuncts and obliques shows this to be somewhat of an oversimplification. Nevertheless, we can concur with Aikhenvald that case marking by **-re** is

the result of a "combination of semantic properties – definiteness, specificity, and animacy [. . . with] topicality as an additional factor" in at least some languages (2007: 251). In sum, although at first glance apparently simple, object coding reveals itself to be a complex feature of verbal syntax in Kotiria and other ET languages, requiring constant sensitivity to the inherent semantic properties of nouns and evaluation of discourse-level distinctions of referentiality.

3. Other DOM systems in the Vaupés region

I turn now to a comparison of the Kotiria DOM system and those described for other languages spoken in the same region but with different genetic affiliations, in order to speculate on the origin and possible spread of shared features and to evaluate statements such Aikhenvald's claim that "the semantically and pragmatically based marking of non-subjects is a feature spread from Tucanoan into all other languages of the area" (2007: 251). Aikhenvald (2002: 101-107, 2003: 139-163, 2007: 247-252) effectively shows that through intense contact and historical convergence with ET languages, primarily Tukano, Tariana (Arawak) has developed case marking for core arguments –in contrast to the head-marking of arguments by pronominal suffixes in Baniwa, Tariana's closest sister-language. Tariana has also developed a DOM system in which topical and definite 'non-subject' constituents are morphologically marked, as in ET languages, although it still retains the historical Arawak pattern of marking pronominal and non-pronominal Os by different means.

Besides ET and Arawak languages, several languages of the Nadahup[9] family are spoken in the Vaupés region – Dâw (described in Martins 2004) is spoken on the southern fringe and Kakua to the north, while more centrally-located Hup (described in Epps 2008) and Yuhup (described in Ospina Bozzi 2002) are the two languages in greatest contact with ET languages (see also Epps 2007 and the general overview in Zuñiga 2007: 221-224). Like ET languages, Dâw, Hup and Yuhup are typologically nominative-accusative, have case markers, and DOM

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[9] I use this term to identify the language family, following Epps (2008: 9), rather than 'Makú', which, though more common, is considered to be derogatory.

systems. Yet we will see that beneath these surface similarities lie coding systems organized along different lines from those we have seen for Kotiria, as representative of the ET pattern.

In contrast to ET and Arawak languages, in most Yuhup clauses there is neither cross-referencing of arguments on verbs nor morphological marking of nominals for their syntactic functions or semantic roles.[10] The grammatical roles of VP participants are either inferred by context or construed according to expectations related to semantic properties: 'agentive' status is awarded to the nominal more highly ranked in terms of intersecting hierarchies of animacy, power, and definiteness – such nominals being typically humans or higher animates – and 'non-agentive' status to the nominal less highly ranked – these being typically lower animates or inanimates (Ospina Bozzi 2002: 139). Participant nominals are unmarked whenever they conform to these expectations. The Yuhup accusative marker **-~dìh** is only employed for purposes of disambiguation – one of the primary forces in the development of DOM systems (Bossong 1991: 152) – in cases in which both arguments have equal agentive value or when the A nominal is lower in the hierarchies than the P nominal. In other words, as Ospina Bozzi demonstrates, Yuhup DOM is based on the 'inverse' marking of objects, the result being a higher overall frequency of unmarked Os. This contrasts sharply with the ET pattern, in which the majority of Os are marked, and in which the use of the morphological marker has an 'indexing' rather than a 'distinguishing' function (Hopper and Thompson 1980: 291). Further contrasts occur in ditransitive constructions. In the ET pattern, both first and second Os are typically marked, whereas in Yuhup, only second Os (recipient/benefactive) consistently take the accusative marker. Morphological coding of a first O occurs only if it is animate, again following the pattern of 'inverse' marking, as first objects of ditransitives are prototypically inanimate (Ospina Bozzi 2002: 139-147).

Moreover, although ET languages and Yuhup tend to place peripheral constituents on the edges of utterances, temporal expressions and locational constituents referring to a point of origin, the fixed location

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[10] Interestingly, the Kakua data presented in Zuñiga (2007: 223-24, from Cathcart 1972) show use of subject prefixes on verbs, a more Arawak-like feature not found in other Nadahup or Eastern Tukanoan languages with the exception of Retuarã (Strom 1992: 34-36). Given the more northern location of the Kakua, in a region currently occupied by ET groups but formerly also by the Baniwa (Wright 2005), it would not be surprising to encounter evidence of Arawak influence in Kakua's language structures.

of a participant during an action, or a bounded trajectory are unmarked in Yuhup. Other spatial notions are expressed by various means: to indicate the orientation of participants toward a fixed location or their movement in relation to it, Yuhup employs three 'relative distance' suffixes, and constituents representing 'inessive' location (relations of containment) are marked by the morphological combination -**v́-t**, a 'predicate locative' construction that is also used to mark instruments. A separate marker occurs on constituents in comitative roles (Ospina Bozzi 2002: 158-161). The case system as presented thus consists of an 'inverse' accusative, a comitative, and an incipient locative/oblique.

The marking of grammatical relations in Hup shows more structural and semantic similarities to ET patterns than are found in Yuhup. Like its sister language, Hup has neither marked S nominals nor agreement marking on verbs, but the marking of objects does not parallel the 'inverse' system found in Yuhup. Rather, there is an object suffix -**ǎn** whose use is more ET-like, in that it "marks a variety of core non-subject participants [including] prototypical patients, recipients, beneficiaries, and other directly affected entities" (Epps 2008: 167). Similar to ET argument coding, the Hup object suffix occurs obligatorily on second objects of ditransitivies and on the majority of first objects, the critical criteria for marking being distinctions of animacy and definiteness, with the former predominating: human nouns, pronouns and demonstratives are obligatorily marked; marking is optional for animals, and ungrammatical for inanimates unmarked for number (Epps 2007: 283, 2008: 170, 176-78). The restriction related to inanimates reveals an underlying contrast to the Kotiria system, in which distinctions of definiteness can take precedence over those of animacy and in which inanimates are frequently case-marked. In Hup, inanimate Os remain unmarked, even if they are definite, the exception being inanimates occurring with the plural/collective =**d'əh**.[11] Although as Epps (2007) demonstrates, the current organization of the Hup system has been molded by its more intense contact with Tukanoan languages, Hup shares an underlying orientation to animacy with Yuhup (for which animacy is the basis of the ambiguity-resolving 'inverse' DOM system), though whether this indicates animacy to be an inherited rather

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[11] Epps indicates this to be one of the most typologically interesting features of the Hup system, but one that makes sense given that both number marking and DOM in Hup orient to an animacy hierarchy (2008: 170-78).

than diffused semantic parameter is a matter for further research.[12] Animacy may also play a role in Dâw case-marking, as animates are overwhelmingly marked by the 'affected' (object) marker **-ʉíjʔ**.[13]

Hup is also similar to ET languages in that it employs a marker nearly identical to its object marker on directional (allative/ablative) obliques, and a single, general oblique suffix marking nouns in instrumental, comitative and locative roles (Epps 2008: 166). Thus, in Hup and Kotiria, we find synchronic parallels in terms of an overall 'economy' of markers employed in argument coding. Each coding system is composed of just three basic markers with certain markers taking on plural functions. In Kotiria there are object **-re** and locative **-pʉ** suffixes, and an instrumental/comitative clitic ~**be're**, while Hup codes objects and directional obliques by **-ǎn** and **-an** respectively, and other obliques by a single instrumental/comitative/locative **-V́t** (notably similar in form and function to the 'predicate locative/instrumental' construction in Yuhup but not analyzed as a case marker).

Yet subtle differences in the way these 'economies' pattern suggest diverse paths of internal development. In Hup, the similarity of the object and directional markers suggests a common origin and extension of use of the marker denoting the "semantic role of destination" to the coding of the "syntactic role of direct object", a diachronic path attested in a number of languages (Epps 2008: 183, Bossong 1991: 157, footnote 41). There is, however, as yet no evidence to suggest that the Kotiria object marker **-re** in itself had former 'locative'-type semantics. Rather, its occurrence on locative constituents – always *in conjunction with* the locative **-pʉ** – suggests semantic extension in the opposite direction, with the 'definite/referential' semantic notions associated with syntactic grammatical objects spreading to significant locational referents.

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[12] Indeed, Epps (p.c.) suggests that the synchronic patterns could be the result of both diffusion and inheritance; that is, originally diffused to proto-Hup/Yuhup, then, as an inherited feature of each daughter language, further developed in somewhat independent directions, with Hup likely displaying more on-going effects due to contact.

[13] Nevertheless, the parameters of the Dâw system are not completely clear. Martins (2004: 524) states that the basic and more fixed SVO word order of assertive clauses is sufficient to identify arguments, yet most nominals in prototypical post-verbal O position are also morphologically marked (not an uncommon phenomenon in languages with DOM systems, according to Bossong 1991: 154). She moreover states that marker of 'affected' case is optional (Martins 2004: 158, 499), but there is no specific explanation of when exactly the marker can be omitted or is required.

What conclusions can we draw from this brief cross-linguistic comparison? First, we have seen that although DOM systems may indeed be an areal feature in the Vaupés, internally, the systems are organized along slightly different lines, with groups of sister languages orienting to the same basic semantic parameters. The DOM systems in Kotiria and other ET languages orient overall to a hierarchy of definiteness with animacy as crucial secondary parameter, which makes sense since 'disambiguation' is not at their core. We should recall that in general, ET head-marking codes quite specific information about subjects – including information on gender and number even for third-person referents (except for the KOT/WAI sub-branch) – so DOM plays virtually no role in the identification of nominal participants in terms of disambiguation. We should furthermore not ignore or underplay the word order factor in Kotiria DOM as it suggests a diachronic scenario for the development of DOM –outlined in the next section– that assumes a historical identity of **-re** marker as originally and primarily a grammatical case marker, developing over time the extended discourse-level nuances and functions attested synchronically.

Just the opposite is the case for DOM in Yuhup, which has no coding of nominal participants by configuration and no agreement morphology. In this language, the 'recoverability' of a noun's grammatical role is clearly at stake, and it is thus unsurprising that its 'inverse' DOM system orients overall to distinctions of animacy, as these reflect inherent semantic properties of nouns and thus indicate the likelihood of their status as agent or patient in a given predicate event. For its part, the Hup argument coding system resembles the general ET model in its more systematic use of morphological markers to indicate grammatical roles, but its DOM system reflects the same overall orientation to distinctions of animacy found in Yuhup and also likely in Dâw.

It thus seems prudent to reconsider blanket statements regarding the origin of DOM systems in the region. Though Tariana and Hup have undoubtedly undergone structural adjustments due to contact with Tukano, Tariana represents an extreme case of structural and semantic convergence; synchronic Tariana is the product of a process of language shift nearing its completion, and we should be cautious in assuming that diffusion processes attested for Tariana represent a norm –if there is such a thing– for the multilingual Vaupés region. Indeed there is yet no clear consensus among researchers on facts and patterns of diffusion, as the arguments and

conclusions presented in works such as Stenzel and Gomez-Imbert (forthcoming), Epps (2007), and Zuñiga (2007) clearly demonstrate.

4. On the diachronic development of the Kotiria DOM system

The interpretation of **-re** presented in this paper assumes that, despite the important secondary semantic and pragmatic information it codes, the morpheme's primary function is that of case marker. Indeed, this is the purported primary function of **-re** in all ET languages,[14] as we can see in table 2, which summarizes cross-linguistic information on word order, object argument coding, and other case marking means in ET languages.[15]

Table 2 shows that many of the tendencies discussed for Kotiria – the possibility of unmarked objects before verbs, obligatory marking by **-re** when the O is not pre-verbal, and consistent, obligatory O_2 marking by **-re** – surface throughout the family (with the exception of Retuarã). Additionally, we see that in terms of word order, while the linear position of S can vary, all ET languages tend to maintain an OV constituent core.[16]

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[14] The notable exception to the general ET pattern is Retuarã, where **-re** occurs on subjects of active (transitive or intransitive) verbs, and first or second objects that have human referents. Non-human object nouns are unmarked, as are subjects of stative verbs (Strom 1992). These departures suggest a promotion of the animacy semantics of **-re** marking over its syntactic and discourse-related functions, and most likely reflect changes toward a more Arawak-like active-stative profile under the influence of intense contact with speakers of Yucuna (Arawak).

[15] Sources: Kotiria and Waikhana (my own fieldwork and analyses); Kubeo (Morse and Maxwell 1999); Desano (Miller 1999); Barasano (Jones and Jones 1991; Gómez-Imbert 1997); Tatuyo (Gómez-Imbert 1982); Tukano (Sorensen 1969; Ramirez 1997), Retuarã (Strom 1992). The grammatical sketches published in *Lenguas Indígenas de Colombia, Una Visión Descriptiva* (González de Pérez and Rodríguez de Montes 2000) were also consulted; they are, for Tatuyo, Bará, Carapana, Barasana and Makuna (Gómez-Imbert and Hugh-Jones 2000); Kubeo (Ferguson, Hollinger, Criswell and Morse 2000), Pisamira (González de Pérez 2000); Siriano (Criswell and Brandrup 2000); Tukano (Welch and West 2000); Tuyuka (Barnes and Malone 2000), Kotiria/Wanano (Waltz and Waltz 2000); and Yuruti (Kinch and Kinch 2000).

[16] Though Waltz and Waltz (2000) indicate basic SOV order for Kotiria, I have found interesting variation pointing to a link between discourse pragmatics and the position of the subject argument. Subjects being introduced or re-introduced into discourse, which are frequently full NPs, tend to occur pre-verbally (or pre-OV in transitive clauses), while known subjects, often referenced by pronominals, tend to occur post-verbally. In narratives and conversations, Ø-subjects and even Ø-objects are also quite common.

Language	Basic Order	Alternate Order(s)	Case Marking of Object(s)	Other Case Marking
Kotiria (Wanano)	SOV	S-initial for new S referent and final for known S referent.	**Ø/-re** before V, **-re** elsewhere and for O$_2$	locative **-pʉ; -i** com/instr **-~be're**
Waikhana (Piratapuyo)	SOV		**Ø/ -d/re** before V, **-d/re** elsewhere and for O$_2$	locative **-pʉ** com/instr **-~be'da**
Tukano	SOV		**Ø/-re** before V, **-re** elsewhere and for O$_2$	locative **-pɨ** com/instr **-~be'da**
Waimajã (Bará)	SOV	OVS (possible)	**-re**	locative **-pɨ** com/instr **-~beda**
Desano	SOV		**-re**	locative **-ge** com/instr **-~bera**
Siriano	SOV		**-re**	locative **-pɨɨroge** com/instr **-~beera**
Karapana	OVS	SOV	**Ø** before V object prefixes on V	locative **-pɨ** com/instr **-~beda**
Tatuyo	OVS	SOV	**-re** and object prefixes on V	locative **-pɨ** com/instr **-~beda**
Tuyuka	SOV		**-re**	locative **-pɨ** com/instr -**~beda**
Kubeo	OVS	VSO	**Ø/-re** before V **-re** elsewhere and for O$_2$	locative **-i**, **-ra** genitive **-i** com/instr **-ke**
Yurutí	OV	S-initial for new S referent and final for known S referent	**-re**	locative **-pɨ** genitive **-ja/-~ka** com/instr -**~beda**
Pisamira			**-re**	locative **-pɨ** source -**~bak** com/instr -**~beda**
Barasana/ Eduuria (Taiwano)	OVS (strict)		**Ø** before V, **-re** elsewhere and for O$_2$	locative **-hʉ** com/instr -**~raka**
Makuna	SVO/ OVS		**-re**	locative **-hʉ** com/instr **-~raka**
Retuarã	SOV	OS-V (with S prefix on V) OVS (in negative utterances only)	**-re** only on human S$_A$, O, O$_2$	locative **-~ra**, **-reka**, **-pi** source **-ka** instrument **-pi** comitative -**ka** possessive **-rika**

Table 2. Word order and argument coding in ET languages

These tendencies suggest a diachronic scenario in which word order may have been a more important means of O coding and that the OV nucleus of a transitive clause was formerly even more tightly united than we observe today. With subjects head-marked and word order responsible for first (direct) object coding, **-re** may well have originated in more marked (ditransitive) constructions involving multiple objects. Case-marking hierarchies indeed show that second-object 'dative' case is a likely candidate for overt morphological coding when 'nominative' and 'accusative' cases are taken care of by other means (Blake 2005).

Over time, the notions of 'definiteness/referentiality/individuation' inherently linked to second objects were reanalyzed as properties of the **-re** marker itself and its use thus spread to equally definite or referential first objects. From there, we can easily imagine its extension to significant locative oblique and discourse-level referential constituents such as temporals. The increased use of **-re** on first objects led to the decreased use –though not complete elimination– of configuration to code grammatical relations, leading to greater flexibility in terms of word order and instances in which objects seem to be doubly-marked, by both morphological and configurational means. Weakening of the OV link and strengthening of overt morphological coding of any referential first or second O then allowed for reanalysis of any unmarked O in the OV nucleus as indefinite, leading to the kinds of synchronic instances of both marked and unmarked pre-verbal objects that were analyzed in §2.

There are, in fact, many cross-linguistic precedents for such a scenario: Bossong cites a number of languages –from Romance, Semitic, Indo-Aryan, and Amerindian families– in which dative markers were the obvious source for newly-developed accusative markers with differential functions. He also shows that in many of the same languages that have developed DOM systems, former means of argument coding, i.e. word order, persist side-by-side with DOM, constituting cases of fairly stable double (or even triple) marking of objects (Bossong 1991: 154-58). As for the reanalysis of unmarked Os as 'indefinite', de Swart shows that there are a number of languages in which the use or absence of case marking triggers different interpretations of a definite/indefinite parameter (2007: 173-94).

Additional thoughts on the 'labeling' issue

Although **-re** clearly functions as a grammatical case marker in ET languages, its multifunctional use in VP syntax and the additional semantic notions it codes have led to a proliferation of glossing labels in the ET literature. Some authors highlight its syntactic functions, alternately identifying it as an 'accusative/dative/oblique' case marker (Sorensen 1969, Gomez-Imbert 1982, forthcoming, Morse and Maxwell 1999, Stenzel forthcoming a). Others focus more on its pragmatic-discourse functions and label it as a 'specificity marker/suffix' (Barnes 1999, 2006), a 'referential complement' marker (Waltz and Waltz 1997, Ramirez 1997), or 'non-subject' marker (Aikhenvald 2007).

My view is that terms such as 'specificity marker' or 'referential complement marker', though appropriate in some ways, tend to bleach the morpheme of what is clearly an essential, and perhaps higher-ranking, function as a grammatical case marker. On the other hand, labeling it as a 'non-subject' case marker implies a subject/non-subject 'two-case' system, ignoring, or at the very least downplaying the fact that overt locative and comitative/instrument case markers are widely employed throughout the family. Zuñiga's suggestion that we adopt a distinction between ACCUSATIVE and OBJECTIVE cases (2007: 212), the former referring "to O-marking that is not subject to any restrictions that bear relationship to referential status of animacy" and the latter to "O-marking that operates based upon one or both hierarchies [of animacy or definiteness, and that] may operate using case markers already present in the language with other functions" seems to me a useful and more appropriate way of framing the complex syntactic and semantic properties of the ET **-re** marker.

Abbreviations

1/2/3	first/second/third person	INST	instrument
ANPH	anaphoric	INTENT	intention
ASSERT	assertion	LOC	locative
BEN	benefactive	MASC	masculine
CLS	classifier	MOV	movement
COLL	collective	NEG	negative
COM	comitative	NOM	nominalizer
COP	copula	OBJ	object
DEM	demonstrative	PERF	perfective
DESID	desiderative	PL	plural
DIM	diminutive	POSS	possessive
EMPH	emphatic	PREDICT	prediction
EXC	exclusive	PROG	progressive
FEM	feminine	SG	singular
FRUST	frustrative	SOL	solitary
IMPER	imperative	VBZ	verbalizer
IMPERF	imperfective	VIS	visual
INFER	inferential		

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