

ON THE ARGUMENT STATUS OF CROSS-REFERENCING FORMS: SOME PROBLEMS

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ABSTRACT

The present paper examines the rationale for the argument status of cross-referencing forms given in FG and also in other theoretical frameworks, e.g. Lexical Functional Grammar (Bresnan and Mchombo 1987), Government and Binding (Jelinek 1984), and identifies a number of problems posed by such an analysis. While some of the issues may find an adequate resolution within the context of FG, it is argued that most either disappear or can be handled better under an 'agreement' as opposed to 'argument' analysis of the cross-referencing forms. It is also argued, that even if the pronominal argument analysis is maintained for some languages, those of the radically head marking type, there are no convincing grounds for extending it to dependent marking languages such as Latin.

KEY WORDS: Functional Grammar, typology, morphology, syntax.

RESUMEN

El presente artículo examina el fundamento lógico sobre el estatus argumental de las formas de referencia cruzada propuesto tanto por la GF como por otros marcos teóricos, ej. Gramática Funcional Léxica (Bresnan y Mchombo 1987), Rección y Ligamento (Jelinek 1984), e identifica un número de problemas que dicho análisis plantea. Si bien algunos aspectos pueden encontrar una solución adecuada dentro del contexto de la GF, se defiende la idea de que la mayoría desaparece o puede ser tratado de manera más satisfactoria desde un análisis de 'concordancia', en lugar de 'argumental', de las formas de referencia cruzada. Asimismo, se sostiene que, incluso si se mantiene el análisis argumental pronominal para algunas lenguas, como son aquellas del tipo más extremo de marca en el núcleo, no existen argumentos convincentes para extenderlo a las lenguas de marca en el elemento dependiente como el latín.

PALABRAS CLAVE: Gramática Funcional, tipología, morfología, sintaxis.

1. INTRODUCTION

In Dik (1989, 1997) a distinction is made between verbal person forms which function as agreement markers and those which function as cross-referencing forms. Under Dik's analysis, agreement markers reflect grammatical agreement

in person between a verbal argument and the verb. Cross-referencing forms, on the other hand, are the realizations of the verb's arguments with the corresponding free forms being in an appositional relationship to the cross-referencing forms. Though the term cross-referencing form is frequently used in the literature, unlike under Dik's interpretation, it is not necessarily understood as co-terminous with the argument status of the verbal person form. Therefore, to avoid confusion, in what follows I will not use the term cross-referencing form but rather bound pronominal argument.

While in some other theoretical frameworks the basis for distinguishing agreement markers from bound pronominal arguments has been a hotly debated issue, in FG it has received hardly any attention. The only criterion for a bound argument as opposed to an agreement analysis of verbal person forms offered in Dik (1997) is syntactic optionality of the corresponding free nominal. In terms of this criterion, verbal person forms which require the obligatory presence of a corresponding free nominal or pronominal, such as the *-s* in *brings* in English (1) emerge as agreement markers, while those which need not be accompanied by a corresponding free form such as *nen-* and *a-* in Tauya (2) qualify as bound pronominal arguments.

English

- (1) a. The postman delivers the mail around 10.00 a.m.
 b. *Brings big parcels too.
 c. He brings big parcels too.

Tauya (Adelbert Range, Trans-New Guinea)

- (2) a. fena?a-ni fanu-/0 **nen-yau-a** -?a
 woman-ERG man-ABS 3PL-see-3SG-IND
 'The woman saw the men'.
 b. **nen-yau-a** -?a
 3PL-see-3SG-IND
 'She/he saw them'. (MacDonald 1990: 118)

Dik does not elaborate on the nature of the appositional relationship between bound pronominal arguments and their accompanying nominals. This issue has, however, been discussed by De Groot and Limburg (1986), though in regard to a much more restricted set of languages than those identified as manifesting such a relationship on the basis of Dik's syntactic optionality criterion. De Groot and Limburg consider the relationship between bound pronominal arguments and their corresponding nominals as involving a subtype of nonrestrictive apposition which they call grammatical apposition.

In this paper I would like to take issue with Dik's diagnostic for assigning argument status to verbal person forms and to examine the nature and cross-linguistic applicability of De Groot and Limburg's notion of grammatical apposition. I will begin by providing a number of arguments against taking syntactic optionality as a diagnostic for the argument status of verbal person forms. I will then consider

what properties nominals in apposition to bound pronominal arguments may be expected to display under De Groot and Limburg's analysis of the appositional relationship between the two and under the analysis developed by generativists. Next I will compare the two sets of predictions with the properties actually exhibited by nominals in strongly head-marking languages in the sense of Nichols (1986, 1992). Finally, I will make a case for incorporating a typology of verbal person forms inspired by the analysis of Bresnan and Mchombo (1986, 1987) in the context of Lexical Functional Grammar into FG.

2. AGAINST THE SYNTACTIC OPTIONALITY CRITERION

As mentioned in the introduction the only criterion for a bound argument as opposed to an agreement analysis of verbal person forms offered in Dik (1997) is syntactic optionality of the corresponding free nominal. In analyses inspired by Chomsky's Principles and Parameters model of grammar or Bresnan's (1982, 1995) Lexical Functional Grammar, on the other hand, syntactic optionality of a nominal is only a necessary but not a sufficient criterion for a bound argument as compared to an agreement analysis of verbal person forms. A similar position is adopted within the context of FG by De Groot and Limburg (1986). Generativists as well as De Groot and Limburg posit argument status of verbal person forms for a subset of languages of the strongly head-marking as opposed to dependent-marking type in the sense of Nichols (1986, 1992). Strongly head-marking languages exhibit verbal person marking of both of the transitive arguments, accompanied by syntactic optionality of what would normally be considered as nominal arguments, affixal person marking of possessed nouns and sometimes also of adpositions, no overt nominal case marking and often considerable word order variation. One such language is Mohawk. The head marking of the verb is illustrated in (3), of the possessed in (4).

Mohawk

- (3) a. Sak ye-hyatú-hkw-a' wa-shakóy-u' ne
 Sak 3_F-write-INSTR-HAB FACT-3_M:3_F-give-PUNC NE
 Uwári.
 Mary.
 'Sak gave Mary a pencil'.
 b. wa-shakóy-u'
 FACT-3:3-give-PUNC
 'He gave it to her'. (Baker 1997: 100)
- (4) a. Sak raó - [a]'share'
 Sak 3_M-knife
 'Sak's knife'.
 b. raó - [a]'share'
 3_M- knife
 'his knife' (Baker 1997: 45)

We see in (3) that in Mohawk, as in most head-marking languages, in ditransitive clauses only the agent and recipient are expressed on the verb by overt markers, the verbal person form for the goal in such case being phonologically null. Mohawk has no uncontroversial adpositions only locative suffixes such as the one shown in (5).

- (5) ye-hʌt-á-'ke
 3N-field-LOC
 'in the field' (Baker 1997: 401)

Baker (1997: 401) considers the locatives to be postpositions, but with an incorporated object argument. The constructions cannot therefore be considered as undermining the head-marking nature of the language.

Whereas De Groot and Limburg and generativists have focused their attention on head-marking languages, Dik (1997: 154-158), by contrast, outlines his bound argument analysis on the basis of Latin, a language which is essentially dependent rather than head-marking. The only head-marking characteristic that Latin exhibits is person marking of the subject on the verb and the syntactic optionality of the corresponding nominal subject. Apart from this Latin is dependent-marking; it has case marking of all the verbal arguments, including the subject (6), of the possessor (7) and of the adpositional object (8).

Latin

- (6) a. Dominus equum cōsulī deti
 master:NOM horse:ACC consul:DAT give:PERF:3S
 'The master gave the horse to the consul'.
 b. Equum cōsulī deti
 horse:ACC consul:DAT give:PERF:3S
 'He gave the horse to the consul'.
- (7) a. cōsulis equus
 consul:GEN horse
 'the consul's horse'
 b. equus
 his horse
- (8) Vādō ad urbem
 go:1S to city:ACC
 'I'm going to the city'.

Dik's argument treatment of the verbal person form and appositional analysis of the accompanying nominal in Latin places the two on a par with their counterparts in Mohawk. This is worrying since it denies typological significance to the presence vs absence of dependent marking. It is by no means evident that the presence vs absence of dependent marking has a direct bearing on the grammatical

status of verbal person forms and their accompanying nominals. However, given that case marking is primarily a feature of arguments, if the bifurcation into agreement markers and bound pronominal arguments is indeed valid, we would expect the latter to be accompanied by nominals lacking rather than bearing case marking. This fact alone already suggests that syntactic optionality is a questionable diagnostic of the argument as opposed to agreement status of verbal person forms.

The validity of taking the syntactic optionality of nominals as a sufficient criterion for the argument status of verbal person forms is further undermined by the fact that in terms of this criterion the overwhelming majority of languages with verbal person forms emerge as having no nominal as opposed to pronominal first arguments and many no nominal first or second arguments. My cross-linguistic investigations of verbal person markers reveal that person markers which require the presence of accompanying independent nominals or pronominals are very rare. In a sample of 272 languages I found only two such markers, in Dutch and Vanimö, a New Guinea language of the Sko family. The only other languages that I have come across which display such markers are: English, German, Icelandic, Faroese, some Rhaeto-Romance dialects, Standard French and perhaps Labu, an Austronesian language of New Guinea, and Anejom a language of Vanatu.¹

¹ Siegel (1984) in his short sketch of Labu does not actually state that the subject agreement markers are always accompanied by overt arguments. However, the only examples lacking overt arguments in his grammatical sketch are some imperatives as in (1b) as compared to (1c) and same subject coordinations as in (1d), which are the environments that may lack overt subjects also in English.

Labu

- (1) a. Ai yu-tutu iya ko hu
 I 1sg:past-fire dog with stone
 'I hit the dog with the stone'.
 b. ye mba nu- kusu naki
 you pot 2sg:irr-spit ir:neg
 'Don't spit'.
 c. no- pesa sema
 2sg:irr-make fast
 'Make (it) quickly'.
 d. esoha se- kelele a te so-no po
 they 3pl:past-win and then 3pl:past-drink water
 'They won and then got drunk. (lit drunk water)'
 (Siegel 1984: 101,106,111,119)

The same appears to hold for Anejom. In Lynch's (1982) grammatical sketch the subject agreement markers which are fused with tense markers also appear to be obligatorily accompanied by free arguments as shown in (2).

Anejom

- (2) a. et avin numu aen
 3sg:aor want fish he
 'He wants a fish'.



If all verbal person forms in languages with syntactically optional nominals were to be treated as arguments and the accompanying nominals were to be viewed as being in apposition to the pronominal arguments, apposition rather than argumenthood would become the fundamental relation borne by nominals. This would require an overhaul of any framework adopting such a position, which can hardly be considered as desirable. More significantly, we would expect the distinction between nominal arguments and nominal appositives to be reflected in the syntactic properties of the two. Yet this does not appear to be the case.

Generative grammarians devoted a whole decade to investigating the predictive potential of the syntactic optionality of nominals under the guise of the pro-drop parameter. Unfortunately, as documented in Gilligan (1987) none of the correlates of the syntactic optionality of nominals that they postulated proved to be cross-linguistically valid. The failure of generativists to establish any cross-linguistically valid properties of nominals in pro-drop as opposed to non-pro-drop languages strongly argues against there being any such properties. And if there are no properties distinguishing argument nominals from their allegedly nonargument appositional counterparts, I cannot see what justification remains for considering the latter to be in apposition to arguments rather than just arguments.

In sum, since taking syntactic optionality as a criterion for the argument as opposed to agreement status of verbal person markers (i) denies any typological significance to the presence of dependent marking, (ii) necessitates viewing appositive rather than argument nominals as the syntactic norm, and (iii) does not appear to be reflected in the syntactic behaviour of the nominals accompanying verbal person forms, I suggest that this criterion be abandoned.

3. THE APPOSITIONAL RELATIONSHIP

My rejection of syntactic optionality as a diagnostic of the existence of an appositional relationship between verbal person forms and their accompanying nominals does not exclude the possibility of there being languages manifesting such a relationship between the two forms. As mentioned earlier, the most likely candidates are strongly head-marking languages.

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- b. et awod kuri albas aen
 3sg:aor hit dog big he
 'He hit/is hitting a big dog'.
- c. et atgii pikad a di?
 3sg:aor kill pig subj who
 'Who killed the pig?' (Lynch 1982: 119,122,137)

Though the agreement markers are not bound to the verb, Lynch (1982: 118) notes that they are well on the way to becoming a verbal prefix, especially in the aorist indicative.

In the literature the nature of the appositional relationship in such languages has been variously conceived of. Some linguists for instance, Bresnan and Mchombo (1987), Bresnan (1995) and Baker (1991, 1997), view it as similar to that between anaphoric pronouns and left- or right-dislocated topics, corresponding to FG themes and tails as, for instance, in the English (9).

- (9) a. The doctor, she really helped the patients.
b. The doctor really helped them, the patients.

For ease of reference, I will call this the dislocational view. It is important to note that this terminology is not intended to imply that the free nominals are somehow extracted from the clause. Their dislocated position is base generated. Other linguists, most notably Jelinek (1984, 1988) and De Groot and Limburg (1986) see the appositional relationship between bound pronominal arguments and their accompanying nominals as more like the NP nonrestrictive appositions in (10).

- (10) He, the doctor, told me, the patient, what to do.

Since under this latter position the appositional nominals are considered to be intra- rather than extra-clausal constituents, I will refer to it as the clausal analysis.

The dislocational analysis of the relationship between bound pronominal arguments and their accompanying nominals allocates a clear grammatical status to the free nominals. They are adjuncts adjoined to the clause. The grammatical status of the free nominals under the clausal analysis is less obvious. Jelinek (1984) treats them as adjuncts. Speas (1990) analyzes them as modifiers. De Groot and Limburg (1986), by contrast, do not discuss the matter at all. Their assumption seems to be that the free nominals have no grammatical status in or relative to the clause beyond the appositional relationship that they bear to the bound pronominal arguments. This reduces the predictive potential of their analysis and also makes it rather difficult to test.

The dislocational view of the relationship between bound pronominal arguments and free nominals leads us to expect that such nominals should exhibit properties similar to that of dislocated topics in languages with free or clitic anaphoric pronouns and crucially, of adjuncts as opposed to arguments. One of these properties is specificity. In various languages including English a left dislocated topic may be definite (11a), or generic (11b) but not nonspecific (11c).

- (11) a. Your brother, I saw him yesterday.
b. Linguists, they don't seem to know what language is.
c. *A musician, she wants to marry him.

Another feature of dislocated topics, related to the above, is that they must involve reference to elements of a set which is pre-established in discourse or the speaker's mind. Dislocands containing variables such as the quantifier *every* as opposed to *all* or the null quantifier or question words are therefore ruled out as shown in (12) and (13).

- (12) a. All the boys, she tells them her life story.
 b. *Every boy, she tells him her life story.²
 c. *Nobody, I know him in the city.
- (13) *Who, he loves you?

If appositional nominals in head-marking languages are like dislocated topics, we would expect these languages to exhibit some constraints in regard to the use of nonspecific NPs, to lack true quantifiers such as *every* and *no* and to disallow questioning in place. In other words the equivalents of the English *every* should be like *all*, expressions such as *nobody* or *nothing* should be expressed not by means of quantifiers but by sentential negation, and question words should occupy different positions from referential nominals.

The dislocational view makes several additional predictions in regard to the properties of nominals in apposition to bound pronominal arguments. The first of these concerns what is often called locality. Since anaphoric relations (with the exclusion of reflexives) are not clause bounded, the nominals should be able to be adjacent to a clause other than the minimal clause featuring the bound pronoun. That this is possible with dislocations is shown in (14).

Sardinian

- (14) Sa līttera, Juane at natu ki l'aíat dza mandata
 the letter John has said:3sg that it:has already sent:3sg
 'The letter, John said that he had already sent it'. (Jones 199x: 317)

Another prediction that follows from the dislocational view is that languages in which nominals are in apposition to bound pronominal arguments should not exhibit subject-object asymmetries in relation to co-reference or variable binding. In the generative literature the relation of referential dependence between pronouns and their antecedents is captured by Chomsky's (1981) Binding Theory which is an elaboration of Reinhart's (1976,1983) c-command condition. The c-command condition essentially states that if the first branching node dominating the pronoun within the syntactic tree also dominates the full noun phrase, co-reference is ruled out. In English and other languages the subject is assumed to c-command the object but the object does not c-command the subject. Consequently a subject possessor may be co-referential with a pronoun in the object but not vice versa. Compare (15a) with (15b).

- (15) a. John's knife_i helps him_j. (possible i=j)
 b. He_i broke John's_j knife. (i≠j)

² As pointed out by Bresnan (1995: 178), among others, with sufficient descriptive content, dislocated quantificational phrase topics are possible in English, as in *Every man she mats, she tells him her life story.*

Whereas in (15a) *him* can be interpreted as coreferential with *John*, in (15b) the antecedent of *he* can only be an extra-clausal one. The same subject-object asymmetry is found with quantifier phrases as shown in (16) and with *wh*-phrases (17).

- (16) a. Every_i man kissed his_j girlfriend. (possible $i=j$)
 b. His_i girlfriend kissed every_j man. ($i \neq j$)
 (17) a. Who_i kissed his_j girlfriend? (possible $i=j$)
 b. Who_i did his_j girlfriend kiss? ($i \neq j$)

If nominals in head-marking languages are adjuncts adjoined to the clause, none will *c*-command the other. Therefore such asymmetries should not occur and only the unbound or bound readings should be available.

Some additional properties which may be expected to be displayed by appositional nominals due to their adjunct status under the dislocational view are absence of lexical case, iterability, word order variation, and different behavior from arguments in regard to extraction. The first of these is a defining property of strongly head marking languages. Nonetheless, it deserves mention since it does follow from the dislocational view. As is well known, dislocands either exhibit no case marking or take only the unmarked nominative case.³ In Modern Arabic, for example, according to Moutaouakil (1989:105-107) while the nominatively marked NP in (18a) is adjoined to the clause, the accusatively marked NP in (18b) is clause internal.

Modern Arabic

- (18) a. Zaydun, qābal-ta-hu
 Zayd:NOM met-1s-3s
 'Zayd, I met him'.
 b. Zaydan _,sāfa_,h-tu-hu
 Zayd:AC greeted-1s-3
 'Zayd I greeted him'. (Moutaouakil 1989: 105-6)

Iteration, by contrast, is less typical of dislocands than of other types of adjuncts. Nonetheless, in some languages, for instance, Sardinian and Italian (19), more than one constituent can be dislocated.

Italian

- (19) Di vestiti, a me, Gianni, in quel negozio, non mi ce ne ha
 clothes, to me Gianni in that shop not to:me there of:them has
 mai comprati
 ever bought
 'Gianni has never bought me any clothes in that shop'.
 (Cinque 1990: 58)

³ This concerns essentially affixal case marking. Prepositions quite happily occur in left-dislocations in Sardinian (Jones 199x: 314-315).

Word order variation in relation to dislocands is understood as meaning variable order relative to the clause, i.e. the ability to occur to the left and right of the clause. Both left- and right- dislocands are found in many languages. An example from English was given earlier in (9). As for extraction possibilities, that dislocands may exhibit different behavior from arguments in this respect can be exemplified on the basis of English. In English, material may be extracted from the object, as in (20b), but not from a right dislocand (21b).

- (20) a. Mary would like a picture of a cat.
 b. What would Mary like a picture of?
 (21) a. Mary would like it, a picture of a cat.
 b. *What would Mary like it, a picture of?

In Modern Arabic, by contrast, we find the converse situation in that certain types of extractions are possible with dislocands but not with arguments. Moutaouakil (1989: 120) points out that, whereas contrastive focus structures which involve extraction out of a complex NP are ungrammatical (22a), dislocands (22b) which violate this constraint are perfectly grammatical.⁴

Modern Arabic

- (22) a. *Zaydan jāʔa r-rajulu l-ladī qābala
 Zayad:ACC came the-man:nom who met
 ‘*It was Zayd that the man came who met’.
 b. *Zaydun jāʔa r-rajulu l-ladī qābala-hu
 Zayad:NOM came the-man:nom who met-3s
 ‘Zayd, the man came who met him’. (Moutaouakil 1989: 120)

Again if all appositional nominals are like dislocands, such differences should not occur.

In contrast to the dislocation analysis, the clausal analysis outlined by De Groot and Limburg (1986) carries considerably less predictions in regard to what sort of properties appositional nominals and bound pronominal arguments should display. De Groot and Limburg do in fact recognize that nominals in head-marking languages may be likened to intra-clausal themes and tails. However, they do not pursue this observation further but rather concentrate their attention on the potential parallels with nonrestrictive apposition.

Nonrestrictive apposition within the clause comes in a number of different guises, some of which infringe on the domain of modification, others on coordina-

⁴ In Italian left-dislocations also do not observe island constraints (Napoli CLS 17: 266), but in Sardinian they do (Jones 199x: 318).

tion and yet others on parataxis.⁵ Consequently, nonrestrictive apposition displays no clear set of properties which can be used as yardstick for evaluating whether or not a phenomenon does or does not constitute an instance of nonrestrictive apposition. The situation is further complicated by the fact that De Groot and Limburg suggest that the relationship between bound pronominal arguments and nominal terms should be seen as a sub-type of nonrestrictive apposition, which they call 'grammatical apposition'. Unfortunately, they do not specify what properties grammatical apposition may be expected to display. They only mention two ways in which grammatical apposition departs from the paradigm case of unrestricted apposition which, like most other linguists, they take to be that obtaining between two co-referential NPs such *my brother* and *the poet* in (23).

(23) My brother, the poet, is arriving on Tuesday.

Whereas in (23) either of the appositives can be omitted, in grammatical apposition the pronominal argument on the verb is obligatory. And while the two appositives in (23) are necessarily adjacent to each other, this need not be the case with respect to bound pronominal arguments and their corresponding free nominals.⁶

Though De Groot and Limburg do not make any predictions in regard to the properties that we may expect grammatical apposition to display, let me venture some. First of all, if grammatical apposition is a subtype of nonrestrictive apposition involving a bound pronoun and a co-referential NP, we would expect the NPs to be necessarily specific and not contain variables such as the quantifier *every* or the null quantifier. Note that in English, though NPs containing an indefinite pronoun can be in apposition to a definite pronoun, as in (24), the NP has a semantically specific referent.

(24) She, a first year undergraduate, had the cheek to tell me, an experienced academic, how I should conduct my classes.

Note also that nonrestrictive appositions with NPs quantified by *every* or *no* are impossible unless they are accompanied by some additional descriptive content as in (25b) and (26).

⁵ Matthews (1981) argues that it is a paradigm instance of a category with a prototype structure, i.e., a category with no clear boundaries.

⁶ The two properties which lead De Groot and Limburg (1986) to posit this new sub-type of apposition are in fact manifested by non-restrictive relative clauses. As shown in (3), only the relative can be omitted, not the head, and the two need not be adjacent to each other.

- (3) a. I met his brother, (who used to live in London).
b. *I met who used to live in London.
c. I met his brother yesterday who used to live in London.

- (25) a. *I gave her, every girl, a bunch of red roses.
 b. I gave her, every girl I came across, a bunch of red rose.
- (26) A: Who took the money?
 B: I know. I saw him, nobody you would recognize, creep in and take it.

However, even in such instances there is no strict co-reference between the set defined by a phrase quantified by *every* and the member of the set referred to by a singular pronoun. The same holds for the null set defined by a null quantifier. Consequently, if grammatical apposition is assumed to involve strict co-reference, languages manifesting grammatical apposition may be predicted to lack quantifiers such as *every* and *no*, just as under the dislocational view. Whether the same can be said for question words in situ, which were also predicted not to occur under the dislocational view, I do not know. In any case, they could be taken not to occur on the basis of the unacceptability of nonrestrictive appositions with question words in English.

The fact that nominals in grammatical apposition are intra- rather than extra-clausal constituents in turn suggests that such nominals should always be located in the minimal clause containing the bound pronoun. This means that languages in which nominals are in an appositional relationship to bound pronominal arguments should not possess constructions corresponding to the Sardinian (14), and its English translation, where the antecedent of the pronoun bound to a subordinate verb is adjoined to the superordinate clause. This is a rather unfortunate consequence of viewing the relationship between a nominal and a bound pronominal argument as a subtype of nonrestrictive apposition, since anaphoric relations, unlike agreement relations, are not typically considered to be bound to the clause. Recall that the very opposite prediction follows from the dislocational analysis. Also, unlike under the dislocational analysis, there is no evident reason for why nominals in grammatical apposition should lack case marking. Case marking does occur on nominals in nonrestrictive apposition, as illustrated in (27), and therefore cannot be expected to be absent in grammatical apposition without stipulation.

Polish

- (27) Dał am jej, twojej siostrze, nasz nowy adres
 gave:3SF her:DAT your:DAT sister:DAT, our:ACC new:ACC address:ACC
 'I gave her, your sister, our new address'.

Two further properties which one could predict of grammatical apposition are the presence of more than one instance of it in the same clause, in view of examples such as (10), and potentially the possibility of several nouns being in apposition to a single bound pronominal argument. Note that in English a noun may occur with more than one appositive, as in (28).

- (28) I met your sister, the painter, the apple of your father's eye.

This second property would be entirely unexpected under the dislocational view.⁷

As for the subject-object asymmetries, or asymmetries involving arguments and adjuncts mentioned in connection with the dislocational analysis, needless to say, in FG such asymmetries would not be dealt with in terms of *c-command*. The question, however, is whether they would be predicted not to exist in languages manifesting grammatical apposition. Under the dislocational analysis, subject-object or argument-adjunct asymmetries are predicted not to exist, since all nominals are considered to be adjuncts. However, De Groot and Limburg do not assign any grammatical status to the relevant nominals other than the appositional status. This may be interpreted as entailing that they should not display any of the properties typically associated with either arguments or adjuncts. Alternatively, since the nominals are in apposition to arguments they could be assumed to adopt argument-like behaviour. Dik (1997: 44) implies that the latter is the case. In discussing nonrestrictive relative clauses, which are adjoined to terms by way of parenthesis in a way parallel to that of appositional nominals, he explicitly states that they are “‘caught’ by the rules and principles which determine the form and the order of constituents in the expression of underlying clause structure.” Presumably the same may be taken to hold for nominals in apposition to bound pronominal arguments. If this is so, languages with nominals in grammatical apposition cannot be predicted to lack argument-adjunct, subject-nonsubject or subject-object asymmetries per se. Such languages may of course not have syntactic function assignment in the FG sense of the term, but this is a feature independent of grammatical apposition and a characteristic of many languages.

Having determined what properties nominals in head-marking languages are predicted to display under the above two conceptions of the appositional relationship between bound pronominal arguments and their accompanying nominals, let us now consider to what extent these predictions are borne out in actual head-marking languages.

4. HEAD-MARKING LANGUAGES

The strongest case for treating verbal person forms as bound pronominal arguments and their accompanying nominals as being in an appositional relationship to them, is provided by Baker (1997) for Mohawk. According to Baker (1997) nominals in Mohawk exhibit a whole range of properties distinct from those typically manifested by arguments and similar to dislocated topics and adjuncts. These include the following. Nominals in Mohawk can occur freely either to the left or to the right of the verb, and out of context both preverbal and postverbal NPs are

⁷ Jones does give an example from Sardinian with such a dislocation.

ambiguous between a definite and indefinite interpretation. Under the definite reading, they thus resemble typical left- and right-dislocated topics. Though unlike true dislocands, Mohawk nominals are open to a nonspecific reading, they cannot take true quantifiers such as *every*. In fact, Baker argues that the language lacks non-referential quantified NPs comparable to *everyone*, *everything* and also *nobody* and *nothing*.⁸ English sentences containing *every* are translated into Mohawk with the element *akweku* which displays the properties of English *all* rather than that of *every*. The equivalents of *nobody* and *nothing* in turn are rendered by ordinary sentential negation. Unlike referential nominals, wh-phrases exhibit no variation in order and are obligatorily sentence initial as shown in (29).

- (29) a. Oh nahótΛ Sak wa-ha-hnínu-ʔ
 what Sak FACT-3M-buy-PUNC
 ‘What did Sak buy?’
 b. Oh nahótΛ wa-ha-hnínu-ʔ ne Sak?
 What FACT-3M-buy-PUNC NE Sak
 ‘What did Sak buy?’
 c. *Sak wa-ha-hnínu-ʔ oh nahótΛ?
 Sak FACT-3M-buy-PUNC what
 ‘What did Sak buy?’ (Baker 1996: 68-69)

Baker interprets the obligatory sentence initial position of wh-phrases as indicative of their being moved to Comp position rather than adjoined to the clause. Thus, just like dislocands, they cannot be questioned in place. Moreover, just like dislocands they may bind an anaphoric pronoun in a lower clause. Consider (30), for instance.

- (30) Uwári waʔ-k-at-hróri-ʔ tsi waʔ-t-ye-núnyahkw-eʔ
 Mary FACT-1-refl-tell-PUNC that FACT-DUP-3F-dance-PUNC
 ‘Mary, I told that she liked it’. (Baker 1997: 102)

Furthermore, unlike in English there are no subject-object asymmetries in regard to variable binding involving question phrases. A possessed NP cannot bind the questioned phrase irrespective of which corresponds to the English subject and which to the English object. Thus only the unbound interpretation is possible in both (31a) and (31b).

- (31) a. Úhka_i raúha_j raó-skareʔ wa-shako-hranúhs-a-yaʔk-eʔ
 who him 3M-friend FACT-3M:3F-face-hit-PUNC
 ‘Who slapped his girlfriend?’ (i≠j)

⁸ The lack of the null quantifier is not very exceptional. According to Kahrel (1997) this is a common property cross-linguistically.

- b. Úhka_i akúha_j akó-skare' wa-shako-hranúhs-a-ya'k-e'
 who her 3F-friend FACT-3M:3F-face-hit-PUNC
 'Who did her boyfriend slap?' (i≠j) (Baker 1997: 79)

This suggests that the subject does not c-command the object, which is consistent with the adjoined rather than argument status of the two. And as one would expect, unlike in English, a subject pronoun can be co-referential with the NP embedded in the object. Thus both of the co-referential relationships in (32a) and (32b) are possible.

Mohawk

- (32) a. Ro-ya'takéhnha-s Sak raó-[a]'share'
 3M help-HAB Sak poss:MS-knife
 'Sak's_i knife helps him_j'. (possible i=j)
- b. Wa'-t-há-ya'k-e Sak raó-[a]'share'
 FACT-DUP-1S-break-PUNC Sak poss:MS-knife
 'He_i broke Sak's_j knife'. (possible i=j) (Baker 1997: 45)

While all of the above properties of Mohawk are consistent with the dislocational view, most are also not incompatible with De Groot and Limburg's analysis. Though as mentioned earlier the grammatical apposition analysis does not predict lack of subject-object asymmetries, this, in the context of Mohawk, may be taken to follow from the fact that the language lacks subject and object assignment in the FG sense of the terms. What is damaging for De Groot and Limburg's analysis is the fact that Mohawk allows the antecedent of a bound pronominal argument to occur in a higher clause as illustrated in (30) above. If grammatical apposition is clause internal, the relationship between *Uwari* 'Mary' and *ye* (the third person singular affix on the verb) in (30) cannot be an instance of grammatical apposition. What then is the nature of the relationship between the two? The only possibility is that *Mary* is a dislocated topic or, in FG terms, a theme. De Groot and Limburg, however, argue that languages manifesting grammatical apposition should not have themes or tails. And indeed, under their analysis, they should not, since there would be no way of distinguishing whether the relationship between a nominal and the bound pronominal argument involves a theme/tail or an appositional nominal. In any case, the recognition of themes or tails specifically for nonlocal instances of anaphoric binding such as those in (30) would be inconsistent with the FG view of these special positions. Thus for languages such as Mohawk, the dislocational view is superior to the clausal analysis.

In addition to the above mentioned features of Mohawk, there is one feature which may be seen to follow from the grammatical apposition analysis but not from the dislocational view, namely the presence of discontinuous NPs. According to Baker (1997:140), discontinuous NPs in Mohawk, unlike in the Australian language Walpiri, for instance, are marginal and very restricted, but do occur. Two examples are given in (33).

- (33) a. KíkΛ wa-hi-yéna-’ ne kwéskwes
 this FACT-1S:3M-catch-PUNC NE pig
 ‘I caught this pig’.
- b. Akwéku wa’-e-tshΛri-’ ne onhúhsa
 all FACT-3F-find-PUNC NE egg
 ‘She found all the eggs’. (Baker 1996: 138)

In the literature the elements of such discontinuous NPs are typically seen as being in apposition to each other and, presumably, this would also have to be the analysis adopted under the dislocational view. However, each of members of the discontinuous phrase could also be considered as being in apposition to the bound pronominal argument on the verb, by analogy to cases of the nonrestrictive apposition such as (28) cited earlier. In fact, the only other alternative under De Groot and Limburg’s analysis would be to assume that the nominal enters into two appositional relationships, with the bound person forms and with its operator or modifier, hardly an attractive solution. As pointed out by Austin and Bresnan (1996) in discussing NP discontinuities in Walpiri, the drawback of analyses which treat nominals in languages manifesting such discontinuities as being in an apposition to pronominal arguments on the verb is that they provide no account of why clauses with discontinuous terms may have both a merged (e.g. She found all the eggs) and an unmerged interpretation (e.g. She found the eggs, all of them) while those with continuous terms are open only to the merged reading. The existence of NP discontinuities is therefore rather problematic for both the dislocational and the clausal view.⁹

In the light of Baker’s account of Mohawk, the language appears to be a very good candidate for at least some version of the appositional analysis.¹⁰ However, by no means all head marking languages are like Mohawk. Thus while Southern Tiwa, Nunggubuyu, Mayli, Chukchee and Chichewa exhibit considerable word order variation, Navajo, Kiowa and Ainu are rigidly verb final and Nahuatl is verb initial. In Nahuatl, Nunggubuyu, Kiowa, and Chukchee wh-phrases are obligatorily initial, but in Navajo, Lakhota and Makua they are in situ. And Chichewa displays both possibilities. Lakhota, Classical Nahuatl, Nunggubuyu and Wichita lack quantifiers such as *every* and *no*, but Navajo and Chichewa do not. And while Southern Tiwa and Lakhota do not have subject-object asymmetries in relation to variable binding, Navajo and Chichewa display the same asymmetries as English does, as illustrated in (34) and (35).

⁹ Baker in fact notes that such discontinuities are not all that common in head-marking languages. Nunggubuyu has discontinuous NPs but in Mayali they are marginal and none have been noted in Kiowa, Nahuatl, Wichita, Ainu or Chichewa.

¹⁰ Baker does not in fact do so.



Navajo

- (34) a. T'aa'altso_i bi_j-ma 'ayoi 'ayoni
everyone his/her-mother really 3s:3s loves
'Everyone really loves his/her mother'. (possibly i=j)
b. Bi_i-ma t'aa'altso_j 'ayoi 'ayoni
his/her-mother everyone really 3s:3s loves
'His/heri mother really loves everyone'. (i≠j)

Chichewa

- (35) a. Mu-nthu á lí y_i,ense_i á-ma-lemekézá ma-kóló_j akje_j
1-person 1 every 3S-PRES-respect 6-parent 6:POSS
'Every person respects his parents'. (possibly i=j)
b. Ma-kóló_j akje_i á-ma-lemekézá mu-nthu á lí y_i,ense_j
6-parent 6:POSS 6S-PRES-respect 1-person 1 every
'His parents respect every person'. (i≠j) (Bresnan 1997: 7)

More interestingly, there are head-marking languages in which only one of the transitive nominals displays the characteristics of being in apposition to a bound pronominal argument, while the other behaves like an argument. Chichewa is a case in point. In Chichewa, subject nominals are obligatorily accompanied by subject prefixes on the verb, but object nominals need not be. According to Bresnan and Mchombo (1987), whereas a subject in Chichewa can be questioned in place, and so may an object nominal which is not accompanied by a person prefix on the verb, questioning of an object in the presence of an object prefix requires a special left construction.

Chichewa

- (36) a. (Kodí) chíyâni chi-ná-ónek-a?
Q what(7) 3S(7)-PAST-happen-INDIC
'What happened?'
b. (Kodí) mu-ku-fún-á chíyâni?
Q you-PRES-want-INDIC what
'What do you want?'
c. *(Kodí) mu-ku-chí-fún-á chíyâni?
Q you-PRES-SG(7)-want-INDIC what(7)
'What do you want it?'
d. Kodí ndí chíyâni chi-méné mú-kú-chí-fún-a?
Q COP what(7) 7-REL you-PRES-SG(7)-want-INDIC
'What is it that you want?' (Bresnan and Mchombo 1987: 759-762)

Moreover, as shown in (35) above, objects which take quantifiers unlike subjects do not occur with person marking on the verb. Nor does such marking occur when the object is an idiomatic expression or a cognate object, i.e. expresses information which is not topic-worthy. When such an object is passivized and thus bears the subject relation, there is an accompanying subject prefix on the verb. Compare (37a) with (37b).

Chichewa

- (37) a. Mlenje a-na-lót-á malót_o ów_opsya usiku
hunter 3S-PAST-dream-INDIC dreams frightening night
'The hunter dreamed frightening dreams last night'.
b. Malót_o ów_opsya a-na-lót-édw-a ndi
dreams frightening 3S-PAST-dream-PASS-INDIC by
mlenje usiku
hunter night
'Frightening dreams were dreamt by the hunter last night'. (Bresnan
and Mchombo 1987: 764)

In the light of the above, if we take the properties of nominals in apposition to bound pronominal arguments to be those predicted under either the dislocational view or the clausal view, strong head-marking per se cannot be automatically assumed to entail that nominals have a different syntactic status than in other languages. In other words, while some version of the appositional analysis may prove to be indeed valid for some head-marking languages or some nominals in some head-marking languages, it is highly unlikely to be valid across the board, i.e. for all head-marking languages.

In section 2, I argued against positing an appositional analysis for all languages in which nominals accompanying verbal person forms are syntactically optional as envisaged by Dik. I have now suggested that, contrary to what has been assumed by De Groot and Limburg, such an analysis cannot be even applied indiscriminately to the much smaller but nonetheless sizable set of head-marking languages. If we accept both of these conclusions, how then should we deal with the verbal person forms in languages in which nominals are syntactically optional and in head-marking languages for which the appositional analysis is not applicable? It is to this that I now turn.

5. GRAMMATICAL, AMBIGUOUS AND ANAPHORIC AGREEMENT

While Dik's typology of verbal person markers is a dichotomous one of agreement markers and cross-referencing forms, Siewierska (1999), inspired by the treatment of agreement presented in Bresnan and Mchombo (1986, 1987) suggests a three way typology of grammatical, ambiguous, and anaphoric agreement markers.¹¹ Grammatical agreement markers are markers with no referential potential

¹¹ Bresnan and Mchombo's (1986, 1987) typology of agreement markers is also primarily a bipartite one of anaphoric and grammatical agreement. I have subdivided their grammatical agreement markers into ambiguous and grammatical ones. This is, nonetheless, implicit in their typology since they recognize that some agreement markers have an ambiguous status: "One stage in the

which require the obligatory presence of a corresponding nominal or free pronoun like the markers found in English or Dutch. Anaphoric agreement markers are incorporated pronouns that fulfill the function of clausal arguments. As they are the realizations of a verb's arguments, they are in complementary distribution with nominal and free pronominal arguments. The only nominals which can co-occur with them are right and left dislocated topics. A language which has such anaphoric agreement markers for both subjects and objects is the Carib language Macushi.

Note that there are no person forms on the verb in (38a).

Macushi (Carib)

- (38) a. t -ekîn era'ma-'pî paaka esa -'ya
 3.REFL -pet.ABS see -PAST cow owner-ERG
 'The owner of the cow saw his own pet'.
 b. i -koneka-'pî -i -ya
 3SG-make -PAST-3SG-ERG
 'He made it'. (Abbott 1991: 24)

Ambiguous agreement markers in turn are the familiar agreement markers of Latin, Hungarian or Polish which are obligatory, but do not require the presence of an accompanying nominal or free pronominal argument. In the presence of such an argument they fulfill the function of a grammatical agreement marker, in its absence that of an anaphoric agreement marker.

There is an exact correspondence between grammatical agreement markers in the above tripartite typology and Dik's agreement markers. Dik's cross-referencing forms, on the other hand, correspond in some cases to my (and Bresnan and Mchombo's) ambiguous agreement markers and in others to anaphoric agreement markers. Thus, for example, while under Dik's analysis both the verbal person forms in Latin and those in Mohawk are cross-referencing forms, under the tripartite typology the former are ambiguous agreement markers and the latter, anaphoric agreement markers. And in Chichewa while the subject prefix is an ambiguous agreement marker, the object prefix qualifies as an anaphoric agreement marker.

Though both Dik and De Groot and Limburg could take issue with the criteria used for assigning verbal person forms to ambiguous as opposed to anaphoric agreement markers, they are unlikely to object to the treatment of the latter since the proposed analysis is the appositional one which they themselves endorse. Thus

historical evolution of a grammatical agreement markers from an incorporated pronoun appears to be a partial loss of referentiality, allowing the same morpheme to be used ambiguously for grammatical and anaphoric agreement" (Bresnan and Mchombo 1986: 287). This suggests that fully grammaticalized agreement markers are those that have completely lost their referentiality, which is exactly the class of markers encompassed in my typology by grammatical as opposed to ambiguous agreement. Thus, my typology differs from theirs essentially only in that I have supplied a separate label for agreement markers in the last stages of grammaticalization.

the basic difference between the alternative analysis of verbal person forms sketched above and the current FG analysis concerns ambiguous agreement markers.

Part of both Dik's and De Groot and Limburg's motivation for treating verbal person forms as the realizations of the verbs arguments rather than agreement markers in such a wide range of languages, is the desire to avoid postulating empty or covert arguments or deletion rules. As the term agreement suggests, in order for agreement to apply two entities need to be present. Thus to account for cases where the verbal person forms are unaccompanied by nominal arguments in terms of agreement a covert argument would need to be postulated and then subsequently deleted. Such an analysis is not only against the spirit of FG but also as pointed out by both Dik and De Groot and Limburg unattractive from the psychological point of view. But as we have seen, the alternative analysis suggested by Dik and De Groot and Limburg also has a severe drawback in that it denies argument status to terms which otherwise are likely to qualify as arguments.

The recognition of ambiguous agreement provides an elegant solution to the above. If the verbal person forms are treated as arguments in the absence of free nominals but as agreement markers in their presence, there is no need to posit empty arguments with which the verb agrees, nor to deny argument status to the occurring nominals.

Since as far as I can see there is nothing in the alternative analysis which is inconsistent with the tenants of FG, I submit that it be given serious consideration as a plausible alternative to the current analysis.



WORKS CITED

- ABBOTT, Miriam. "Macushi." *Handbook of Amazonian Languages*. Vol. 3. Ed. Desmond C. Derbyshire and Geoffrey K. Pullum. Berlin: Mouton de Gruyter. 1991, 22-160.
- AUSTIN, P. and J. BRESNAN. "Nonconfigurationality in Australian Aboriginal Languages." *Natural Language and Linguistic Theory* 14 (1996): 215-268.
- BAKER, Mark. "On Some Subject/Object Non-Asymmetries in Mohawk." *Natural Language and Linguistic Theory* 9 (1991): 537-576.
- *The Polysynthesis Parameter*. Oxford: Oxford UP, 1997.
- BRESNAN, J., ed. *The Mental Representation of Grammatical Relations*. Cambridge, Mass.: MIT P, 1982.
- "Lexical-Functional Syntax." Ms. Stanford University. Reproduced at the European Summer School in Logic, Language and Information, Universitat de Barcelona, August 13-25, 1995.
- "Morphology Competes with Syntax: Explaining Typological Variation in Weak Crossover Effects." Ms. Stanford University, 1997.
- BRESNAN, J. and Sam A. MCHOMBO. "Grammatical and Anaphoric Agreement." *Proceedings of the Chicago Linguistic Society 22. Papers from the Parasession on Pragmatics and Grammatical Theory*. Ed. Anne Farley, Peter Farley, and Karl McCullough. Chicago Linguistic Society: U of Chicago P, 1986. 741-782.
- "Topic, Pronoun and Agreement in Chichewa." *Language* 63 (1987): 741-782.
- CHOMSKY, N. *Lectures on Government and Binding*. Dordrecht: Foris, 1981.
- CINQUE, Guglielmo. *Types of A-bar Dependencies*. Cambridge, Mass.: MIT P, 1990.
- DE GROOT, C., and M.J. LIMBURG. "Pronominal Elements: Diachrony, Typology, and Formalization in Functional Grammar." *Working Papers in Functional Grammar* 12 (1986).
- DIK, S.C. *The Theory of Functional Grammar. Part 1. The Clause*. Dordrecht: Foris, 1989.
- *The Theory of Functional Grammar. Part II: Complex and Derived Constructions*. Ed. Kees Hengeveld. Berlin: Mouton, 1997.
- GILLIGAN, G. "A Cross-Linguistic Approach to the Pro-Drop Parameter." Diss. University of Southern California, 1987.
- JELINEK, Eloise. "Empty Categories and Non-Configurational Languages." *Natural Language and Linguistic Theory* 2 (1984): 39-76.
- "The Case Split and Pronominal Arguments in Choctaw." *Configurationality: The Typology of Asymmetries*. Ed. László Mátasz and Peter Muysken. Dordrecht: Foris, 1988. 117-142.

- JONES, Michael. *Sardinian Syntax*. London: Routledge, 1993.
- KAHREL, Peter. "Aspects of Negation." Diss. University of Amsterdam, 1997.
- LYNCH, J. "Anejon Grammar Sketch." *Papers in Linguistics of Melanesia* 4 (1982): 93-154.
- MACDONALD, Loma. *A Grammar of Tauya*. Berlin: Mouton de Gruyter, 1990.
- MATTHEWS, P.H. *Syntax*. Cambridge: Cambridge UP, 1981.
- MOUTAOUAKIL, A. *Pragmatic Functions in a Functional Grammar of Arabic*. Dordrecht: Foris, 1989.
- NAPOLI, Donna. "Subject Pronouns: The Pronominal System of Italian vs French." *Proceedings of the Chicago Linguistic Society*. Chicago: U of Chicago P, 1981. 249-276.
- NICHOLS, Johanna. "Head-Marking and Dependent Marking Grammar." *Language* 52 (1986): 56-119.
- *Linguistic Diversity in Space and Time*. Chicago: U of Chicago P, 1992.
- REINHART, Y. "The Syntactic Domain of Anaphora." Diss. MIT, 1976.
- *Anaphora and Semantic Interpretation*. Chicago: U of Chicago P, 1983.
- SIEGEL, J. "Introduction to the Labu Language." *Papers in New Guinea Linguistics* 23 (1984): 83-157.
- SIEWIERSKA, A. "From Anaphoric Pronoun to Grammatical Agreement Marker: Why Objects Don't Make It." *Folia Linguistica* 33.1-2 (1999): 225-251.
- SPEAS, M. *Phrase Structure in Natural Language*. Dordrecht: Kluwer, 1990.

