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Author(s): Linda Schwartz

Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society: Special Session on African Language Structures (1991), pp. 223-230

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The Annual Proceedings of the Berkeley Linguistics Society is published online via [eLanguage](#), the Linguistic Society of America's digital publishing platform.

Category asymmetries in Hausa Asymmetric Coordination*

Linda Schwartz
Indiana University

1 *Asymmetric coordination*. In Hausa,¹ expressions of thematic coordination (i.e., coordination of two (or more) participants necessarily bearing the same thematic role in a state or event) can take several forms, including the 'asymmetric' coordination² in (1), where a plural pronoun associated with a certain thematic role has one syntactic relation, and another of the participants in that same role appears in a *da*-phrase adjunct. Diagnostic of asymmetric coordination are a dependent plural pronoun with anaphoric function and the dual interpretation given in (1a). The marker *da* will be represented throughout the glosses as '&'; it functions in Hausa like English *and* and *with* in their use with NPs. The English readings in (a-c) are labeled with the terms I will use to refer to them in the discussion. As much as possible, only readings crucial to the discussion will be included in the glosses. It is the dual asymmetric coordinate reading which I will concentrate on because of its diagnostic function; the components of this reading will be underlined in the English glosses. Throughout the paper, I will assume that the structure at issue is essentially that of the surface syntax: that there is no abstract syntactic coordination of which the *da*-phrase is a subpart (as proposed in Aissen 1989 for Tzotzil asymmetric coordination), but rather that it is an adjunct to (a projection of) V or N. Arguments for the plausibility of this assumption are found in Schwartz 1989b.³

- 1) mun je Kano da Audu
1PLsubj+COMPL go Kano & Audu
- a 'Audu and I went to Kano.' (dual asymmetric coord.)
- b 'We and Audu went to Kano.' (plural asymmetric coord.)
- c 'We went to Kano with Audu.' (plural comitative)

The contrast between a standard (or symmetric) coordinate interpretation and an asymmetric coordinate interpretation in Hausa (and other languages with this construction) corresponds to English 'we and John' (symmetric) vs. 'we including John' (asymmetric). Syntactic and semantic criteria clearly distinguish asymmetric coordination from other coordinate and comitative expressions; for exemplification and discussion of these criteria, see Schwartz 1989b.

2 *Category asymmetry of plural pronoun host*. This paper examines asymmetric coordination in four distinct structures, based on the category of the constituent which hosts the dependent plural pronoun. The host category may be a tense/aspect marker (TAM), as in (1), a main verb, as in (2), a verbal noun as in (3), or a noun, as in (4).

- 2) Bala zai taimake+mu da Audu
Bala 3+FUT help+1PLobj & Audu
'Bala will help me/us and Audu.'
- 3) Bala zai iya taimako+n+mu da Audu
Bala 3+FUT MODAL helpVN+LINK+1PLposs & Audu
'Bala will be able to help me/us and Audu.'

- 4) Bala ya ga doki+n+mu da Audu
 Bala 3+COMPL saw horse+LINK+1PLposs & Audu
 a 'Bala saw the horse belonging to me/us and Audu.'
 b 'Bala saw our horse and saw Audu.'

These constructions show three different syntactically dependent pronoun paradigms: subject pronominal markers are dependent on (and sometimes phonologically fused with) TAMs and are referred to as 'tense-aspect pronouns' (Newman 1987), object pronouns are dependent on main verbs, and possessive pronouns are dependent on nouns, including verbal nouns, as shown in (3). As the examples in (1-4) show, plural pronouns from any of the dependent paradigms can participate in asymmetric coordination. However, these four construction-types do not show homogeneous behavior under all circumstances. Rather, they split into two groups in terms of whether or not they support an asymmetric coordinate interpretation when the *da*-phrase is not adjacent to the host of the dependent plural pronoun. Under nonadjacency, plural dependent pronouns hosted by TAMs, main verbs and verbal nouns support such an interpretation, and plural dependent pronouns hosted by nouns generally do not (the qualification will be made explicit later). This split is illustrated using three criteria: separability of the *da*-phrase from the dependent plural pronoun by other material of a simple clause, and focus or topic constructions without resumptive pronouns.

2.1 *Clause-internal discontinuity*. The example in (1) shows that the *da*-phrase need not be adjacent to the TAM which hosts the dependent plural pronoun. These are, in fact, always discontinuous. The examples in (5) and (6) show that an adverb may appear between the object pronoun dependent on the main verb and the *da*-phrase that is associated with it in asymmetric coordination.

- 5) Bala zai taimake+su gobe(,) da Audu
 Bala 3+FUT help+3PLobj tomorrow, & Audu
 'Bala will help him/her/them and Audu tomorrow.'
- 6) Audu ya gan+mu jiya da Binta
 Audu 3+COMPL see+1PLobj yesterday & Binta
 'Audu saw me/us and Binta yesterday.'

The example in (7) shows that the dependent pronoun hosted by a verbal noun also may be separated from the *da*-phrase without destroying the dual interpretation.⁴

- 7) Bala zai iya taimako+n+su gobe(,) da Audu
 Bala 3+FUT MODAL help_{VN}+LINK+3PLposs tomorrow & Audu
 'Bala can help him/her/them and Audu tomorrow.'

On the other hand, the examples in (8-11) show that if the *da*-phrase is not adjacent to the dependent plural pronoun hosted by a noun, the dual interpretation is not possible (9) or is only marginally possible and is not the preferred interpretation (11).⁵

- 8) doki+n+mu da Audu ya gudu
horse+LINK+1PLposs & Audu 3+COMPL run
'The horse belonging to me/us and (to) Audu ran away.'
- 9) doki+n+mu ya gudu da Audu
horse+LINK+1PLposs 3+COMPL run Audu
a 'Our horse ran away with Audu.'
b ≠'The horse belonging to me/us and (to) Audu ran away.'
- 10) Musa ya ga doki+n+mu da Audu jiya
Musa 3subj+COMPL see horse+1PL & Audu yesterday
a 'Musa saw our horse and (also saw) Audu yesterday.'
b 'Musa saw the horse belonging to me/us and (to) Audu yesterday.'
- 11) Musa ya ga doki+n+mu jiya da Audu
Musa 3subj+COMPL see horse+1PL yesterday & Audu
a 'Musa saw our horse yesterday, and (also saw) Audu.'
b ≠?'Musa saw the horse belonging to me/us and (to) Audu yesterday.'

2.2 *Displacement in topic and focus constructions.* The same pattern emerges when the *da*-phrase appears in topic or focus position, illustrated in (12) and (13). These examples show that when the *da*-phrase associated with a dependent plural pronoun hosted by a TAM occurs in topic or focus position, the dual asymmetric coordinate interpretation is possible.

- 12) da Audu kam, mun je Kano
& Audu TOP 1PL+COMPL go Kano
'As for Audu, he and I/we went to Kano.'
- 13) da Audu ne, muka je Kano
& Audu FOC 1PL+RELCOMPL go Kano
'I/we and AUDU went to Kano.'

The same pattern of structure and interpretation occurs with *da*-phrases associated with plural pronouns hosted by main verbs and verbal nouns, as shown in (14-19).

- 14) da Audu kam, Bala zai taimake+mu
& Audu TOP Bala FUT+3msubj help+1PLobj
'As for Audu, Bala will help me/us and him.'
- 15) da Audu ne, Bala zai taimake+mu
& Audu FOC Bala FUT+3subj help+1PLobj
'Bala helped me/us and AUDU.'
- 16) da Audu kam, Bala ya gan+mu
& Audu TOP Bala 3msubj+COMPL see+1PLobj
'As for Audu, Bala saw me/us and him.'
- 17) da Audu ne, Bala ya gan+mu
& Audu FOC Bala 3msubj+RELCOMPL see+1PLobj
'Bala saw me/us and AUDU.'

- 18) da Audu kam, Bala zai iya taimako+n+mu
& Audu TOP Bala FUT+3msubj MODAL help_{VN}+LINK+3PL_{poss}
'As for Audu, Bala will be able to help me/us and him.'
- 19) da Audu ne, Bala zai iya taimako+n+mu
& Audu FOC, Bala FUT+3msubj MODAL help_{VN}+LINK+3PL_{poss}
'Bala will be able to help me/us and AUDU.'

On the other hand, a similar displacement of the *da*-phrase associated with a plural pronoun hosted by a noun does not support the dual interpretation diagnostic of asymmetric coordination, as shown in (20) and (21).

- 20) da Audu kam, Bala ya ga doki+n+mu
& Audu TOP Bala 3msubj+COMPL see horse+LINK+1PL_{poss}
a 'As for Audu, Bala saw our horse and (also saw) him.'
b ≠'As for Audu, Bala saw the horse belonging to me/us and him.'
- 21) da Audu ne, Bala ya ga doki+n+mu
& Audu FOC Bala 3msubj+REL COMPL horse+LINK+1PL_{poss}
a 'Bala saw our horse and (also saw) AUDU.'
b ≠'Bala saw the horse belonging to me/us and (to) AUDU.'

All of the evidence presented here indicates that TAMs, main verbs and verbal nouns pattern together with respect to allowing an asymmetric coordinate interpretation under displacement while nouns pattern differently. This leads to two questions. First, why do other elements which host the plural pronouns that support an interpretation of asymmetric coordination pattern together to the exclusion of (non-derived) nouns -- i.e., what property do they have in common which makes them different from nouns in this regard, or, conversely, what property do nouns have to the exclusion of these other categories? Second, why does this property make it possible for TAMs, main verbs and verbal nouns to support asymmetric coordination of nonadjacent elements, while nouns can support asymmetric coordination only (or preferably) of adjacent elements? In this paper, I will focus primarily on the first question. Before addressing these questions, however, it must be established that what I have called here 'verbal nouns' are in fact nominal in category.

3 *The nominal status of verbal nouns.* In Hausa grammars, the term 'verbal noun' refers to a number of different derivational formations. I will be concerned here with only two types: (i) 'primary verbal nouns' formed by regular derivation from Grade 2, 3 or 7 verbs, or from monosyllabic verbs, and (ii) 'secondary verbal nouns' which are nominalizations that do not bear a regular and predictable derivational relation to their verbal bases and which have in some cases replaced the corresponding primary verbal nouns in their use as complements to the continuous TAM and modals. (See Abraham 1959 and Newman 1987 for a discussion of the derivation of verbal nouns.) The reason for focusing on these two types is their clear nominal behavior according to three diagnostic tests: (1) the presence of a 'linker' morpheme between stem and possessive pronoun (manifested in a 'short' or 'suffixed' form as *-r* for feminine singular nouns ending in *-a*, *-n* elsewhere); (2) the ability to host dependent pronouns from the possessive paradigm; and (3) the ability to cooccur with demonstrative articles.⁶

The presence of the linker morpheme between noun or verbal noun and dependent possessive pronoun is shown in examples (7-11) and (18-21) above; these examples would be ungrammatical without this morpheme. These examples also illustrate that nouns and verbal nouns both host dependent pronouns from the possessive paradigm; where the paradigms do not overlap, substitution of pronouns from another paradigm is ungrammatical.

The sentences in (22-25) illustrate that both nouns and verbal nouns may occur with demonstrative articles.

- 22) doki+n+nan ya gudu
horse+LINK+DEM 3msubj+COMPL run-away
'This horse ran away.'
- 23) Bala ya ga doki+n+nan
Bala 3msubj+COMPL see horse +LINK+DEM
'Bala saw this horse.'
- 24) tamabaya+r+nan ta dame+ni
askingVN+LINK+DEM 3fsubj+COMPL bother+1obj
'This questioning bothered me.'
- 25) na gaji da tambaya+r+nan
1subj+COMPL tired with askingVN+this
'I'm fed up with this questioning.'

The sentences in (24) and (25) further demonstrate the ability of verbal nouns to appear in typical nominal positions, such as subject and object of preposition, respectively.

4 *Common properties of TAMs, main verbs and verbal nouns.* Verbal nouns and (non-derived) nouns thus share a number of morphosyntactic properties which collectively justify the syntactic classification of Hausa verbal nouns as a subclass of nouns. There is, on the other hand, little if any reason to justify classifying TAMs, main verbs, and verbal nouns together syntactically. TAMs are the first obligatory element of all verbal clauses and host dependent elements carrying pronominal information either functioning as subject agreement markers when an independent subject is present or functioning anaphorically when an independent subject is absent. These pronominal elements belong to the dependent subject paradigm (the 'tense-aspect pronouns'). Main verbs immediately follow TAMs and host dependent pronominal elements with anaphoric function only (i.e., no agreement function) selected from the object pronoun paradigms. Verbal nouns immediately follow the progressive TAM or a member of a set of modality markers or else they appear in noun phrase positions, and they select dependent pronouns from the possessive paradigm. It thus seems reasonable to conclude that the common property which is shared by TAMs, main verbs and verbal nouns is not syntactic category membership.

Rather, I claim first of all that their common property (or set of properties) is semantic and second that its semantic nature is compatible with the nature of asymmetric coordination in Hausa (and perhaps universally). It is first important to note the semantic function of main verbs and verbal nouns as functors. Verbal

nouns and main verbs which share a common base have the same argument structure, as illustrated in (26-27).

- 26) Bala ya taimaki Audu
 Bala 3msubj+COMPL help Audu
 'Bala helped Audu.'
- 27) Bala ya iya taimako+n Audu
 Bala 3msubj+COMPL MODAL help_{VN}+LINK Audu
 'Bala was able to help Audu.'

TAMs are operators relating tense/aspect/modality-unspecified event schemata to tense/aspect/modality-specified event subschemata (this is not to say that tense, aspect and modality are semantically operators over the same scope). They do not affect the argument structure of the functors within their scope. These elements all host plural pronouns functioning as arguments of lexical elements which are the manifestation of functors specifying the event structure of a clause. On the other hand, in a noun phrase that expresses a possessive or associative relation, the head noun is not a functor but rather is one of the arguments of this relation,⁷ and the pronoun which it hosts represents the other argument of the relation, not a clause-level argument. Thus, the function and relation of the host and the dependent pronoun of a possessive construction differs semantically from the other pronoun-host combinations considered here.

5 *A syntactic alternative.* One objection to the claim that it is semantic characteristics of the categories under investigation which determine their grouping with respect to asymmetric coordinate interpretation involving nonadjacent *da*-phrases must be addressed. It could be argued that there is a structural distinction between verbal nouns and their associated *da*-phrases and (non-derived) nouns and their associated *da*-phrases. Specifically, in verbal noun constructions of the type we have been considering, such as those illustrated in (3), (7), (18) and (19), the *da*-phrase (or its trace) is an independent constituent of the verb phrase (or perhaps the INFL-phrase) and thus can freely occur in focus and topic constructions. This analysis is very plausible and would seem to be confirmed by the acceptability of structures in which the host constituent of the dependent plural pronoun is discontinuous with the *da*-phrase in simple clauses, as in examples (1) or (5-7). Further evidence for this analysis is given in Schwartz 1989. In the case of nouns, however, the *da*-phrase could be analyzed as a constituent of the phrase headed by the noun or its projection and be assumed to be subject to a condition on extraction from NP. This would seem to be confirmed by the relative unacceptability of NP-external material intervening between the host constituent and the *da*-phrase in a simple clause, as shown in (8-11). (There are two potential problems with this part of the analysis. The first is that, as observed in example (11) and footnote 5, it's not clear that such an extraction constraint is absolute. The second is that it has been claimed in Junaidu 1987 and Ahmad 1990 that the Complex NP Constraint is systematically violated in Hausa, so it would not be a trivial matter to invoke an extraction constraint as part of this hypothetical account. Since there is another strong reason for rejecting the account, I will not pursue these points further.)

Under this analysis, then, the use of verbal nouns which function as heads of NPs, rather than as complements to modal verbs, should show the same behavior as nouns functioning as heads of NPs do, since their associated *da*-

phrases would be structurally NP-internal. Specifically, they shouldn't allow an asymmetric coordinate interpretation with a *da*-phrase which appears outside of the NP position, since this would violate the hypothesized condition on extraction from NP. However, (29) and (30), compared to (28), show that this is not the case:

- 28) taimako+n+su da Audu yana da wuya
 help_{VN}+LINKER+3PL_{poss} & Audu 3msubj+COMPL & difficulty
 'Helping him/her/them and Audu is difficult.' (lit. '...is with difficulty')
- 29) da Audu kam taimako+n+su yana da wuya
 & Audu TOP help_{VN}+LINK+3PL_{poss} 3msubj+CONT & difficulty
 'As for Audu, helping him/her/them (and Audu) is difficult.'
- 30) da Audu ne taimako+n+su yake da wuya
 & AUDU FOC help_{VN}+LINK+3PL_{poss} 3msubj+RELCONT &
 difficulty
 'Helping him/her/them and AUDU is difficult'

Rather, in (29) and (30), the *da*-phrase in topic or focus position can still participate in an asymmetric coordinate interpretation with the dependent possessive pronoun hosted by the verbal noun in subject position. This evidence refutes the argument that it is solely the different syntactic structure of verbal nouns and nouns which determines their ability to support an asymmetric coordinate interpretation with a discontinuous *da*-phrase.

6 *The naturalness of a semantic category distinction.* It is natural that the properties which unify these constructions are of a semantic nature rather than of a syntactic nature, since the issue here is the conditions under which a *da*-phrase can have a certain semantic interpretation -- i.e., when it can be interpreted as a member of a group specified by a plural pronoun. If we make the assumption that interpretation of pronouns is a semantic phenomenon, then it's not surprising that semantic properties of the construction involved should be relevant. Kathman 1991 argues that a consideration of the behavior of verbal nouns in Welsh requires that both semantic and syntactic categorial status of these be acknowledged, with semantic properties such as argument structure, selectional restrictions and adverbial modification correlating with the semantic categorization of verbal nouns as functors, grouping them at this level with main verbs, while syntactic distributional and cooccurrence properties correlate with their syntactic categorization as nouns. Taken together, these investigations support the straightforward principle that semantic phenomena are correlated with semantic category status and syntactic phenomena are correlated with syntactic category status, rather than vice versa.

A second question posed earlier remains to be addressed: why do the common semantic properties of structures involving TAMs, main verbs and verbal nouns make them compatible with an asymmetric coordinate interpretation of nonadjacent elements while structures involving nouns are incompatible with this interpretation of nonadjacent elements rather than vice versa? This question deserves serious discussion and justification of the answer beyond what I am able to give at this time, but I suggest that the crucial factor may be that the verbal predicates host pronouns which function as arguments in event structure and are thus subject to backgrounding and foregrounding processes in discourse, while the

pronouns hosted by nouns are not arguments in event structure and are thus not subject to these processes. Since the *da*-phrases are interpreted as members of the set of participants specified by the plural pronouns, they therefore are subject to the same backgrounding and foregrounding processes, and furthermore, since they are manifested as syntactically independent of the plural pronoun representing the group in a language such as Hausa, they are thus independently manipulable in this regard. In Schwartz 1988b, I suggest that this independent manipulability functions in an important way to establish background and foreground in discourse in a language (like Hausa) where independent pronouns lexically carry a high degree of discourse prominence and thus where a syntactically symmetric coordinate structure like *ni da Binta* 'Binta and I' may in certain discourse contexts be out of balance with the prominence of the previously mentioned (=pronominal) members of the group being referred to. To establish this, however, and to answer more fully the question of why functors and operators over functors and their arguments can support an interpretation of asymmetric coordination when they host plural pronouns requires a more extensive study of the usage of these constructions in discourse than has yet been done.

Notes

*The data gathered for this paper was supported in part by an Indiana University grant-in-aid. Primary language consultant for the data included here was Mustapha Ahmad, a native speaker of Nigerian Hausa. I am grateful to Mr. Ahmad for reading a draft of this paper and commenting on the examples included here, and to Paul Newman for sharing his knowledge of Hausa verbal nouns with me.

¹The phenomenon to be discussed is found among all speakers of Nigerian Hausa whom I have consulted, but not all Hausa speakers from Niger allow the interpretation at issue.

²See Schwartz 1988a,b for a discussion of the general properties of asymmetric coordination and Schwartz 1989a for a discussion of asymmetric coordination in African languages.

³The transcription used in this paper is that of standard Nigerian Hausa, with the exception of some morpheme divisions represented by '+', to indicate the syntactic dependence of a plural pronoun on its 'host'. In the glosses, a '+' is used to represent the meaning components of morphophonologically fused elements as well as syntactically dependent elements. Since some pronoun paradigm distinctions are made with vowel length and tone, which are not represented in the standard orthography, paradigm distinctions may only be apparent in this transcription from the morpheme glosses which label the distinct paradigms. The following abbreviations are included in the glosses: subj=subject, obj=object, poss=possessive, COMPL=completive, RELCOMPL=relative completive, CONT=continuous, RELCONT=relative continuous, FUT=future, LINK=linker, VN=verbal noun, m=male gender, f=female gender, 1=first person, 2=second person, 3=third person.

⁴Mr Ahmad sometimes preferred a pause before the *da*-phrase in examples like (5) and (7) and suggested that this might be related to appositives like *Bala zai iya taimakonsu gobe, shi da Audu* 'Bala will be able to help them tomorrow, him and Audu'. In Schwartz 1989b I rejected this structure as a general synchronic source of asymmetric coordination because asymmetric coordination in general doesn't have either the typical intonation contour or the appositive semantics of

these structures, but Mr. Ahmad's observations nonetheless may cast doubt on whether structures like (5) and (7) represent simple clauses.

⁵Judgements on the interpretation of sentences like (11), where the dependent object pronoun is hosted by the main verb, are less clear than those for sentences like (9), where the dependent subject pronoun is hosted by the TAM. Sentences like (9) were never interpreted by Mr. Ahmad as asymmetric coordinations, but sentences like (11) were on rare occasions given this interpretation, with the added statement that this was the least likely interpretation.

⁶I am grateful to Paul Newman for clarifying the distinctions among verbal noun types in Hausa for me; in the analysis of Hausa 'verbal nouns' proposed by Newman (p.c.), only these two types would be considered nominals.

⁷It may be relevant that possessive relations in Hausa are not expressed with verbal predicates (as they are, for example, in English, which uses such transitive verbs as *have* or *own* to express possession). Instead, they are expressed with a nonverbal construction as a main clause, as in *Audu yana da kud'i* 'Audu has money' (lit. 'Audu he-is with money'), or by juxtaposition of possessed and possessor as in *dokin Audu* 'Audu's horse' (lit. 'horse+LINK Audu').

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