

PRAGMATIC EFFECTS OF COORDINATION:

THE CASE OF 'AND' IN SISSALA*

Regina BLASS

1. Abstract

Sissala, a Niger-Congo (Gur) Voltaic language of the sub-group Gurunsi, has a variety of coordinating conjunctions whose use is syntactically conditioned: *ká* for conjoined sentences, *a* for conjoined VPs, and *ri* or *ari* elsewhere. These coordinate structures also differ in their pragmatic effects: for example, sentential coordination with *ká* is standardly analysed as conveying an element of unexpectedness not carried by its non-sentential counterparts. In this paper, I will argue that these pragmatic differences result not from differences in the lexical meaning of the coordinating conjunctions, but from syntactic factors, and that they follow automatically from considerations of relevance.

2. Introduction

Sissala has three different forms of 'and', whose use is syntactically conditioned: *ká* is used to conjoin Ss, *a* is used to conjoin VPs, and *ri*, or *ari*, is used elsewhere. The different coordinate constructions also differ in their pragmatic effects: for example, sentential coordination with *ká* is standardly analysed as suggesting that the event described in the second conjunct was unexpected, whereas non-sentential coordinations carry connotations of stereotypicality. The question I shall consider in this paper is how these pragmatic differences can be explained.

In principle such differences in pragmatic effect might be traced to any of three sources. First, the various coordinating conjunctions might differ in their truth-conditional meaning: use of *ká*, for example, might entail that the event described in the second conjunct was unexpected. Second, the coordinating conjunctions might have a common truth-conditional meaning but differ in their non-truthconditional meaning: *ká*, for example, might carry a constraint on relevance (in the sense of Blakemore 1987), specialising it for use only in contexts in which an element of unexpectedness was presupposed. Third, the pragmatic differences among conjoined structures might arise not from the lexical meanings of the coordinating conjunctions, but from syntactic factors. This is the idea I shall pursue.

My claim will be that where the speaker has a choice between the coordination of non-verbal constituents (NVC), VP coordination, and S coordination, the form he chooses will follow from considerations of relevance, in the sense of Sperber and Wilson (1986). Since S coordination requires more linguistic processing effort, it will only be chosen to achieve some extra effect; i.e. some effect that could not have been achieved by the less costly NVC or VP coordination. If processing effort were ignored, there would be various theoretical options for dealing with the pragmatic effects of coordination. However, on the basis of the principle of relevance, and especially considerations of least effort, only one solution is psychologically plausible.

3. The syntax of 'and' in Sissala.

In this section, I will briefly sketch the syntax of *rí* (*ari*), *a* and *ká*, and show how their use is syntactically conditioned. In later sections, I will illustrate and discuss their pragmatic effects.

3.1 Coordination of non-verbal constituents.

The coordinating conjunction *rí* and its variant *arí* connect NPs, PPs, Numerals and Adjectives [F1]. I will call these 'non-verbal-constituents' (NVC). In principle, as in English, any number of conjuncts can be used, and *rí* prefaces every conjunct but the first, or is used only in the last conjunct. The following examples will illustrate.

(1) and (2) are examples of NP conjunction. In (1) the conjoined NP is in subject position, and in (2) it is in object position:

- (1) [Púléké *rí* wówólénéré né] mué hé bakse.
[Chameleon and spider] SDM went put farms.
'The chameleon and the spider went and made their farms.'

- (2) ʋ bídífilé ní ká [nánwulé *rí* fíṇfíli wíela].
His food SDM is [fish and flying things].
'His food is fish and flying animals.'

(3) is an example of PP conjunction; (4) illustrates the conjunction of a series of PPs.

- (3) [Balleduoru wuu sieru
[Strong-animals all in

rí biwíela wuu sieru]
and small-animals all in]

lúm é múlmé ɔŋ ke
speed F concerning monkey surpasses

dikáŋ wuu ní.
big-part all SDM.
'Amongst all the strong animals and amongst all the small animals, as far as speed is concerned, the monkey surpasses most of them.'

- (4) Háálá nágá de fóké kokís ná tá
women other INT shell shells DEF throw away
'Some women shell them and throw the shells away

ká pii hé [gbáŋse mé arí gáráwa nyuu,
and take put [calabash into and tins on top,

rí bótówa muí má tɪ].
and sacks under even].
'and put them into calabashes, on top of tins, and even under sacks.'

(5) is an example of conjoined numerals: 'fifteen' in Sissala is a compound of 'ten' and 'five', and the two numerals are conjoined with *rí*:

- (12) l susényé sié [tok niŋ
 You now so {take fire
 'You now take fire,

(a) mú, (a) coki yiɓuú ná, (a) nyike
 (and) go, (and) cut mound DEF, (and) light

(a) ɓa yila vɪva].
 (and) cut mound IMP-walk].

'You clear the mound place there and burn (the place). You now form the mounds while walking.'

(12) has a series of conjoined VPs, all optionally connected with *a*. 'Optionally', of course, means syntactically optional. In the text from which the example was taken, *a* had to be there for pragmatic reasons. I will discuss this point further below.

VP coordination is not possible with *ɾi* or *ká*. (13) and (14) are ungrammatical:

- [Compare with (11)]
 (13) * U [tómɔ { ɾi
 ká } pá Bukéré]

- [Compare with (12)]
 (14) * l susényé sié [tok níŋ
 { ɾi mú ɾi coki yiɓuú ná { ɾi nyike...]
 { ká } { ká } { ká }

Thus VPs and NVCs have their own special coordinating conjunctions in Sissala.

3.3 Coordination of S's.

Sentential coordination is marked with *ká*, which may conjoin two sentences with different subjects and different tenses. Where there are more than two conjuncts, *ká*, like *a*, and like *and* in English, may recur, or it may occur only in the last conjunct. The following example, will illustrate.

(15) is an example of sentence coordination:

- (15) [Betúú congorong pəri méétré belle
 [Elephant height reach meters two
 'The height of the elephant reaches two meters.'

 ká ú zín má peri kíló búi-ammuo.]
 and his weight also reach kilos thous.-five.]
 and his weight reaches five thousand kilos.'

Here, neither *ɾi* nor *a* is possible. (16) is ungrammatical:

- (16) * [Bétúú congorong pəri méétré belle.
 { ɾi ú zín má peri kíló búi-ammuo.]
 { a }

Sometimes, as in (17), the identical subject of the second clause is omitted:

- (17) [U wí cǎná pere ká [e] lɛ.]
 [She not month reach and e left.]
 'She did not stay a month and left.'

That this is sentence rather than VP coordination is evidenced by the ungrammaticality of (18) with *a* and *rí*.

- (18) * [U wí cǎná pere { $\begin{smallmatrix} \acute{a} \\ r\acute{i} \end{smallmatrix} \}$ [e] lɛ]

In some cases, it is not clear at first sight why the speaker chose sentential coordination rather than VP coordination with *a*. Consider (19):

- (19) [A lɛsɔ́ ré ká [e] tá.]
 [We taken IM and e left.]
 'We have taken (some) and left (some).'

In this example, the 'hearsay' particle or interpretive use marker *ré* is the clue to the choice of *ká*. The whole of the first conjunct is presented as a report of speech, and the scope of *ré* must therefore be the sentence as a whole - making VP conjunction impossible. Thus (20) is actually ungrammatical:

- (20) * [A lɛsɔ́ ré { $\begin{smallmatrix} \acute{a} \\ r\acute{i} \end{smallmatrix} \}$ [e] tá.]

In other cases, however, either sentential coordination or VP coordination would be grammatically possible, and the choice between them must be made on non-syntactic grounds. Consider (21), for example:

- (21) [Rí kɪŋkáná né [bó óŋ a dí]
 If lion SDM [kills a-thing and eats]

ká [e] kááné], u má
 and e leave-over, he also

[mú pú-ú ní a dí]
 [go take-it SDM and eat.]

'If the lion kills something, eats and leaves some over, then he (hyena) also takes some and eats.'

Here, the sentential conjunction *ká* has been chosen at a point where the VP conjunction *a* would not only be grammatical but has in fact just been used. Here, the speaker must have had pragmatic reasons for choosing S coordination with *ká*. I will discuss this case further below.

This section was designed to show that there are grammatical restrictions on the use of *rí*, *a* and *ká* and that the three different coordinating conjunctions mark NVC coordination, VP coordination and S coordination respectively. The question arises, why does a language have such distinctions, and why does a speaker sometimes use S coordination when grammatically he could have used the more economical VP coordination? I will discuss these issues in a later section. First, I will briefly review some recent work on the pragmatic effects of coordination in English.

4. Pragmatic effects of coordination: the case of *and* in English.

The pragmatic effects of coordination in English have been well studied in recent years, and it is interesting to note that these studies have tended to discredit lexical explanations. The fact that similar effects are found in all types of Sissala coordinate structures provides additional disconfirmation of the lexical approach, since systematic ambiguity would have to be postulated not just in a single coordinating conjunction, but in each of three distinct conjunctions. I will briefly outline the results of such studies here.

In formal logic 'and' is truth-functional: if P is true and Q is true then 'P and Q' is also true, whereas, if either P or Q is false, 'P and Q' is false. According to this analysis, 'P and Q' and 'Q and P' are logically equivalent. However, in natural language, as was pointed out by Grice (1967), the order in which the conjuncts are stated may have significant pragmatic effects. Consider (22) and (23):

- (22) Peter went to the shops and bought some wine.
- (23) Peter bought some wine and went to the shops.

(22) would normally be construed as conveying that Peter went to the shops in order to buy wine; in (23) this interpretation is not possible. In both cases, an interpretation based on a temporal ordering of the events described is natural, in the absence of further contextual information. Whereas in (22) Peter is understood as having gone to the shops at time *t* and bought wine at time *t*+1, in (23) he is understood as having bought the wine at *t* and gone to the shops at *t*+1. However, non-temporally ordered interpretations are also possible: for example as partial answers to the question 'What activities did Peter perform today?'

Grice argues that the temporal, additional, purposive and causative interpretations of coordinate constructions in English are not part of the meaning of *and*; he proposes to analyse them as implicatures conveyed by conformity to the maxim 'Be orderly'. Carston (1984, 1988), argues that they are not implicatures but part of what Grice calls 'what is said', i.e. of the proposition expressed by the utterance, of its explicit truth-conditional content. They are not implicatures, she shows, because like other aspects of truth-conditional content, they fall within the scope of negation and other logical operators.

In saying that these temporal, additive etc. connotations are not part of the meaning of *and*, we endorse the view that these connotations are due to pragmatic factors. More specifically: Carston (1988) argues that 'these meanings are the result of the way our minds organise information into connected scenarios or scripts, making a variety of connections amongst events and states of affairs in the world (that variety doubtless determined by innate constraints on our powers of conceptualisation). So we relate events temporally, causally and for that matter spatially'. Thus she claims that these pragmatic effects of coordination are the outcome of an interaction between syntactic structure, pragmatic principles and general properties of the mind, rather than the meaning of *and*. It is an explanation of this general type that I propose to offer for a rather different range of effects in Sissala.

Blakemore (1987:111-120) makes a rather different point about the pragmatic effects of coordination in English. She argues that coordinate utterances are not processed in exactly the same way as independent utterances, since a sentential coordination is consistent with the principle of relevance only if it has contextual effects not carried by the conjuncts in isolation. On the assumptions of relevance theory, the extra processing effort

caused by the coordinate structure and the conjunction must be compensated for by extra contextual effects. Thus, compare (24) and (25):

- (24) John plays the clarinet. Mary sings.
 (25) John plays the clarinet and Mary sings.

In (24), each of the two propositions is presented as relevant in its own right; in (25), what is presented as relevant is the conjoined proposition as a whole. The hearer of (25) is thus encouraged to look for implications of the proposition as a whole, which could not have been obtained by considering each conjunct in isolation: he might conclude, for example, that John accompanies Mary on the clarinet while she sings - a conclusion which is less clearly warranted by (24).

Here again the pragmatic effects of coordination are seen as arising from some non-lexical source. What is particularly interesting about Blakemore's account is that it emphasises the importance of processing effort in the creation of such effects. Within the framework of relevance theory, processing effort is seen as a major influence on pragmatic interpretation (see, for example, Sperber and Wilson 1986, chapter 4, section 6). This is an idea that I want to pursue.

5. The pragmatic effects of coordination in Sissala.

Sissala coordinate structures have the same possibilities of temporal, causal, instrumental, etc. interpretation as equivalent structures in English. For example, (26) is naturally understood as instrumental (the pig was beaten with the stick mentioned in the first conjunct):

- (26) U pí daa (a) ɣmɔwe koo.
 He took stick (and) beat pig.
 'He beat the pig with a stick.'

However, there is no reason to think that this is due to the lexical meaning of the conjunction *a*. As Carston points out for English *and*, differences among temporal, causal, instrumental, etc. interpretations are the result of an interaction between linguistic structure, pragmatic principles and the way our minds organise information into connected scenarios. Exactly the same arguments apply to Sissala. There is therefore no reason, on the basis of the phenomena so far considered, to postulate anything more than a single truth-conditional sense for the three different Sissala words for 'and'.

As mentioned above, the pragmatic effects of coordination that concern me in this paper lie elsewhere. Sometimes a speaker who could have chosen NVC or VP coordination uses S coordination instead. The effect is generally to suggest that there is something unusual, unexpected or particularly significant about the events described in the second conjunct. For instance, in the case of example (21) above, while it is expected that the lion would eat what he has killed, it is not so much expected that he would leave left-overs. Or consider another example, which has both *a* and *ká*:

- (27) a. U tɔ́sɛru juse náɲá,
 Its town-inside houses some,
 b. 6a pí Simiti ni
 they take cement SDM

- c. a sɔ́ wɔ́
and build them
- d. ká básé wɔ́ wuu arí céngsé.
and nail them all with zinc.
'Some of the houses (of Abidjan) are made with cement and
they all have zinc (roofs).'
- e. ɔ juɛ wɪ juyolli kéné.
Its houses not mud-roofs have.
'Its houses don't have mud roofs.'

Here the fact that ALL the houses have zinc roofs is unusual, and this conjunct is introduced with *ká* rather than *a*.

One possible account would be to see *ká* as carrying a semantic constraint on relevance, indicating that the proposition it introduces is to be processed in a context which would make it unexpected, unusual or particularly remarkable. The use of *ká* would then be designed to get the hearer's special attention for this information which goes against his expectations. This is essentially the account developed in Carlson's (1987:2-19) analysis of the coordinate conjunctions *ká* and *ma* in Súpyiré, a language of Mali. According to Carlson's data, the use of these two conjunctions parallels the uses of *a* and *ká* in Sissala. However, Carlson does not comment on the obvious grammatical difference between them: he sees them as switch reference markers, with *ma* connecting familiar information and *ká* unfamiliar. In particular he claims that *ká* indicates that topically new information is being introduced.

Carlson says himself that what exactly is meant by 'topic' is hard to delimit; so his account is at best vague. It seems that he sees the obvious syntactic difference between the two coordinating conjunctions as irrelevant. What there is in common between his analysis of these conjunctions in terms of switch reference and an account in terms of constraints on relevance is that no connection is made between syntactic form and pragmatic effects. The pragmatic differences in both cases would result from the lexical meaning of the conjunctions themselves.

There is, however, another possibility. The pragmatic differences between the different types of coordination might be derivable from their syntactic differences. As Sperber and Wilson (1986:202-24) argue, utterances which are truth-conditionally equivalent may nonetheless differ in their stylistic effects. Differences in word order, for example, may be exploited to give favoured access to different encyclopaedic entries, yielding different possible contexts and contextual effects. Differences in linguistic processing cost may be exploited in a variety of ways, in line with the general principle that increases in processing cost must be offset by increases in contextual effect. It is this line of explanation that I want to pursue.

Compare the following examples:

- (28) Jim and Jill have gone to Africa.
(29) Jim has gone to Africa and Jill has gone to Africa.

Suppose that if (28) were used, the most natural assumption in the circumstances would be that Jim and Jill had gone to Africa together. This is not, of course, the only possible interpretation of (28), but let's suppose that in the circumstances in which (28) is uttered it is the most natural one, and hence the only one consistent with the principle of relevance. Then in

these circumstances, a speaker who did *not* want to be understood as saying that Jim and Jill had gone to Africa together would have to find another form of utterance than (28). (29), a costlier sentential conjunction, is one obvious candidate. It is costlier, yes, but the less costly form of utterance (28) is ruled out as carrying undesirable contextual effects. This sketch of an account thus goes some way towards explaining the link between the choice of sentential conjunction and implications of unexpectedness or unusualness in the events described. As will be seen below, considerations of processing effort also affect the choice between *rí* and *arí* as NVC conjunctions, and the presence or absence of *a* in VP conjunctions.

6. Stylistic effects of conjunction in Sissala.

6.1 Parallel NVC processing.

My hypothesis is, then, that it is the syntax of coordination itself which is responsible for the pragmatic effects of coordination. In the light of this hypothesis, let us return to example (1):

- (1) Píléké rí wówólénéré ne mvé hé bakse..
 Chameleon and spider SDM went put farms..
 'The chameleon and the spider went and made their farms...'

The idea is that NP coordination will be used when the most natural assumption about how the chameleon and spider set about making their farms is the one the speaker intends. If there is a stereotypical way of making farms, for example, then the implication is that this is the method both chameleon and spider used. In this sense, a common context can be used for processing each of the conjoined NPs.

Notice now that in some conjoined NPs *arí* is used instead of *rí*. It is used either when the interpretation is meant to be 'with' or when the conjunct added is semantically or pragmatically quite different from the first. Consider (30):

- (30) Mólnéémi óh ná né ha-á né
 Now thing DEF people which-IPF gain

 barásé ná né ká:
 dam DEF SDM is:

 gesese-nyii rí ðufoole,
 clothes-washing-water and bathing-water,

 arí naŋwule bikana.
 and fish a-lot.
 'Now, what the people gain from this dam is this: washing water
 and bathing water and a lot of fish.'

(30) could be seen as an answer to the question 'What do the people gain from the dam?' Each conjunct provides a partial answer to this question. However, 'washing water' and 'bathing water' are semantically and pragmatically similar whereas 'fish' has little in common with the items mentioned in the two preceding conjuncts. The extra effort needed to process *arí* may give forewarning of this fact.

Or consider (31):

- (31) Kíŋkáná ðó aama rí kóní
 Lion kills bushbucks and roan antelopes

ari ballewela ná náná né a-á dí.
and animals-small DEF other SDM and-IPF eat.
'The lion kills the bushbucks and roan antelopes and the other
small animals for eating.'

Clearly, there are greater similarities among types of antelopes than among antelopes and other animals. The suggestion is, then, that the phonologically reduced form *ri* is more appropriate for the second conjunct, and the fuller form *ari* for the third.

6.2 Parallel VP processing.

What is immediately evident when examining the uses of *a* is that it is sometimes used to conjoin particular verbs which could under no circumstances be S-conjoined with *ká* - verbal combinations which create such interpretations as 'benefactive', 'instrumental', 'comparative', 'causative'; and that at other times, it occurs in coordinate constructions in discourse which could in the appropriate circumstances be S-conjoined with *ká*. In the latter case, the choice between *a* and *ká* is pragmatically conditioned.

Let us consider first the more 'fixed' constructions which always have either *a* or no coordinating conjunction at all. The latter constructions are of the kind which are typical of serial verb constructions in other languages (see Bamgbose 1966, Stahlke 1974, Sebba 1987). Sissala, unlike other West-African languages, has both serial verb constructions and VP conjoining with *a*. I will call the serial verb constructions 'paratactic structures'. My primary concern is not with paratactic structures; however, since they are variants of the conjoined VP structures which I do want to discuss, I shall mention a few relevant insights from the literature on these constructions.

Christaller (cited in Sebba 1987:5-6), in his study of Twi, contrasts 'essential combinations' and 'accidental combinations'. The former are what I have called 'fixed combinations' of verbs. According to Christaller, in such constructions one verb is principal and the other is an auxiliary verb, yielding an adverb of time or manner. Bamgbose (1982), who uses the terminology 'coordinate SVC' (serial verb construction) for the non-fixed kind and 'modifying SVC' for the fixed kind, is of the opinion that though in the latter type one of the verbs has a different meaning from its use in single verb constructions, it is still a full verb, as long as it does not differ morphologically from other verbs. I share Bamgbose's view, and since all such verbs in Sissala (except *ka* 'take (it)') undergo normal verb affixing, I will treat these constructions as normal VP coordinations when *a* is present, and as non-subordinating paratactic structures when *a* is absent.

Though syntactically there seem to be no real problems involved, the question is, how are these constructions to be viewed propositionally? In particular, do they express a single proposition or two coordinate propositions? It seems obvious that in many African languages main verbs have the function performed by prepositions and adverbs in European languages. It has, indeed, been observed that these verbs change over time into prepositions and adverbs (Ansre, cited in Sebba 1982:8). It therefore seems likely that some of these constructions express only one proposition with adverbial modification. The same is true when the two verbs form an idiom chunk, expressing only a single concept.

I shall present the data with *a* in brackets in shorter examples, which have not been taken from particular texts. However, in longer examples I shall mark the presence and absence of *a* as they occurred in my texts. *A* is optional syntactically but not pragmatically, i.e. in some contexts VP

coordination is pragmatically preferable to parataxis, and in other cases parataxis is preferable to VP coordination. While commenting on the interchangeability of VP coordination with parataxis, some speakers would say, 'It is all right, but it sounds funny - children speak like this.' Having introduced the data, I will sketch a pragmatic explanation for the presence or absence of *a*.

I have already given some examples of VP coordination of the 'accidental' kind. Let us consider two more examples in order to see how they differ from the fixed kind:

- (32) U mǔ yowǎ (a) yowǎ ɓiɛ.
 She went market (and) bought things.
 'She went to the market and bought things.'
- (33) U cǎ bɪdɪlɛ (a) dɪ [ɛ].
 She cooked food (and) ate [ɛ].
 She cooked food and ate it.

In both cases the natural interpretation is a temporal one, with the action described in the first conjunct preceding that described in the second. Where *a* is left out, and the utterance requires marginally less processing effort, according to the argument developed above, one would expect the event to happen exactly according to the stereotype or scenario of going to a market, and of cooking and eating food. The addition of *a*, with its marginal increase in processing effort, might alert the hearer to some minor departure from stereotypicality, and hence some slight increase in the relevance of the conjunct introduced.

The next examples are of Christaller's 'essential combination' kind, and the verb 'to give' has a prepositional interpretation such as 'for' or 'to'. *Pá*, for instance, never has this prepositional interpretation other than in these coordinate constructions. I shall describe the data using such traditional terms as 'benefactive', 'instrumental' etc., to which I do not ascribe any particular syntactic or semantic function: they are just a convenient shorthand for the sort of interpretation that would be conveyed:

- [Benefactive]
- (11) U tǔmǎ (a) pá Bukéré.
 She worked (and) give Bukere.
 'She worked for Bukere.'
- (34) U bǔlǎ (a) pá háálǎ.
 He spoke (and) gave woman.
 'He spoke to the woman.'
- [Instrumental]
- (26) U pí daa (a) ɲmǔwǎ koo.
 He took stick (and) beat pig.
 'He beat the pig with a stick.'
- [Comparative]
- (35) U tǔmǎ (a) kǎllɛ Bukéré.
 He worked (and) surpassed Bukéré.
 'He worked more than Bukere'.

[Terminative]

- (36) U tókó (a) tenni.
 She pounded (and) finished.
 'She finished pounding'
- (37) U bísé nyii (a) ta.
 She poured water (and) throw-away.
 'She poured the water away.'

The difference between the presence and absence of *a* in these examples can be explained along the lines laid out above, with the paratactic constructions connecting, if anything, a slightly more stereotypical sequence of events. And, of course, the more stereotypical the sequence of events, the more likely it is to be describable in terms of a single (perhaps complex) proposition rather than two independent propositions, each with its own relevance.

That VP coordination may have not only a 'mono-propositional' but also a 'mono-conceptual' interpretation can be seen from the following example. It involves the verb *ka*, which could be translated as 'take it'. It is verbal but has an implicit object, usually coreferential with an object in a preceding conjunct. The verb could be seen as having a causative function, and together with other verbs it conveys the meaning of 'bring'

- (38) U pí namé (a) ka (a) ko.
 He took meat (and) take-it (and) come.
 'He brought the meat.'

Here the paratactic construction might be thought of as expressing the single concept 'bring'.

There are also idiomatic coordinations which represent only one concept. These expressions are dead metaphors, i.e. the semantic content of the individual words is no longer consciously accessed. The hearers will access a conceptual representation directly when hearing this idiom. Consider (39) - (42):

- (39) U lá wé (a) di.
 he took matter (and) eat.
 'He believed the matter.'
- (40) U lá v (a) ta.
 He took him (and) throw-away.
 'He saved him.'
- (41) U pi v háálís wé di.
 He took his wife's words ate
 ró-ú bél u bio.
 COMP-she watch her child.
 'He believed his wife's statement that she watched the child.'
- (42) U bul pɔ-v, ró-ú la v wé di.
 He said gave-her, COMP-he take her words eat.
 'He said to her that he would believe her.'

The hypothesis that these examples are mono-conceptual is strengthened by the fact that they may either function like higher verbs in propositional attitude constructions, or be subordinated under a verb of propositional attitude. In (42), for instance, the matrix sentence is made up of a paratactic structure and the subordination includes a VP coordination.

While it seems clear that these last examples are idiomatic and have come into the language via metaphor, the exact current status of other constructions is not so clear. My hypothesis is that these so-called 'essential combinations' are idiom chunks too. Verbs like *pa* 'give', *kalle* 'surpass' are also 'dead metaphors'. Their conceptual representation is learned and accessed as a unit. There is no evidence, however, that the verbs involved have become prepositions or adverbs.

On the account just developed, it is easy to see why these mono-propositional or mono-conceptual constructions are barred from S coordination with *ká*: they cannot be analysed as expressing two different propositions, each making its own contribution to relevance.

In the next section I will discuss in more detail the difference between S coordination and VP coordination.

6.3 S coordination versus VP coordination.

I shall now develop the hypothesis outlined in previous sections by looking at longer stretches of natural text. My main claim is that VP coordination is used for relatively more predictable or stereotypical situations, while S coordination is used for departures from the interpretation that would be assigned to VP coordination on the basis of the principle of relevance, and, more generally, from normal or stereotypical states of affairs.

In (43), from the third conjunct onwards, every conjunct is connected with *a*, except for one which is introduced with *ká*:

- (43) l kúsé wó wuu.
 You cut them (rice plants) all.
- l kúsé
 You cut
- a hé
 and put
- a vowe guumé,
 and bind bunch,
- a hé kúré mí,
 and put basket in,
- a ka
 and take
- a ko jaa,
 and come house,
- a ka
 and take
- a ko bíl
 and come put

a dááné mvoɔ,
and last a bit,

ká [e] pí ɲmɔwɛ,
and e take beat,

a sié máǵsé
and now measure

a ná é ná ɪ mui há ɔsé
and see manner the your rice how produce

a mú peri.
and go reach.

'You cut them (rice plants) all.
You cut them and bind them into bunches.
You put them in a basket and go home.
You leave them for a little while and then you beat them.
You measure them in order to see how much rice you have produced.'

Syntactically, this discourse consists of two conjoined sentences, each with a cluster of conjoined VPs. The break between the two conjoined S's coincides with a break in the action after the rice plants have been left for a while. The natural reaction for the hearer is to see the treatment of the rice plants as falling into two sub-routines, corresponding to two separate schemas in memory, each with its own conditions and consequences. In this case, one might see the difference between VP and S coordination as being used to *create* schemas and stereotypes, rather than, as in less procedural discourse, merely exploiting existing schemas.

Because of the length of the discourses, I shall present the next example by giving only the English translation and the *a* and *ká* markers.

- (44) How to make TZ (savory millet porridge)
 If you want to prepare TZ you pound millet,
 a take, enter and wash,
 a take out, let swell.
 You take it, come, grind
 a take, come,
 a sweep rubbish,
 ká boil bathing water,
 a pour out
 ká make, you add sour water.
 So when it boils, you take a light calabash
 a take
 a come, make the flour wet
 a take, pour
 a take ladle, stir,
 a take ladle out,
 ká leave (it)
 (When) it is ready, you look for scraper
 arí ladle
 a take

a come
a make (porridge) less (take some out)
ká so add flour
a prepare
a stir,
 It ready, you take out, put TZ calabasse in
a gather
a go, give TZ-eaters.

This discourse fits the account just presented for (43). In both (43) and (44), *a* occurs with activities which follow each other immediately in time, and which might be regarded as belonging to the same subroutine or subschema. *Ká*, as one would expect on this account, involves rather greater discontinuities.

As we see, not all verbal connections are marked with *a* or *ka*. Those not so marked are highly predictable, and there are more highly predictable actions in (44) than in (43), at least in the eyes of a Sissala, who has access to a scenario for grain preparation. Thus it is highly predictable that if one takes a stirring stick one will stir with it, whereas if one takes flour, prepares it and then stirs, the act of stirring is less predictable. This example thus fits the account of the differences between VP coordination and parataxis developed in the previous section.

The first *ká* is used when the first phase of TZ making has been completed and the second one starts. The subsequent uses of *ká* fall into the same pattern. My hypothesis is, then, that in this type of procedural text the use of *ká* is a valuable clue to the organisation of the speaker's encyclopaedic memory, and the way she 'chunks' behaviour into routines and subroutines. This example seems to suggest that *ká* and S coordination is always used when the activity takes a different 'turn' from the way things went before, where the notion of 'turn' connects with the way information is chunked in memory.

In the following stretches of discourse things are not going at all as expected, and *ká* is used more often. As predicted by the account just outlined, the speaker takes into account the hearer's expectations of how the things work under 'normal' circumstances; when things do not go that way, he uses the sentence conjunction *ká*.

When I say that *a* marks more 'expected' actions or states of affairs, this is relative. Of course, none of the activities in (43) and (44) is so predictable that describing them would be irrelevant - particularly to a novice or outsider. But the Sissala speaker has the two types of 'and' available which he exploits in such a way that he demands special attention from the hearer when he uses *ká* and S coordination, for the reasons outlined above.

(45) contains extracts from a longer piece of text describing the famine in Burkina Faso.

- (45) a. When things grew like this
 all the people said: "excellent"
 that this year the crops will grow well.
 b. This did not last one month
 ká the drought stayed.
 c. So all the seedlings withered
 ká there was only one here and one there left.
 d. We had thought that it would be
 the corn *ne* which would save the people.

- e. The name of 'corn' is not even used
this year *dé*.
- f. *ká* when the drought was like this
there was no grass for the animals to eat.
- g. They were all lean
ká stayed (to be) skin and bones,
ká the majority of them died.

(45a) describes what the people expected and the following utterances describe how events turned out differently. Some of the conjunctions with *ká* have different subjects and could not have been replaced by VP coordination. However, in (45g) for instance, there is an implied subject and I suggest that *ká* is preferred to VP coordination because of the element of unexpectedness involved.

Consider a further example, also involving expected and unexpected states of affairs. (46) is a riddle with its solution.

- (46) a. A thousand men went farming
ká did not clear a lot.
 - b. *ká* one man went farming
a cleared a lot.
- solution:
- c. Many stars appear
ká they do not have much light.
 - d. *Ká* the moon only appears
a gives much light.

What is interesting in example (46) is the fact that the many stars giving little light is conjoined with *ká*, and yet this fact is known to everyone. The reason for this is to preserve the parallelism to (46a), in which *ká* has already been used. Here the use of *a* would destroy the analogy. The contrast between *ká* and *a* may be conditioned by quite subtle and complex pragmatic factors, as this example shows. Simple analyses in terms of 'expected' or 'unexpected' events will not always work. What conditions the choice between *ká* and *a* is considerations of optimal relevance, i.e. considerations of contextual effect and processing effort. Generally, unexpected events yield greater contextual effects; the construction of non-stereotypical contexts may involve greater processing effort. But these are not the only factors affecting contextual effect and processing effort, and are therefore not the only factors affecting the choice between sentence and VP coordination.

When hearing the first conjunct of (46), the hearer must access certain assumptions about how much a thousand men could do. The use of *ká* rather than *a* warns the hearer that the proposition to follow is relevant in its own right, perhaps because it does not fit this expectation, in (46b) he again uses *ká*, this time for purely syntactic reasons, since a new subject NP is used. The choice of *a* in the fourth line suggests that there is something predictable about the amount that particular man cleared. The result is an impression of paradox which is only resolved, when the two statements are reproduced in the context suggested by the interpretation of (46c-d).

Or consider (47):

- (47) Bala tɛŋ to solosolo,
M-lizard skin is-NEG smooth,

u tanjá ká hurahura ré,
it really is rough TDM,

ká wí nyuge ten pére.
and/but NEG frog skin reach.
'The monitor lizard's skin is not smooth, it is rather rough, but
not like the frog's skin.'

Here, the use of *ká* might be seen as preventing the hearer from drawing a conclusion he might otherwise have drawn: that the monitor lizard has as rough a skin as a frog.

In example (48), the *ká* has its usual conjoining function which here results in a 'denial of expectation' interpretation:

(48) a. Tié wuu hil.
Earth all dry
'All the ground was dry.'

b. Mie paarv wuu hil a vowe nájá mé,
millet leaves all dry and stick together at,
'The millet leaves are all dry and stick together,

c. leemie bónni ñalle pé tíe,
Corn broken fallen lie ground
'the corn is broken, has fallen and is lying on the ground,'

d. síwié paarv wuu gunni,
groundnut leaves all folded
'all the groundnut leaves are folded,'

e. ká pié é dé wí nyúé má wuu.
and yams F F NEG germinated even.
and the YAMS did not even germinate.

Every conjunct from (48b) to (48e) provides evidence for (48a) which is not part of the conjunction. Every conjunct provides a partial answer to the same question 'What were the consequences of the dry ground?' (48e) is the most extreme case and is marked with *ká*, with the implication 'this is against your expectations'.

To sum up: what distinguishes the use of S coordination with *ka* from VP coordination with *a* is that the conjoined VPs require less processing effort. S coordination should be preferred to VP coordination only where the use of VP coordination would run the risk of misinterpretation because the interpretation the speaker has in mind is not the one that would be assigned to the VP coordination by the criterion of consistency with the principle of relevance. Hence the intuition that the states of affairs appropriately described by S coordination are somehow less typical, usual or predictable than those appropriately describable by VP coordination.

7. Conclusion

In this paper, I have tried to show that the implications of unexpectedness that attach to certain sentential coordinations in Sissala do not arise from a lexical source, but receive a natural explanation within the framework of relevance theory. At this point someone might object that I

have only shown that there is an alternative to the lexical explanation - I have not shown that this alternative is to be preferred. Here I would draw the reader's attention to some differences in pragmatic effect which cannot be explained in lexical terms. If *ka* itself creates an effect of unexpectedness, it should create this effect wherever it appears. However, as pointed out in section 6, the effect of unexpectedness is selectively created: it appears wherever *a* could have been used in preference to *ka*, but not elsewhere (see the discussion of (45) above, for example). It is hard to see how this variation in pragmatic effects could be explained in lexical terms. My results thus tend to confirm what has become increasingly apparent over the years: not all pragmatic effects have semantic causes.

8. Notes

*Sissala, which is spoken in Burkina Faso by around 10.000 people is a Niger-Congo, Gur (Voltaic) language, of the subgroup Gurunsi. 'Sissala' is the French name; the Sissala people call their language 'Sisaali'.

The data used in this article are exclusively from Boura, the main centre of the Sissala area. The dialect is called 'Buuni'.

The Sissala data were taken almost exclusively from natural, recorded text, and were collected by myself in preparation for my Ph.D. dissertation (Blass 1988), during a field trip in 1981-1983 and a further field trip in 1985.

The Sissala examples are given in orthographical form. The marked tone represents high tone. Unmarked syllables are to be understood as carrying low tone.

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1. The adjective in this case is what I called an 'ideophone' in chapter 6 of my dissertation (Blass 1988). However, 'ideophone' is not a syntactic category: in Sissala it includes both adverbials and adjectivals. Only adjectivals can coordinate with *ri*. I have therefore decided to use 'adjective' here.

2. It is, however, possible to have all conjuncts except the last marked with perfective aspect and the last marked with imperfective aspect; in this case the last conjunct has a purposive interpretation.

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