Negation in Akan
Linguistic Convention versus Pragmatic Inference

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The present paper considers how a narrow scope of negation can be encoded by linguistic (rather than inferential) means in Akan (Kwa, Niger Congo). The paper consequently argues against the originally Gricean position that the scope of negation is invariably wide in the encoded logical form of negative natural language sentences, and that any narrow-scope interpretation of negation is due to pragmatic strengthening, as proposed by Robyn Carston. Akan displays a variety of ways in which the scope of negation is fixed by linguistic means, and it is argued that this is wholly due to procedural encoding of information on the scope of negation. The argument is supported by the ways in which a marked syntactic position of a negation marker and negative ‘it’-cleft constructions impact on the truth-theoretic interpretation of Akan utterances, suggesting that similar patterns may be found in other unrelated languages. In particular, I examine the interaction between Akan quantifier words involving the morpheme bi and the scope of negation. The approach taken in this paper is strongly inspired by Burton-Roberts’ Representational Hypothesis (RH).

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Keywords: Akan, Inference, Scope, Negation, Quantifier

* I am grateful to Thorstein Fretheim, Sarah Nakijoba and Lilian Hauge Reid for earlier collaborative work which led to this paper. Our collaborative work under the title “The scope of negation: how much depends on pragmatic inference?” was presented at the August–September 2007 Linguistics Association of Great Britain (LAGB) meeting at King’s College London, an improved written version later appeared in the 2007 Working Papers ISK 4 series. Any infelicities regarding the present paper are my own.
1. Introduction

In this paper, I argue against the originally Gricean position that the scope of negation is invariably wide in the encoded logical form of negative natural language sentences, and that, as proposed by Carston (2002), any narrow-scope interpretation of negation is the result of pragmatic strengthening. My arguments follow analyses of data from Akan (Kwa, Niger Congo) which appear not to support the above assertion. I am going to consider some cases of linguistically encoded scope of negation in Akan which I believe provides some bases for the refutation of the hypothesis that a univocal semantics for negation markers, that is, a unitary handling of the scope of negation in the grammars of natural languages, can be posited cross-linguistically. My attention will be focussed mainly on the semantic effect of scope relations in negative cleft sentences in Akan. The presence of certain lexical forms and syntactic constructions in Akan procedurally encode the information that negation targets one specific syntactic constituent.

I proceed as follows: Section 2 presents Carston’s view on the scope of negation, which is indeed a development of the Gricean position, even though there are points where they depart from each other. Section 3 is a presentation of certain aspects of Burton-Roberts’ Representational Hypothesis (RH) (Burton-Roberts 2005, 2007) that I find to be fruitful in relation to the principal issue; as to what extent, and in what sense, is the scope of negation encoded in the linguistic form of Akan utterances? Section 4 takes a look at data from Akan, and I focus on what I judge to be encoded narrow-scope negation in Akan. Section 5 considers the theoretical implications of the suggested encoded narrow scope of negation as deduced from the Akan data. Section 6 is the conclusion.

2. Encoded Wide Scope Negation

Grice (1989) proposed a univocal, wide-scope semantics for negation. A context-dependent pragmatic narrowing of the scope of negation, according to him, is due to a conversational implicature, a consequence of the general Gricean programme. Carston (2002: chapter 4) adopted this view of the scope of negation as maximally wide and ‘presupposition-cancelling’ in the encoded semantic representation (logical form) of a sentence, but in keeping with her relevance-theoretic stance she claimed that all stronger, ‘presupposition-preserving’, narrow-scope interpretations are due to pragmatic strengthening at the explicit level of content rather than to a conversational implicature that entails ‘what is said’.

Carston’s position implies that her examples (1) and (2) have the same wide scope of negation in their encoded logical form, despite the fact that the difference in word order would seem to have implications for the way that the scope of negation is likely to be construed.

(1) All the children haven’t passed the exam.
(2) Not all the children have passed the exam.

(Carston 2002: 266)
If the scope of negation is wide in (1) and (2) alike, then the difference in the linear order of the elements cannot affect the logical form of those sentences at all. Rather, the difference between a sentence whose negation marker appears immediately after the finite verb and one whose negation marker precedes the subject nominal would then be of a strictly procedural character, affecting the computational phase of the addressee’s utterance interpretation and not some linguistically encoded semantic representation (‘logical form’) that the addressee has to decode on the basis of whatever conceptual meaning skeleton the sentence form exposes. A marked syntactic position of the item that represents negation will constrain the addressee’s computation of the intended scope of negation in the thought that is the output of the pragmatic processing of the utterance in a context (on procedural encoding, see Blakemore 1987; Wilson and Sperber 1993).

Negative declaratives produced by someone who intends the scope of negation to be of the widest possible sort that is not meant to tell us anything about what conceptual elements are affected by the denial are probably very rare both in conversation and in written discourse. To the best of my knowledge, no one has ever proposed that a certain procedural linguistic cue is meant to direct the addressee to a wide-scope interpretation of negation. Now, if the widest possible scope is actually what is encoded in the logical form of sentences, as Carston proposed, then it might seem like an initially plausible idea that procedural indicators such as assignment of contrastive stress to a single syntactic constituent or a marked syntactic position for the negation marker are needed only for the purpose of scope restriction.

On the other hand, a wide-scope reading of negation is as far as you can get from a ‘default’ interpretation. In reality, accessing a wide-scope of negation interpretation is normally a very effortful pragmatic task which cannot come off without an accompaniment of strongly conducive information in a follow-up utterance, notably information that cancels any attempt at a ‘presupposition-preserving’ interpretation.

A prosodic highlighting of one particular syntactic constituent may be the most important and widespread indicator of how the scope of negation is supposed to be narrowed down in the inferential phase of the process of English utterance interpretation, for instance. Contrastive accentuation of a constituent in a declarative sentence gives the addressee the procedural information that this is the focus constituent in the scope of negation. All other de-accented out-of-focus constituents contain discourse-given or ‘presupposed’ information. Accentuation alone probably provides clear hints of what the intended scope of negation is, without ruling out the possibility that there might be contexts that make a different interpretation accessible. In (3), contrasting stress on the quantifier all and a de-stressing of all items in the rest of the utterance is a familiar way to signal that negation targets the highlighted utterance-initial universal quantifier.

1) Prosodic highlighting of single constituents in negative interrogatives works differently. There a highlighted syntactic phrase is typically used to single out a conceptual element in a positive proposition which the speaker believes to be true and to be in conflict with a thought attributed to the interlocutor or to a third person (Fretheim 1998).
(3) All the children haven’t passed the exam.

In order for the addressee to work out the initially less probable interpretation that gives the quantifier the wider scope in an utterance of sentence (1), the speaker will have to postpone use of any significant pitch accent (focal accent) until the very last lexical word, exam, as indicated in (4).

(4) All the children haven’t passed the exam.

In the following section, I look at some rather radical approach suggested by Burton-Roberts (2005, 2007) for handling interpretation and specifically the scope of negation in natural language sentences.

3. A scope-neutral semantics for negation markers?

Some recent papers by Burton-Roberts (2005, 2007) invite the reader to contemplate a truly radical alternative to those views on encoding and the semantics/pragmatics distinction that most of us are accustomed to. He proposes that the meaning properties that natural languages encode are not constitutive of a conceptual structure. It is not possible to encode a logical form, as ‘encode’ is usually understood. Semantics for him is not ‘linguistic semantics’, semantics is the ‘real semantics’ (truth-functional semantics) of the Language of Thought (LoT). He reminds us that there is an obvious alternative to the dominant Saussure-Chomskian tradition which equates the two notions ‘representation’ and ‘what-is-represented’. Adopting what he likens to Charles Sanders Peirce’s view of the sign as something that is other than its object, as opposed to the Saussurian ‘double-interface’ (‘signifiant+signifié’) model that defines logical properties as inherent in the language code, Burton-Roberts (2007: 109) argues that linguistic expressions (signs) are no more than phonetic “pointers to conceptual regions in thought”. Linguistic forms offer evidence for the addressee’s drawing of inferences about the thought that a communicator intends to convey but the thoughts themselves exist only in the language users’ minds. When combined with a set of contextual assumptions, a sentence can function as a representation-of a non-linguistic entity with logical properties by way of the conventions of a natural language code, but all such conventions are of a procedural kind, they put us on the right track so that we can draw inferences about the thought represented but they never constitute conceptual ingredients of those thoughts.

According to Burton-Roberts, the output of linguistic decoding is not “a structured string of concepts with certain logical and causal properties” (Carston 2002: 57). By contrast, Carston says that the output representation resulting from linguistic decoding is indeed a semantic representation, or logical form, with exactly the properties that she attributes to the linguistic encoding itself. One consequence of Carston’s radical under-determinacy thesis is that she questions the assumption that lexically encoded concepts
are fully fledged concepts; they are typically much more general than the ad hoc, context-dependent concepts which form part of the thought that is the output of the addressee’s inferential processing. Nevertheless, even for Carston, a sentence encodes a proposition template, which is subject to pragmatic adjustment and enrichment at the lexical level as well as the sentence level.

Burton-Roberts accuses the relevance theory (RT) linguists in general of being inconsistent in their claims about the locus of semantic properties. While they do distinguish between ‘linguistic semantics’ and ‘real semantics’, and while they associate logical properties and conceptual structures with the latter and attribute real, truth-theoretic semantics to the LoT representations that are the output of the pragmatic processing of the linguistic meaning of an utterance in a context, Burton-Roberts finds it confusing that they also apparently endow the sentences generated by natural language grammars with logical properties. For example, Sperber and Wilson (1986: 72–3) observe that the encoded semantic representation of an English sentence like *She carried it* enters into logical relations by virtue of the fact that it entails the thought ‘Someone sometime carried something’ and contradicts the thought ‘No one ever carried anything’. This, according to Burton-Roberts, is an unfortunate consequence of the Saussure-Chomsky legacy, notably the double-interface view of the linguistic sign. Rather, the thought that is the output of inferential processing of the sentence *She carried it* in a context is what entails the thought ‘Someone sometime carried something’ and contradicts the thought ‘No one ever carried anything’.

Burton-Roberts addresses specifically the RT approach to negation expounded by Carston (2002). He distinguishes sharply between the English word *not* and similar words used for negation in the world’s languages on the one hand and the logical negation operator on the other hand. The former is not to be equated with the latter as Grice (1989) proposed. Instead, *not* (and by extension other natural language equivalents) is a conventional M-representation of those properties that we attribute to the negation operator. Burton-Roberts reasons as follows:

... if the English word *not* C-encodes — and thus is — a logical operator, there must be scope-of-negation WITHIN THE LINGUISTIC ENCODING. Where real negation is, there also is scope of negation. Against this, it is often unclear from the linguistic encoding what the scope of negation is. This is suspicious: if the linguistic encoding were such as to C-encode and thus include the logical operator, and thus have a genuine logical form, we should expect it to wear scope-of-negation on its sleeve. We can’t say that the encoding is scopally ambiguous if it C-encodes (and thus has) a logical form. Logical form, by definition, is not ambiguous. To admit that the linguistic encoding could be semantically ambiguous would be to concede that the linguistic encoding and logical form are distinct — that the latter isn’t a property of the former — in short, that logical form is *not* C-encoded. (Burton-Roberts 2007: 99)
Carston’s solution to the problem of scopal ambiguity was to say that there is no such ambiguity in the linguistically encoded ‘logical forms’ of natural-language negative sentences (Carston 2002: chapter 4), because the scope of negation is invariably wide in the logical form. This implies, as observed in Section 2, that (1) and (2) have the same logical form, both with a wide scope of negation; apart from the scope of negation there is nothing in (1) and (2), repeated here as (5) and (6), that could possibly differentiate them semantically.

(5) All the children haven’t passed the exam.
(6) Not all the children have passed the exam.

I do not want to say that the logical forms of (5) and (6) differ; indeed, I am tempted to deny, with Burton-Roberts, that sentences, including the English sentences (5) and (6), have logical forms at all. The position taken in this paper is sympathetic to his RH position and his suggestion that we should “jettison C-encoding in favour of M-encoding” (Burton-Roberts 2007: 106).

It is a refreshing and invigorating hypothesis that the sentences of natural languages do not have logical forms and that only the output of inferential processing, the LoT, has conceptuo-logical properties and what Burton-Roberts calls a conceptual-intentional (‘C-I’) structure. At the end of his 2007 paper he speculates that, “if we want to allow that linguistic encoding ever C-ENCODES anything, we might allow that what it C-encodes is procedural” (Burton-Roberts 2007: 110). This is apparently not the kind of analysis that Carston (2002) had in mind, because she endows the negation marker not in English with logical properties. It is, however, the position adopted in the present paper. Any surface-syntactically based information that affects the addressee’s understanding of the scope of negation is procedural information, directions that cause the addressee to choose one particular inferential path at the expense of certain other imaginable ways to recover the communicated message. Furthermore, we maintain that procedural information that consists in exploiting differences in the linear order of syntactic elements sometimes resolves scopal indeterminacies or ambiguities completely, by way of M-encoding in Burton-Roberts’ sense, while at other times such information constrains the range of interpretations but does not really force a unique interpretation of the scope of negation in LoT.

Atlas (1989, 2005) is known for his scope-neutrality position on negation at the level of linguistic encoding. While a scope-neutral view of natural language negation follows automatically from Burton-Roberts’ claim that not and similar markers in other languages do not have logical properties like those of the negation operator of formal logic, Atlas, while denying that not has an encoded scope, still wants to allow that natural language negation markers have truth-theoretic semantics. This implies that Atlas’ position and Burton-Roberts’ RH account cannot be lumped together.

Both the hypothesis that the scope of negation is always wide in the encoded logical form of negative sentences (Carston) and the hypothesis that the scope of negation is
never specified in the encoded logical form of negative sentences (Atlas) are problematic. When a sentence or a subsentential syntactic fragment gives an addressee no choice but to construe the scope of negation as narrow in the LoI, then a narrow scope of negation is de facto encoded. Burton-Roberts (2007) advanced the hypothesis that it is only thoughts that have logical properties; sentences and sentence fragments do not. There is no ‘real semantics’ in linguistic stimuli. His Representational Hypothesis (RH) would in fact tally with the spirit of Relevance Theory as I know it, but his position on the relationship between encoded meaning and communicated thought is a lot more radical than what has ever been stated openly in relevance-theoretic circles. The current relevance-theoretic view of the relationship between linguistically encoded meaning and communicated thought is that linguistic underdeterminacy is rife not only at the sentence level but also at the lexical level. The ad hoc, context-dependent concepts that are part of the mental representations of communicated thoughts are often much more precise and complex than the linguistically encoded concepts that cue the pragmatic development of ad hoc concepts (Carston 2002), but encoded concepts still exist. This is the main difference between Relevance Theory and Burton-Roberts’ RH.

Taking Burton-Roberts’ speculation seriously, the proposal is that linguistic encoding of the scope of negation must be understood as encoding of a procedure, an instruction for the addressee to follow in the context-dependent process of pragmatic computation leading to construal of a proposition, or thought; it does not mean encoding of scope relations as an inherent property of an encoding sentence (i.e. conceptual encoding). My concern in this paper is with the fact that certain sentence forms in effect fix, by linguistic convention, the addressee’s belief about the intended scope of the negation operator so that no alternative pragmatic processing will have a chance to be tested for relevance, while other sentence forms permit some degree of interpretive latitude, to be constrained by contextual evidence, as the data in Akan, presented in the following section, demonstrate.

4. Encoded narrow-scope negation in Akan

Akan is a West African Niger-Congo language of the Kwa branch and the most prominent indigenous language of Ghana. It is an SVX language, and negation is expressed by means of a homorganic nasal prefix to the verb stem. Additionally, it has the ability to employ a cleft sentence to narrow down the scope of negation and it exhibits a peculiar and extremely interesting interaction between universal quantifier words and negation.

A negative sentence like (7) does not tell us whether the negation prefix -n- takes scope over the subject nominal papa no (‘the man’), or over the verb phrase only, or just the temporal adjunct nnera (‘yesterday’); the addressee must add contextual assumptions to compute the truth-conditional content of this sentence. The respective continuations in (8)–(11) testify to the vagueness of the scope of negation in (7) at the level of linguistic semantics\(^2\).

\(^2\) With the exception of example (18), which is in the Fante dialect, the rest of the Akan examples are from the Asante dialect. The abbreviations used in this section are as follows: COMPL=
As indicated earlier, there is an interesting interaction between quantifier words and negation in Akan. Table 1 lists some of the most frequently used quantifier words in Akan. Notice that the Akan quantifiers whose English glosses are ‘anyone’/‘anything’ are classified as universal, not existential quantifiers, and that the morpheme bi is present everywhere except in the final item nyin a, a universal quantifier which can only function as a determiner.

Example (12) means ‘Some of the young men can do it’, and (13) means ‘Some of the young men cannot do it’ with internal VP negation; (13) cannot ever be interpreted as a representation of a proposition expressed by the English sentence Not any of the young men can do it. The subject nominal mmran te no bi (‘some of the young men’) takes scope over negation, which is represented linguistically by the nasal prefix n- attached to the verb -tumi (‘be able’).
What is significant here is that *bi*, like English *some*, encodes the information that the quantifier it represents is outside the scope of negation. In addition, any morphologically complex quantifier that includes *bi* as a proper subpart also represents a propositional form in which the quantifier takes scope over negation. This implies that it is impossible to use *biara* if you wish to express that ‘Not every young man can do it’ or ‘Not any (tree-choice *any*) young man can do it’. The morpheme *-ara* is added to the existential quantifiers *bi*, *obi*, *ebi* and *biribi* to yield the universal quantifiers *biara* (‘every’/‘any’), *obiara* (‘everyone’/‘anyone’), *ebiara* (‘any one of’) and *biribiara* (‘everything’/‘anything’). When you use *biara* in an Akan translation of the English sentence *All the children didn’t pass the exam*, as shown in (14), the result is not truth-conditionally underdetermined as it is in English.

(14) *M-mofra* no bi-arara a-n-twa nshwe no.
    PL-child DEF Q-UNIV COMPL-NEG-pass exam DEF
    ‘All the children didn’t pass the exam.’

In fact, the unmarked interpretation ‘Not all the children passed the exam’ is impossible, because the negation marker *n-* cannot take scope over the quantifier *biara* (or *obiara*) or any Akan quantifier that includes *-bi*- (but see the comments on cleft sentences like (20) and (21) below).

There is no literal equivalent in Akan of the inherently negative English quantifiers *nobody, nothing*, etc. If you want to communicate what would be rendered in English as ‘No one can do it’, you have to say what corresponds literally to ‘Anyone/everyone can not do it’ (with the universal quantifier *obiara*), as illustrated in (15), and the Akan way of saying

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'Nothing will happen’ also requires the use of a universal quantifier that takes scope over negation in the LoT: ‘Anything/everything will not happen’. This is demonstrated in (16). These are the respective Akan structures when the quantifier is not accompanied by a head N:

(15) O-bi-ara n-tumi n-ye.
    NOM-Q-UNIV NEG-able NEG-do
    ‘No one can do it.’ (literally: everyone/anyone can not do it)

(16) Biribi-ara re-n-si.
    Q-UNIV FUT-NEG-happen
    ‘Nothing will happen.’ (literally: everything/anything will not happen)

If the quantifier is a modifier of a definite description (a ‘floating’ quantifier), there is a choice between (17) with biara (‘any one (of)’) and (18) with nyinaa (‘all (of)’).

(17) M-mofra no bi-ara a-m-ma.
    PL-child DEF Q-UNIV COMPL-NEG-come
    ‘None of the children came.’ (literally: any one of the children did not come)

(18) M-mofra no nyinaa a-m-ma.
    PL-child DEF all COMPL-NEG-come
    ‘None of the children came.’ (literally: all the children did not come)

Both in (17) and (18), the grammatical construction determines the fact that the quantifier takes scope over negation in the LoT.

Example (19) is an attested example of the interaction of obiara and the negative prefix n- taken from Amfo (2010: 203)\(^4\).

(19) O-bi-ara n-nyim beebi a ɔ-kɔ.
    NOM-Q-UNIV NEG-know somewhere REL he-go
    ‘Nobody knows where he has gone.’
    (literally: everybody/anybody does not know where he has gone)

An analogous attested example is (20), from Haugereid (2008).

\(^4\) The glossing of obiara in (18) deviates from the original in Amfo (2010), which was ‘nobody’. There are no lexical items in Akan that correspond exactly to nobody/no one, nothing, nowhere, etc. In order to express the non-existence of something you have to use a universal quantifier expression and contrary predicate negation.
(20) *Se wo-ye Onyankop n ba yi dee, biribi-ara*

> since you-COP God child this TM anything/everything

> re-n-hia

> FUT-NEG-be.needful you

> ‘Since you are the child of God, you will need nothing.’

If the combination of *bi* and *-ara* always means that the scope of negation is restricted to the negated predicate phrase, one may wonder how it is possible to express thoughts corresponding to English ‘Not everyone can do it’ in Akan. It so happens that there is an exception to the rule that universal quantifier forms in the *ara* series always take scope over negation. A copula construction of the cleft-sentence type does the trick. The rules that would otherwise determine what pragmatic interpretations are accessible when universal quantifiers interact with negation in Akan are overridden by any cleft sentence in which a universal quantifier like *obiara* is the cleft constituent occurring in the position between the copula verb and the focus marker *nà* that represents the divide between the new (and or salient) and presupposed parts of the cleft sentence. Consider (21) where *obiara* is the cleft focus item. *Obiara* will here be construed as the only element in the scope of negation.

(21) *e-n-ye o-bi-ara nà o-be-tumi a-ye.*

> it-NEG-COP NOM-Q-UNIV FM he-FUT-able CONS-do

‘It’s not everyone who can do it.’/‘It’s not ANYone who can do it.’

The language-specific rule that regulates Akan speakers’ assumptions about the relationship between *-ara* quantifiers and negation is suspended in cleft sentences like (21) where the element inside the scope of negation is placed between the negated copula form and the focus marker *nà*. The procedural information encoded by the cleft sentence construction constrains the addressee’s search for the explicitly communicated proposition by leading them to an interpretation which entails that some people can do it, similar to what happens in (22) where *zuu hɔ* (‘there in the zoo’) is the cleft constituent that falls within the scope of negation; the utterance entails the thought that they fed all those animals somewhere else.

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5) As correctly pointed out by an anonymous reviewer, a cleft construction is (linguistically) marked. In Akan, and many other languages, it is an information structural device used to highlight new and or salient elements in a proposition. The point here, however, is that it is an example of a linguistic, rather than a pragmatic, means of narrowing the scope of negation, when the cleft element contains the negative morpheme. Thus the scope of negation is encoded in the linguistic structure rather than inferred.

6) The Akan lexicon does not differentiate between the domain-restricted kind of universal quantification illustrated by the English ‘every’ series of quantifiers and the so-called ‘free choice any’ quantification, which is a totally unrestricted, exception-free kind of universal quantification (e.g. Kadmon and Landman 2003).
The cleft sentence of (22) with its fixed narrow scope of negation that does not extend to the area following the focus marker na contrasts sharply with the procedural information gained from processing an utterance of (23) with straight word order. Example (23) does not indicate, by M-encoding, what part of the sentence is affected by the speaker’s denial, the universal quantifier nyinaa (‘all’), the subject pronominal prefix ye- (‘we’), the nominal aduane (‘food’), or the locative phrase zuu hɔ (‘there in the zoo’).

(23) ye-n-ye zuu hɔ na ye-ma-ma m-moa no nyinaa aduane di-i.
we-COMPL-NEG-give PL-animal DEF all food be.at zoo there

‘We did not feed all the animals in the zoo.’

To sum up, in Akan, it is possible to M-encode (cf. Burton-Roberts 2007) the information that the scope of negation is narrow. A cleft sentence can be used for this purpose. The cleft constituent in Akan occurs in the position between a copula form and the general focus marker na. When the copula form is negated, the cleft constituent is the sole conceptual element of the proposition expressed that falls within the scope of the negation operator. In addition, there is a group of Akan quantifiers all of which possess the inherent lexical property that they may not be included in the scope of the negation operator, cleft constructions being a conspicuous exception to this generalization. The conclusion then is that the rule of Akan grammar which dictates that the existential quantifier bi and the corresponding universal quantifier forms with -ara take scope over negation cannot be reconciled with a universal dictum that the negation marker is a wide-scope operator or a scope-neutral operator in the encoded logical form of negation sentences.

In the spoken form of English ‘it’-clefts, the focal accent does not have to fall on the cleft constituent, as in It’s TOM I’m talking about, it can be shifted to the embedded clause, as in It’s Tom I’m TALKING about. In the latter case the information focus is indicated by the accentuation, while Tom is an activated discourse referent mentioned in the utterance that the cleft sentence is a reaction to. The prosodic pattern counteracts the assumption that the cleft constituent represents the sole element whose LoT correspondent falls within the scope of negation (cf. Gundel 2002; Gundel and Mulkern 2007). This situation where intonation overrides the information structure that one would otherwise associate with an ‘it’-cleft is unknown in Akan. As for Akan clefts, those sentences seem to mark the cleft constituent redundantly as the only linguistic item that represents new and or salient information in the sentence and consequently the only item that represents the scope of negation in LoT. In addition to the procedural effect of the focus position immediately to the right of the
negated copula form, the focus is obligatorily right-bounded by the focus marker na whose function (i.e. procedural meaning) is to highlight the constituent to which it is attached as the only new and or salient information the speaker intends to communicate (Amfo 2010).

5. Discussion

The grammar of Akan embody certain procedural constraints on how to construe the scope of negation in sentences with a negative verbal prefix. A negation marker in front of the cleft element of a cleft sentence construction rules out a wide-scope interpretation (by linguistic means). Other language-specific procedural constraints in Akan that I examined were also shown to exclude an interpretation of the scope of negation as wide, directly by linguistic convention rather than via pragmatic inference. A very valuable cross-linguistic, typological research project would be to try to identify the range of syntactic patterns that recur as procedural encoders of a narrow scope of negation in a large number of natural languages. The cleft sentence construction is one very obvious universal candidate. Preliminary work (Amfo et al. 2007) indicates that negative cleft sentences in genetically unrelated languages such as Luganda (Bantu) and English (in addition to Akan) encode a narrow scope of negation. At the other extreme we find the seemingly idiosyncratic Akan series of quantifier expressions that contain the morpheme bi, whose procedural meaning places the referent outside the scope of negation—with the exception that a negative cleft sentence in Akan overrules this procedural information. This is probably an encoding of procedural information about the intended scope of negation that is peculiar to Akan and possibly its closest Kwa relatives. It is in this light that Burton-Roberts’s proposal regarding M-encoding resonates with the situation noted in Akan; that the presence of a negative cleft construction and also that of a quantifier expression containing the morpheme bi, procedurally encode information about the intended scope of negation. Thus, the addressee takes a cue from the linguistic structure (in the case of negative cleft sentences) itself, rather than from the context, about the narrow scope of negation. While the presence of a bi-quantifier is an important pointer regarding the extent to which the impact of the negation element ought to be construed. These constructions and lexical items do lend support to Burton-Roberts’ suggestion that linguistic structures, more than anything else, encode procedures.

If a linguistic stimulus does not encode a concept schema but merely a set of interacting pointers to an extra-linguistic interpretation, as argued by Burton-Roberts, then the question of the scope of negation in a linguistically encoded ‘logical form’ does not arise. Now a decision to abolish ‘logical form’ from the level of linguistically encoded meaning has certain ramifications, not all of which may be seen as beneficial. There will no longer be a distinction between two types of encoded meaning, conceptual meaning that contributes to the addressee’s representation of an utterance and procedural (computational) meaning that cues the addressee’s manipulation of the encoded representation in the inferential phase of the utterance comprehension process. The psychological plausibility of such a distinction has been defended with reference to the fact that there are two types of linguistic
expressions in natural languages, those that encode concepts and those that encode procedures.

However, it has been received knowledge for several years in relevance-theoretic circles that there is no one-to-one correlation between conceptual meaning and truth-conditional meaning or between procedural meaning and non-truth-conditional meaning. Quite a few adverbs with a conceptual meaning trigger mental processes of the computational sort, and discourse anaphora of the pronominal kind can have a more or less pure procedural meaning and still contribute to real-semantic representations. Blakemore (2004: 231) points out that, “in contrast with expressions that encode concepts—for example, \textit{in contrast}—expressions that encode procedures do not undergo regular compositional semantic interpretation rules. Thus while the meaning of \textit{complete} combines with the meaning of \textit{in contrast} to create a new complex concept, the meaning of \textit{but} cannot be modified in this way.” For me, the fact that \textit{in contrast} and \textit{in complete contrast} are both grammatically well-formed English prepositional phrases is less significant than the fact that the contributions of the shorter and the longer phrase to propositional content are both nil. There are meaningful linguistic descriptions which appear to contain encoded concepts but which do not make a contribution to the conceptual-intentional structure that may be equated with the thought expressed by an utterance in a context. Suppose that Sally tells John that Ruth has informed her that she (Sally) would be offered a job that she has applied for, whereupon John reveals the following to Sally: \textit{What you were told is not true}. The fact that Ruth told Sally something is truth-conditionally irrelevant. The conceptual-intentional counterpart of John’s free relative in the interlocutors’ (John’s and Sally’s) minds is the assumption that Sally will be offered the job she applied for. This is the assumption that John claims to be false. Relevance theory in its present state cannot account for the fact that not only discourse markers like \textit{frankly} or \textit{in contrast} encode ‘concepts’ without contributing to the proposition expressed but also that a lexical verb like \textit{tell}, in its participial form \textit{told}, lacks truth-conditional meaning in the above example\textsuperscript{7}.

The same individual may be referred to once as \textit{my late aunt}, later as \textit{she}, and finally as \textit{your aunt} in the interlocutor’s turn. Thus the referent is the same but the so-called mode of presentation of the reference differs from one occasion to the next (Recanati 1993). A referent’s mode of presentation is always truth-conditionally irrelevant (an important concept in Recanati, op. cit.), though it does have cognitive significance. Recanati (op. cit.: 47) says that “the mode of presentation is no part of the truth-conditional content of the thought (by virtue of the equation of the proposition expressed with the truth-conditional content of the thought).” I would like to add that I believe the truth-conditional irrelevance of the manner in which the referent of a definite nominal phrase is presented (or represented) supports Burton-Roberts’ Representational Hypothesis. For him no linguistic meaning, whether of members of open-class lexical categories or of function words like the negation

\textsuperscript{7} Above in the phrase \textit{the above example}, as it is being used at the end of the present paragraph, is another word whose function is wholly procedural and non-truth-conditional, and even the head noun \textit{example} is a non-truth-conditional item in our phrase \textit{the above example}, whose referent is the metalinguistically used utterance \textit{What you were told is not true}. 
marker *not*, makes a direct contribution to propositional content. A communicator’s mode of presentation is tailored to a context that is mutually manifest to speaker and addressee, and it is informed by Sperber and Wilson’s communicative principle of relevance and their relevance-theoretic comprehension procedure (e.g. Wilson and Sperber 2004).

6. Conclusion

This paper has argued against the hypothesis, suggested by Carston (2002) following Grice (1989), that the scope of negation is always wide in the encoded logical form of negative sentences. Following a presentation of Carston’s position, Burton-Roberts (2005, 2007) radical alternative was considered. He suggests that linguistic expressions are only indicators of concepts which reside in the thoughts of individuals, implying therefore that all linguistic expressions encode procedural meaning, in relevance-theoretic terminology. With regard to the specific issue of the scope of negation, Burton-Roberts goes even further than Atlas (1989), who opts for a scope-neutrality view, to propose that natural language negation operators M-represents the properties that are attributed to the negation operator. It is my conjecture that ultimately, the relevance-theoretic distinction between conceptual encoding and procedural encoding may give way to a view of the relationship between language and thought which is much closer to Burton-Roberts’ Representational Hypothesis than what we witness today, but this is a discussion which goes way beyond the scope of the present paper.

References

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