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CONDITIONAL CONSTRUCTIONS IN MAKARY KOTOKO

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Makary Kotoko is a Chadic language spoken in Cameroon, in the region just south of Lake Chad. Based on an analysis of a corpus of texts with helpful input from a mother tongue speaker of the language, this paper presents the forms and functions of conditional constructions. Like other Chadic languages (Frajzyngier 1996: 313, 327), conditionals are formally indistinguishable from certain types of temporal constructions. However, unlike other Chadic languages (e.g. Hausa, Baraïn, Lamang, Miya, Goemai, Buwal), Makary Kotoko has no overt marker for the protasis comparable to 'if' in English. Instead, the protasis and apodosis are joined by the marker aro 'then' which is semantically linked to the apodosis, but is often prosodically realized at the end of the protasis. Conditional constructions are categorized by their semantics based on classifications by Taylor (1997) and Thompson, Longacre & Hwang (2007), and the function of conditional constructions within discourse is explored.

Keywords: conditional, Makary Kotoko, Chadic

Makary Kotoko (mpadə; mpi) is a Central Chadic B language spoken by approximately 16 000 people.[1] The locus for the language area is the town of Makary, indigenously called *mpadə*, situated in the Logone-et-Chari Division of the Far North Region of Cameroon. The language borders overflow political boundaries, and there are speakers of the language in Chad to the east and Nigeria to the west. The Ethnologue's classification of the language is Afroasiatic, Chadic, Biu-Mandara, B, B.1, Kotoko Proper, North (Lewis, Simons & Fennig 2015). The analysis presented here is a significant expansion with revisions of the relevant sections of Allison (2012), and like that work, is based on a corpus of some sixty texts,[2] with additional input from a mother tongue speaker of the language.[3]

The paper is divided into two parts: a discussion of the form of conditional constructions, followed by a discussion of their function. In the first section I begin with a broad look at the marker *aro* (§1.1), then focus on its role within conditional constructions (§1.2). I follow this with a discussion of other means of coding conditions (§1.3, §1.4). In the second section of the paper, I start by examining the meaning of the conditional constructions, taking into consideration the semantic classifications proposed by Taylor (1997) and Thompson, Longacre & Hwang (2007) (§2.1). This is followed by a presentation of the discourse functions of conditional constructions within the corpus of texts (§2.2). The conclusion to the paper (§3) summarizes the findings regarding the form and function of conditional constructions in Makary Kotoko.

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1 This estimate is proposed by Henry Tourneux (http://llacan.vjf.cnrs.fr/langues/kotoko.html, last accessed Aug. 27, 2015).

2 Cf. Allison (2012: 7) for a description of the corpus used.

3 I would like to thank Abakar Mahamat (Chalki) for his helpful insights about his language in general and about conditional clauses in particular.

1. Form of Makary Kotoko conditional constructions

In Makary Kotoko, conditional constructions are formally indistinguishable from certain types of temporal constructions such that the evaluation of whether a construction is 'conditional' or 'temporal' in nature can only be made by an examination of the larger context. I begin this section by considering the broader functions of the sequential marker *aro* 'then' which occurs in almost all conditional constructions within the corpus.

1.1 The sequential marker *aro* 'then'. Allison (2012: 496-502) identifies two sequential markers in Makary Kotoko: *k'ani* 'then' and *aro* 'then'. Both markers "indicate that the situation of the clause marked with the sequential marker temporally (or in some cases, logically) follows the situation of a preceding clause" (Allison 2012: 496). The marker *k'ani* "is often used to sequentially link specific situations in a past time frame" (Allison 2012: 497). As such, the aspectual coding of the clauses joined by *k'ani* is often perfective.[4] The marker *aro* "can also link clauses in past time but the situations in those clauses are generally habitual or generic" (Allison 2012: 499). The use of *aro* is not limited to past time frames as it can be used in present and future time frames, as well as in irrealis contexts. The example below illustrates the use of *aro* as a sequential marker linking two clauses coded with irrealis mode. Though *aro* 'then' is semantically linked to the apodosis, it is often prosodically realized at the end of the protasis. This is shown in this and subsequent examples by placing a comma (representing a pause) after *aro*, while bracketing it with the apodosis to show its semantic connection.[5]

(1)

Nō[6]	gə	gí	[m-ól	i	kən	marágə]	[**aro**,
3SG.F.PFV	say	COMP	IRR-3SG.F	stir	2SG.M.IO	together	then

hó	dó,	m-á	lū	a	dəwo	ngó.]
house	DET.F	IRR-3SG.M	come	3SG.M.NEUT	buy	PREP.2SG.M

'She said that she would pester you, then, the house, he would come (and) buy (it) from you.'

The following table presents the aspectual/modal coding of the clauses joined by *aro* within the corpus. Only a small subset of these (less than one fifth) code conditional constructions and these will be explored in §1.2.

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[4] Perfective is referred to as 'completive' in Allison (2012), suggested by Dixon (p.c.). See also Dixon (2012: 31-36).

[5] More details of the various phonetic realizations of *aro* are given in §1.2.

[6] High tone is marked with an acute accent, and mid tone with a macron, while low tone is unmarked.

Table 1: Aspectual/modal coding of clauses joined by *aro*

		Protasis							
		PFV	NEUT	NON-V	IPFV	IRR	IMP	VOL	
Apodosis	PFV	8	10	6		4	1		**29**
	NEUT	38	73	12	15	1	6	2	**147**
	NON-V	14	6	3	2	1			**26**
	IPFV	13	8	5	16	2			**44**
	IRR	59	10	6	3	23	10	2	**113**
	IMP	21	3	1	5	2	29	2	**63**
	VOL	3							**3**
		156	**110**	**33**	**41**	**33**	**46**	**6**	**425**

A few brief notes about some of the aspectual/modal codings. The analysis proposed in Allison (2012: 221-252) recognizes aspectual and modal distinctions in Makary Kotoko, but no tense distinctions. The aspect and mode markings are adjoined to the person markings preceding the verb. The neutral aspect is the bare person marker and its function is largely discourse determined. The imperative mode covers both positive imperative and negative imperative (i.e., prohibitive). The volitive mode is a partially grammaticalized modal marking which is developing from the verb *yá gó* 'want'. The non-verbal category covers all types of non-verbal predication. These make no aspectual/modal distinctions.

Table 1 is read as follows. The aspectual/modal coding of the protasis is read across the second row from the top. The aspectual/modal coding of the apodosis is read down the second column from the left. So, for instance, there are 29 instances in the corpus where the protasis and apodosis both contain an imperative. Cells with no data indicate that the combination does not occur in the corpus (though may be possible).

Looking at Table 1, for the neutral aspect, the imperfective, the irrealis, and the imperative, the most frequent combination of aspectual/modal coding is to have the same coding in both the protasis and the apodosis. Note that there are very few instances (8) of a combination of perfective coding in both the protasis and apodosis being linked by *aro* as this is most commonly done with the sequential marker *k'ani*. When perfective aspect is in the protasis, the most frequent aspectual/modal coding of the apodosis is irrealis mode. As will be seen in §1.2 this is by far the most frequent combination for conditional constructions. Overall, the most common aspect/mode of the protasis is perfective aspect. The most common aspect/mode of the apodosis is neutral aspect.

There are occurrences of *aro* in the corpus which are not included in the table. These are cases where either (i) a temporal adverb precedes *aro* and the following clause, or (ii) *aro* begins direct speech, or (iii) *aro* begins the clause immediately following direct speech, or (iv) *aro* functions as a quotative, introducing direct speech. In some cases, the function of *aro* is not to conjoin contiguous clauses, but larger portions of discourse. I turn now to the use of *aro* in conditional constructions.

1.2 Conditional constructions coded with *aro*. In the corpus, the protasis always precedes the apodosis. I have made mention of the fact that *aro* tends to prosodically attach to the preceding

clause with a slight pause before the subsequent clause. However, there are examples within the corpus where *aro* attaches to the following clause with a pause preceding *aro*. The difference in prosodic attachment does not appear to correlate with any semantic distinction. In still other cases, there is no pause between the protasis and apodosis. In such cases, *aro* is often phonetically reduced, being realized [a], [ja], or [e] depending upon the degree of influence of the surrounding phonetic environment.

I have claimed earlier that conditional constructions in Makary Kotoko with *aro* between the protasis and apodosis are morphosyntactically indistinguishable from temporal constructions with *aro* between the two clauses. This is in keeping with the more general claim made by Frajzyngier (1996: 313, 327) that it is common in Chadic languages for the same word to be used for both conditional and temporal interpretations.[7] My claim is further supported by the analysis underlying the following table. Table 2 presents the aspectual/modal coding of the conditional constructions with *aro* within the corpus.[8] There are no aspectual/modal pairings between protases and apodoses where all occurrences have a conditional interpretation, except one. The exception is the case where the protasis is in the volitive mood and the apodosis is in the imperative, though there are only two instances of this combination in the entire corpus. For all other aspectual/modal combinations that occur in the corpus, some of the instances of that combination have a temporal interpretation. The mentioned exception aside, it is not possible to say that certain aspectual/modal pairings between the protasis and apodosis necessarily result in a conditional interpretation.

Table 2: Aspectual/modal coding of conditional constructions with *aro*

		Protasis							
		PFV	NEUT	NON-V	IPFV	IRR	IMP	VOL	
Apodosis	PFV	4	0	1		0	0		**5**
	NEUT	12	3	1	1	0	0	0	**17**
	NON-V	3	0	1	0	0			**4**
	IPFV	6	0	0	0	0			**6**
	IRR	41	1	4	2	2	0	1	**51**
	IMP	4	0	1	2	1	0	2	**9**
	VOL	1							**1**
		71	**4**	7	**5**	**3**	**0**	**3**	**93**

Table 2 is constructed in the same way as Table 1. A blank cell means that the aspectual/modal pairing under consideration does not occur within the corpus. For aspectual/modal pairings that do occur in the corpus, but for which none of the instances in the corpus have a conditional interpretation, I have placed a zero (0) in the relevant cell in Table 2. So, for instance, there are no instances of conditional constructions where the aspect/mode of the protasis is the imperative.

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[7] More generally still, Dixon notes that "there is in many languages a close association between Conditional … and 'when' Temporal … clause linkings" (2009: 14).

[8] Cf. Allison (2012: 221-252) for a discussion of what is meant by the different aspectual/modal labels used here. In that reference the terms completive/incompletive aspect are used for what I refer to here as perfective/imperfective aspect.

Although a variety of aspectual/modal codings can occur in either the protasis or apodosis of conditional constructions, far and away the most frequent aspectual/modal coding in the protasis is the perfective aspect, and the most frequent aspect/mode of the apodosis is irrealis mode. The combination of the two (perfective aspect in the protasis and irrealis mode in the apodosis of conditional constructions) is clearly the most frequent pattern, representing a little under half (41 of 93) of all the conditional constructions in the corpus. Further, almost 70% (41 of 59) of occurrences of that aspectual/modal pairing have a conditional interpretation. So, even though no aspectual/modal pairing exclusively leads to a conditional interpretation, the combination of perfective in the protasis and irrealis in the apodosis is frequently interpreted as a conditional construction. Use of the irrealis in the apodosis sets up a possible situation whose realization is conditioned upon the situation presented in perfective aspect in the protasis.

However, since there are no exclusive morphosyntactic clues to help the hearer evaluate whether a construction is conditional or temporal in nature, the larger discourse context must be taken into consideration, and even then, there are cases where either a conditional or temporal interpretation is possible.[9] This can be illustrated with the following example where the protasis allows for either interpretation.

(2)

Kanía	wási	n	ndá-u	fo	to	só,
therefore	advice	MOD.M	IPFV-1SG	give.APPL	2SG.F.IO	DET.M

[wi-sə-m	ā	lū]P	[**aro**,	má-g	gə	rə.]Q
husband-LINK-2SG.F	3SG.M.PFV	come	then	IRR-2SG	say	3SG.M.IO

‘Therefore the advice that I’m giving you, when/if your husband comes, then you will tell him (it).’

Often the temporal or conditional interpretation of the protasis is influenced by the hearer’s real world knowledge in addition to the discourse context. So, for instance in the following example, the context is that an older man who is close to dying wants to give his son some last words of advice. The protasis is interpreted temporally because of this discourse knowledge in combination with our real world knowledge that everyone dies.

(3)

Ló	n-g-u,	[sə́	ro	wō	mādə]P	[**aro**,
child	MOD.M-POSS-1SG	day	MOD.M	1SG.PFV	die	then

tá-g	ha	gərəm	amán	wa.]Q
PROH-2SG	do.APPL	woman	trust	NEG

‘My son, when I die, don’t trust a(ny) woman.’

In the following example, the protasis is in perfective aspect while the apodosis is in the imperfective. The free translation uses the conditional marker ‘if’ but ‘when’ would also be appropriate.

[9] As determined by discussions with a native speaker of the language for a number of the sentences identified as ‘conditional’ by the discourse context.

(4) Tíā dó [blō n ā hən nyi ro əl
olden.times DET.F man MOD.M 3SG.M.PFV do thing.ABSTR MOD.F 3SG.F.NEUT

ɓāse]P [**aro**, mansən ndá-l ha rə bigə́.]Q
be.bad then chieftaincy IPFV-3SG.F do.APPL 3SG.M.IO fine

'In olden times, if a man did something wrong, then the sultanate would give him a fine.'

Given that there are no exclusive formal clues to distinguish conditional constructions from certain temporal constructions in languages like Makary Kotoko, it would be interesting to devise a psycholinguistic test to evaluate whether the semantic conditional/temporal distinction is less robust in the minds of monolingual speakers of such languages.

1.3 Conditional constructions coded with *sə́ ro (gí) ... aro.* In a number of Chadic languages, the protasis generally begins with a marker comparable to English 'if' (e.g. Hausa: *ìdan* (Newman 2000: 125-127); Baraïn: *tò* (Lovestrand 2012: 202-203); Lamang: *vìtá* (Wolff 1983: 247-8); Miya: *kwáa* and *tá(n)* (Schuh 1998: 372-378); Goemai: *d'à* or *là* (Hellwig 2009: 323-326); Buwal: *màdā* or *āndzā* (Viljoen 2013: 576-577)).[10] As we saw above, this is not usually the case for Makary Kotoko. Of the ninety-three instances of the use of *aro* in a conditional construction in the corpus, seventy seven of them have no overt coding of the protasis comparable to English 'if' or French 'si'. Example (3) given earlier and example (5) directly below, however, illustrate the use of the marker *sə́ ro* 'when/if' which, as its gloss suggests, can code temporal or conditional protases. A variant form of this marker is *sə́ ro gí*. There doesn't appear to be any semantic distinction between the two forms and native speaker's intuitions concur. *Sə́ ro (gí)* occurs a total of twenty seven times in conjunction with *aro*. Sixteen of those times the sentence can have a conditional interpretation, as in the following example, where the protasis is a type of non-verbal predication while the apodosis is in the irrealis mode.

(5) [Sə́ ro nda ngó a lībū]P **aro**, [m-ə́l gē.]Q
day MOD.M be.at.M PREP.2G.M PREP pocket then IRR-3SG.F be.finished

'If it (i.e., money) is in your pocket, it'll (soon) be finished.'

Elicited examples of conditional constructions (using French as the language of interaction) invariably begin with *sə́ ro (gí)* likely due to the presence of 'si' in the French sentences provided as input. This point brings out the value of using a corpus of texts to analyse aspects of the grammar of a language instead of relying on elicited sentences.

1.4 Conditional constructions coded without *aro.* Although most of the conditional constructions in the corpus contain *aro*, there are about ten instances where a conditional interpretation is obtained with either the contrastive marker *de* or the adversative *dəmá* 'but' occurring between the protasis and apodosis (with *sə́ ro (gí)* occurring at the beginning of the protasis in a couple of instances). I'll address each of these in turn.

[10] But not Buduma, where the marker *ŋə́* glossed as 'si' in French comes between the protasis and apodosis. However, there is a marker *wánə̀* which precedes the protasis, but Awagana glosses it 'auparavant' ('before') (Awagana 2010: 177).

In its primary function, the contrastive marker *ɗe* occurs after a fronted argument and is followed by a pause. It is used to switch the addressee's attention from one established participant in the discourse to another (cf. Allison 2012: 449-455 for details).[11] Interestingly, when *ɗe* occurs in conditional constructions, it generally occurs with pairs of conditional sentences, signalling contrasting conditions in the sentences. Like *aro*, it attaches prosodically to the end of the protasis, shown in the example below by a comma after *ɗe*. However, since its function is broader than the sentence in which it occurs, I set it outside the bracketing of the protasis and apodosis for each pair of conditional constructions. Example (6) below is taken from a folk tale in which a lion offers to help a pregnant woman hoist a water jar on her head. Nonetheless, he places the following conditions on providing his help.

(6) Ji ro mə́-g wē dó,
thing.CONC MOD.F IRR-2SG give.birth DET.F

[ndó blōse]P **ɗe**, [sabá n-g-u.]Q
PRES male CONTR friend MOD.M-POSS-1SG

[Ndó gərəm]P **ɗe**, [m-ú sī do gərəm nó-g-u.]Q
PRES female CONTR IRR-1SG take as wife MOD.F-POSS-1SG

'The thing that you'll give birth to, if it's male, (he'll be) my friend. If it's female, I'll take (her) as my wife.'

The primary function of the adversative *ɗamá* 'but' is to mark a contrast between two propositions (cf. Allison 2012: 519-521 for details). In the two instances in the corpus where it occurs in a sentence with a conditional interpretation, the apodosis is an interrogative clause. The additional semantic contribution of *ɗamá* in both instances appears to be to convey that the questioned consequent in the apodosis is not expected to occur, though with only two examples in the corpus it is difficult to evaluate. Unlike *aro* and *ɗe*, *ɗamá* prosodically attaches to the beginning of the apodosis. In example (7) below I bracket it with the apodosis as it is semantically connected to it. This example comes from a folk tale. In this story, the quick witted jackal has been caught by some hunters at the outskirts of town as they set off on a hunt, and been tied to a tree to await their return. The dim-witted hyena comes across the jackal and asks why he's tied to the tree. The jackal replies that he's the imam for the village and in exchange for leading the townspeople in their prayers, they give him a goat to eat each day. This leads the hyena to ask the question below.

[11] The marker *ɗe* was tentatively called a 'switch reference' marker in (Allison 2012: 449). A more appropriate label might be a 'switch topic' marker given the general use of the expression 'switch reference' in linguistics.

(7) [Sə́ ro gí, don da, wō lū]P,
day MOD.M COMP 1SG.IND CONTR 1SG.PFV come

[**ɗamá** m-í ha hən nyi ro dó wo?]Q
but IRR-3PL do.APPL 1SG.IO thing.ABSTR DEM.F DET.F POL

'If I came, would they do this (same) thing for me?'

Having focused in this first section on the form of conditional constructions in Makary Kotoko, I now turn my attention to their function.[12]

2. Function of Makary Kotoko Conditional Constructions

I begin by considering the semantics of conditional constructions (2.1), and then their functions in discourse (2.2). I restrict myself to those constructions that make use of *aro* (with or without *sə́ ro (gí)*). That is, I will limit my discussion below to the ninety-three conditional constructions for which the aspectual/modal pairings of their protases and apodoses were given in Table 2 earlier.

2.1 Semantic classification of conditional constructions. Both Taylor (1997: 301-302) and Thompson, Longacre & Hwang (2007: 255-262) propose classifications of conditionals on semantic grounds. Table 3 synthesizes the distinctions proposed by both approaches.[13]

Table 3: Semantic classifications of conditionals

<table>
<tr><th colspan="3">T,L&H (2007)</th><th>Taylor (1997)</th></tr>
<tr><td rowspan="3">Reality</td><td colspan="2">Present</td><td rowspan="3">Factual</td></tr>
<tr><td colspan="2">Habitual/Generic</td></tr>
<tr><td colspan="2">Past</td></tr>
<tr><td rowspan="3">Unreality</td><td colspan="2">Predictive</td><td rowspan="2">Hypothetical</td></tr>
<tr><td rowspan="2">Imaginative</td><td>Hypothetical</td></tr>
<tr><td>Counterfactual</td><td>Counterfactual</td></tr>
</table>

I have sought to categorize the conditionals in the Makary Kotoko corpus based on Thompson, Longacre & Hwang's (2007) classification. The categorization is represented in the series of tables beginning with Table 4 which give the aspectual/modal pairings for the protasis and apodosis of each conditional construction classified according to the semantic distinctions proposed by Thompson, Longacre & Hwang (2007). The sometimes challenging process of classifying conditional constructions according to this semantic classification has raised a few issues that I

[12] I have not included here a discussion of concessive conditionals (*even if*), negative conditionals (*if not*), or necessary conditionals (*only if*) as these are adequately described in Allison (2012) (Cf. for concessive conditionals: §29.8 (pp.517-519); negative conditionals: §29.10 (pp. 521-522); and necessary conditionals: §29.15 and 29.16 (pp.525-526)).

[13] This synthesis is based on Nicolle (2017). Taylor speaks of a "gradience of epistemic likelihood of the protasis ranging from factual conditionals … through hypothetical conditionals … to counterfactuals" (1997: 302).

will address progressively as I present my findings. Table 4 gives the aspectual/modal pairings for the protases and apodoses of Present Reality conditionals in the corpus.

Table 4: Aspectual/modal coding of Present Reality conditionals in Makary Kotoko

		Protasis		
		NEUT	NON-V	
Apodosis	PFV		1	**1**
	NEUT	1	1	**2**
	NON-V		1	**1**
		1	**3**	**4**

Table 4 and the subsequent tables are patterned after Table 2 but only include the relevant aspectual/modal pairings. Though only four instances of Present Reality conditional constructions have been found in the corpus, it is noteworthy that non-verbal predications (which have no aspectual/modal coding) are most frequent in the protasis. I have categorized the example below as a Present Reality conditional. The leopard and the monkey are friends, and the leopard wants the monkey to teach him how to jump through the trees, so he asks:

(8) [wáādə nda lə bás]P [**aro**,
trust be.at.M PRO INTENS then

gə i hən yó go, wá?]Q
2SG.NEUT teach 1SG.IO LP PREP TAG

'If you really trust me (lit. if trust is really there), then you teach me, eh?'

Table 5 gives the aspectual/modal pairings for the protases and apodoses of Habitual/Generic Reality conditionals in the corpus.

Table 5: Aspectual/modal coding of Habitual/Generic Reality conditionals in Makary Kotoko

		Protasis		
		PFV	NEUT	
Apodosis	PFV	2		**2**
	NEUT	6	1	**7**
	IPFV	1		**1**
	IRR	2		**2**
		11	**1**	**12**

I have categorized 12 conditional constructions as Habitual Reality conditionals. The only overlap of aspectual/modal pairings with Present Reality conditionals is with neutral aspect in both the protasis and apodosis. Perfective aspect in the protasis and neutral aspect in the apodosis is the most frequent pairing for Habitual/Generic Reality conditionals. The example below occurs at the

conclusion of a narrative in which an old woman surpasses the devil in her devilry. This sentence gives the moral of the story:

(9) [Gəlk'a nō só hó ro-ngó]P [**aro**,
old.woman 3SG.F.PFV enter house MOD.F-POSS.2SG.M then

m-ə́l kə́l hó ro-ngó.]Q
IRR-3SG.F destroy house MOD.F-POSS.2SG.M

'If an old lady enters your home, then she'll destroy your home.'

Table 6 gives the aspectual/modal pairings for the protases and apodoses of Past Reality conditionals in the corpus.

Table 6: Aspectual/modal coding of Past Reality conditionals in Makary Kotoko

		Protasis
		PFV
Apodosis	NEUT	1
	NON-V	1
	IPFV	3
		5

The aspectual/modal pairings of Past Reality conditionals overlap with Habitual/Generic Reality conditionals at two points: (i) with perfective in the protasis and neutral aspect in the apodosis, and (ii) with perfective in the protasis and the imperfective in the apodosis. Using Thompson, Longacre & Hwang's (2007) system, one wonders what to do with examples like the following which refers to an habitual event in the past, thus combining their Habitual/Generic Reality category and their Past Reality category. Using Taylor's (1997) system would avoid this problem as it lumps all Reality conditionals into a Factual category. The example below is drawn from an historical narrative, a portion of which is about Rabih Fadlallah (known as Rabah in French) who, toward the end of the 19th century, briefly established a powerful empire in a region of Africa which included the Kotoko area.

(10) [Mēgə n ē jí gə kadə́-n rə]P [**aro**,
people MOD.PL 3PL.PFV refuse PREP follow-INF 3SG.M.DO then

a la dán.]Q
3SG.M.NEUT kill 3PL.do

'If people refused to follow him, then he would kill them.'

Of the ninety-three conditional constructions containing *aro* in the corpus, twenty one of them are Reality conditionals. This means that the majority of conditionals in the corpus (72 of 93) are of the Unreality type. Yet only two of the Unreality type are Imaginative Counterfactual conditionals. Both instances have perfective aspect in the protasis and irrealis mode in the apodosis. There is nothing about the morphosyntax of the examples which would distinguish them

from either of the other Unreality conditionals (Imaginative Hypotheticals and Predictives) or the Reality conditionals. The evaluation of the counterfactual nature of these conditionals is entirely determined by context. Consider for instance example (11), drawn from another historical narrative text.

(11) [Wō ka rə]P [**aro**, m-ú la rə,]Q
1SG.PFV find 3SG.M.DO then IRR-1SG kill 3SG.M.DO

ɗàmá wō ka rə wa.
but 1SG.PFV find 3SG.M.do NEG

'If I had found him, I would have killed him, but I didn't find him.'

The evidence that it is in fact an Imaginative Counterfactual conditional, comes from the final clause introduced by the adversative *ɗamá*, which negates the content of the protasis, thus showing that the conditional clause is contrary to fact.

Table 7 gives the aspectual/modal pairings for the protases and apodoses of Imaginative Hypothetical Unreality conditionals in the corpus.

Table 7: Aspectual/modal coding of Imaginative Hypothetical Unreality conditionals in Makary Kotoko

		Protasis					
		PFV	NEUT	IPFV	IRR	VOL	
Apodosis	PFV	2					**2**
	NEUT	5	1	1			**7**
	NON-V	2					**2**
	IPFV	2					**2**
	IRR	12		2	2		**16**
	IMP	4		2	1	2	**9**
		27	**1**	**5**	**3**	**2**	**38**

The Imaginative Hypothetical Unreality conditionals are the most frequent within the corpus and have the most diverse aspect/mode codings, though the perfective dominates in the protasis, and irrealis mode in the apodosis. I have categorized the following example as hypothetical. It is drawn from a folk tale where the sultan has given his subjects the impossible task of building him a home between heaven and earth. The people respond that they will, once he has marked out the lines for the foundation. His response follows:

(12) [Don da, m-ú kɔ́ re fyū hé]P [**aro**,
1SG.IND CONTR IRR-1SG draw 2PL.IO line LP then

do kíɗa ró-ən.]Q
go.2PL.IMP work MOD.F-POSS.2PL

'If it's me that has to mark out the lines for you, then go about your work (i.e., get lost!).'

Table 8 gives the aspectual/modal pairings for the protases and apodoses of Predictive Unreality conditionals in the corpus.

Table 8: Aspectual/modal coding of Predictive Unreality conditionals in Makary Kotoko

		Protasis				
		PFV	NEUT	NON-V	VOL	
Apodosis	IRR	25	1	4	1	**31**
	VOL	1				**1**
		26	**1**	**4**	**1**	**32**

The apodosis is predominantly in the irrealis mode which makes sense since the irrealis can be used for possible future contexts – which one can make predictions about. I have categorized the following example as Predictive. A woman has three suitors, each with supernatural powers that they use one day in order to resurrect her from the dead. The story concludes with the following question:

(13) [yá-l sī wi]P [**aro**, mə́-l sī yagí?]Q
VOL-3SG.F take husband then IRR-3SG.F take who?

'If she wants to take a husband, then who will she take?'

In distinguishing Imaginative Hypothetical Unreality conditionals from Predictive Unreality conditionals, Thompson, Longacre & Hwang note that the former are 'those in which we *imagine* what might be ... and [the latter are] those in which we *predict* what will be' (2007: 255, italics in original). It is unclear from their description whether one should evaluate the protasis, the apodosis, or the conditional construction as a whole in order to determine whether we are imagining or whether we are predicting unreal situations. Indeed, I found it difficult for certain examples in the Makary Kotoko corpus to decide if an Unreality conditional should be categorized as Imaginative Hypothetical or Predictive. It seems to depend on whether I was focusing on the protasis (often leading to a hypothetical evaluation) or the apodosis (resulting in a predictive evaluation in some cases) or the entire conditional construction (leading to vacillation). Taylor's (1997) system would avoid this problem as it would lump these two types of Unreality categories into a single Hypothetical category.

This subsection has examined the semantic categorization of conditional constructions in Makary Kotoko. There were no systematic morphosyntactic clues to help distinguish between different semantic types of conditionals, though tendencies were noted.

The determination of the semantics of the different conditional constructions depended far more on discourse context (and real world knowledge in some cases) than on morphosyntactic clues. It was also found that Thompson, Longacre & Hwang's (2007) proposed semantic classification was too fine grained at points, while Taylor's (1997) more coarsely grained system was more easily applied. I now turn to a discussion of the discourse functions of conditional constructions.

2.2 Discourse functions of conditional constructions. Having considered the semantics of each of the conditional constructions in the corpus, I consider now their discourse function within the texts in which they occur.

The predominant genre of the corpus is narrative, though for a number of the texts, the narratives are couched between an exhortation and a moral, and are thus being used to drive home the larger point being made by the speaker. Many of the narrative texts contain large portions of direct speech, as participants in the narrative interact verbally with each other. Indeed, the most frequent context in which conditional constructions occur in the corpus is direct speech. Example (8), given earlier as an example of a Present Reality conditional, is in direct speech. In fact, all the Present Reality conditionals in the corpus (albeit only four in total) are in direct speech. For each semantic type of conditional, with the exception of Past Reality conditionals, there are instances in direct speech.

Conditionals also occur in the introduction of texts to provide a framework for the following discourse. Example (4), given earlier, is the first line of an historical narrative. Immediately following the text initial time frame (*tíã dó* 'in olden times'), the conditional construction sets the stage for an explanation of how people would go about paying off their fines. All the semantic types of conditionals, except Present Reality conditionals and Counterfactual Unreality conditionals, occur in the introduction of a text.

Closely related to this function is the use of conditionals as part of the means used to set up a subsequent episode or point of discussion within the ongoing discourse. For instance, in an exhortative text, the speaker is relaying advice that he'd received from an elder about appropriate behavior in particular social contexts. As this is an exhortative text, the apodosis in each case is in the imperative. The introduction to the text makes use of a conditional construction to set up the story.[14]

> Shetima Guskro gave us advice. (This is) the advice that he gave: situations that occur in the world, (if) they find you, or (if) you find (yourself in) those situations, then [*aro*] **take time to reflect** (before acting) …

The speaker then addresses three scenarios, each being introduced in part with a conditional construction.

> He told me, first, (if) two friends become angry (with each other, and) you enter into the middle of them, then [*aro*] **don't take sides**. …

[14] Due to the length of the examples, I only provide the English translation. The conditional construction is underlined in each example. Words given in parentheses are not in the Makary Kotoko text but their addition helps understood the flow of the story. The position of the marker *aro* (or *dé*) is given in square brackets following its translation 'then', and the apodosis is bolded.

The second scenario contains the concessive conditional marker *yahe* 'even if'.[15]

> Second, a woman and (her) husband, even if they become angry (and) you tell them to remain calm then [*aro*] each one calms down then [*aro*] they stop (being angry with each other), then [*aro*] **get yourself out of there**.[16]

The third scenario uses the contrastive marker *ḍe* instead of *aro* to introduce the apodosis. Section 1.4 discussed the use of *ḍe* in conditional constructions. Its function here is broader then just introducing the apodosis of the conditional construction. It also contrasts the third scenario with the preceding two.

> Third, children with their parents, (and he's) your friend, (if) he gets in an argument with his parents then [*aro*] you incite him: "Don't agree with them," (and) he leaves them and you (two) run off, then [*ḍe*] he (i.e. Shetima Guskro) said **don't do that**.

With the exception of Present Reality conditionals and the Counterfactual Unreality conditionals, all the other semantic types of conditionals are used to set up a subsequent event/episode or point of discussion within the ongoing discourse.

Lastly, conditionals also occur in the conclusion of texts. Example (9), given earlier, comes at the end of a narrative text and warns the listeners about the dangers of allowing an older woman into their home. The corpus contains examples of Habitual/Generic Reality conditionals and Predictive Unreality conditionals in the conclusion of a text.

Table 9 summarizes the findings of this section, presenting the discourse functions of the conditional constructions of different semantic types.

Table 9: Discourse functions of conditional constructions

T,L&H (2007)			Taylor (1997)	DS	Intro.	New episode	Concl.
Reality	Present		Factual	✓			
	Habitual/Generic			✓	✓	✓	✓
	Past				✓	✓	
Unreality	Predictive		Hypothetical	✓	✓	✓	✓
	Imaginative	Hypothetical		✓	✓	✓	
		Counterfactual	Counterfactual	✓			

3. Conclusion

In this paper I have presented both the form and function of conditional constructions in Makary Kotoko. I began with a broad discussion of the sequential marker *aro* 'then', which can be used to

[15] The marker *yahe* 'even if' actually occurs at the end of the protasis (i.e., clause finally) (cf. Allison 2012: 517-519 for details).

[16] This example shows three occurrences of *aro* 'then'. The first two are used in the elaboration of the protasis which ties in with the broader functions of the marker *aro* discussed in section 1.1.

temporally or logically link clauses containing various aspectual/modal codings. It generally links itself prosodically to the preceding clause, though semantically it is connected to the following clause. I followed this up with a discussion of the conditional constructions containing *aro*, demonstrating that conditional constructions are morphosyntactically indistinguishable from certain types of temporal constructions. Real world knowledge and discourse context need to be taken into consideration in order to determine if a construction has a conditional interpretation. Nonetheless, the most frequent pairing of aspectual/modal codings to receive a conditional interpretation is with perfective aspect in the protasis and irrealis mode in the apodosis. I concluded the first section by presenting conditional constructions that use other coding devices in addition to or other than the sequential marker *aro*.

In the second half of the paper, I addressed the semantics and discourse functions of conditional constructions in Makary Kotoko. With respect to their semantics, there were no systematic morphosyntactic clues to help distinguish between the different semantic types of conditionals as proposed by Thompson, Longacre & Hwang (2007) and Taylor (1997). Instead, certain tendencies were noted. Present Reality conditionals were most frequent with non-verbal predication in the protasis. The most frequent Habitual/Generic Reality conditionals had perfective aspect in the protasis and neutral aspect in the apodosis. Past Reality conditionals only had perfective aspect in the protasis. The two instances of Imaginative Couterfactual Unreality conditionals both had perfective aspect in the protasis and irrealis mode in the apodosis, which was also the most frequent aspectual/modal pairing for the Imaginative Hypothetical Unreality conditionals and the Predictive Unreality conditionals. Within discourse, conditional constructions were used most often within direct speech (due to the nature of the corpus), but also in scene setting contexts like in the introduction to a story and to introduce a new topic into the discourse. In addition, conditionals also occurred in the conclusion.

Given that there are no exclusive formal clues to distinguish conditional constructions from certain temporal constructions in Makary Kotoko, a potential point of future research would be to devise and apply a psycholinguistic test in order to evaluate whether the semantic distinction of a conditional protasis versus a temporal protasis is less robust in the minds of monolingual Makary Kotoko speakers. Additionally, it would be good to gather and analyse additional non-narrative texts in order to determine if the findings of this paper, based primarily on narrative texts, hold true for those genres as well.

Abbreviations Used

1	1st person	LP	locative particle
2	2nd person	M	masculine
3	3rd person	MOD	marker of modification
ABSTR	Abstract	NEG	Negation
APPL	Applicative	NEUT	Neutral aspect
COMP	complementizer	NONSPEC	non-specific marker
CONTR	contrastive marker	NON-V	Non-verbal predication
DEM	demonstrative	P	protasis
DET	definite determiner	PFV	Perfective aspect
DS	direct speech	PL	plural
F	feminine	POL	polar question marker
IMP	Imperative	POSS	possessive marker
IND	independent pronoun	PREP	preposition
INF	infinitive marker	PRO	locative/inanimate pronoun
INTENS	intensifier	PROH	Prohibitive
IO	indirect object pronoun	Q	apodosis
IPFV	Imperfective aspect	SG	singular
IRR	Irrealis mode	TAG	tag question marker
LINK	linking element	VOL	Volitive mode

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