FOLIA ORIENTALIA
VOL. 47 2010

Zygmunt Frajzyngier and Erin Shay
University of Colorado
Boulder

TENSE AND ASPECT IN CHADIC: A TYPOLOGICAL OVERVIEW

Abstract

This preliminary overview covers three types of formal distinctions found in Chadic languages. The first has to do with whether a language has a single tense/aspect system or whether it has separate systems of tense and aspect. The second distinction has to do with whether the language has only one tense and aspect system, used in all types of constructions, or whether the language has two (or more) tense and aspect systems, with different systems being used in different types of constructions. The third issue addressed in the study is the internal structure of tense and aspectual domains, viz. the number and types of distinctions coded by grammatical systems in various languages. The formal means taken into consideration in this preliminary sketch are inflectional changes on verbs and pronouns; auxiliary verbs; and temporal adverbs.

1 Introduction

The present study proposes a first typology of tense and aspectual systems in Chadic languages. The aim of the study is to provide a brief outline of the major categories that exist rather than to provide a systematic account of all distinctions existing in languages described so far. The typology covers three formal distinctions found in Chadic languages from all four branches (East, West, Central, and Masa). The first formal distinction has to do with whether a language has a single tense/aspect system (T/A) or whether it has separate systems of tense and aspect (T, A). A language has a single (T/A) system if a given clause can have only one marker of either aspect or tense. A language has separate tense and aspect systems if both a tense marker and an aspect marker can occur in the same clause.

Independent of whether tense and aspect constitute one or two functional domains, some languages have two tense/aspectual systems and other languages have only one tense/aspectual system. In some languages with two tense/aspectual systems, the use of system rather than another codes functions outside the domains of tense and/or aspect. An interesting question, to which only a partial answer has been given so far, is what those other functions are. We address this question in a subsequent section.

The third formal distinction has to do with the internal structure of tense and aspect systems and the values of temporal and aspectual categories. In some languages, the internal structure of the tense/aspect system(s) is not based on a contrast among several marked values but rather on the contrast between an unmarked form, which does not code a specific tense or aspect, and one or more marked forms. Thus, a past tense form and a present tense form are not in contrast with each other but rather in contrast with the unmarked form. In these systems, the unmarked form may refer to either past or present time; the form marked for past tense refers to a specific time in the past; and the form marked present refers to a time concurrent with another event or specific time in the present. Future tenses are reported in many grammars of Chadic languages, but other tenses, especially past and present, are reported only sporadically, and there are some languages where no formal coding of tenses has been reported.

All existing Chadic grammars report the presence of several aspects in each language. Identified aspects include the unmarked form; completive; incomplete; stative; continuative; progressive, i.e. ongoing at the time of speech or some other time; inceptive; and terminative. Labels assigned to various tenses and aspects in grammars written in English, French, or German not only reflect the different linguistic terms used in those languages but also may reflect different assumptions about the functions of the categories described. It is often the case that these assumptions are not made explicit.

The data for the present study come from published sources and from our own field notes. In several cases we propose new analyses for own previous descriptions.

2 Terms used

The term 'aspect' is used in the conventionally agreed-upon sense of describing the status of the event. We do not link the status of event to a specific point in time, as this additional narrowing does not characterize aspect in Chadic.

The term 'tense' refers to the grammatical category coding the time of the event in relation to the time of speech or some other temporal reference point.

The term 'mood' is used in reference to the grammatical category coding the relationship of the speaker to the proposition. We discuss the category mood in this paper only when it is intertwined with the categories tense and aspect.

As a working approach, we accept the classification of Chadic into four branches, West, Central, East, and Masa (Newman 1977). Classification into three branches will not materially alter the discussion the follows.

3 Languages with a single tense/aspect system

At least two West Chadic languages, Hausa and Miya, and one Central Chadic language, Mina, appear to have a single system where tenses and aspects are part of the same domain. A single-system analysis is explicitly postulated for Miya (Schuh 1998) and for Mina (Frajzyngier et al. 2005). For Hausa, Newman 2000 includes mood as part of the same conjugational system, but he does not explicitly address the issue of how many systems there are.

In Hausa, the categories tense, aspect and mood (except for the imperative) are marked on pronominal subject forms that precede the verb. There is no unmarked form. Analyses of the values of these categories differ from one description to another, but it appears that only one form codes tense (future), while the remaining categories code aspect and mood. Markers coding aspect cannot co-occur in the same clause with the future-tense marker.

For Miya, Schuh 1998 postulates one tense (future); two aspects, labeled 'perfective' and 'imperfective'; and several moods. The imperative is marked by the bare verb form. Based on Schuh's description, there appears to be a constraint whereby the future-tense marker cannot co-occur with aspectual markers.

Mina uses leftward and rightward reduplication of the verb to code two tenses. Other tenses, and all aspects, are coded by auxiliaries or other markers preceding or following the main verb. The future tenses and the dependent past tense are coded through leftward repetition of the verb. The language also codes habitual perfect (stative), completive, and iterative aspect. Aspect markers cannot co-occur with tense markers. The language also has an unmarked construction, consisting of the subject and the unmarked verb, which may have a variety of temporal and aspectual interpretations, all in pragmatically dependent clauses (see section 5). The unmarked verb may refer to the time of speech:

(1) *à* *zèbér* *mà* *tùkón*
3SG follow word 2SG
'He is following your word.' (about an interpreter during a recording session)

Here, the unmarked verb has past-time reference and perfective aspectual value:

(2) *hà* *lìm-é* *nòk* *mí*
2SG see-GO 1PL.INCL what
'What have you found for us?'

In some languages with a single tense/aspect system, all tense/aspect categories are coded by auxiliaries or other markers outside of the verb. When auxiliaries and other markers occur between the subject pronoun and the verb, they often fuse with the subject pronoun to produce portmanteau morphemes whereby a single form codes person, number as well as tense or aspect. This is the case in Hausa and, to a certain degree, in Miya. In Mina, which also has a single tense and aspectual system, some tenses are coded on the verb, while other tenses and all aspects are coded by auxiliaries that precede or follow the verb. Here is an illustration of the single tense/aspect system in Masa (East

Chadic), to supplement the information from West and Central Chadic languages just discussed.

For Masa, Melis (1999) posits three different aspectual forms, coded by tone on the verb stem. He labels these aspects *inaccompli* (incomplete further in this study), *accompli* (completive, further in this study), and unmarked. Melis describes the unmarked form, characterized by Low(-Low) tone, as coding the imperative or the injunctive, i.e., a wish or desire on the part of the speaker. Here are examples with verbs in the unmarked form (glossed ø). (English glosses and translations are ours. A number of phonetic symbols used in Melis's transcriptions could not be updated, but the importance of the examples lies in the distribution of the forms rather than in the forms themselves.)

làk-kì	*z&*	*àmù*	***yì-kì-t***	*á là*	*mì*	*jùf-k&yà*
remain(Ø)you	with	him	call(Ø)you-him	that	PRED.2	husband-you

'Stay with him, and call him your husband.' (Melis 1999: 203)

In the next example, the unmarked verb contrasts with the verb marked *accompli*, in this case by high tone on the verb stem. This is the function that Melis terms 'injunctive':

àm	***jóp***	*sà*	*má*	*càf-mà*	*á*	*àm*	***l-ùm***	*gúmù*
he	ask(AC)	man	CONJ	forge + DET	that	he	make(Ø)-him	hoe

'He asked the blacksmith to prepare him a hoe.' (Melis 1999: 203)

The fact that the functions of the unmarked form are limited to the imperative and the injunctive suggests that the functions of the unmarked form lie outside the domain of aspect.

Melis describes the function of the completive form, also marked by tone on the verb stem, as coding an event that was completed before the time of speech or another temporal reference point. This function is consistent with that of the completive (sometimes called perfective) aspect described for other Chadic languages:

nà	*yòw*	*céy-n*	*góyó*	*dúw-mù*	*lùt-mú*
she	take(AC)	sorghum-DET.	DIR	thresh(AC)-it	grind(AC)-it

'She got out the sorghum, threshed it, and ground it.' (Melis 1999: 203)

For the incomplete, Melis posits a wide range of functions: 'It can express an ongoing process or its opposite, a process that is potential or non-realized at the time of speech or some other point referred to by the speaker. It is also used to refer to a habitual event or to events generally held to be true (for example, proverbs and sayings).'[1]

The incomplete can also be used with future time reference, where it may refer to a punctual event.

Future punctual:

nà	*s-òm(à)*	*wà*	*vàyt*	*kàyn*	*nà*	*Æàr-àmú*
she	dry(AC)-it	ACH	today	DEM	she	crush(INAC)-it

'She has already dried it, today she will crush it.'

àm	*mà-y(à)*	*wà-nà*	*[1]úgól-òn-tà*	*hòyòk-òm*	*góyò*
he	come(INAC)-DIR	ACH + DEM	cut(INAC)-me-it	side-it	DIR

'When he comes, you can cut me through the middle.'

The wide variety of functions posited for the incomplete form, and the fact that some of these functions, e.g., future punctual and present ongoing, appear to be mutually incompatible, suggests that the form Melis identifies as incomplete may in fact be the functionally unmarked form. Evidence is provided by the fact the incomplete form, and only the incomplete form, can occur with preverbal auxiliary verbs coding a number of functions, including future time reference, the beginning of an event, the end of an event, repetition of an event,

[1] 'Il peut servir à exprimer un procès en train de se réaliser ou au contraire virtuel, non réalisé, non actualisé au moment de l'énonciation ou au moment auquel se réfère le locuteur. Il est aussi employé pour rendre compte soit d'un procès habituel, soit d'un procès à valeur de vérité générale (par exemple dans les proverbes et les dictons)' (Melis 1999: 195).

extension of the event in the past, and others. Some of these functions are incompatible with the posited function of the incomplete. Moreover, the auxiliary verb before the incomplete verb form may itself be marked completive. If the incomplete form were truly an aspectual form, the result would be a clause coding two different aspects:

dùwèy-n	***tùn***	***zàl***	*kày-n...*
pot + SPEC.	put(**AC**)	boil(**INAC**)	DEM

'When the pot started to boil.'

These facts confirm that the incomplete is the functionally unmarked verb form. The fact that this form is the only form that can co-occur with a marker coding future time confirms that Masa has a single tense/aspect system in which a marker of tense cannot co-occur with a marker of aspect.

4 Languages with separate tense and aspect systems

The existence of separate tense and aspectual systems has been observed in West, Central, and some East Chadic languages. The evidence for the existence of separate tense and aspectual systems is provided by the co-occurrence of tense markers and aspect markers in the same clause.

In Mupun (West Chadic), tenses are coded by lexical adverbs of time in clause-initial position. The default position for adverbs of time *qua* adverbs is clause-final. As tense markers, adverbs of time are phonologically reduced. The language also has four aspectual markers consisting of auxiliaries that precede the verb. Evidence that tense and aspect constitute separate systems is that tense markers can co-occur with aspectual markers. In this example, the remote past marker *də* co-occurs with the progressive aspect, marked by the preposition *pə́*:

(3)	*də*	*wur*	*pə*	*cin*	*a*	*siit*	*maar*
	PAST	3SG	PROG	do	COP	work	farm

'he used to do farm work'

Here is an example of the remote past used with the perfective aspect:

(4) *watoo, jep də də nji mo kə dîlaŋ*
that is children REL PAST ancestral spirits PL PERF swallow-PL
'That is, children that the ancestral spirits have swallowed . . .'

In Pero (West Chadic), aspects are marked by suffixes to the verb and by auxiliaries. There is also a preverbal marker *tà* (the vowel can change under certain phonological conditions) which marks potential modality and, by functional extension, future tense. (This analysis supersedes that in Frajzyngier 1989, where the form *tà* was postulated to be a future tense marker.) Here is the evidence that *tà* is a marker of potential modality, rather than a future tense marker (all data from Frajzyngier 1989):

(5) *púccì yòw gwándùm mà-**tù**-lù máy-cù*
long ago Gwandum COND-**POT**-put chief-3PL
'Long ago, when Gwandum wanted to select their chief.'

Here is an example in which the marker *tà* can be interpreted either as a future tense marker or as a marker of potential modality:

(6) *cà míjibà mà-pót-nà ànjíkkò kàm wée-nì*
saystranger COND-come-COMPL rich man PREP thing-3M
*cí-**tà**-múnù-n tì míjibà-ì*
REL-POT-give-BEN PREP DEF
'They say that if a stranger comes, a rich man has things that he will give/might give to the stranger.'

The marker of potential mood/future tense can co-occur with markers of the stative or completive aspect:

(7) *kínnímà cí-nì-**tà**-kàp-**áanì** kà tóom kúndùl*
deity REL-1SG-POT-talk-STAT PREP front *kundul*

'The deity I am going to talk about first is *kundul*.'

(8) *mà-**tà**-lí-**nà***
COND-POT-put-COMPL.VENT
'if he will put' (Frajzyngier 1989)

In Wandala (Central), aspects are coded by reduplication of the verb and by suffixes to the verb. Tenses are coded by auxiliaries and by tone on the verb and on pronominal subjects. Different tenses can co-occur with different aspects. Here is an example of the future tense marker *dɔ́* co-occurring with the verb *cìn* 'hear' in perfective aspect, which is formally unmarked. A transitive verb in the perfective aspect has the root form (i.e. the form without a final vowel) before an object:

(9) *yò ʃóyì ŋánnà wàtsè kwà-**dɔ́** **cìn**-ná*
well chat DEF FUT 2PL-FUT hear-3SG
kúr nà nó-ŋwàné ɔ́lvà wàndàl
2PL DEM PRES-DEF language Wandala
ŋánnà tákàtànà ɮàmá kláwà
ŋánnà tá kàtà-n-à ɮàmá kláwà
DEF 3PL want-3SG-PB world all
'Here is the chat that you will hear in Wandala and that the world desires.'

Here is an example of the imperfective aspect, coded by the root form plus the vowel *a*, with the past tense, coded by low tone on subject pronoun:

(10) *àcìnàyéddɔ́ ŋárámhùɗávgè*
*à **cìnà** yé ddɔ́ ŋárà á-m hùɗ-á*
3SG hear voice father 3SG PRED-IN belly-GEN
vgè
grave
'He heard the voice of his father in the grave.'

In Lele (East Chadic), the past and future tenses are coded by inflectional changes on the verb. Aspectual categories and one future tense are coded by auxiliaries. The auxiliaries coding aspect can co-occur with inflectional means coding tense. The following example illustrates the use of the inceptive aspect marker *se* followed by the verb 'take' in the past tense form:

(11) *tamá* ***se*** *jè* ***ày*** *kolo* *go* *nè* *ile*
woman INCEPT SW.REF take reason REF make cry
ná-ŋ́g *yàá bè* *ɓòdu*
ASSC-DEF tell DAT monkey
'The woman started to tell the monkey the reason for her crying.' (Frajzyngier 2001: 182)

In the next example, the telic aspect marker *è*, glossed as 'go', is followed by the verb 'bury' in the past tense form:

(12) *tamá-ŋ* *sòndrí* *ná* *se* *ày* *tòrò* ***è*** ***ìm***
woman-DEF fear ASSC INCEPT take hen go bury:PAST
'The woman became scared, took the hen, and buried her.' (Frajzyngier 2001: 178)

5 Languages with two tense and aspectual systems

Many descriptive studies of Chadic (and Niger-Congo) languages have reported the existence of two tense and/or aspect systems, whereby the same aspect or tense categories have different formal realizations in different syntactic environments (Jungraithmayr 1994). This phenomenon has attracted a variety of interpretations and explanations. Robert 1991 has postulated for Wolof (Niger-Congo) that each of the different aspectual forms codes focus on a different constituent of a clause. Caron 2000 postulates that in some languages, including Hausa, Fula, and others, there are special aspects for use in focus constructions. Most studies of Hausa postulate that the two aspectual systems

are selected by different types of clauses (Gouffé 1966, 1967, 1968; Caron 1986; Newman and Schuh 1974; Pawlak 1993). Newman 2000, while acknowledging distribution of two systems in different types of clauses, notes that in certain types of clauses, e.g. affirmative sequential clauses, either system can be used. He does not offer an explanation for this phenomenon, noting only that there may be slight temporal distinctions between the members of the two systems. For a number of African languages, including Hausa (Chadic), Hyman and Watters (1984) postulate a typology consisting of two focus domains. One, which they call 'auxiliary focus', is focus on tense-aspect, modality, and polarity. The other is focus on nominal constituents of the clause. The functional properties of focus on tense, aspect, or polarity are not explained. In some Chadic languages content question words may or may not be in focus, yet in some languages that have two tense/aspect systems, the same tense/aspect system is used for all content questions regardless of whether the question word is in focus or not.

Jungraithmayr (1994: 119) postulates that in Mubi, Bidiya, and Dangaléat (also called Dangla (East Chadic)), aspectual markers distinguish between semantically independent and semantically dependent clauses, and that a similar situation also exists in Hausa. Jungraithmayr also states that the movement of an element to clause-initial position triggers the choice of one rather than another aspectual form, a fact not confirmed in languages that have multiple aspectual/tense forms. Our investigation indicates that movement of a noun phrase into clause-initial position for topicalization does not trigger the use of one tense/aspectual system rather than the other (Frajzyngier 2004).

Frajzyngier 2004 postulates that if a language has two tense and/or aspectual systems that code identical temporal or aspectual values, the two systems also have functions outside the domains of aspect or time. In that analysis, members of one temporal/aspectual system are used in content interrogative clauses, comment-on-focus clauses, relative clauses, sequential clauses, some temporal or conditional protasis or apodosis clause, and, in some languages, negative clauses. These clauses have a common pragmatic status, in that they must be interpreted in connection with some other proposition or event. Aspects and tenses coded in such clauses are referred to as 'dependent', and the clauses in

which they occur are referred to as 'pragmatically dependent'. Members of the other temporal/aspectual system do not code the pragmatic status of the clause, and such clauses can be interpreted independently of any other proposition or an event. Such aspects and tenses are referred to as 'independent'. In some languages, one tense/aspect system consists of unmarked verbs, while the other tense/aspect system has overt marking of tense and/or aspect.

We now need to revise the generalizations in Frajzyngier 2004 because there are important differences across languages with respect to the distribution and functions of the multiple tense and aspectual systems. The functions coded by the choice of tense/aspectual systems are not limited to the distinction between pragmatically dependent and pragmatically independent clauses. In what follows we discuss various functions of the two systems.

As demonstrated in Frajzyngier 2004, in languages that code pragmatic dependency, dependent tenses and aspects are in complementary distribution with other means of coding pragmatic dependency, including complementizers, subordinating particles, and sequential markers coding general rather than specific time relations. In what follows we show that in languages where tense and aspectual systems code other distinctions outside the domain of tense and aspect, the use of tense and aspectual systems as coding means is in complementary distribution with other means of coding the same functions.

6 Languages that code pragmatic dependency through tense and aspectual systems

Below are some of the functions coded by the choice of tense/aspect systems in a number of languages.

6.1 Comment-on-focus clauses

The pragmatic dependency of the comment-on-focus clause lies in the fact that the focused element may be conceived as a predication of its own, as evidenced by the frequent grammaticalization of focus as a clausal expression

corresponding to 'it is X that . . .' When the focused element is not marked as a separate predication, marking of the comment-on-focus clause as pragmatically dependent may be the only indication that the focused constituent is in focus. In the following example from Hausa, Newman analyzes the adverb of time as being in focus in 6b (Newman's glosses COMPL (completive) and PRET (preterite) correspond to what we call 'pragmatically independent completive aspect' and 'pragmatically dependent completive aspect'). Note that the two clauses have exactly the same temporal and aspectual values. The only indicator that the adverb of time is in focus is the use of the pragmatically dependent aspect in the second clause:

(13a) *jiyà* *sun* *sana-ř* *dà* *mu*
yesterday 3PL:COMPL know-CAUS ASSC 1PL
'Yesterday they informed us.'

(13b) *jiyà* *suka* *sana-ř* *dà* *mu*
yesterday 3PL:PRET know-CAUS ASSC 1PL
'**Yesterday** they informed us.' (Newman 2000: 572, glosses Z.F.)

In Mina (Central Chadic), the simple verb stem is used only in pragmatically dependent clauses. In the following example, the use of the simple stem is the only indicator in the second clause that an element is in focus. The simple stem is also used in the content interrogative of the first clause:

(14) *à* *mìsíl* *mí* *à* *mìsíl* *wədá*
3SG steal what 3SG steal food
'What did she steal? She stole food!' (Frajzyngier et al. 2005)

6.2 Relative clauses

The dependent nature of the relative clause stems from the fact that it is a comment on some other noun within a sentence. If a language has two aspectual

and tense systems, only one of these systems, the dependent system, is used in relative clauses. The perfective aspect in Gidar is coded by the suffix *kà* (reduced to *k* in phrase-internal position) in pragmatically independent clauses. In relative clauses, the perfective aspect is unmarked. The following example illustrates both perfective aspect in the relative clause (unmarked) and perfective aspect (marked by the suffix *kà*) in the pragmatically independent clause (all data from Frajzyngier 2008):

(15) *krà mà-bá-n də ɬù ná dərɬíŋé*
dog NOM-sate-3M ASSC meat GEN hyena
à-mpə́r tìvé tìvé à-mɮáh-ə́k á
3M-eat road road 3M-turned toward-PRF PREP
màlpá ə́sà ə́nkílè
river drink water
'The dog, having been satisfied with the meat of the hyena that he ate on the road, stopped over at a river to drink water.'

Progressive aspect in independent clauses is coded by the form *tà* ('be') followed by subject pronouns. Progressive aspect in the relative clause is marked by the form *dàw:*

(16) *də̃ à-n də-**dàw** kày-tá*
man REL-M 3M-D.PROG want-3F
'The man who courts her'

(17) *nà-sə́n-ə́k díi má **dà***
1SG-know-3M-PRF men REL D.PROG

d-áŋ *mɻ́yɻ́*
prepare-PL medicine
'I know the men who prepare medicine'

Here is an example of the independent progressive in the first clause and the dependent perfective (unmarked) in the relative clause:

(18) *tímè gímè hɻ́wə́-k né-t* ***ctà-y***
sheep CONJ goat-F GEN-3PL PROG-3
ə́mpə́r-nə́ŋ wə́tə́-n góŋyòm màz
chew-3M-PL fruit-3M acacia REL
à-kày-án
3M-search-PL
'Sheep and Goat ate the fruit of acacia that they were looking for.' (Frajzyngier 2008)

The use of the independent progressive aspect in the relative clause yields an ungrammatical sentence:

(19) **nà-sə́n-ə́-k dĩi mə́* ***tà-y***
1SG-know-3M-PRF men REL PROG-3M
d-áŋ mɻ́yɻ́
prepare-PL medicine
'I know the men who prepare medicine'

6.3 Content interrogatives

Content interrogatives are pragmatically dependent because a question about a specific element of the clause is based on the assumption that the rest of the proposition is true. In Mina, the simple form of the verb is used in content questions:

(20) *báy zá ngwáy bàhámàn báká bá* ***dzán-á*** *nók mí*
chief COMP people Bahaman today still find-OBJ 2PL what
'The chief said, "People, what else did Bahaman find us today?"'

Compare the reduplicated form, which codes the perfective aspect in the pragmatically unmarked clause:

(21) *séy ndə̀* ***dzáŋ á*** ***dzáŋ-á*** *kə̀ɗə́m á dámù*
so go find 3SG find-DIST calabash PREP bush
'And then she found a calabash in the bush.' (Frajzyngier et al. 2005)

6.4 Sequential clauses

The sequential protasis or apodosis clause, or both, may be marked pragmatically dependent. The coding of either clause as pragmatically dependent forces its interpretation in connection with another clause. No other marker of temporal sequence is needed. In the following example from Mina, the second clause has dependent perfective aspect, coded by the simple verb stem:

(22) *zə́m zə́m zə́m á zə́m zá*
eat eat eat 3SG eat be
á n kə̀ɗə́m ngə̀n ***ɓə̀t***
3SG PREP calabash 3SG take
'She ate and ate and ate, then she took her calabash.' (Frajzyngier et al. 2005)

In the following example, the use of the dependent habitual aspect, marked by *ra*, without any other marker of subordination, codes temporal protasis. Tone on the dependent habitual marker is polar to that of the preceding syllable:

(23) *mə̀ mbír mbír ván də̀ **rá** dǐy-á mbír nə̀*
REL jump jump rain fall D.HAB start-DIST jump PREP
màŋ cìdék cìdék cìdék cìdék cìdék
L.ANAPH ideophone
'The jumper, when the rain was falling, he started to jump in it.' (Mina, Frajzyngier et al. 2005)

Compare the independent habitual, without *ra*:

(24) *séy á tə̀t kám í **ndí** ngà*
then PRED 3PL TOP (F.) 3PL HAB catch
*ɮì-yû **zə̀** ká nd-á kə̀ dá tàŋ*
meat EE INF go-GO INF cook DED
'As for them [the hyenas], they just catch the meat [and] bring it for cooking.' (i.e., they have plenty of meat)

6.5 Negative clauses

In some Chadic languages, negative clauses have the same aspectual system as affirmative clauses (Giziga, Lele). In other languages, negative clauses have a pragmatically dependent tense/aspectual system. In still other languages, negative clauses have a tense/aspectual system that is different from that of both pragmatically independent and pragmatically dependent clauses.

In Mina, which has two tense/aspectual systems, the use of dependent tense/aspect coding in the negative clause marks the clause as pragmatically dependent, thereby forcing the negative clause to be interpreted in connection with a corresponding affirmative clause. Pragmatic dependency in the following example is coded by the dependent habitual aspect marker *ra*, which is phonologically reduced in phrase-internal position:

(25) *á tùk hà* ***ɓə́ŋ*** ***rə̀*** *skù wúl ɓéhl* ***rà*** *wà syì*
PREP you 2SG think D.HAB NEG neck break D.HAB DEM COM
'You are not thinking, you are crying with joy like that.' (i.e., 'you're out of your mind and screaming and shouting')

The unmarked aspect, used in pragmatically independent clauses, allows the negative clause to be interpreted independently of any corresponding affirmative clause:

(26) *màllúm wà bàhá à* ***tálə́*** *skù*
teacher DEM also 3SG walk NEG
'That teacher was a sedentary one' (lit. 'the teacher does not walk', as opposed to a traveling teacher)

7 Coding grammatical relations through tense/aspect systems

Giziga (Central Chadic) has two different tense/aspectual systems. In addition to coding tense and aspect, the two systems code a distinction between content questions about the subject and questions about other grammatical relations. The question word *wá* (*wà* when sentence-final) refers to a human participant whose grammatical role could be subject, direct object, indirect object, or other grammatical relation. Use of the independent completive aspect, marked by high tone on the subject pronoun and the unmarked verb form, codes reference to the direct object (Shay MS):

(27) *kí prù* ***wá*** *àn lúumò (kà)*
2 see who PREP market Q
'Whom did you see at the market?'

Use of the dependent completive aspect, coded by the prefix *mí*, indicates that *wá* has the subject role:

(28) ***mí-g-á*** *(í)* ***wá*** *kà*
D.PERF-do-REF COP who Q
'Who did this?'

The question word *mí* 'what' refers to a non-human participant. In a question about the subject, the dependent tense/aspect marking is used:

(29) *mí-kɔ́d-ì* *í* ***mí*** ***kè***
D.PERF-hit-1SG COP what Q
'What hit me?'

A question about a non-human participant that is not the subject role has independent tense/aspect marking. Low tone on the subject pronoun codes the independent incompletive aspect:

(30) ***kì*** *gí* *mí* *kè*
2 do what Q
'What do you do?'

8 Coding backgrounding and comment clause using aspectual forms

The aspectual system of Wandala (Central Chadic) is as follows:

Aspect	Coding means
Perfective	Pronoun Verb
Imperfective	Pronoun Verbal noun
Backgrounding	R1-Pro-R2
Punctual	Pronoun Verb-*hè*
Inceptive	Pronoun *tsè* Verb
[Progressive	*tìrè* Verbal noun] elicited only
Stative	Pronoun *án* Verbal noun

There are no aspectual distinctions in the negative modality, where only tense distinctions exist.

Of interest for this study is the backgrounding aspect coded by the form R1-Pro-R2, where R is the root form of the verb and Pro is a subject pronoun. A clause marked as backgrounding is necessary for the proper understanding of the ensuing proposition. The systemic evidence for the backgrounding function of the R1-Pro-R2 (the third-person singular form is unmarked and so does not have Pro) form is that it cannot occur in content interrogatives or in negative clauses, i.e. in types of clauses where the backgrounding function contradicts the function of interrogative and negative domains. The backgrounding clause provides a spatial, conditional or temporal background for other propositions (note that the form Pro-R1-R2 codes the mood of obligation in all types of clauses):

Conditional:

(31) *ágdzər žílé má ndàvándà və mùksè*
ágdzər žílé má ***ndàvə-ndàvə*** *mùksè*
child boy HYP ask-ask girl
á fəmfà márvòndárà
á fə-m-fà á-m árvònd-á-rà
3SG put-IN-put PRED-IN heart-GEN-3SG
'A young man, if he asked for a woman,
he should put into his heart . . .'

Spatial setting:

(32) *dàrámdà à dázà ddə́ ŋà-r gəgyálè*
dà-rə́-m-dà *á dá-zà ddə́ ŋà-r*
arrive-3PL-IN-arrive PRED go-side father POSS-3SG
gə́ gyálè
TO girl
ástárà nówáŋá kàtágdzáŋnà ŋákàtàn vágmànyà

ástárà *ná* *wá* *ŋá* *kàtá* *gdzá-ŋ* *nà*
so here DEM COM 1EXCL want child-2SG DEM
ŋá *kàtà-n-vá* *g* *mànyà*
1EXCL want-3SG-APPL:GO TO such and such
'They arrived at the father of the girl. "Well, we want your child, we want her for so and so."'

The backgrounding aspect may provide the propositional background for another proposition:

(33) *ábɮyè dùksámhùdàyéw ŋán-ní*
á *bɮyà* *dùksà* *á-m* *hùd-à* *yàwè*
3SG fall thing PRED-IN belly-GEN water
ŋán-ní ***cìnà-ká-n-cìná*** *ɓákà*
DEF-INTNS listen-2SG-3-listen NEG.EXCL
'Something falls into this water. You have heard it? No way!'

The tense and aspectual system of affirmative clauses in Wandala is reduced to a distinction between two tenses, past-and non-past. The negative non-past has the verb ending in a root form. The negative past has subject suffixes attached to the verb. Most monosyllabic verbs have the low tone in the negative non-past but the high tone in the negative past:

(34) *á* *tsə* *kà* *tsá-t* *kà*
3SG rise NEG rise-T NEG
'he does not rise' 'he didn't rise'

á *mbə* *kà* *mbá* *kà*
3 cure NEG cure NEG
'he does not cure himself' 'he didn't cure himself'

9 Complementarity of tense and aspect markers with other coding means

Evidence that tense/aspectual systems have functions other than the coding of tense and aspect is provided by the complementary distribution of tense and aspect markers with other coding means. For example, if focus, specific interrogative, sequential, temporal or conditional clauses are coded systematically (i.e. obligatorily) in a language by external markers, they are not coded by a tense/aspectual system. If a language does not have obligatory external markers to code a pragmatic function, the function is coded by tense/aspectual systems (Frajzyngier 2004). If external markers in such languages do co-occur with tense and aspectual markers, these code much narrower functions than the tense and aspectual markers themselves. A similar complementarity of means holds for the coding of grammatical relations in languages with separate tense and aspect systems.

9.1 Complementarity of means in pragmatic dependency

Here we illustrate the complementarity of coding means using data from Lele (East Chadic), which has two tense and aspectual systems. The complementarity lies in the fact that if there are external means to code certain pragmatically dependent categories, tense and aspect markers are not used to code this function.

Contrastive focus on the subject in Lele is coded through the use of the third-person pronoun *dày* preceding the nominal subject. In such clauses independent tenses and aspects are used. In the following fragment, the second sentence has the nominal subject in contrastive focus with the subject of the preceding clause (all data from Frajzyngier 2001):

(35) *è kè-gè go se géŋ ná*
go GEN-3PL REF INCEPT change? ASSC
kíyà hím kàjé so lay
K. gather throwing knife:PL two also
ìlú pìnà lay
stick one also
dày ólkùsiŋ *ày tàbál lay ná kàjé*
3M O. took lance also ASSC knife
poriŋ
four
'When they went, Kiya gathered up two knives and one stick. Olkusin took one lance and four throwing knives'

Non-contrastive focus is coded by the particle *bà* preceding the comment-on-focus clause:

(36) *yàá bé-ì na gìdìrè* ***ba*** *na ma*
say DAT-3M HYP moon COM HYP die
ná kùn ana-jè
ASSC return:IMP leave:IMP-VEN
'He told him that it was the moon that would die and return.'

An element that is topicalized by definite markers can also be focused in Lele:

(37) *tamɠ́-ŋ ba kùb-rò hamli síɗé*
wife-DEF COM mouth-3F light too much
'The wife had too light a mouth' (talked too much)

There are two relative markers in Lele: **go** 'masculine' and 'plural' and **do** 'feminine singular'. Since relative clauses have obligatory external markers, there is no need for tense and aspect to mark relative clauses. Therefore, the independent T/A system is used.

(38) *tama* ***do*** *nè* *kere-ŋg* *se* *è* *túgú*
woman REL:F make beer-DEF INCEPT go village
'the woman who makes beer goes to the village'

(39) *bayndi* *go* *na* *ày* *kùná-y* *gụ́yé* . . .
person REF HYP take uncle-3M spider
'the person who would take his uncle Spider . . . '

(40) *kamda* *go* *tèy-gé* *kur* *go* *yage* *màybùlò*
women REF trace-3PL place REF work sesame
'women who marked the place to plant sesame . . .'

Content interrogatives are coded by the word referring to the scope of the question ('question word') in the position it occupies in indicative clauses and by the clause-final interrogative marker *gà*. There is thus no functional motivation for tense and aspect markers to code the interrogative function:

(41) ***wéy*** *ba* *è* *jé* ***gà***
who COM go VENT Q
'who came?'

(42) *mè* *ày* *wéy* *gà*
2F marry who Q
'who did you marry?'

(43) *lèé* *dí* *me* *gà*
eat he what Q
'what did he eat?'

9.2 Complementarity of tense/aspect systems in the coding of grammatical relations

In Giziga, the tense/aspect system codes the difference between a question about the subject, coded by dependent tense/aspect, and a question about the object, coded by independent tense/aspect. Reference to other grammatical relations in content questions is coded by the use of prepositions. These questions are marked by for independent tense or aspect. The use of tense/aspect to code grammatical relations in content questions is thus in complementary distribution with other coding means, namely prepositions:

(44) *á hərk-à ɬà* ***dá*** *wá kà*
3 buy-REF cow PREP who Q
'For whom did he buy the cow?

(45) *kí híj hərŋgá* ***ŋgú*** *wà*
2 shave head GEN who
'Whose head did you shave?'

(46) *kí rú ŋgá lúumò* ***àtì*** *wá kà*
2 go PREP market CONJ who Q
'With whom did you go to the market?'

In affirmative clause with independent tense/aspect coding, the grammatical role of the noun phrase is coded by its position with respect to the verb. Thus, linear order is another means of coding grammatical relations that is in complementary distribution with tense/aspect coding:

(47) *zùŋó à* ***sá*** *r ŋgá hày-tàŋ*
girl 3 FUT go PREP home-3PL
'The girl will go to her parents.' (lit. 'their home')

(48) *nà wrée nà sí í zl-ò zùŋó í cfúd-à*
so now DEM necessary 1SG call-VENT girl 1SG ask-GO
'Now, it is necessary that I call the girl and ask her.'

In Wandala, question words follow the verb or another element. The distinction between the subject and object roles of the question word is marked by inflectional coding on the preceding element. The root form of the preceding element indicates that what follows the object, and the root + *a* form of the preceding element indicates that what follows is the subject:

(49) *à* *wú* *wàrè*
3SG bite who
'whom did he/it bite?' (the vowel ú is epenthetic)

Compare a question about the subject:

(50) *à* *w-á* *wàrè*
3SG bite-PB who
'who bit him?'

Changes on pronominal object forms:

(51) *ŋánwá àžàgàdà* *káwgəkà*
ŋán *wá* *à* *žàgàdà-**ká*** *w* *gə* *kà*
DEF COM 3SG run-2SG what TO 2SG
'What made you run away?' [the girl's father speaking]

(52) *à* *kyà-**ná*** *wàrè*
3SG break-3SG who
'who broke it?'

10 Functions of tense and aspectual forms

The purpose of the present section is to describe the structure of tense and aspectual systems and the functions of individual tenses and aspects. The functions of individual tenses and aspects are described by the roles they occupy within the systems of individual languages. The study is preliminary, since many

descriptions, though they list tense and aspectual forms, provide only rudimentary discussions of their functions, most often through translations. In this section, instead of providing a systematic study of the values of individual aspect and tenses, we provide the evidence for the existence of major types of values.

10.1 Unmarked form

Some languages from all four branches exhibit an unmarked form that receives its tense/aspectual interpretation from preceding clauses, from adverbs of time, or from general knowledge of the situation involved. Although we do not have frequency counts of various forms, the unmarked form appears to be the most frequent form in discourse. Mupun (West Chadic) has four aspects marked by forms occurring after the subject pronouns and before the verb: perfective *kə̀*, habitual *ká*, progressive *pə̀*, and imperfective *mbə̀*, which also serves as one of the two future tense markers. Mupun also has a form unmarked for tense and aspect. In the following fragment, all verbs but one (bolded) are unmarked for aspect. The verbs in this fragment can have a variety of aspectual interpretations:

(53) *par pus can nə́ ɓe kən fua mo cak dəɓen*
day circumcision DEF CONS kin 2M PL gather foodstuff
'On the day of the circumcision your kin will gather foodstuffs

(54) *mo ji ká nə́ n-puun fua*
3PL come CONJ ANAPH PREP-father 2M
'and bring it to your father,

(55) *mbə́ ret n-yit ɗe kən fur* ***mbə́ ɗen*** *a mis*
PREP joy PREP-eye REL kin 3PL IMPF become COP man
'for the joy of the occasion of their kin becoming a man,

(56) *ɗen* *a* *la* *mis*
become COP child man
'becoming a young man.' (Mupun, Frajzyngier 1993)

The perfective aspect is used only when it is in contrast with other aspects in the same clause or sentence. In the following example, the perfective aspect, used with the remote past tense marker **də**, is in contrast with the succeeding clauses, in which the imperfective aspect is used:

(57) *watoo,* *jep* *də́* *də́* *nji* *mo kə̀* *dîlaŋ*
that is, children REL PAST ancestral spirit PL PRF swallow-PL
'That is, children that the ancestral spirits have swallowed,

mo ***mbə́*** *wut* *mo* *kə́* *mo* *wa* *aŋ* *mo*
3PL IMPF vomit 3PL COMP 3PL return repair 3PL
'they will vomit them in order to resurrect them,

ɗak *mo* *dî* *a* *gurum* *ke* *nan*
make 3PL COMP COP person like that
'make them into humans.'

10.2 Aspect

Most grammars of Chadic languages report the existence of a completive (often called 'perfective') aspect, an incompletive (often called 'imperfective') aspect, and a continuous aspect. Completive aspects, as reported in various grammars, most often indicate the completion of the event or the achievement of the state, whether in the past, present, or future. Schuh 1998 explicitly says that state is one of the characteristics of the completive aspect.

In Wandala, the R1-Pro-R2 form, which marks the backgrounding function (see above), also codes the state resulting from an event. The state must have occurred by the time of speech or by the time of another event, whether in the

past or in the future. The events described by the completive aspect may be bounded or unbounded but are always completive, in the sense that the event described by the state has been achieved. The aspect does not represent the event as one whole.

Bounded:

(58) *cùkwá ŋgùdì ʃà-r-ná-ʃè hàyè*
cúkw-á ŋgùdì ʃà-r-n-á-ʃè hàyè
small-GEN very find-3PL-3SG-GO-find river
'After a little while, they reached a river.'

(59) *ə̀bɮ̀gyàsə́bɮ̀gyè dùksá*
ə̀bɮ̀gy-à-sə́-bɮ̀gyè dùksá
fall-GO-S-fall thing
'Something fell out?'

(60) *ʃúlyá zàrvá mì pàllə̀ kày mbə̀ɗá mbə̀ɗám dámyáwnà*
ʃúlì-á zàrv-á myà pàllè kày mbə̀ɗá-m-mbə̀ɗ
sand-GEN sesame-GEN 1INCL one EXCL? fall-IN-fall
á-m d-ár yàwè nà
PRED go:ON water DEM
'One of our sesame seeds fell into the water.'

Unbounded:

(61) *dàdə̀nə̀kínì ɬyàpɬyè dàdámbárwá*
dàdə̀ nə̀ kínì ɬyà-v-ɬyè dàd á-m
father DEM C.FOC mature-APPL-mature father PRED IN
mb-á-rà wá
house-GEN-3SG COM
'As for the father, once he is a father at his home,'

mándà súwèe kínì ǝgdzárwá áɮìpɮyè káɮàbè
má á ndà-sú wèe kínì ǝgdz-á-r wá
HYP 3SG say-S what C.FOC child-GEN-3SG COM
á ɮì-p-ɮyè kə́ ɮàbè
3SG accept-APPL-accept NEG again
'whatever he says, his child should accept, shouldn't she?'

(62) *nóovà tătàkìnínjànínjà twàfká ordinater yàndàl v wàndàlà*
nóo và tttà kìní njà-n-í-njà t wàfk-á ordinater
well time AT-DEF C.FOC sit-1SG-EP-sit at face-GEN computer
yà ndàhá lv Wandala
1SG speak language Wandala
'Here I am sitting in front of the computer speaking the Wandala language . . .'

(63) *ŋóŋwà nè yènjátwáfká pàtrònárwà*
ŋó ŋánnè yè-nj á t-wàfk-á patron-á-rwà
voici DEM 1SG-sit PRED AT-face-GEN boss-GEN-1SG
'Here I am sitting in front of my boss.'

(64) *yà šà-tr-ú gə ɮàmá*
1SG speak-3PL-APPL DEST population
'I speak to the people.'

Progressive aspect, as reported for many Chadic languages, is coded by auxiliary verbs or erstwhile prepositions, often preceding the nominalized form of the verb or even a noun, resulting in verbal meaning. In Wandala, the progressive aspect is coded by the form *tírà*, which precedes the main verb of the clause. The form *tírà* is a complex structure, consisting of the form *t*, which is the preposition 'on', and the noun *írà* 'head'.

(65) *á* *tírà* *mág-á* *ɬrá* *ám* *fé*
3SG PROG do-GEN work PRED-IN field
'he is working in the field right now'

(66) *yà* *tírà* *z-á* *dàfá* *ám lókt* *nà* *sáw* *nà*
1SG PROG eat-GEN food IN time DEF arrive-VENT DEF
'I was eating at the time he came'

In Mupun (West Chadic), the progressive is coded by a preposition before a verb or a noun, resulting in a verbal interpretation:

(67) *mo* *pə* *makaranta*
3PL PREP school
'They are at school learning.' (not simply 'they are at school')

10.3 Tense

There are several important characteristics of tense systems in Chadic languages. The first is that in most languages the tense systems contain relatively few categories, and in some languages there is no tense category at all. The most common tense category, and often the only tense category, is the future, which can be coded by auxiliary verbs, by prepositions, or (less often) by inflectional markers:

(68) *yé* *dú-ngù* *posí-ŋ* *de* *ná* *ŋ*
mother GEN:PL-2PL insult-1SG THEN ASSC 1SG
jè ***léè-dú*** *ná* *kasa go* *ŋ* *yì* *háŋ*
SW.REF eat:FUT-3F ASSC corn ASSC 1SG pound DEM:P
'Your mother has insulted me; therefore, I am going to eat her with this corn I pounded.' (Lele, Frajzyngier 2001: 186)

Some languages are reported to have both past and present tense, but very often the scopes of the past and present tense are not stated. Ebert 1979 analyzes the preterite in Kera (East Chadic) as referring to a specific event in the past rather than to a general time in the past. The same is true in Hdi (Central), where the past tense marker *sí* is used only when the event refers to a specific time in the past (Frajzyngier with Shay 2002):

(69) *ká-xən* *mántsá,* ***sí*** *ndá* *gá* *ká* *ndá*
comp-3PL like that PAST ASSC where 2SG ASSC
rvídîk
night
'And they said, "Where were you last night?"'

(70) ***sí*** *tà* *zá* *wlíwá-dî* *ndá* *tà'á* *grà,* *ká-'á*
PAST IMPF eat walk-1SG ASSC PREP-DEM friend COMP-3SG
"'I was taking a walk on the other side, my friend," he said.'

(71) *ìná* *gùlí* *kà* *snà-n-tà* *índà* *mndú-xà* *tà*
good again SEQ know-3-REF all man-PL PREP
kùmà *kàkí* ***sí*** *ndzà-kw-á* *xdì*
front how PAST stay-ABS-GEN hdi
'It would be good if the future generations knew how Hdi used to live.'

The non-specific past time is not marked:

(72) *kà* *lá-úgh-wí* *ùvá* *dîfà-ù-tà*
SEQ go-D:SO-REF cat hide-SO-REF
mà *tùghwázàk*
PREP hibiscus
'And Cat went and hid in the hibiscus.'

(73) *kà* *ks-ú-tá* *krì* *t-'úvá*
SEQ touch-SO-REF dog OBJ-cat
'And Dog devoured Cat.'

Perhaps one of the richest systems of tenses in Chadic is that of Mupun (West Chadic). Tense markers in Mupun locate the event in a rather narrowly determined time slot. Tenses in Mupun are not in contrast with each other, but rather in contrast with the unmarked form of the verb:
Recent past:

(74) *yi* *n-naa* *war* *n-bit*
REC.PAST 1SG-see 3F morning
'I saw her in the morning'

Future:

(75) *yak* *mun* *wa* *o* *ye*
FUT 1PL return EXCL
'we will soon return, oh ye' (from a song)

(76) *kumaa* *ba* *mo* *n-cet* *me* *gwom* *kas*
also NEG 3PL FUT-cook QUANT food NEG
mo *n-dəm* *se* *mbise* *a* *yil*
3PL FUT-go eat food PREP bush
'They will not cook any food [at home]; they will eat in the bush.'

11 Conclusions

Some Chadic languages have one system that comprises tenses, aspects, and even moods (not discussed in the present paper), while other languages have separate tense and aspectual systems. When a language has one system, only one category from the system, either tense or aspect, can be present in the clause. If

a language has two systems, two categories, one tense and one aspect, can be present in the clause.

Regardless of whether the language has one common system or separate systems of tense and aspectual coding, some languages have two or even three forms to code the same temporal or aspectual value. In such languages, tense and aspectual systems are also coding means for functions other than tense and aspect. In some languages, one system (dependent tense and aspect) codes pragmatically dependent clauses, i.e. clauses that must interpreted in connection with another clause, proposition, or some specific element in the environment of speech. The other system (independent tense and aspect) does not force interpretation in connection with another proposition, or event. Typical pragmatically dependent clauses include comment-on-focus clauses, relative clauses, sequential clauses, and in some languages, negative clauses. In some languages, there is a system of tenses and aspects used in negative clauses (Hausa, Wandala). In other languages, different tense and aspect systems code still other functions. In Giziga, the distinction between subject and object in content interrogatives is marked by the choice of aspectual system. Whatever the functions of the different tense and aspectual systems, there exists a complementarity of coding means, in that the tense/aspectual system is used as a coding means when there are no other markers for the functions coded.

Tense systems in Chadic languages comprise relatively few categories. Some languages have no tense category at all. Other languages have only one or two future tenses. Some languages have specific past and specific present tense. Many languages have a verbal form that is unmarked for tense and aspect and that can receive different interpretations depending on the preceding discourse and on adverbs of time and other temporal expressions. In the majority of languages, the category tense is coded by auxiliary verbs and prepositions. In some languages, tense categories are coded by adverbs of time in a position other than the default position for this category.

Aspect is coded through the system of auxiliaries and prepositions, and also through inflectional changes on the verb, including reduplication. Aspectual distinctions coded include completive, incomplete, habitual/continuous, progressive, stative, continuative, inceptive, and terminative.

References

Caron, Bernard (ed.). 2000. *Topicalisation et focalisation dans les langues africaines.* Louvain-Paris: Peeters.

Caron, Bernard. 2000. Assertion et préconstruit: topicalisation et focalisation dans les langues africaines. In Caron 2000, 7-44.

Caron, Bernard. 1986. Les accomplis I et II du haoussa et la subordination. Aspects, modalité: Problèmes de catégorisation grammaticale. *Collection ERA* 642. Université Paris 7, 103-120.

Ebert, Karen. 1979. *Sprache und Tradition der Kera (Tschad).* Marburger Studien zur Afrika- und Asienkunde. Ser.A, Afrika.

Frajzyngier, Zygmunt. 2008. *A Grammar of Gidar.* Frankfurt: Peter Lang.

Frajzyngier, Zygmunt. 2004. Tense and aspect as coding means. In *Journal of West African Languages* 30.2: 53-67. Special issue, edited by Bernard Comrie and Ekkehard Wolff.

Frajzyngier, Zygmunt. 2001. *A Grammar of Lele.* Stanford Monographs in African Linguistics. Stanford: CSLI.

Frajzyngier, Zygmunt. 1993. *A Grammar of Mupun.* Berlin: Reimer.

Frajzyngier, Zygmunt. 1989. *A Grammar of Pero.* Berlin: Reimer.

Frajzyngier, Zygmunt, and Eric Johnston, with Adrian Edwards. 2005. *A Grammar of Mina.* Berlin/New York: Mouton de Gruyter.

Frajzyngier, Zygmunt, with Erin Shay. 2002. *A Grammar of Hdi.* Berlin: Mouton de Gruyter.

Gouffé, Claude. 1968. Les problèmes de l'aspect en haoussa. *Compte Rendu du Groupe Linguistique d'Études Chamito-Semitiques, GLECS* 12.27-51.

Gouffé, Claude. 1967. Les problèmes de l'aspect en haoussa. *Compte Rendu du Groupe Linguistique d'Études Chamito-Semitiques,* GLECS 11.29-67.

Gouffé, Claude. 1966. Les problèmes de l'aspect en haoussa. *Compte Rendu du Groupe Linguistique d'Études Chamito-Semitiques,* GLECS 10.151-165.

Hyman, Larry, and John Watters. 1984. Auxiliary focus. *Studies in African Linguistics* 15.3: 233-273.

Jungraithmayr, Herrmann. 1994. 'Zweite Tempora' in Afrikanischen Sprachen-Ägyptisch-Tschadische Gemeinsemkeiten. In Bietak, Manfred, Johanna

Holaubek, Hans Mukarowsky, and Helmut Satzinger (eds.), *Zwischen den Beiden Ewigkeiten*. Festschrift Gertrud Thausing. Wien: Institute für Ägyptologie der Univesität Wien.

Melis, Antonino. 1999. Ms. *Déscription du Masa (Tchad)*. Ph.D. thesis, Université de Tours.

Newman, Paul. 2000. *The Hausa language*. New Haven & London: Yale University Press.

Newman, Paul. 1977. Chadic classification and reconstructions. *Afroasiatic Linguistics* 5:1-42.

Newman, Paul, and Russell G. Schuh. 1974. The Hausa aspect system. *Afroasiatic Linguistics* 1:1-39.

Pawlak, Nina. 1993. Alternacje syntaktyczne wykładników aspektu. In Sambor, Jadwiga, Jadwiga Linde-Usiekniewicz and Romuald Huszcza (eds.), *Jezykoznawstwo synchroniczne i diachroniczne*. Warsaw: Wydawnictwa Uniwersytetu Warszawskiego, 215-221.

Robert, Stéphane. 1991. *Une approche énonciative du système verbal: le cas du wolof*. Paris: Presses du CNRS, Coll. Sciences du langage.

Schuh, R. G. 1998. *A Grammar of Miya*. University of California Publications in Linguistics, Volume 130. Berkeley: University of California Press.

Shay, Erin. Submitted. *A Grammar of Giziga*.

Abbreviations

1	First person
2	Second person
3	Third person
A	Aspect
ABS	Absolutive
AC	*Accompli*
ACH	Achieved
ANAPH	Anaphor
APP	Applicative
Ar.	Arabic
ASSC	Associative

CAUS	Causative
COM	Comment marker
COMP	Complementizer
COMPL	Completive
COND	Conditional
CONJ	Conjunction
CONS	Consecutive
COP	Copula
D.	Dependent
DAT	Dative
DEF	Definite
DEM	Demonstrative
DEST	Destinative
DET	Determiner
DIR	Directional
DIST	Distal
E	External
EP	Epenthetic
EXCL	Exclusive; exclamation
F	Feminine
FOC	Focus marker
FUT	Future
GEN	Genitive
GO	Goal
HAB	Habitual
HYP	Hypothetical
IMP	Imperative
IMPF	Imperfective
IN	Extension coding movement 'inwards'
INCEPT	Inceptive
INCL	Inclusive
INAC	*Inaccompli*
L.	Locative

M	Masculine
NEG	Negative
OBJ	Object marker
OUT	Extension coding movement 'out'
PB	Phrasal boundary
PERF	Perfective
PL	Plural
PRED	Predicative
PREP	Preposition
PRET	Preterite
PRF	Perfective
Pro	Pronoun
PROG	Progressive
Q	Question marker
R	Root form
REL	Relative
RC	Relative clause
REC	Recent
REF	Referential
REL	Relative marker
SEQ	Sequential
SG	Singular
SO	Source orientation
SP	Specific
STAT	Stative
T	Tense
TEMP	Temporal
TO	Extension coding movement 'towards'
UP	Extension coding movement 'up'
VEN(T)	Ventive