

Starting Points for Tense-Aspect Analysis  
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Natural languages express tense-aspect (T-A) notions within a clause via distinct constituent types, either grammatical morphemes at/near the verb or lexical items with an adverbial status. In many descriptions, the starting point for T-A analysis is the verb and associated grams, as exemplified by studies of Bini (Èdó) from Nigeria’s Edoid group (Amayo 1976, Omoruyi 1991, Yuka and Omoregbe 2011). An alternative initiates T-A inquiry with adverbial elements followed by examination of corresponding gram expressions. We follow the latter strategy.

Our center point for analysis is the group of Edoid languages spoken in south-central Nigeria. Within this group there are at least 30+ languages, one of which is Emai, for which we have a relatively extensive database. Others in this group include Bini, Esan, Yekhee, Urhubo, Degema, and Engenni.

In addition to the Edoid group we have compiled some initial data about T-A adverbial elements and their corresponding grams from a range of languages that are also spoken in West Africa. These include West Benue Congo, East Benue Congo, Kwa, Gur, and the Wider Lake Chad Region. Further impetus for this study comes from Nurse, Rose and Hewson (2016) and Nurse (2007). They postulate that tense was not a feature of Proto-Niger-Congo or early Niger-Congo. Niger Congo was essentially aspectual, with tense emerging clearly in Bantu and its Benue-Congo predecessors. Tense expression thus becomes our primary target.

We start with Edoid and its equivalents for day/night cycle adverbials (‘yesterday,’ ‘today,’ ‘tomorrow’). We adhere to Comrie (1985) in considering tense as the expression of location in time, grammatical and otherwise. Next we assess a larger context, examining adverbials in West Benue Congo, East Benue Congo with Plateau, Bantoid and Proto Bantu receiving attention, and more distantly the Niger Congo phylum, specifically Kwa. An even broader context arises from a brief survey of day-unit adverbials in languages of the Wider Lake Chad Region: Hausa and Kanuri.

For all these languages we also identify grammatical morphemes that code futurity, both affirmative and negative. Regarding day-cycle adverbials, we find two patterns in Edoid that code day<sub>-1</sub>, day<sub>0</sub>, day<sub>+1</sub>, where day<sub>0</sub> refers to deictic center, essentially ‘today.’ Coding in Edoid is geographically circumscribed and often conflationary. Distinct terms occur for each of day<sub>-1</sub>, day<sub>0</sub>, day<sub>+1</sub> in some northern varieties of Edoid but southern varieties conflate day<sub>-1</sub> and day<sub>+1</sub> under one term relative to a day<sub>0</sub> term.

Table 1a. Adverb forms for day units in Edoid relative to deictic center

	yesterday day <sub>-1</sub>	today day <sub>0</sub>	tomorrow day <sub>+1</sub>
Emai	òdè	éèná	ákhò
Yekhee	én-òdè	éèlè	ákhùè
Esan	òdè	éléèná	éwíè
Bini	n-òdè	n-éè	n-ákhùè

Urhobo	òdè	n-ónè	odè-óchà
Engenni	udhè	ínyáà	udhè
Degema	údéè	ínínà	údéè

Similar conflation appears in WBC and Kwa, although their terms pattern with an east-west orientation.

Table 1b. Adverb forms for day units relative to deictic center in West Benue Congo and Kwa

	yesterday day <sub>-1</sub>	today day <sub>-0</sub>	tomorrow day <sub>+1</sub>
Yoruba	ní ànà	ní òní	ní òlá
Isekiri	ní ọlá		ní èjùmá
Igala	?	èṅíní	?
Igbo	éché	táà	éché
Ekpeye	séle	tám	séle
Nupe	tsúwó	nyína	èsun
Gwari	ósù	ónyáyèè	ósù
Okò	érán	ámónè	usie
Ebira	èèrí	ajíni	ùhwóó
Akan	nnera	enne	ɔkyena
Ga	nye	ɲmɛnɛ	wɔ
Ewe	ètsò	égbè	ètsò
Fongbe	sò	égbè	sò

In EBC, Proto Bantu displays conflation, whereas daughter languages tend toward differentiated coding of day/night cycle adverbials.

Table 1c. Adverb forms in East Benue Congo (including Plateau, Bantoid, and Proto Bantu)

	yesterday day <sub>-1</sub>	today day <sub>-0</sub>	tomorrow day <sub>+1</sub>
Dūya	àréké	ìrérè	údààn
Yukubɛn	í-li	ì-nəŋ	kò-húŋtu
P Bantu	dúbi	deedó	dúbi

In languages of the Wider Lake Chad Area and Gur, no conflation is evident; differentiated terms prevail for each day unit.

Table 1d. Adverb forms for day units relative to deictic center in Gur, and Wider Lake Chad Region

	yesterday day <sub>-1</sub>	today day <sub>-0</sub>	tomorrow day <sub>+1</sub>
Kanuri	bíska	kúù	bali
Hausa	jiyà	yáàu	gòbe
Supyire	táŋjáà	níŋjáà	nùmpañña

For all these languages we also identify grammatical morphemes that code futurity, both affirmative and negative. We turn to these now. As with tense-related adverbial elements, we

compiled some initial data about corresponding grams for futurity and its negation in West Africa.

In Edoid, the expression of futurity and its negation is non-uniform. In affirmative contexts, Edoid reveals two basic patterns for the coding of futurity. We find either a grammatical morpheme in conjunction with tone or simply tone. Some Edoid languages also code futurity with two degrees of temporal distance ('will' vs. 'about to'). In negatives, Edoid manifests either gram substitution or gram addition.

Table 2a. Forms that express futurity and its negation in Edoid

	will	will not
Emai	<sup>H</sup> ló / RPST <sup>L</sup> ló / NPST	khà non-fut neg=[ì, yà]
Yekhee	Θáà	<sup>H</sup> <sup>L</sup> Θáá
Esan	áà	ì
Bini	gha/gháà V 'will' khian 'about to'	ì í V
Urhobo	cha	
Engenni	sì / ì	verb <i>tone</i>
Degema	pro <sup>H</sup>	pro <sup>L</sup>

Systems in central and north-central Edoid tend to consist of a vowel or consonant-vowel gram for future (*gha, cha, Θáà*) that appears cognate with form *ga* in Igbo and much of Nupoid.

Table 2b. Forms that express futurity and its negation in West Benue Congo and East Benue Congo

	will	will not
Yoruba	yóò 'will' á 'about to' máa 'be going to'	kì yóò / kò á
Isekiri	waá / wá	éè wá
Igbo	gà 'will' gà háà 'about to, will soon'	ga-ghi
Ekpeye	-mV- / -V- (-ma-)	-mV- / -V...-V
Nupe	ga	ga...à / ga...nyi à
Gwari	ḃá / ḃéi	ta/to ḃá / ḃéi...n
Okò	éke-/áka-	èke-/àka- <i>tone</i>
Ebira	váà / véè	yì váà / véè
Dūya	í 'will' wurí 'be about to'	sí-
Yukubén	pro <sup>H</sup> <sup>L</sup> <i>tone</i>	pro <sup>H</sup> <sup>L</sup> ...kón
Akan	bɛ- 'will' rɛ-bɛ- 'be about to'	rɛ-N- 'will not'
Ewe	[l]a POT	mé...o
Fongbe	ná 'will' ná-wá 'will eventually' dò...ná...wé 'will be at Ving'	mà ná *mà ná-wá mà dò...ná...wé
Kanuri	ti-/ta- ...-ò	ti-/ta- ...-nyí
Hausa	záài / zaa yà	bà záài ...ba

		bà zaa yà ...ba
Supyire	si N-	
P Bantu	-ka- ti/i-	ka-

Table 2c. Forms that express futurity and its negation in Kwa, Gur, and Wider Lake Chad Area

	will	will not
Akan	bɛ̀- 'will' rè-bɛ̀- 'be about to'	rè-Ǹ- 'will not'
Ewe	[l]a POT	mé...o
Fongbe	ná 'will' ná-wá 'will eventually' dò...ná...wé 'will be at Ving'	mà ná *mà ná-wá mà dò...ná...wé
Kanuri	ti-/ta- ...-ò	ti-/ta- ...-nyí
Hausa	záàì / zaa yà	bà záàì ...ba bà zaa yà ...ba
Supyire	si N-	

One North-Central Edoid language, Emai, shows no affinity to the Igbo/Nupe form. Instead, it codes futurity with the form *lɔ́*, which has two degrees of temporal distance (remote past 'will' vs. near past 'about to').

- 1 a. í lɔ́ ànmé ólí ókà  
1SG RPST roast\PFV the maize  
'I will roast the maize.'
- b. ú lɔ́ ànmé ólí ókà  
2SG RPST roast\PFV the maize  
'You will roast the maize'
- c. ì lɔ́ ànmé ólí ókà  
1SG NPST roast\PFV the maize  
'I am about to roast the maize'
- d. ù lɔ́ ànmé\PFV ólí ókà  
2SG NPST roast the maize  
'You are about to roast the maize'

This form for the future affirmative in Emai appears to emanate from Yoruba, although not from its future marker. Rather, we propose that Emai's future gram is derived from a Yoruba verb that expresses motion toward a goal: *lɔ́* 'go to.'

Various minimal contrast sets available in Bamgbose (1967) reveal the grammatical character of Yoruba *lɔ́* 'go.' Regardless of tense value in these examples, verb *lɔ́* consistently shows mid tone.

- 2 a. nwón lɔ́ 'They went'  
3PL go

- b. nwón á ló ‘They will go’  
 3PL FUT go
- c. nwón ti ló ‘They have gone’  
 3PL PFT go
- d. nwón ò ló ‘They did not go’ / ‘They are not going’  
 3PL NEG go

In other words Emai future marker *ló* derives from Yoruba motion verb *lò*. Grammaticalization of this nature is built on the assumption that at one point in history there was a high degree of Emai-Yoruba contact, highlighted, for example, by Yoruba proselytizing for Christianity in Emai country. Bilingualism between speakers of the two languages must have been extensive and potentially prolonged.

Such a grammaticalization path is featured in Bybee and Dahl (1989) and Heine and Kuteva (2002). It also relates to the proposal by Trudgill (2011) that contact between populations speaking different languages can lead to two quite different outcomes: simplification of structure brought about by short-term adult learning or complexification induced by long-term learning by children. In other words, the outcome of contact can be reductive or additive.

Nonetheless, similar contact with Yoruba does not account for futurity’s day-cycle adverbial (*ákhò* ‘tomorrow’) or negative future substitute: *khà*, in contrast to *ì* for negative present and *yà* for negative past. Regarding the latter, we note the following. The form for negative future, *khà*, is identical in segmental and tonal form to the hypothetical marker of modality *khà*, as in 3 on the next slide. And the form for negative past, *yà*, is identical in segmental and tonal form to the ingressive/past absolute form *yà* of Emai’s aspectual preverbs.

- 3 a. *ólí ómóhé khà é ólí émàè.*  
 the man RPST.HYP eat the food  
 ‘The man would / should have eaten the food (but he didn’t).’
- b. *ólí ómòhè yà gbé ólí ákhè á.*  
 the man NPST.IG break the pot CS  
 ‘The man almost started breaking the pot.’
- c. *ólí ómóhé yà móé éghó’.*  
 the man RPST.PA have money  
 ‘The man used to have money (but not any longer).’

As for adverbials, we return to Nurse, Rose and Hewson (2016). They propose that Proto-Niger-Congo was essentially aspectual and devoid of tense specification. Over time, especially near the break out of Benue-Congo and the eventual emergence of Bantu (Nurse 2007), they propose that tense categories began to appear.

Under such a scenario, conflation of day<sub>-1</sub> and day<sub>+1</sub> under one term relative to a day<sub>0</sub> term could well be expected, i.e. today vs not-today. This has implications for day/night cycle adverbials in Emai. Following the Nurse scenario, it would not be surprising to find that distributional differences in day-unit terms would exist and that the term for ‘today’ would have a wider distribution than terms for ‘yesterday’ and ‘tomorrow,’ even though all three day-unit terms exist in the contemporary language.

Consider then the following tables for temporal adverbials in Emai, which identify their co-occurrence relations with tense categories. In particular attend to the more frequent occurrence of the day<sub>0</sub> term *éèná* in adverbial compound expressions (identified in italics, three total) and the near total absence of day<sub>-1</sub> *òdè* and day<sub>+1</sub> *ákhò* in this same range of expressions.

Table 3a. Co-occurrence relations between day/night-cycle temporal adverbials and tense categories in Emai

Emai temp advs	<i>òdè</i> ‘yesterday’ <i>ékhèdéá</i> ‘d-b-y’	<i>éèná</i> ‘today’	<i>ákhò</i> ‘tomorrow’ <i>òtíákhó</i> ‘d-a-t’
<i>ó ò</i> HAB			
<i>ò ó</i> PROG			
<sup>H</sup> <sub>L</sub> RPST	√		
<sub>L</sub> <sup>H</sup> NPST			
<sup>H</sup> <i>ló</i> RFUT		√	√
<sub>L</sub> <i>ló</i> NFUT			

Table 3b. Co-occurrence relations between non-day/night-cycle temporal adverbials and tense categories

Emai temp advs	<i>èdèdè</i> ‘while ago’	<i>ìghéèghé</i> ‘generations ago’	<i>sàá</i> ‘usually’	<i>ùsúmú éèná</i> ‘9-days from today’	<i>ènyáà</i> ‘just now’	<i>èghéèná</i> ‘recently’
<i>ó ò</i> HAB		√	√			
<i>ò ó</i> PROG					√	
<sup>H</sup> <sub>L</sub> RPST	√					
<sub>L</sub> <sup>H</sup> NPST						√
<sup>H</sup> <i>ló</i> RFUT				√		
<sub>L</sub> <i>ló</i> NFUT					√	

Table 3c. Co-occurrence relations between non-day/night-cycle temporal adverbials and tense categories (where t-u = time unit like ‘week’)

Emai temp advs	t-u <i>lí</i> <i>ó ráá rè</i> ‘t-u which passed’	t-u <i>lì òdè</i> ‘t-u which coming’	<i>éíá t-u</i> ‘t-u we discussed’	<i>ùkpéèná</i> ‘this season’
<i>ó ò</i> HAB				
<i>ò ó</i> PROG				
<sup>H</sup> <sub>L</sub> RPST	√		√	
<sub>L</sub> <sup>H</sup> NPST				√
<sup>H</sup> <i>ló</i> RFUT		√		√
<sub>L</sub> <i>ló</i> NFUT				

Table 3d. Co-occurrence relations between non-day/night-cycle temporal adverbials and tense categories

Emai temp advs	<i>éghé àin</i> anaphor	<i>éghé àin</i> ‘those times’	<i>ólí éghè</i> anaphor	<i>vbí ólí éghè</i> ‘at the time’
<i>ó ò</i> HAB		√		√
<i>ò ó</i> PROG				

' <sup>H</sup> ' <sup>L</sup> RPST				√
' <sup>L</sup> ' <sup>H</sup> NPST				
' <sup>H</sup> I <sub>ó</sub> RFUT				
' <sup>L</sup> I <sub>ó</sub> NFUT				

Table 3e. Co-occurrence relations between non-day/night cycle temporal adverbials and tense categories

Emai temp advs	vbí úkpédé lí ózèvà 'on second day'	íkpédè èèà 'for three days'	vbí ékéín íkpédè èèà 'within three days'
ó ò HAB			
ò ó PROG			
' <sup>H</sup> ' <sup>L</sup> RPST	√	√	√
' <sup>L</sup> ' <sup>H</sup> NPST			
' <sup>H</sup> I <sub>ó</sub> RFUT	√	√	√
' <sup>L</sup> I <sub>ó</sub> NFUT			

We conclude that adverbial elements are revealing of tense categories, both synchronically and diachronically. In the present case, they inform our understanding of the diachronic emergence of tense categories in Edoid and other Niger-Congo languages and the synchronic status of tense in Emai. Moreover, they lead us to examine more closely their corresponding tense grams and their source.

## References

- Adiva, John. R. 1989. *The Verbal Piece in Epira*. Arlington: SIL.
- Aikhionbare, Matthew. 1986. *Aspects of the Verb Phrase in Edo*. Unpublished M.A. Department of Linguistics and Nigerian Languages. University of Ilorin, Ilorin.
- Aikhionbare, Matthew. 1988. The verbal suffixes in Edo. *Afrika und Übersee* 71:205-228.
- Amayo, Airen. 1976. *A Generative Phonology of Edo (Bini)*. An Unpublished Doctoral Thesis, Department of English. University of Ibadan, Ibadan.
- Amayo, A. 1975. The structure of verbal constructions in Edo (Bini). *Journal of West African Languages* 10.1: 5-27.
- Anyanwu, Rose-Juliet. 2010. *Tense, Aspect, and Mood in Benue Congo Languages*. Koln: Rüdiger Köppe Verlag.
- Anyanwu, Rose-Juliet. 2013. *Reference Grammar of Yukuben (Jukunoid, Nigeria)*. Koln: Rüdiger Köppe Verlag.
- Atoyebi, Joseph Dele. 2010. *A Reference Grammar of Oko: A West Benue-Congo Language of North-central Nigeria*. Koln: Rüdiger Köppe Verlag.
- Bamgbose, Ayo. 1967. *A Short Yoruba Grammar*. Ibadan: Heinemann.
- Bybee, Joan L. and W. Pagliuca. 1985. Cross-linguistic comparison and the development of grammatical meaning. In Jan Fisiak (ed.), *Historical Semantics, Historical Word Formation*, 59-83. The Hague: Mouton.
- Bybee, Joan L. and Osten Dahl. 1989. The creation of tense and aspect systems in the languages of the world. *Studies in Language* 13.1: 51-103.
- Carlson, Robert. 1994. *A Grammar of Supyire*. Berlin: De Gruyter.
- Clark, David John. 1969. *A Grammatical Study of Ekpeye*. Ph.D dissertation. University of London.
- Comrie, Bernard. 1976. *Aspect*. Cambridge, UK: CUP.
- Comrie, Bernard. 1985. *Tense*. Cambridge, UK: CUP.
- Cyffer, Norbert. 1994. *English-Kanuri dictionary*. Köln: Rüdiger Köppe Verlag.
- Cyffer, Norbert. 1998. *A sketch of Kanuri*. Köln: Rüdiger Köppe Verlag.
- Dähl, Östen. 1984. Temporal distance: Remoteness distinctions in tense-aspect systems. *Linguistics* 21: 102-122.
- Dunn, Ernest. 1968. *An Introduction to Bini. African Monograph No.9*. African Studies Centre. Michigan State University. Michigan.

- Ejele, Philomena. 2000/2001. The syntax and semantics of tense markers in Esan. *Journal of West African Languages* 28.1: 85-95.
- Elimelech, Baruch. 1978. *A Tonal Grammar of Etsako*. Los Angeles: University of California Press.
- Elugbe, Ben. 1989. *A Comparative Edoid: Phonology and Lexicon*. Port Harcourt Series. 6. University of Port Harcourt: University of Port Harcourt Press.
- Essegbey, James. 2008. The potential morpheme in Ewe. In Felix K. Ameka and M.E. Kropp Dakubu, *Aspect and Modality in Kwa Languages*. 135-194. Amsterdam: John Benjamins.
- Heine, Bernd & Tania Kuteva. 2002. *World lexicon of grammaticalization*. New York: Cambridge University Press.
- Kari, Ethelbert. E. 1997. *Degema*. Munich: Lincom Europa.
- Kari, Ethelbert. E. 2004. *A Reference Grammar of Degema*. Köln: Rüdiger Köppe Verlag.
- Marggrander, Anna. 2018. *A Grammar of Dūya: A Plateau Language of Central Nigeria*. Köln: Rüdiger Köppe Verlag.
- Newman, Paul. 2000. *The Hausa language: An encyclopedic reference grammar*. New Haven: Yale University Press.
- Nurse, Derek. 2007. The emergence of tense in Early Bantu. In Doris L. Payne and Jaime Peña (eds.), *Selected Proceedings of the 27<sup>th</sup> Annual Conference on African Linguistics*, 164-179. Somerville, MA: Cascadia Proceedings Project.
- Nurse, Derek. 2008. *Tense and Aspect in Bantu*. New York: Oxford University Press.
- Nurse, Derek, Sarah Rose, and John Hewson. 2016. *Tense and Aspect in Niger-Congo*. Tervuren: Royal Museum for Africa.
- Ogie, Ota. 2003. *About Multi-Verb Constructions; Past Tense Suffixation and Syntactic Representation in Edo*. Proceedings of the Workshop on Multi-Verb Constructions. Trondheim Summer School.
- Omamor, Augusta. 1982. Tense and aspect in Itsekiri. *Journal of West African Languages* 12.2: 95-129.
- Omoruyi, Thomas. 1991. Tense, aspect and modality in Edo. In *Afrika Und Ubersee*, Band 74. 1-19.
- Schaefer, Ronald P. & Francis O. Egbokhare. 2017. *A Grammar of Emai*. Mouton Grammar Library Series. Berlin: Mouton de Gruyter.
- Thomas, Elaine. 1978. *A Grammatical Description of the Engenni Language*. Arlington: Summer Institute of Linguistics.
- Trudgill, Peter. 2011. *Sociolinguistic Typology: Social determinants of Linguistic Complexity*. New York: Oxford University Press.
- Williamson, Kay & Roger Blench. 2000. Niger Congo. In Bernd Heine & Derek Nurse (eds.), *African languages: An introduction*, 11-42. New York: Cambridge University Press.
- Yuka, Constantine & Mercy Omeregbe. 2011. Tense and aspect in Edo: A re-appraisal. In Francis O. Egbokhare, Kola Olatubosun & Matthew Emerson (eds.), *Edo North: Field Studies of the Languages and Lands of the Northern Edo*. 171-184. Ibadan: Zenith Book House.