Chapter 7 – Tense, aspect and manner encoding in Ikaan beyond verbal inflection

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1 Introduction[1]

This paper reports on aspects of the verbal morphology of Ikaan, an endangered minority language spoken in Nigeria. In addition to regular and obligatory tense-aspect-mood inflection, Ikaan shows a range of optional morphemes in the verb which translate with adverbial meanings such as 'just', 'still', 'again' or 'too' but do not fit the category of adverbs in the language. These morphemes trigger a range of changes in the verbal affixes and the verbal root, both at the segmental and the tonal level. Neither the inflectional nor the semantic side of the tense-aspect-mood system has been described yet, and nothing has previously been written about the meaning, classification and effects of the additional adverb-like morphemes. While this paper cannot give an exhaustive description and analysis of these morphemes, it provides an overview and some preliminary hypotheses about these morphemes.

The first section of the paper gives background on the Ikaan language, on the context in which the research presented here was carried out and on the aims and objectives of the paper. The second section gives an overview of the tense and aspect categories that have so far been identified in Ikaan. Section 3 presents a

range of morphemes that add additional meaning differences to the basic tense and aspect categories. Section 4 discusses hypotheses about the morphosyntactic classification of the morphemes presented in Section 3.

The Ikaan speakers and their language

The language variety described here is called Ikaan [ìkàːn]. A member of the ethnic community is called an Okaan [ɔ̀kàːn], the plural for this is Akaan [àkàːn]. There is no known relation to the Akan of Ghana. Ikaan is a dialect of Ukaan, a language of the Benue-Congo family of the Niger-Congo phylum. Ukaan is spoken in south-western Nigeria in five villages: Ikakumọ and Ayanran, both located in the Akoko Edo Local Government Area of Edo State, and Ikakumọ, Auga and Iṣẹ, which are located in the Akoko North Local Government Area of Ondo State. The Ikaan dialect is spoken in the two Ikakumọ villages, the other three villages each have their own dialect. Not all dialects are mutually intelligible.

The area where Ikaan is spoken is highly multilingual. Yoruba is spoken throughout the region as a lingua franca, the use of English and Ebira is widespread and there are many minority languages spoken in neighbouring villages. In addition to its minority status, Ikaan is also an endangered language because the language is not learned by many children and among the parent generation many speech genres that are not used every day are being lost.

The Ukaan language has received some attention by linguists interested in the classification of the language within the Benue-Congo family though no conclusive classification has been agreed on yet. Beyond classification, linguistic research on aspects of the structure of the language has been carried out by Taiwo (1988, pp.69), Abiọdun (1989, 1997, 1999), Oyetade (1996), Kelsey (2007) and Borchardt (2009) and myself. None of this research has looked at the verb system and in general little is known on the grammar, the lexicon and the use of the language.

Ikaan has nine vowels, all of which may be short or long, oral or nasal. Nasal vowels are restricted in their distribution and do not occur word-initially. There is ATR ('advanced tongue root') vowel harmony in the language, the distribution of vowels into ATR sets is shown in Table 1.

Table 1: Vowels and ATR harmony

	+ATR		−ATR	
	unrounded	rounded	unrounded	rounded
high	i	u	ɪ	ʊ
mid	e	o	ɛ	ɔ
low			a	

Ikaan is a tone language with two tones, a high tone (H) and a low tone (L), both of which are underlyingly present. Like in many other tone languages, two low tones that are adjacent to one another are merged into one underlying tone that is attached to a number of surface tones. Low tones can be attached to tone-bearing units or they may be unattached floating L tones. Floating L adjacent to attached L merge into the attached L, whereas floating L adjacent to H cannot merge and stay afloat. Downstep occurs in Ikaan after floating low tones (non-automatic downstep) but there is no downstep after attached and overtly realised low tones in LH surface sequences (no automatic downstep). Downstep in Ikaan is complex and unusual for a number of other reasons, for more details see Salffner (2010, 2011).

The word in Ikaan is minimally bimoraic. As most words consist of a vowel prefix followed by a root that is at least CV, they fulfil the minimal word requirement. However, as shown in Table 2, demonstratives have no vowel agreement prefix. Also, two of the possessive pronouns have roots which consist only of a consonant. These words would fail to meet the two-mora requirement for the minimal word if the vowels in the root or prefix were monomoraic. However, in these words the one remaining vowel surfaces bimoraically, as shown in (1).[2]

(1)   nὲ: 5.DEM.PROX
       ⁺nέ:n   5.DEM.DIST
       ὲ:-dʒ   5-1S.POSS
       ěː-n   5-3S.POSS

Diachronically, this may be explained by compensatory lengthening to ensure that the requirement for the minimal word is met. Synchronically this has now probably lexicalised into words with bimoraic vowels.

Ikaan nouns consist of a noun class prefix and a root. Noun roots have lexical tonal melodies which are mapped onto the nouns. The prefixes indicate six different nominal agreement classes which are maximally distinguished in the demonstratives and determiners, though classes O1 and O6 share the same prefix. An overview is given in Table 2.

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2   For conventions on transcription and glossing and for a list of abbreviations used in this paper see the Appendix.

Table 2: Noun classes and agreement classes

Noun class	Agreement class	prefix	DEM. PROX	DET
O	1	o-/ɔ-	jɔ̃̀:	ɔ̀jón
A	2	a-	dà:	àdán
U	3	u-/ʊ-	dɔ̀:	ʊ̀dɔ́n
I	4	i-/ɪ-	dɛ̀:	ìdɛ́n
E	5	e-/ɛ-	nɛ̀:	ɛ̀nɛ́n
O	6	o-/ɔ-	nɔ̀:	ɔ̀nɔ́n

Verbs are also made up of a prefix and a root. Unlike nouns, however, verb roots are underlyingly toneless and receive their tonal melodies from inflectional tonal melodies – such systems are called "predictable" by Kisseberth and Odden (2003:61).

The verbal prefix is not considered to be a pronoun for a number of reasons. Firstly, the verbal prefix is generally monomoraic and therefore fails to meet the minimal word requirement. More importantly however, the verbal prefix co-occurs with overt nouns or noun phrases as subjects as shown in (2) and (3), and with overt pronouns, as shown in (4).

(2) **ò-lú**   **ò-jé**   **à-bàbá**   **à:-dʒ**
    O1-[name]   3S.NFUT-eat.NFUT   A2-beans   2-1S.POSS
    'Olu ate my beans'.

(3) **ɛ̀:-wí**   **ò-jén**   **ɔ̀:-dʒ**   **ù**   **nɛ̀:**   **ɛ̀-ŋmànà**   **ò-wàhálà**
    E5-goat   O1-wife   1-1S.POSS   EPV   5.DEM.PROX   5.NFT-have.NFUT   U3-trouble
    'This goat of my wife's is troublesome'.

(4) **ìhjɛ̀:dʒ**   **dʒɛ̀-ŋmɛ̀:**   **b-ì-skû:**   **ì-skû:**   **ì-tɛ́ʲ**
    1S   1S.NFUT-sit.NFUT   LOC- I4-school   I4-school   4-small
    'I myself was in school, primary school.'

The Ikaan pronouns are given in Table 3.

Table 3: Personal pronouns

	singular	plural
1	ìhjè:dʒ	ìhjèbɔ́
2	ìhjɛ̀:rɔ	ìhjèmɔ́n
3	ìhjě:n	ìhjèmán

Verb roots can be followed by object suffixes. A list of object suffixes is given in Table 4.

Table 4: Object suffixes

	singular	plural
1	-dʒ	-bɔ́
2	-ɔ̀	-mɔ́n
3	-n	-mán

Unlike the subject agreement prefixes, object suffixes do not co-occur with overt objects but are used instead of object nouns. Still, they are not independent object pronouns. Evidence for their status as affixes firstly comes from the fact that they do not meet the minimal word requirement of two moras. Secondly, there is a specific tonal process that applies between the verb root and the object suffixes that does not apply to noun phrases. More details on the morphological structure of verbs are given in the next section. The canonical word order in Ikaan is SVO.

1.1   Research context

The data presented here was collected during ten months of fieldwork conducted as part of my PhD in Linguistics within the Endangered Languages Academic Programme and the Endangered Languages Documentation Project of the Hans Rausing Endangered Languages Project (HRELP). The research and fieldwork pursued a double objective. The first aim was to initiate the documentation and description of Ikaan, that is, to produce a record of the linguistic practices of the Ikaan-speaking community and present the results in the form of an annotated corpus supplemented with a sketch grammar and a small dictionary. The second aim of the research was to describe and analyse the tonal system of Ikaan at the phonological, morphological, lexical, morphosyntactic and grammatical interface level and present the results of this linguistic investigation in the form of a PhD thesis.

Tense, aspect and mood were not the focus of the research. However, from a tonal perspective tense, aspect and mood require studying because tense, aspect and mood inflection is partly carried out through tonal melodies. In addition, there are non-obligatory morphemes that express tense, aspect and mood. These morphemes interact with and affect the inflectional tonal melodies in ways that are not yet clear. A description of the grammatical tense, aspect and mood system and the additional morphemes that affect it is therefore important both for an understanding of the language as a whole and for an understanding of the tonal system.

The double objective of the research informed the research methodology and data collection methods. The data presented here comes from;

> ➢ free texts such as folk tales, historical narratives and procedural descriptions based on photo series (e.g. data on Sequential aspect)

> ➢ participant observation of speakers and interaction with speakers in Ikaan (e.g. the potential Immediate Future tense, Sequential aspect)

> ➢ follow-up sessions with the main consultant to clarify questions and obtain paradigms based on the naturally observed data

> ➢ elicitation sessions with the main consultant in which I described scenarios and asked how this scenario would be expressed in Ikaan (e.g. data on Continuous aspect)

All data has been submitted for archiving and public access (where permissions allow) to the Endangered Languages Archive of HRELP.

1.2   Aim, objectives and scope of this paper

The main aim of this paper is to share data from my field notes that should not stay hidden away. I aim to give a descriptive overview of Ikaan tense and aspect categories from a morphosyntactic and a semantic perspective as they have so far shown up in my research. The objectives are firstly to show some data which I have identified and have been able to give a preliminary classification. Secondly, I present data which I can describe but cannot yet classify either morphosyntactically or semantically. Thirdly, I share observations and thoughts on the structures I have encountered. I am not in a position to go further than this because as yet none of the data has complete paradigms that would allow a more fine-grained description and analysis.

With my own research focus in phonology and tone, I am not an expert in verbal semantics and have not carried out a detailed investigation or tests for the categories presented here. Therefore, I give illustrations and scenarios for situations in which a given tense or aspect category is used rather than use specific semantic labels. I hope that with this approach I can show the diversity as well as the usage of the tense and aspect forms in Ikaan and can interest other researchers with more expertise in verbal semantics in the Ikaan data.

2 Ikaan tense and aspect categories

This section presents basic tense and aspect categories occurring in affirmative main clauses. There are many more forms in various types of subordinated clauses which have not yet been investigated and therefore cannot be discussed here.

2.1   Key terms

To clarify my use of terminology in this paper, I will briefly explain how I understand the terms 'tense' and 'aspect'. Tense locates an event in time by comparing it to a reference point. An event can take place before, simultaneously with, or after this reference time. If no specific reference time is given, the speech time is taken as the reference time. Aspect deals with how an event unfolds over time. An event can be dynamic or stative, that is, it may change over time or not; it can be closed or ongoing, that is, it may be finished or have an inherent endpoint, or not; or it can be iterative, that is, it may be made up of smaller events that repeat over time (Chung and Timberlake 1985:203, 214).

2.2   Morphosyntactic marking strategies in Ikaan

Ikaan verbs are made up of a verb root and a prefix which encodes person, number and noun class agreement with the subject as well as tense, aspect and mood information.[3] The verbal prefix is analysed here as a portmanteau morpheme but is likely to have internal structure which is yet to be described and analysed.

Verb roots are underlyingly toneless and are inflected for tense and aspect with grammatical tonal melodies. In some tense and aspect categories, monosyllabic

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[3]   The form of the prefix is in fact even more complex and is also influenced by whether a verb occurs in a main clause or a subordinate clause, by what type of subordinate clause it occurs in, whether it occurs in a statement or a question, whether or not the subject is marked as [+specific], whether the clause is negated and possibly more factors that are yet to be identified. For now, prefixes are glossed as encoding a tense or aspect if there is reason to believe so, though more work remains to be done to verify and expand the preliminary glosses given here.

verb roots have a second form derived from the root which is used if the verb occurs sentence-finally. There is a range of formation strategies for these alternate forms and there are patterns to their formation as shown in the following section. The monosyllabic forms of the verb root are referred to in this paper as the simple form or simple stem whereas the derived forms are referred to as the complex stem. Bisyllabic and trisyllabic verb roots do not show this alternation. For more details see Salffner (2010: 69).

(5)	-og	tif	tifog	'tell'
		muɡ	muɡoɡ	'cook'
	-aɡ	ʃɛɡ	ʃɛɡaɡ	'sift'
		kɔr	kɔraɡ	'break'
		ba̠r̥	ba̠raɡ	'peel'
	nasalization	ta	tã	'play'
		r̠ḁ	r̠ã	'finish'
	reduplication	nɛː	nɛnɛː	'hold'
		jaː	jajaː	'take a photo'

The word order in Ikaan is SVO in most cases. The overt subject of the sentence can be dropped, though its person, number, and noun class are retrievable by way of the obligatory verbal prefix. A descriptive template for the word order in most Ikaan sentences is given in (6).

(6)   SUBJ AGR/TAM-V OBJ

Tense and aspect in Ikaan are encoded by changes in segments and tones, through additional morphemes and by changes in the word order. An illustration of these changes is given in (7) to (10); full paradigms for four tense/aspect categories are given in the appendix.[4]

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[4]   While I have tried my best to give correct transcriptions of the data I present here, I cannot guarantee that my transcriptions are always accurate. I have encountered difficulties with ATR values for high vowels as well as with nasality. In addition, there are indications that ATR values for high vowels may vary within the community. I therefore recommend not to use the transcriptions given here for further work on ATR harmony or nasality and to go back to the original recordings instead, which are available from the Endangered Languages Archive of HRELP.

(7)   àtínàhú   ɔ̀-fɛ́ṛ   ìwé
      [name]   3S.NFUT-write.NFUT   book
      'Atinahu wrote a book.'

(8)   àtínàhú   ò-kénè   ùjág
      [name]   3S.NFUT-make.NFUT   food
      'Atinahu made food.'

(9)   àtínàhú   ó˟:-jé   ùjág
      [name]   3S.CONT-eat.CONT   food
      'Atinahu is eating.'

(10) àtínàhú   á   ìwé   è   fɛ́ṛág
      [name]   3S.FUT   book   FUTL   write.FUT
      'Atinahu will write a book.'

In these four examples, the differences between tense and aspect forms are in;

➢ the vowel on the verbal prefix, here in quality (*ɔ/o* vs. *a*), ATR value (+ATR vs. –ATR) and quantity (short vs. long), though in 1S more variation is attested with forms such as *dʒi*, *dʒe*, *dʒo* and *dʒa* and their respective –ATR counterparts both as short and long vowels for the different tenses and aspects

➢ the tones on the verbal prefix, here L, H˟H and H, but other tonal melodies exist

➢ the form of the verb, here simple *fɛṛ* vs. complex *fɛṛag*, but other formation strategies for the complex stem exist as shown in (8)

➢ the tonal melody on the verb stem, here H vs. HL but other tonal melodies exist

➢ an additional morpheme before the verb, here a mora bearing a L tone in (7)

> ➤ word order, in (8) what seems to be SVO vs. SOV

In addition, other morphemes may be present, which will be shown below. Even though the internal structure of the verbal word is yet to be investigated in detail, some aspects of the interaction of the tonal morphemes and the segmental morphemes are already clear. As mentioned above and as will be explained in more detail below, the verb root gives the lexical meaning of the verbal word, and the choice of simple or complex stem adds grammatical meaning. Most of the grammatical meaning however is encoded in the segmental structure of the prefix and in the inflectional tonal melody of the prefix and the root. One way of marking and glossing this morphological structure in detail would be as in (11) to (15), where all morphemes have been separated by tabs for more clarity.

(11)   dʒɛ̀kʊ́rà

dʒɛ̀-		kʊ́rà	
dʒɛ-	L-	kʊra	-HL
1S.NFUT-	NFUT-	sleep	-NFUT

'I slept/am asleep.'

(12)   dʒɔ̂:kʊ̀rá

dʒɔ̂:-		kʊ̀rá	
dʒɔ:-	HL-	kʊra	-LH
1S.HAB-	HAB-	sleep	-HAB

'I used to sleep.'

(13)   dʒɔ̌:kʊ́rà

dʒɔ̌:-		kʊ́rà	
dʒɔ:-	LH-	kʊra	-HL
1S.COND.NFUT-	COND.NFUT-	sleep	-NFUT

'if I slept/am asleep'

(14)   dʒɛ́ꜛ:kʊ́rá

dʒɛ́ꜛ:		kʊ́rá	
dʒɛ:-	HL_FL H-	kʊra	-H
1S.CONT -	CONT-	sleep	-CONT

'I am sleeping'

(15)   dʒɛ̌ːꜜkúrá
       dʒɛ̌ː-   kúrá

dʒɛ̌ː-	LH-	L_FL	kʊra	-H
1S.COND.CONT-	COND.CONT-	CONT(?)-	sleep	-CONT

       'if I am sleeping'

However, since this way of glossing is very complex and since the distinction between tonal and segmental morphemes is not the focus of this paper, I will gloss the data differently. I will mark up the boundaries between morphemes at the segmental level but will gloss the tonal melodies as part of the segmental morphemes. Therefore (11) as given above will be represented as given in (16).

(16)   dʒɛ̀-kúrà
       1S.NFUT-sleep.NFUT
       'I slept/am asleep.'

An additional complication arises from the fact that while each tense or aspect occurs with a specific inflectional tonal melody for both the prefix and the root, these melodies do not always surface in the same way in monomoraic, bimoraic and trimoraic verbs because of the way in which tonal melodies are mapped onto words. For some examples of tonal melodies on different verbs see the Appendix; for more details about how and why the surface forms arise see Salffner (2010).

2.3 Tenses

Ikaan distinguishes two tenses. Events and states that occur in the present or past are encoded with Non-Future tense. Events that occur in the future are encoded with Future tense.[5]

2.3.1 Non-Future

The Non-Future tense is used for past and present events and states. In the Non-Future, the verb prefix for 1S is *dʒe/dʒɛ*[6], and the tone on the verb prefix is L. The

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[5]   I have not yet investigated whether what is presented here as a non-future vs. future split may alternatively be analysed as a realis vs. irrealis split.

[6]   As mentioned above, tense and aspect categories may differ in the quality of the vowel that occurs in the verbal prefix. This difference does not show in all persons and numbers, however, it consistently surfaces in 1S. Therefore I will give the form of the prefix for 1S wherever the data is available.

ATR value of the verbal prefix is determined by the ATR value of the verb root. The inflectional tonal melody for the verb itself is HL. It surfaces as H, HL and HLL for monomoraic, bimoraic and trimoraic roots respectively. The verb stem used in the Non-Future is the simple one, and the word order is SVO.

Examples for Non-Future tense were shown in (7) and (8) above and are repeated here as (17)[7] and (18).

(17)   àtínàhú   ɔ̀-fɛ́ṛ   ìwé
       [name]   3S.NFUT-write.NFUT   book
       'Atinahu wrote a book.'

(18)   àtínàhú   ò-kénè   ùjág
       [name]   3S.NFUT-make.NFUT   food
       'Atinahu made food.'

2.3.2 Future

The Future tense is used for future events. It looks markedly different from all other tenses and aspects in Ikaan and its full structure is not yet understood. In the intransitive construction in (19), it looks as though the Future tense is marked with a prefix with a long vowel /aː/ bearing a HL melody.

(19)   dʒâː-kúrá
       1S.FUT-sleep.FUT
       'I will sleep.'

(20)   âː-kúrá
       3S.FUT-sleep.FUT
       'S/he will sleep.'

However, what looked like a prefix in the intransitive constructions above looks different in the transitive constructions in (21) and (22). The 'prefix' is no longer a long vowel with a HL melody but a short vowel with a H melody. More importantly, it is now separated from the verb and stands alone. The 'prefix' is followed by the object, then a vocalic mora that copies its vowel specifications

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[7]   The H tone on *fɛṛ* 'write' in (17) is surface melody on monomoraic verb roots of the underlying HL Non-Future melody.

from the preceding vowel and bears a low tone, and finally the verb in sentence-final position.

(21) á   ìwé   è   fér̥ág
      3S.FUT   book   FUTL   write.FUT
      'He will write a book.'

(22) dʒá   àbàbá   à   jág
      1S.FUT   beans   FUTL   eat.FUT
      'I will eat beans.'

With this behaviour, the future marker does not fit well into the category of prefixes anymore and is starting to look more like an auxiliary. Other data suggests that the Future tense is in fact expressed in a grammaticalised multi-verb construction consisting of a verbal prefix followed by the verb *wa* 'come', which would mean that the structure of this tense would be PREF + *wa* + OBJ + L + second verb. A hint towards this is that in some spoken texts, the verb *wa* 'come' occurs simply as *a* and that in examples that I give below in (82) *dʒá* seems to be split into *dʒó/dʒɔ́* and *à*. If this hypothesis is correct, it would make the structure similar to other multi-verb constructions which are touched upon below and which in some cases show the underspecified vocalic mora bearing a L tone. I briefly discuss the potential internal structure of *dʒá* below, but in this paper I will not follow up on the multi-verb construction hypothesis.

Since the structure of the Future tense is still to be investigated in detail, only preliminary descriptions can be given here. The future marker for 1S is *dʒa*, and the tone on the marker is H. The vowel /a/ is −ATR so that the verb root does not change the ATR value of the verbal prefix. The inflectional tonal melody for the verb itself is H and surfaces as H, HH and HHH. In addition to the verb prefix, a segmentally underspecified vocalic mora bearing a low tone occurs immediately before the verb. This vocalic mora takes its segmental feature specifications from the preceding vowel. The Future tense uses the complex verb stem that is derived from a simpler root as was shown in (5). The future marker itself has prefix-like properties in some cases and more auxiliary-like properties in other cases. Until a precise classification can be given it will be glossed as an independent morpheme. The word order in the Future tense is SOV.

Given the preliminary description, the construction in (19) is repeated here as (23) with the glossing conventions explained above.

(23) dʒá   à   kúrá
      1S.FUT   FUTL   sleep.FUT
      'I will sleep.'

2.4 Aspects

In Ikaan, there are more aspectual distinctions than there are tense distinctions. So far four aspectual categories have been identified.

2.4.1 Continuous

The Continuous aspect is used for ongoing events and changing states occurring either in the present or the past. The Continuous aspect cannot be used to refer to future events. In the Continuous aspect, the verbal prefix has a long vowel, and the form for 1S is *dʒeː-/dʒɛː-*. The surface melody on the verbal prefix is H⁺H, with the register lowering occurring after the first mora. As downstep in Ikaan is the result of a floating low tone followed by an attached high tone, the underlying tonal melody on the prefix must be HL_FLH. The ATR value of the vowel in the prefix is determined by the ATR value of the verb root. The tonal melody on the verb root is H, which surfaces as H, HH and HHH on monomoraic, bimoraic and trimoraic verbs. The verbal stem used in the Continuous aspect is the simple stem if the verb is in non-final position in the sentence. If the verb is in final position the complex stem occurs, as shown in (26) below. The word order in clauses with Continuous aspect is SVO.

(24) dʒéꜛː-fɛ́ɽ⁸   ìwé
      1S.CONT-write.CONT   book
      'I am writing a book.'

(25) dʒéꜛː-jé   àbàbá
      1S.CONT-eat.CONT   beans
      'I am eating beans.'

For Continuous aspect it is also possible to have the O_FOCSV word order shown in (26). Here, the object is in focus position and marked with a high tone indicating focus on the noun class prefix. In spontaneous speech in answer to the question

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8   The H tone on *fɛɽ* 'write' in (24) is surface melody on monomoraic verb roots of the underlying H Continuous melody.

'What are you doing?', this sentence structure is more frequently used than the one in (24) and (25) and is also considered more natural by some speakers.

(26) íwé   dʒɔ́-fɛ́ɾ̥àg
      book.FOC   1s.CONT-write.CONT
      'I am writing a book.' *or* 'It's a book that I'm writing.'

With this sentence structure, the verbal prefix has a short ɔ- as the vowel rather than the long ɛ·- in (24) and (25) and bears a H melody rather than H⁺H. The tonal melody on the verb stem is HL instead of HH above, the verb stem used here is the complex stem rather than the simple stem in the non-focus construction above.

2.4.2 Habitual

This form is used to express habitual events; for example, events that used to happen, for things that people do as a hobby in the present, for food that a person eats or does not like eating, or for food that a person eats but does not cook himself. The verbal prefix in this form has a long vowel, the form in 1S is *dʒoː/dʒɔː* and it carries a HL melody. The ATR value of the prefix is again determined by the ATR value of the root of the verb. The verb root is inflected with a LH melody, which surfaces as H, LH and LHH on mono-, bi- and trimoraic verbs respectively. In the Habitual aspect, the simple stem of the verb is used. The word order in this construction is SVO.

(27) èkɛ̀   dʒɔ̀[9]-b-ìkákùmɔ̀   dʒɔ̂ː-fɛ́ɾ̥[10]   ìwé   b-ìjòhú
      when   1S-LOC-[name]   1S.HAB-write.HAB   book   LOC-morning
      'When I was in Ikakumo, I used to write in the morning.'

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[9] I have not investigated the inflectional patterns for this form and therefore cannot say anything about any tense, aspect and mood marking. The same holds for some other data presented in this paper. Therefore, throughout this paper the absence of tense-aspect-mood glossing on prefixes and verbs does not indicate that the forms are uninflected, it just means that it is not yet clear whether this form is inflected at all and if yes, how it is inflected.

[10] The H tone on *fɛɾ* 'write' in (24) is surface melody on monomoraic verb roots of the underlying LH Habitual melody.

(28) ô:-ʃènó
 3S.HAB-play.HAB
 'He used to play.'

(29) bâ:-kpàr̥íná   àdé
 1P.HAB-carry.HAB   [name]
 'We used to carry Ade.'

2.4.3 Sequential

Sequential aspect is generally used for events that happen one after another. The verbal prefix for sequential forms is *gi-/gɪ-* for all persons and numbers.[11] The first *gi-/gɪ-* of a series of *gi-/gɪ-* may also be *dʒi-/dʒɪ-*. In either case, the prefix occurs with a short vowel and bears a H melody. As before, the ATR value of the prefix harmonises with the verb root. The tonal melody on the verb stem is either H or L; there is no explanation yet for this alternation. H melodies surface as ꜜH, which suggests the presence of a floating L between the prefix and the root. The verb occurs with the simple stem; the word order is SVO.

(30) dʒè-ŋmè: gí[12]-wà   ìbáírò ì:dʒ   gí-ꜜfér̥   ìwé
 1S.NFUT-sit.NFUT   SEQU-take.SEQU   biro   1S.POSS   SEQU-write.SEQU   book
 'I sat down, took my biro and wrote.'

(31) ɔ̌:-kʊ̀   àwɔ́   ǎ:n   gí-ŋmè: gí-ꜜjé   àbàbá
 3S.NFUT-wash.NFUT   hands   3S.POSS   SEQU-sit.SEQU   SEQU-eat.SEQU   beans
 'He washed his hands, sat down and ate the beans.'

A possible second use of the Sequential aspect is to indicate the beginning of an action or some kind of immediate future. This use of Sequential aspect could occur, for example, in a situation where I have been sitting with people but now I am leaving from there and I want to tell the other people what I will do next. Alternatively, I could be meeting someone at my doorstep as I am going out and he

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11 The fact that the *gi-/gɪ-* prefix is used for all persons, numbers and noun classes may be an indication that it may also be interpreted as a continuation-of-subject marker or as a same-subject marker. Note though that this potential continuation of subject marker is specific to the Sequential aspect and does not occur in any other tense.

12 Here it is also possible to say *dʒí-* to express 1S.SEQU.

is coming in and this person would ask me where I am going or what I am doing. In both cases I could say:

(32) dʒí-gá   bá   ùmɔ́
1S-go   fetch   water
'I'm going to fetch water.'

Unlike in (30) and (31), however, there is no downstep preceding the high-toned verb stem. Nonetheless, the Sequential aspect (30)-(31) and potential Immediate Future (32) prefixes are identical tonally, and can both surface as *dʒí-*. Therefore one hypothesis to follow up is that there may be a grammaticalisation process towards an Immediate Future from the Sequential aspect and the verb *ga* 'go'. On the other hand, it may just be a coincidence that the Immediate Future and Sequential aspects are both marked with a high-toned prefix *dʒí-/dʒí-* for 1S.

2.4.4 Perfective (completive)

Perfective (completive) aspect is typically used for events that have reached their natural end or activities that have been carried out to their end. Perfective aspect can be combined with other tense and aspect categories.

For Perfective aspect, there are no segmental, tonal or morphological changes in the verbal prefix or the verb stem. Instead, the verb *ṛa* 'finish' is added at the end of the sentence. As this construction is morphosyntactically different from the other tenses and aspects discussed so far, it may be more appropriate to analyse this construction as a multi-verb construction, though further research is needed to establish whether this analysis is justified.

(33) dʒè-jé   àbàbá   ṛá
1S.NFUT-eat.NFUT   beans   finish.NFUT
'I ate up the beans.'

(34) ìwág dè nĩ́[13]-wág dʒá ìwé è féṛág ṛã́
year REL 3S-come 1S.FUT book FUTL write.FUT finish.FUT
'Next year, I will finish writing the book.'

In (33), the verb *ṛa* 'finish' is used with its simple form whereas in (34) it is

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[13] The prefix surfaces is *nĩ-* for 3S here because it is in noun class agreement with the subject *ìwág* 'year'.

used in its complex form, which is marked here through nasalization. This is parallel to the other verb in each of the sentences (*je* 'eat' in (33) and *fe̞ɾag* 'write' in (34)), which also occur in their simple and complex forms respectively.

3 Additional semantic distinctions in tense, aspect and manner

In addition to the categories given so far, Ikaan has further means to add more detailed tense, aspect and manner distinctions. These distinctions can be made with adverbs, which are a word class by themselves, or with members from a set of morphemes that occur within the verbal word. I first discuss adverbs to establish them as a class with their own distinct features. I then discuss the other set of morphemes to show that they have a meaning similar to adverbs but that they do not look or act like adverbs. For these morphemes, I give examples for tense, aspect and manner with explanations for scenarios in which the respective morpheme can be used, example data, observations on the phonology and morphology of the constructions and hypotheses on their semantic classification.

3.1 Adverbs

Ikaan has a distinct category of adverbs which show specific phonological, morphological and syntactic features. A list of Ikaan adverbs is given in (35).

(35) àʃâːʃà   'very well'
      àhwéhwér   'quickly'
      àtátàtá   'wobbly, insecurely'
      àté˦té̃ʲ   'a little bit'
      àhwɛ́dʒíhwɛ́dʒ   'in a tip-toeing way'
      àjímóːn   'safely'
      àgbéː   'too much'

Phonologically, adverbs often but not always occur with H tones. Morphologically, adverbs are marked with a L-toned prefix *à-* and, in almost all cases, by partial or full reduplication. Unlike verbs, adverbs are not inflected for tense, aspect and mood. Syntactically, there are fixed positions in the sentence in which adverbs may occur and there are other places where adverbs cannot go, as shown in (36).

(36) à-wéjè   ìʃɔ̰ŗ   àʃâːʃà
     3P.NFUT-turn.NFUT   pounded.yam   very.well
     'They turned the pounded yam very well.'

     *à àʃâːʃà wéjè ìʃɔ̰ŗ
     *àwéjè àʃâːʃà ìʃɔ̰ŗ
     ? àʃâːʃà àwéjè ìʃɔ̰ŗ

Like adverbs, the morphemes to which I now turn also add semantic distinctions or refinements to the sentence. However, phonologically, morphologically and syntactically they do not resemble adverbs at all.

3.2 Overview

Before introducing each of the morphemes in detail, I will give a brief overview of the morphemes, their meanings, behaviour and effects. Examples of the morphemes to be discussed in this section are given in (37), (38) and (39) below.

(37) ǒː-**tù**-féŗ   ìwé   ò-jé   àbàbá
     3S.BEFORE-**before**-write   book   3S.NFUT-eat.NFUT   beans
     'Before he wrote the book, he ate beans.'

(38) ó-**bó**-ʃʊ̂
     2S.NFUT.QU-**just**-wake_up.NFUT
     'Did you just wake up?'

(39) ǎːŗú   à-hɔ̀ːn-ó-**gè**-dʒ
     bees   3P.NFUT-sting.NFUT-EPV-**EXC**-1S.OBJ
     'The bees stung me too much.'

All the morphemes to be discussed here are contained within the verbal word. They occur either before or after the verb root and can be preceded or followed by prefixes as in (37) and (38) or by suffixes as in (39). None of the morphemes to be discussed here has any effect on the choice of simple or complex stem of the verb nor do they have any effect on the word order in the clause. Semantically, the morphemes contribute meaning that adds either a further tense dimension as with *tù* 'before' in (37), an aspectual dimension as with *bó* 'just' in (38), or a manner

dimension as with the excessive marker *gè* 'too' in (39). Two further morphemes to be discussed also add lexical meaning: *rúg⁺ị̀rị́* 'gently' and *hwéhwér* 'quickly'.[14]

All the morphemes have their own tonal melodies and ATR specifications. The exception to this is the excessive marker *ge/gɛ*, which receives its tones and ATR values from the verb root. Some of morphemes have an effect on the tonal and/or segmental form of the verb prefix, and some may also affect the inflectional tonal melody of the verb root. For example *kpèkpè* 'still' in (40) and (41) does not have any effect if it occurs in Non-Future tense, apart from triggering ATR vowel harmony in the prefix.

(40)   dʒè-kpèkpè-há
        1S.NFUT-still-see.NFUT
        'I still see [it].'

(41)   dʒè-há
        1S.NFUT-see.NFUT
        'I see [it].'

However *bó* 'just' has a range of effects on the verbal word. In the Continuous Aspect constructions in (42) and (43), its presence changes the vowel quality and quantity of the prefix from a short /o/ to a long /eː/ and the tonal pattern from H⁺H to H. Furthermore, *bó* 'just' changes the tonal melody on the verb root from all-H to HL.

(42)   dʒéʶ-kéné   ṛ̥ấ
        1S.CONT-do.CONT   PERF.CONT
        'I'm finishing.'

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14   Ikaan has a series of voiceless approximants /ɹ̥ j̊ w̥/, which contrast with their voiced counterparts and undergo nasalization before nasal vowels just like voiced approximants. Ikaan also has labialised and palatalised consonants and therefore possibly also has /hʷ/ and /hʲ/. A thorough investigation of the segmental inventory of Ikaan is in preparation, for now however it is not always possible to tell whether a given sound is /hʷ/ or /w̥/ or /hʲ/ or /j̊/. Therefore, as a compromise, these sounds are currently transcribed as sequences of /hw/ and /hj/ respectively, without implying that they represent sequences of consonants.

(43)   dʒó-bó-ꜛkénè   r̥ɑ́
       1S.CONT-just-do.CONT   PERF.CONT
       'I'm just finishing.'

In the next sections, I will discuss each of the morphemes in detail. I will then return to a more comprehensive summary and comparison before discussing the morphological classification of the morphemes.

3.3 Tense

3.3.1 'before'

In dependent clauses, a further tense distinction can be made in addition to the basic Non-Future tense. The event that is described with this construction takes place before another event which itself is marked as Non-Future. Semantically, this category may therefore be a relative past or a pluperfect. The verb in this construction is marked with the morpheme *tù* 'before', which occurs between the verbal prefix and the verb root. The order of the morphemes in the verb is as follows:

(44)   PREFIX – tù – ROOT

In constructions with *tù* 'before', the verbal prefix shows a bimoraic vowel bearing a LH tonal sequence. In 1S, the verb prefix takes the form *dʒǐ:-*, the prefix for 3S is *ǒ:-* as shown in (45), though 3S may also occur as *tǒ:-*.

(45)   ǒ:-tù-fɛ́r̥   ìwé   ò-jé   àbàbá
       3S.BEFORE-before-write   book   3S.NFUT-eat.NFUT   beans
       'Before he wrote the book, he ate beans.'

The ATR value of the verbal prefix is +ATR like the morpheme *tù*. The verbal prefix does not harmonise with the verb root, which is –ATR. The ATR value of *tù* itself is not affected by the verb root at all. Tonally, *tù* always occurs with a low tone. It is not possible to say whether the presence of *tù* affects the tones of the verbal prefix or the verb root since it is not clear which construction without *tù* it should be compared to. The verb root in the constructions with *tù* in the available data set is the simple form; the word order is SVO.

3.4 Aspect

3.4.1 'again' or 'still'

Constructions with the morpheme *kɔ́rú* 'still, again'[15] are used for the same event or action that is in itself completed and then repeated over again. This use also expresses a notion of unexpectedness or against-the-odds and can be used to express annoyance. This use of *kɔ́rú* is illustrated in (46) to (50), which relate to a scenario of a boy who keeps skipping school. For comparison, the sentences are given with and without the morpheme *kɔ́rú*.

(46) ìdʒěːn   ɔ̀ː-kì   ìskûː=g
      yesterday   3S.NFUT.NEG-go.to.NFUT.NEG   school=NEG
      'Yesterday, he didn't go to school.'

(47) ìdʒó   dɛ̀ː   ɔ̀ː-ꜜkɔ́rú-kíː=g
      today   DEM   3S.NFUT.NEG-still-go.to.NFUT.NEG=NEG
      'Today, he still didn't go.'

(48) ìdʒó   dɛ̀ː   ɔ̀ː-ꜜkíː=g
      today   DEM   3S.NFUT.NEG-go.to.NFUT.NEG=NEG
      'Today, he didn't go.'

(49) ěːꜜréːn   ɔ̀ː-kɔ́rú-kàː=g
      tomorrow   3S.FUT.NEG-still-go.to.FUT.NEG=NEG
      'Tomorrow, he still won't go.'

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[15] The translations for the morphemes themselves given here are taken from the translations that the Ikaan speakers offered. It should be noted though that the meaning of words like 'again' and 'still' in Nigerian English is not always the same as in British or American English. I have tried to give translations and explanations that are more accessible to British or American English speakers in the free translations of the example sentences and in the text. For the morphemes themselves, I have kept the Nigerian English translation for two reasons: firstly, because this is how the speakers translated these morphemes and this is how it can be understood by others who are familiar with Nigerian English and, secondly, because it is actually not always possible to find an exact translation equivalent for British or American English.

(50) ě:ˈré:n   ɔ̌:-kà:=g
      tomorrow   3S.FUT.NEG-go.to.FUT.NEG=NEG
      'Tomorrow, he won't go.'

In addition to the usage illustrated above, the construction with *kɔ́rú* 'still, again' can also be used for two or more different events that are in themselves completed and occur one after another. In this usage, the form can be seen as a sequential aspect but at the same time it again expresses an idea of against-the-odds or unexpectedness and can also express admiration. This is illustrated in (51) and (52), which relate to a scenario of someone who works on the farm in the morning, comes home, sweeps the house and then still goes to the pond to fetch water even though that person might be expected to be too tired by now to fetch water.

(51) ò-ʃí   b-ìjòhú   gí-ˈwá   tɛ̀
      3S.NFUT-farm.NFUT   LOC-morning   SEQU-come   reach

      gí-fɛ̀tɛ̀   ègù   gí-ˈkɔ́rú:[16]-gá   bá   ùmɔ́
      SEQU-sweep   house   SEQU-still-go   fetch   water
      'She went to farm in the morning, returned home, swept the house and still went to fetch water.'

(52) ò-ʃí   b-ìjòhú   gí-ˈwá   tɛ̀
      3S.NFUT-farm.NFUT   LOC-morning   SEQU-come   reach

      gí-fɛ̀tɛ̀   ègù   gí-ˈgá   bá   ùmɔ́
      SEQU-sweep   house   SEQU-go   fetch   water
      'She went to farm in the morning, returned home, swept the house and went to fetch water.'

Finally, the morpheme *kɔ́rú* 'again, still' can be used to express an additional activity that occurred 'on the side', as shown in the data in (53). This scenario describes how I stayed in the village to learn the Ikaan language, but also used to sit down with people and help them peel cassava.

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[16] I have no explanation for the lengthening of the final vowel here.

(53)   ɔ̀:-kɔ́rú-ꜜfṹnã́   àní   ùwɔ́   bár̥   àgúgúfè̀
        3S.HAB-still-be.able.to.HAB   people   hand   peel   cassava
        'She also used to help people peel cassava.'

In (54), the same construction is given without *kɔ́rú*. In (55) the same construction is given with the phrase *bè̀kè̀nìkè̀n* 'always' added.

(54)   ɔ̀:-fṹnã́   àní   ùwɔ́   bár̥   àgúgúfè̀
        3S.HAB-be.able.to.HAB   people   hand   peel   cassava
        'She used to help people peel cassava.'

(55)   ɔ̀:-fṹnã́   àní   ùwɔ́   bár̥   àgúgúfè̀ b-è̀kè̀nìkè̀n
        3S.HAB-be.able.to.HAB   people   hand   peel   cassava LOC-always
        'She always used to help people peel cassava.'

In the sentences with and without *kɔ́rú*, the verb prefix is the same with respect to vowel length, vowel quality and the tonal pattern.[17] Regarding the ATR value of the prefix vowel, all available examples for verbs preceded by *kɔ́rú* are verbs with –ATR vowels. This is almost certainly an accidental gap in the data rather than a systematic gap in the language. Because of this gap, however, it is impossible to say whether *kɔ́rú* affects the ATR value of the preceding verb prefix the way *tú* 'before' does.

Regarding the tonal melodies on the verb and the verbal prefix, *kɔ́rú* 'again, still' does not cause any changes in the melodies in examples (47), (49), or (51) above. In (53), however, the verb *fõnã* 'be able to' surfaces with a H melody in conjunction with *kɔ́rú*. In (54) and (55), however, where *kɔ́rú* is not present, the verb root surfaces with the normal LH melody for Habitual aspect.

Even though the inflectional tonal melodies do not change in the presence of *kɔ́rú* 'again, still', the presence of *kɔ́rú* can give rise to tonal change elsewhere in the clause. In particular, the morpheme on which the downstep is realised differs when *kɔ́rú* is present, as shown in the negative Non-Future tense clauses and in affirmative Sequential aspect clauses. In (47) and (51), the register lowering occurred before *kɔ́rú*. In (48) and (52) where *kɔ́rú* is not present, the downstep occurred before the verb root *kí* 'go to' and the verb root *gá* 'go' respectively.

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[17]   That being said, changes in vowel quality mostly show in the first person singular and only rarely show in other persons. The available data does not include full paradigms for all the forms so that all descriptions here can only be preliminary.

However, all instances with downstep have in common that the downstep is realised on the morpheme immediately following the verbal prefix, no matter if that is *kɔ́rú* or the verb root. Since downstep in Ikaan is triggered by a floating low tone, this floating L must be located between the verb prefix and the verb root, and *kɔ́rú* 'again, still' must slot in between the floating L and the verb root. The order of the morphemes including the floating L can therefore be sketched as follows:

(56)   PREFIX – L$_{FL}$ – kɔ́rú – ROOT

Finally, *kɔ́rú* 'again, still' does not affect the choice of simple or complex stem of the verb and also does not alter the word order in the sentence.

3.4.2 'again' or 'still'

There is a second morpheme, *mǐ*, which is also translated as 'again' or 'still' and also refers to events which are repeated or follow each other. However, it has a slightly different meaning and occurs in slightly different contexts. Imagine a situation where someone is running around all day without ever sitting still, and then finally sits down, only to jump up again after a few minutes to go somewhere else. In a situation like this, an onlooker might say, with or without exasperation:

(57)   ùbúnǒ: nɔ̌-mɪ́-ꜜkɪ́g
       where   3S.NFUT-again-go.to.NFUT
       'Where did he go to now/again?'

(58)   ùbúnǒ: nɔ̌-kɪ́g
       where   3S.NFUT-go.to.NFUT
       'Where did he go to?'

(59)   ùbúnǒ: nɔ̌-mɪ́-kàg   bɛ̀
       where   3S.CONT-again-go.to.CONT   now
       'Where is he going to now/again?'

(60)   ùbúnǒ: nɔ̌-kàg
       where   3S.CONT-go.to.CONT
       'Where is he going to?'

The vowel length and vowel quality of the prefix are not affected by the

presence of *mí* 'again, still'. Since the available data only contains examples where the verb root contains a −ATR vowel, it is not possible to give evidence on whether the ATR value of the vowel in the prefix harmonises with *mí* rather than the root.

The tonal melody on the verb root is also not affected by the presence of *mí*. The tone on the verb prefix does change however, and there is also a difference involving downstep. In the sentences with *mí*, the tone on the verb prefix is H. There is downstep after *mí* and preceding the verb root if the verb root carries a H melody as in (57). In L-toned verb roots such as in (59), the floating L triggering the downstep would be adjacent to the root L. It would therefore be merged with its neighbour and would not be available as a trigger for downstep anymore. In the sentences without *mí*, the verb prefix bears a low tone instead and there is no downstep.

When comparing the forms of verbs with *kórú* 'again, still' and those with *mí* 'again, still', in both cases the additional morphemes slot in between the verb prefix and the verb root. Unlike with *kórú*, however, the downstep follows *mí* rather than preceding it, and the downstep occurs in clauses with Non-Future tense rather than Continuous aspect. Therefore for constructions with *mí* the order of the morphemes and the floating L that triggers the downstep in Non-Future tense seems to be as in (61):

(61)   PREFIX – mí – L$_{FL}$ – ROOT

However, there may be an additional substantial difference between the downsteps in *kórú* and *mí*. Given that there is no downstep when *mí* is not present and given that the presence and absence of downstep is independent of the presence or absence of *kórú*, it could also be argued that the downstep is lexically part of *mí*, e.g. as a floating L that follows the word, whereas there is no such lexical floating tone for *kórú*. *mí* occurs with both the complex and the simple form of the verb root but does not determine which of the two is used. Also, the word order in the sentence is not affected. As an aside, in an extract of the oral history of the Akaan people, the morpheme *mì* 'again, still' occurs, with the same segmental form and the same translation but with a low tone instead of H. Note that this time *mí* occurs in a dependent clause. The situation described here is that after some arguments with the ruling king of Ile-Ife, the three brothers that founded the three Ikakumo villages had to leave Ile-Ife with their families. At first, they went to the city of Benin.

(62) èkὲ   ná-mǐ̀-ɛ̌ː-tὲ   b-ìbìnɪ́
      when   3P.NFUT-again-???-reach.NFUT   LOC-[name]
      'When they again reached Benin City, …'

Note that the Akaan people had never actually gone to Benin before; this was in fact the first time they had ever been there. The translation into Nigerian English with 'again' may be due to the fact that arriving in Benin is one event in a sequence of events in the Akaan's journey from Ile-Ife to their current location. Instead of (62), it is also possible to use the following two constructions:

(63) èkὲ   ná-ɛ̌ː-tὲ   b-ìbìnɪ́
      when   3P.NFUT-???-reach.NFUT   LOC-[name]
      'When they reached Benin City, …'

(64) èkὲ   ná-tὲ   b-ìbìnɪ́
      when   3P.NFUT-reach.NFUT   LOC-[name]
      'When they again reached Benin City, …'

The expression in (63) stresses the fact that reaching Benin and whatever was following in the next part of the sentence occurred simultaneously. Here a good translation would also be 'At the time that they got to Benin,…'. As shown in (63) and (64), it is possible to leave out *mǐ̀* and keep *ɛ̌ː*, which I have not been able to find a translation for. However, it is not possible to keep *mǐ̀* and leave out *ɛ̌ː*. Finally, in this example the segments and tones in the verb are not affected by whether *mǐ̀* is used or not, they stay the same in both cases.

3.4.3 'still'

If an event is ongoing and not interrupted, *kpèkpè* 'still' can be used to describe this. For example, one morning I might see a woman frying *gari*, a local food. When I walk past in the afternoon, the same woman is still sitting by the fire frying the same batch of *gari*. She has not stopped to do anything else since the morning. In this situation I can say (65):

(65) ìdʒòlá   ôː-kpèkpè-hὰ̃wɛ̃́ː
      [name]   3S.CONT-still-fry.CONT
      'Jola is still frying.'

(66)   ìdʒɔ̀lá   ɔ́ʜ-hã́wã́ː
       [name]   3S.CONT-fry.CONT
       'Jola is frying.'

In another situation, someone who has a stain on his clothes asks another person to wash the clothes for him. The person washing the clothes, however, does a bad job and the stain is still there after the washing. Therefore the owner of the clothes goes back to complain and says:[18]

(67)   dʒè-kpèkpè-há
       1S.NFUT-still-see.NFUT
       'I still see [it].'

(68)   dʒɛ̀-há
       1S.NFUT-see.NFUT
       'I see [it].'

A third scenario where *kpèkpè* 'still' can be used is the following example of a person who suffered from typhoid fever and took both traditional and Western medicine. Despite that, however, his fever didn't go down:

(69)   ɛ̀wĩ̀ɾ̥   ì   nɛ̀ː   ěː[19]-kpèkpè-jètì   ɾɛ́-dʒ-ì=g
       fever   EPV   DEM   3S.-still-leave   BEN-1S.OBJ-EPV=NEG
       'This fever still didn't leave me.'

(70)   ɛ̀wĩ̀ɾ̥   ì   nɛ̀ː   ěː-jètì   ɾɛ́-dʒ   ì   =g
       fever   EPV   DEM   3S-leave   BEN-1S.OBJ   EPV   =NEG
       'This fever didn't leave me.'

Neither the presence nor absence of *kpèkpè* 'still' causes changes in the quality or length of the vowel of the verb prefix. However, adding *kpèkpè* in (65) and (67)

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18   In the same situation, I could also say *dʒèmĩ̀⁴há* 'I still see [it].' but it would have a different meaning: it would imply that the first stain would not be there anymore but that I would see another stain, maybe one that I had missed before.

19   The prefix for 3S here surfaces as *eː-* because it agrees in noun class with the subject *ɛ̀wĩ̀ɾ̥* 'fever'.

changes the ATR value of the vowel of the verb prefix so that the vowel harmonises with *kpèkpè* rather than with the root. The morpheme *kpèkpè* itself is not affected by the ATR values of the verb root. Adding *kpèkpè* 'still' further changes the tones in Continuous aspect clauses from the regular H˥H in (66) to HL in (65) on the prefix, and from the regular HH to LH on the root. In the Non-Future tense clauses in (67) and (68), however, the tones are not affected by the presence of *kpèkpè*. Regarding the order of the morphemes, *kpèkpè* 'still' is inserted between the verb prefix and the verb root as with the previous morphemes. Unlike with *kɔ́rú* 'again, still' above, nothing can be said about on which side of the floating L *kpèkpè* is inserted. This is because the L tones on *kpèkpè* immediately merge any neighbouring floating L because of OCP (Obligatory Contour Principle) violations, no matter to what side it is located. Therefore the order of the morphemes in the verb is as in (71):

(71)   PREFIX – kpèkpè – ROOT

Also like the previously discussed morphemes, *kpèkpè* 'still' does not affect the word order or the choice of simple or complex verb stem.

3.4.4 'just'

The morpheme *bó* 'just' is used with a meaning of immediateness, which can refer both to the present and the past. It can be used for example if someone comes to visit in the morning and I still look a bit sleepy. In this case, the visitor may ask the question given in (72), to which I may reply as in (73).

(72)   ó-bó-ʃʊ̂̃
        2S.NFUT.QU-just-wake.up.NFUT
        'Did you just wake up?'

(73)   hɪ́:   dʒó-bó-ʃʊ̂̃
        yes   1S.NFUT -just-wake.up.NFUT
        'Yes, I just woke up.'

This compares with the form without *bó* 'just' given in (74).

(74)   hɪ́ː   dʒɛ̀-ʃũ̂
       yes   1S.NFUT -wake.up.NFUT
       'Yes, I woke up.'

bó 'just' can also be used with the Perfective marker *ṛa* 'finish', combining both with Non-Future as shown in (75) and with Continuous as shown in (77). Again, it has an immediate past meaning in (75) and immediate future meaning in (77).

(75)   dʒó-bó-jé   ùjág   ṛá
       1S.NFUT-just-eat. NFUT   food   PERF
       'I just finished eating.'

(76)   dʒè-jé   ùjág   ṛá
       1S.NFUT-eat.NFUT   food   PERF
       'I finished eating/I have eaten up.'

(77)   dʒó-bó-ꜜkénè   ṛ̥ǎ
       1S.CONT-just-do.CONT   PERF.CONT
       'I'm just finishing.'

(78)   dʒéꜜ-kéné   ṛ̥ǎ
       1S.CONT-do.CONT   PERF.CONT
       'I'm finishing.'

bó 'just' also occurs combined with Continuous aspect, with the translation by the speaker given in (79). I am not sure of the meaning and the context for this usage of the Continuous aspect and the morpheme *bó* here, but it does not seem to have a meaning of immediateness.

(79)   ɪ́jɔ́   dʒó-bó-báṛàg
       yam.FOC   1S.CONT-just-peel.CONT
       'It is yam that I'm just peeling.'

(80) íjɔ́   dʒɔ́-bár̥àg   (bɛ̀)
      yam.FOC   1S.CONT-peel.CONT   (now)
      'It is yam that I'm peeling.'

bó 'just' cannot be used with Sequential aspect, the potential Immediate Future tense or with Habitual aspect.

In the clauses without focus constructions, the vowel quality in the verbal prefix changes from *dʒe/dʒɛ* in Non-Future and Continuous without *bó* in (76) and (78) above to *dʒo/dʒɔ* with *bó* in (75) and (77). The vowel length in Non-Future is not affected by the presence of *bó*. In Continuous however, the vowel is monomoraic if *bó* is present as in (77) but bimoraic if *bó* is not present as in (78). The fact that the prefix loses a mora if *bó* is present may indicate an internal structure inside the verb prefix in Continuous aspect which has not yet been investigated. The ATR quality of the verb prefix harmonises with *bó* rather than with the verb root, while the ATR value in *bó* itself is not affected by the verb root. The tones on the prefix also change if *bó* 'just' is present, both in Non-Future and in Continuous. In Non-Future, the change is from H with *bó* in (75) and (77) to the regular L if *bó* is not present, as in (76). In Continuous, the prefix bears a single H if *bó* occurs as in (77) but the regular H↓H melody if *bó* is not present as in (78).

In the focus construction in Continuous aspect in (79) and (80), the prefix is already different from the non-focus construction in terms of vowel length, vowel quality and tones and does not change further if *bó* 'just' is added apart from the changes in the ATR value. Note that *dʒe/dʒɛ* for 1S.CONT changes to the same *dʒo/dʒɔ* 1S.CONT both for adding *bó* and for using the focus construction. This may indicate a pattern, which has yet to be followed up.

The presence of *bó* 'just' does not affect the tonal pattern on the verb in Non-Future tense. Tonal changes on the verb root however do occur in Continuous aspect in non-focus constructions. With *bó* present, the verb root on a bimoraic verb carries a HL melody. Without *bó*, the verb carries an all-H melody. Notably, in focus constructions the tonal melody on the verb root is also HL for the bimoraic verb, no matter whether *bó* is present or not, which again shows the parallels between the *bó* construction and the focus construction.

Regarding the order of the morphemes and the floating L, in Continuous aspect the register is lowered after *bó* 'just' and before the verb root so that the prefix and *bó* surface as H and the root surfaces as ↓H. If *bó* is not present, the register is lowered inside the verb prefix, which surfaces as H↓H. Again, this may be an indication for internal structure in the verb prefix in Continuous which remains to be studied. The template for the morpheme order inside the verbal word in the Continuous aspect construction with *bó* is therefore given as in (81):

(81) PREFIX – bó – L_{FL} – ROOT

The presence of *bó* 'just' does not influence the choice of verb stem, nor does it show any effects on the word order in the sentence.

As another side note, the construction with *bó* 'just' combined with Future tense offers some hints on the morphosyntactic make-up of Future tense. *bó* cannot be used with Future tense to refer to the future. However, what looks like a Future Perfective from a morphosyntactic point of view can be combined with *bó* 'just' and then receives the meaning of 'almost'.[20]

(82) dʒó-bó-à   ùjág   à   jág   r̥á
     1s.FUT-just-FUT   food   FUTL   eat.FUT   PERF
     'I almost finished eating.'

(83) dʒá   ùjág   à   jág   r̥á
     1s.FUT   food   FUTL   eat.FUT   PERF
     'I will finish eating.'

The verb prefix in the Future tense looks as though it is *dʒá* for 1S.FUT. Once *bó* 'just' is inserted, it looks as though this *bó* breaks up the verb prefix into *dʒó* – which occupies the usual prefix position before *bó* – and *à*, which occupies the position after *bó*, which the verb root occupies in the other examples. The morpheme *bó* may therefore indicate that there is internal structure in the Future tense prefix and what this internal structure is likely to be, namely a merger of a verbal prefix with an auxiliary verb root for which we must assume the form *a*. As all other verb roots are at least CV and as there is evidence that the verb *wa* 'come' sometimes surfaces as *a*, this may be a hint that Future tense is (or was) made up of a verb prefix followed by *wa* 'come' followed by the object, the mora with L attached to it and then other verbs, which would make it similar to other multi-verb constructions in Ikaan. This construction may then have grammaticalised into Future tense or may still be an ordinary multi-verb construction that I would then have wrongly analysed as Future tense. Again, this requires further investigation.

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[20] Further research would have to look into the exact semantic differences between *bó* 'just' when combined with Continuous aspect and when combined with Future tense.

3.5 Manner

3.5.1 'gently' and 'quickly'

The two morphemes *rúg⁺íṛí* 'gentle' and *hwéhwér* 'hurry' can be used to describe the way in which an action is carried out.

(84) à-rúg⁺íṛí-wéjè   ìʃɔ̰ṛ   tí-fṵ̀nằ   fɔ́
      3P.NFUT-gentle-turn.NFUT   pounded.yam   3S.SEQU-can   be.good
      'They are turning the pounded yam carefully so that it will be nice.'

(85) à-wɛ́jè   ìʃɔ̰ṛ
      3P.NFUT-turn.NFUT   pounded.yam
      'They turned the pounded yam.'

(86) ò-hwéhwér-í-⁺wéjè   ìʃɔ̰ṛ
      3s.NFUT-hurry-EPV-turn.NFUT   pounded.yam
      'She quickly turned the pounded yam.'

(87) ɔ̀-wɛ́jè   ìʃɔ̰ṛ
      3s.NFUT-turn.NFUT   pounded.yam
      'She turned the pounded yam.'

The verbal prefix and the verb itself do not change in terms of vowel quality, vowel length or tonal melodies in the presence of the *rúg⁺íṛí* 'gentle' and *hwéhwér* 'hurry'. The ATR value of the prefix harmonises with the +ATR vowels in *hwéhwér* rather than the –ATR vowels in *wɛjɛ* 'turn' in (86), as we have seen with other morphemes before. As in those cases, the morphemes *rúg⁺íṛí* and *hwéhwér* themselves do not undergo vowel harmony with the verb root.

With *hwéhwér* 'hurry', it seems as though there is a floating L tone following the morpheme and causing downstep on the following verb root in the Non-Future tense example (86). Whether this holds for further data remains to be seen. Based on the limited data that is available, the morpheme order in the verb for *rúg⁺íṛí* and *hwéhwér* is given below.

(88) PREFIX – rúg⁺íṛí – ROOT
(89) PREFIX – hwéhwér – L_{FL} – ROOT

rúg⸜íŗí 'gentle' and *hwéhwér* 'hurry' do not occur with any changes in word order or verb stems.

As with the previously discussed morphemes, it is not possible to insert *rúg⸜íŗí* or *hwéhwér* anywhere else in the sentence. Unlike with the previous morphemes however, it is possible to form an adverb *àhwéhwér* and use this in the sentence. If the adverb is used, it has to go in a different position than the morpheme *hwéhwér*.

(90)   ɔ̀-wéjɛ̀   ìʃɔ̩̀r   àhwéhwér
       3s.NFUT-turn.NFUT   pounded.yam   quickly
       'She quickly turned the pounded yam.'

Also unlike any of the other morphemes above, *rúg⸜íŗí* 'gentle' or *hwéhwér* 'hurry' can stand on their own if they are used in Imperative constructions.

(91)   rúg⸜íŗí
       gentle.IMP
       'Be careful!'

(92)   mánà-rúg⸜íŗí   b-ùwɔ́
       2P.IMP-gentle.IMP   LOC-hand
       'Be careful with your hand!'

(93)   mánà-hwéhwér   ⸜ó꞉
       2P.IMP-hurry   EMPH
       'Don't be long!'

This ability to occur on their own in addition to their more lexical meaning marks *rúg⸜íŗí* 'gentle' or *hwéhwér* 'hurry' as different from all the other morphemes that are attested between the verb prefix and the verb root.

3.5.2 'really'

The morpheme *kpê꞉* or *kpè* 'really' occurs in phrases where the speaker wants to express that something is very much or very strongly the case. For example, unlike many people in the village, I do not sleep or rest in the afternoons. There was one day however when I had returned from a rather exhausting survey in another village and was very tired. That day, I fell asleep for two hours in the afternoon. When I finally woke up I was told:

(94)   è-kpê:-kúrà
    2S.NFUT-really-sleep.NFUT
    'You really slept!'

(95)   è̀-kúrà
    2S.NFUT-sleep.NFUT
    'You slept.'

The same morpheme could also be used in a situation where there is plenty of noise, plenty of people and various other things going on that could potentially disturb a person that is sleeping. However, if there is a person in this situation that sleeps soundly despite the noise, another two people could be standing in front of the bed, looking down on the sleeping person and say:

(96)   ô:-kpè-kùrâ:
    3S.CONT-really-sleep.CONT
    'She's really sleeping!'

(97)   ɔ́ʷ:-kúrá
    3S.CONT-sleep.CONT
    'She's sleeping.'

Finally, in a situation where I as a language learner try to speak Ikaan and try out new phrases, people who want to praise me for my new words can say:

(98)   è-kpê:-kpí   ìkà:n   (ì:)
    2S.NFUT-really-hear.NFUT   Ikaan   (EMPH?)
    'You really understand Ikaan!'

This compares to the following phrases without *kpê:/kpè*.

(99)   è̀-kpí   ìkà:n
    2S.NFUT-hear.NFUT   Ikaan
    'You understand Ikaan!'

Instead of *kpê:/kpè* 'really' it is also possible to use the adverb *àʃâ:ʃà* 'very

well'. According to the speakers, the sentence with *kpê:/kpè* in (98) and the sentence in (100) have the same meaning.

(100)   ɛ́ʷ-kpí   ìkàːn   àʃâːʃà
         2S.CONT-hear.CONT   Ikaan   very.well
         'You understand Ikaan very well.'
         [lit. 'You are hearing Ikaan very well.']

The presence of *kpê:/kpè* 'really' does not change the vowel quality or the vowel length in the verbal prefix. As with the morphemes discussed previously, the ATR value of the *kpê:/kpè* is constant and does not harmonise with the verb root. Instead, it triggers ATR harmony with the verb prefix, which agrees with the +ATR value of *kpê:/kpè* rather than the ATR values of the root.

Tonally, there are no changes to the prefix and the root in Non-Future tense. In the Continuous aspect however, the tones on the prefix change from the regular H⁺H to HL if *kpè* 'really' is present. The tonal melody on the root in Continuous aspect changes from a regular H melody to a LHL melody if *kpè* 'really' occurs. This change in the tonal melodies on the verb root to a LHL melody differs from all other morphemes and verb roots discussed previously in this section. In addition, there is a lengthening of the final vowel in the verb root, which again is not yet found elsewhere for verbs. Neither of these unusual patterns can be explained yet.

The morpheme itself surfaces as both *kpê:* and *kpè*. The only other morpheme to occur with two different tonal melodies is *mĩ* 'again, still'. *mĩ* occurs with both a H and a L melody but does not change its segmental structure. Again, neither the length difference nor the tonal difference between *kpê:* and *kpè* can be explained yet. The only observation that can be made is that in the data that is available *kpê:* occurs in Non-Future tense whereas *kpè* occurs in Continuous aspect. However, given how limited the data this can only be a first observation.

In terms of morpheme order, *kpê:/kpè* 'really' occurs between the prefix and the root. In Continuous aspect, the L-toned *kpè* variant occurs. As there is a L on *kpè*, it is not possible to say whether the morpheme occurs before or after the floating L that occurs in Continuous aspect because the floating L would be merged into the L of *kpè,* making it impossible to determine its location.

(101) PREFIX – kpê:/kpè – ROOT

As with the other morphemes discussed in this section, neither the word order nor the choice of verb root is affected by the presence of *kpê:/kpè* 'really'.

Semantically, this form may constitute a category that expresses validational and veridical force, similar to the veridical mode marker described by Laskowske for Seko Padang (Austronesian, Indonesia), cited in Payne (1997:235) and given here in (102).

(102)　ku-boro-mo-**ko**
　　　　1S-swollen-PERF-**1S:VER**
　　　　'I am really full.'

3.5.3 'just'

The morpheme *kpà* 'just' occurs with two meanings: (i) continuation, in which case it represents an aspectual distinction, and (ii) 'simply', in which case it represents a manner-like distinction. In a situation where a person is sick with typhoid fever and for weeks the doctor keeps giving him different medicines, *kpà* 'just' is used to express this continuation.

(103)　ìʃê:-wà　　ɔ̀-kpà-mâ:rá:[21]-dʒ　ìtɛ̀ʲ　　　òríʃìríʃì
　　　　weeks-two　3S-just-give-1S.OBJ　medicines　different
　　　　'For two weeks, he just kept giving me different medicines.'

If *kpà* is not used in this sentence, the verb is morphologically marked for Habitual aspect.

(104)　ìʃê:-wà　　ɔ̂:-màrá:-dʒ　　　　ìtɛ̀ʲ　　　òríʃìríʃì
　　　　weeks-two　3S.HAB-give.HAB-1S.OBJ　medicines　different
　　　　'For two weeks, he kept giving me different medicines.'

kpà also occurs with Non-Future tense, where a different verb stem is used. The use of the different stem however is not necessarily caused by *kpà* since the verb 'give' occurs with two different stems whose distribution is yet to be described and analysed.

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[21]　The verb 'give' has two different stems, which explains the different forms in (103) vs. (105) and (106).

(105)   ɔ̀-kpà-mɛ́ː-dʒ   ìtɛ̃̀ʲ   òríʃìríʃì
        3S.NFUT-just-give.NFUT-1S.OBJ   medicines   different
        'He still gave me different medicines.'

(106)   ɔ̀-mɛ́ː-dʒ   ìtɛ̃̀ʲ   òríʃìríʃì
        3S.NFUT-give.NFUT-1S.OBJ   medicines   different
        'He gave me different medicines.'

In another scenario, the typhoid patient is in hospital and there are plenty of people coming to visit him and to pray for him. He doesn't know who sent for them to come, they are simply coming.

(107)   à-kpà-wág   ꜜóː
        3P.CONT(?)-just-come.CONT   EMPH
        'They were just coming.'

(108)   áꜛː-wág   ꜜóː
        3P.CONT-come.CONT   EMPH
        'They were coming.'

In the same sentence, *kpà* can also be combined with Non-Future, the only difference that occurs is the stem of the verb, which is the complex stem for Continuous aspect as usual and the simple stem of Non-Future tense, also as usual.

(109)   à-kpà-wá   ꜜóː
        3P.NFUT-just-come.NFUT   EMPH
        'They just came.'

(110)   à-wá   ꜜóː
        3P.NFUT-come.NFUT   EMPH
        'They came.'

For example (103), it is not clear which tense and aspect the verb occurs in so that it is not possible to compare the sentence with *kpà* 'just' to a sentence without *kpà*. In the remaining examples, in Non-Future the verb prefix and the verb root do not change segmentally or tonally in the presence of *kpà*. The ATR value of the

verb prefix in all examples agrees with the –ATR value of the morpheme *kpà*. However, this is not conclusive evidence that this –ATR value is triggered by *kpà* because all the verbs are also –ATR.

In Continuous aspect, the verb root is not affected at all by the presence of *kpà*. The prefix, however, changes. Instead of the regular bimoraic prefix with a H⁺H melody, the prefix is monomoraic and bears a L melody if it is followed by *kpà*. Also, there is no more downstep in the Continuous form, which can be explained by the fact that the trigger for the downstep, the floating L, merges into the L-toned *kpà*. As the location of the floating L that triggers downstep cannot be given in relation to *kpà*, the order of the morphemes is as follows:

(111)   PREFIX – kpà – ROOT

There are no stem changes or word order changes that can be observed when *kpà* 'just' is used, as with the morphemes discussed above.

3.5.4 'too' – excessiveness

The morpheme *ge/gɛ* 'too' indicates excessiveness, expressing that something is too much and has gone to an extreme. Unlike the morphemes discussed so far, *ge/gɛ* always follows the verb root and cannot precede it.

(112)   ìrèmí   íʕː²²-tʷá̃-gê꞉
           orange   3S.CONT-bitter.CONT-EXC
           'The orange is too bitter.'

(113)   ìrèmí   íʕː-tʷá̃
           orange   3S.CONT-bitter.CONT
           'The orange is bitter.'

(114)   à-gbé-gè꞉
           3P.NFUT-stay.long.NFUT-EXC
           'They stayed for too long.'

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[22]   In this example and the following ones, all verbal prefixes surface in forms that show noun class agreement with the subjects.

(115)　à-gbé
　　　　3P.NFUT-stay.long.NFUT
　　　　'They stayed long.'

For some speakers, *ge/gɛ* 'too' can be combined with *àgbéː*, an adverb that also expresses 'very much', whereas other speakers do not find that possible.

(116)　ɛ̀wḭ̃̀r̰　ɛ̀-hú-gɛ̀ː　　　　　　àgbéː
　　　　sun　　3S.NFUT-be.much.NFUT-EXC　very.much
　　　　'The sun is just too much.'

(117)　ɛ̀wḭ̃̀r̰　ɛ̀-hú　　　　　　　　àgbéː
　　　　sun　　3S.NFUT-be.much. NFUT　very.much
　　　　'The sun is just too much.'

If there is an object suffix attached to the verb, *ge/gɛ* occurs between the root and the object suffix.

(118)　ăːr̰ú　à-hɔ̰̀ːn-ʊ́²³-gɛ̀-dʒ
　　　　bees　3P.NFUT-sting.NFUT-EPV-EXC-1S.OBJ
　　　　'The bees stung me too much.'

(119)　ăːr̰ú　à-hɔ̰́ːn-ʊ́-dʒ
　　　　bees　3P.NFUT-sting.NFUT-EPV-1S.OBJ
　　　　'The bees stung me.'

The morpheme *ge/gɛ* 'too' differs from all other morphemes discussed here in a number of ways. Firstly, *ge/gɛ* does not have its own ATR value specification. Instead, it harmonises with the root as can be seen in the different ATR values in (112) and (114). Secondly, *ge/gɛ* does not have its own tonal specification and instead takes part of the tonal melody of the verb root as seen in (114), where the L part of the HL Non-Future melody maps onto *gè*. Also, it does not affect the tones on the verb or on the verbal prefix at all. Thirdly, *ge/gɛ* follows the verb root rather than precedes it. The order of the morphemes in the verb if *ge/gɛ* is present is as follows:

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[23]　I cannot explain the tone on this epenthetic vowel.

(120)   PREFIX – ROOT – ɡe/ɡɛ – OBJ

ge/gɛ 'too' has no effect on the word order or the choice of verb stem in the constructions in which it occurs. Finally, what cannot yet be explained is the variation in length displayed by *ge/gɛ* , which occurs both with a long vowel and a short vowel. Despite these differences, *ge/gɛ* shares with all other morphemes discussed here the property that it is contained within the verbal word and that it adds a meaning component to the verb, in this case excessiveness, which modifies the manner of the verb.

3.6   Comparison of the markers

Having presented all morphemes, this section compares the phonological, morphological and syntactic changes which accompany the presence of the morphemes. All the morphemes presented here have in common that they are integrated into the verb. Also, none of the morphemes discussed here has any effect on the word order in the sentence or on whether the simple or complex stem of the verb occurs. All morphemes occur in main clauses, with the exception of *tù* 'before', which is so far only attested in subordinate clauses. The only morphemes that seem to have lexical meaning and that can stand on their own are *rúg⁺ír̥í* 'gently' and *hwéhwér* 'quickly'. There is no evidence that any of the other morphemes discussed here can occur on their own, nor is there any attested example in the corpus or in any of the participant observation data.

3.6.1 Morpheme order

With the exception of *ge/gɛ* 'too', which occurs after the verb root, all morphemes occur between the verb prefix and the verb root. The resulting preliminary verb template, which still has to be checked for whether any of these extra morphemes can co-occur, is as follows:

(121)   SUBJ/TAM PREFIX – TENSE/ASPECT/MANNER – ROOT – MANNER – OBJ SUFFIX

3.6.2 Tonal and ATR specifications of the morphemes

Almost all of the morphemes presented here come with their own tonal specifications. *ge/gɛ* 'too' is best analysed as underlyingly toneless and receives its tones from the verb root (see Salffner (2010) for more details). The morphemes *mí̃/mì̃* 'again, still' and *kpê:/kpè* 'really' each have two different tonal melodies. With *mí̃/mì̃* 'again, still' the distribution correlates with clause types, high-toned *mí̃*

occurring in main clauses and low-toned *mì̀* occurring in the subordinate clause. With *kpê:/kpè* 'really' the distribution correlates with tense/aspect categories: *kpê:* occurs in Non-Future tense examples and *kpè* occurs in Continuous aspect examples. In Non-Future tense, this does not mean that the verbal melody is mapped onto *kpê:* 'really' because the verbal melody on the verb root is still HL, as with other bimoraic roots in the Non-Future. The tonal pattern on *kpê:* 'really' in Non-Future must therefore come from the morpheme itself. In Continuous aspect, the internal structure of the prefix is not yet clear; it remains to be seen whether this means that *kpè* 'really' takes up part of the verbal melody in Continuous.

Almost all these morphemes come with their own ATR specifications and trigger ATR harmony on the verbal prefix. In contrast, the morpheme *ge/gɛ* 'too' is a target for ATR harmony and takes its ATR specifications from the verb root. As discussed above, *ge/gɛ* is also the only morpheme following rather than preceding the root, and it is the only morpheme that does not have its own tonal melody. Whether this set of differences is a coincidence or a systematic pattern remains to be seen.

However, it is already apparent that this bundle of differences cannot be attributed to the fact that *ge/gɛ* occurs after the verb root. Subject prefixes on the verb are similar to *ge/gɛ* in that they do not come with their own ATR values and are inherently toneless. Object suffixes are similar to *ge/gɛ* in that they follow the verb, but they are invariably –ATR and are lexically specified for tones, as shown in the table of object suffixes given in Table 4 above and repeated here in (122).

(122) | -dʒ | 1S.OBJ | -bɔ́ | 1P.OBJ |
|-------|--------|--------|--------|
| -ɔ̀ | 2S.OBJ | -mɔ́n | 2P.OBJ |
| -n | 3S.OBJ | -mán | 3P.OBJ |

Comparing the verbal prefixes, the preverbal morphemes discussed here, the postverbal morpheme *ge/gɛ* 'too' and the object suffixes, there are no correlations between the place of a morpheme within the verbal word and whether or not a morpheme has its own tonal or ATR specifications. Morphemes at the periphery may be unspecified (verbal prefixes) or fully specified (object suffixes), but inner morphemes close to the root may also be unspecified (*ge/gɛ*) or fully specified (the preverbal morphemes discussed here). Similarly, preverbal morphemes may be unspecified (verbal prefixes) or specified (the morphemes described here), but postverbal morphemes may also be unspecified (*ge/gɛ*) or specified (object suffixes). The reason why *ge/gɛ* 'too' differs from all the other morphemes discussed here must therefore lie elsewhere.

3.6.3 Effects on the verb prefix and root

Regarding effects on the segmental and tonal properties of the verb prefix and the verb roots, the morphemes do not follow any regular patterns. An overview of the effects is given in Table 5.

The table lists those morphemes whose presence results in certain concurrent changes in the verbal word. For each of these morphemes, the table gives information on whether and how the presence of the morpheme changes the vowel quality of the verbal prefix, the vowel length in the verbal prefix, the tones on the verbal prefix and the tonal melody on the verb root. The table is to be read as follows:

➢ if a cell contains 'no', the presence of the morpheme does not affect the form of the verb in the respective characteristic

➢ if there is a change, the regular form without the presence of the morpheme and the form that it changes into when the morpheme is present are given (separated by a > sign)

➢ if information is only available for some constructions, these constructions are listed followed by a colon and 'no' if in the given construction there is no change, or by a colon and the changing pattern if in the given construction there is a change; abbreviations for the constructions are the same as used before, in addition QU stands for 'questions' and SUB stands for 'subordinate clauses'

➢ empty grey-shaded cells indicate that no data is available

➢ non-empty grey-shaded cells in the columns for vowel quality indicate that the data that is available does not include examples for 1S, where the vowel quality changes, and only includes examples in 2S or 3S, where often there are no changes, even for combinations where 1S changes; therefore the available data does not allow for any conclusions over whether the vowel quality is affected by the presence of the morpheme.

Four of the morphemes discussed above are not listed below. *tù* 'before' is excluded because there are no comparable forms without *tù* 'before'. *ge/gɛ* 'too', *rʊ́ꜜgíɾí* 'gentle' and *hwéhwér* 'hurry' are not included because they do not trigger any of the changes listed in this table.

Table 5: Overview of effects of the presence of an additional morpheme on certain aspects of the verb

	PREFIX									**ROOT**		
	Quality (1S)			Length			Tones			Tones		
	NFUT	CONT	OTHER	NFUT	CONT	OTHER	NFUT	CONT	OTHER	NFUT	CONT	OTHER
kɔ́rú	3S.NEG: no		3S.FUT.NEG 3S.SEQU: no	NEG: no		FUT.NEG SEQU: no	NEG: no		FUT.NEG SEQU: no	NEG: no		FUT.NEG SEQU: no
mɨ́/mɨ̀	3S: no	3S: no		QU, SUB: no	QU: no		QU: H>L, sub: no	QU: H>L		no	no	
kpɛ̀kpɛ̀	no	3S: no		no	no		no	HᵘH>HL		no	HH>LH	
kpɛ̂/kpɛ̀	2S, 3S: no	2S, 3S: no		no	no		no	HᵘH>HL		no	HH>LH(L)	
bó	dʒe> dʒo	dʒe:> dʒo	FUT: dʒa>dʒo	no	two moras > one	FUT: no	L>H	HᵘH>H	FUT: no	no	HH>HL	FUT: no?*
kpà	3S: no			no	two moras > one		no	HᵘH>L		no	no	

* In Future tense, it is difficult to say whether the tones are affected because it is not clear which verb should be used to compare the form with and without *bó* 'just'. This is because if *bó* 'just' is present, it seems as though there was a verb *à* which is not present if *bó* 'just' does not occur. However, if the verbs at the end of the sentence are compared in the constructions with and without *bó* 'just', it is clear that their tonal melodies do not show and alternation.

Regarding the effect on the prefix vowel, the data is not comprehensive. There is only data in 1S for two morphemes, *kpèkpè* 'really' and *bó* 'just'. *kpèkpè* 'really' does not change the vowel in the prefix while *bó* 'just' does. Therefore no conclusions can be drawn yet.

The length on the prefix vowel is only affected by two morphemes, *bó* 'just' and *kpà* 'just' and only in Continuous aspect. In both cases however the bimoraic verbal prefix becomes monomoraic. The prefix vowel length in Non-Future and Future (affirmative and negated) and Sequential aspect are not affected in the data available here.

The tonal melody on the vowel of the prefix does not show any clear pattern either. In Continuous aspect the tones are affected by five of the morphemes but the effects do not go in the same direction. If the prefix remains bimoraic in Continuous, the melody changes from Hᶜ H to HL. If the prefix becomes monomoraic, the melody is H for *bó* 'just' but L for *kpà* 'just'.

The tonal melody on the verb root is not affected in Non-Future tense. In Continuous aspect, the results are again mixed. There are no changes with *mǐ/mǐ* 'still, again' or *kpà* 'just'. With *kpèkpè* 'still' and *kpê:/kpè* 'really', the melody changes from all-H to LH/LHL. With *bó* 'just' the melody changes to HL. With data as varied as this, it is difficult to find any patterns in the data.

3.6.4 The location of floating tones and downstep

Table 6 lists all morphemes discussed above with their rough English translation, their place within the verb including their position relative to the floating L if a floating L occurs, and the tense/aspect category in which the floating L is attested.

Table 6: Morphemes discussed with English equivalents

Morpheme	Gloss	Morpheme order	Category
tù	'before'	PREFIX – **tù** – ROOT	
kɔ́rú	'again'	PREFIX – L$_{FL}$ – **kɔ́rú** – ROOT	NFUT.NEG, SEQU
		PREFIX – **kɔ́rú** – L$_{FL}$ – ROOT	HAB
mɪ̋	'again'	PREFIX – **mɪ̋** – L$_{FL}$ – ROOT	NFUT (questions), no downstep in CONT questions
kpèkpè	'still'	PREFIX – **kpèkpè** – ROOT	
bó	'just'	PREFIX – **bó** – L$_{FL}$ – ROOT	CONT
rúg˧írí	'gently'	PREFIX – **rúg˧írí** – ROOT	
hwéhwér	'quickly'	PREFIX – **hwéhwér** – L$_{FL}$ – ROOT	NFUT
kpê:/kpè	'really'	PREFIX – **kpê:/kpè** – ROOT	
kpà	'just'	PREFIX – **kpà** – ROOT	
ge/gɛ	'too'	PREFIX – ROOT – **ge/gɛ** – OBJ	

Clearly, there is a range of downsteps in various locations and for various reasons. In negated sentences and in sentences in Sequential aspect, downstep seems to be part of the inflectional marking of these categories. These forms, however, have not yet been fully analysed and it is therefore not possible to say how far the presence of an additional morpheme affects the downstep and where the morpheme is inserted with respect to floating L that triggers the downstep.

Non-Future does not usually occur with downstep. With the downstep in *mɪ̋* 'still', it is possible that the floating L is lexically part of the morpheme as discussed above. For the downstep in the form with *hwéhwér* 'quickly' there is no explanation yet.

For *bó* 'just', it is clear that the morpheme slots in before the downstep in Continuous aspect. For morphemes bearing a L tone, it is not possible to tell whether they occur before or after any floating L because in either case the floating L, which would be adjacent to the L of the morpheme, would fall victim to the OCP and would be merged into the linked L of the morpheme. Without a floating L, there cannot be downstep and it is not possible to detect the location any longer.

4 Part-of-speech of morphemes that add TAM distinctions

The morphemes discussed here form a group in as far as they are incorporated

into the verb and add temporal, aspectual or manner-like meaning to the verb. Within these parameters, however, they form a rather heterogeneous set and still require more detailed semantic and morphological description and classification. While I will not follow up the semantics in this paper, I will discuss hypotheses concerning the morphological status of these morphemes.

It is clear from the description given here that none of the morphemes show the phonological, morphological and syntactic properties of adverbs in Ikaan. The morphemes discussed here occur inside the verb and not on their own in a position where adverbs occur, they are not preceded by the prefix *à-*, and apart from *kpèkpè* 'still' there is no tendency for reduplication. Therefore the morphemes discussed here are not considered to be adverbs.

As for verbal affixes, I have established in Salffner (2010) and shown and argued again here that Ikaan verbs have prefixes and suffixes, and that affixes may or may not have their own ATR and tonal specifications: subject prefixes do not have either specification whereas object suffixes have both. Admittedly that is not a very discriminatory criterion but it is nevertheless met by the morphemes discussed here. Also, all the morphemes discussed in this paper are wedged between the verb root and either a prefix or a suffix. On the left edge of the verb, they are preceded by the subject prefix, which is obligatory except for 2S.IMP. On the right edge of the verb, one of the morphemes discussed here is followed by the object suffix, which is optional. Furthermore, there is no indication yet that the morphemes can stand on their own. Instead, all available data shows that the morphemes are integrated phonologically into the verb and its affixes in that they either trigger or are targets for ATR harmony. I therefore propose that the morphemes presented here are affixes and I propose that there are three different types of affixes in the group. Firstly, there is *tù* 'before', which is most like an actual tense and might be an inflectional prefix. Secondly, there are *rúg⁺íɾí* 'gentle' and *hwéhwér* 'hurry', which function as prefixes here but are the most lexical among the affixes and are more like incorporated morphemes. All the remaining morphemes are more derivational – not in the sense that they change the word class of their base morpheme but in the sense that they are affixes that significantly alter the meaning of the root, in terms of temporal organisation or of manner. Within this group, *ge/gɛ* 'too' is a suffix and the rest are prefixes.

'before'

The morpheme *tù* 'before' forms a subgroup on its own because it is the only morpheme that so far has not been found outside subordinate clauses. Semantically, it may be a dependent tense such as a relative past or a pluperfect, which requires an event in the main clause as a reference point in time to which it

is anterior. Morphosyntactically, the morpheme *tù* 'before' may be a tense marker that has not merged with the subject agreement marker.

'gentle' and 'hurry'

The morphemes *rúg⁺íɾí* 'gentle' and *hwéhwér* 'hurry' form a subgroup that stands apart from all the other morphemes discussed in this section because there are words that are formed from these roots that may occur on their own as actual lexical verbs. Therefore they occur both as free morphemes and as morphemes inside a verb construction. When they occur inside the verb constructions, they do not look or behave like the class of words described previously, which suggests that they are not adverbs here.

Given their more lexical character and given the fact that these morphemes and the verb root occur immediately one after the other, it could be argued that they form serial verb constructions rather than being part of the verb itself. Multi-verb constructions exist in Ikaan but they are not very wide-spread. Examples are given in (123) to (126).

(123) dʒí-gá   ʃí   wá
      1S.SEQU-go   cut   come
      'I'm going to farm and will be back.'

(124) dʒí-gá   ʃénì   ùjág   jé
      1S.SEQU-go   look.for   food   eat
      'I'm going to look for something to eat.'

(125) è-há   ànì   àrɔ́   jɔ́
      2S.NFUT-see.NFUT   people   A.2S.POSS   call
      'Did you get through to your people (on the phone)?'

(126) ɔ̀-rɔ̌m   ìwé   è   féɾ̥ág
      3S.NFUT-learn.NFUT   book   L   write
      'He learned to write.'

The constructions with *rúg⁺íɾí* 'gently' and *hwéhwér* 'quickly' which were presented above do not resemble any of the constructions given in (123) to (126). The constructions in (123) and (124), which do have more than one verb in sequence, are both in the Sequential aspect, and it is not known whether it is

possible to have the same sequence of verbs in the Non-Future tense, for example. The sentences in (125) and (126) are in the Non-Future tense and have objects like the *rúg⁴íṛí* 'gently' and *hwéhwér* 'quickly' constructions, but here the two verbs are not in a sequence but in discontinuous locations in the sentence.

Another approach to these constructions would be to see *rúg⁴íṛí* 'gently' and *hwéhwér* 'quickly' as lexical affixes that are incorporated into the verb stem. In that sense the two morphemes would function as derivational prefixes that do not change the part-of-speech of their base but do alter the semantics of the verb. Their status as another prefix in a chain of prefixes would be justified because they occur after the subject prefix and do not take on the verbal inflection that is given to the verb root.

I cannot however comment on many of these issues as I have not yet investigated multi-verb constructions in Ikaan and therefore cannot say how the sentences with *rúg⁴íṛí* 'gently' and *hwéhwér* 'quickly' should be classified morphosyntactically. Again, further research is needed.

All other morphemes

The remaining morphemes share a number of characteristics: firstly, they significantly change the basic concept expressed by the verb by adding aspectual or modal information that is not inherent in either the verb root or the regular tense, aspect and mood marking. Secondly, none of the markers is grammatically required by the language, all of them are entirely optional. Thirdly, none of the morphemes occurs in well-defined paradigms, that is, there is no set of forms of which one is required to occur, as for example with tense marking in English, where a verb cannot be left unspecified for tense. Instead, the morphemes discussed here do not form such a set, they are far more idiosyncratic and non-productive. Payne (1997: 257) discusses morphemes that also show such characteristics and cites lexical time reference (as opposed to grammatical tense) as a typical derivational morpheme, e.g. the suffix *-jay* 'yesterday' in Yagua or a prefix *ee-* in Koyukun that means that an action is carried out 'once only', which may in fact be more aspectual in nature. In these cases, the information that these affixes express is very specific, i.e. their meanings are more characteristic of lexical items than of grammatical morphemes, which is very much like the morphemes discussed here. In addition to lexical time reference, Payne lists distributive functions ('all over the place, 'with-a-back-and-forth' motion), environmental functions ('at night', 'over water') and functions that express speakers' attitudes ('complaining', 'frustration', 'disgust').

The manner distinctions presented here, but also the aspectual distinctions, fit the characteristics and description outlined by Payne. Therefore I suggest to

preliminarily classify these morphemes as derivation lexical affixes of the verb.

5 Summary and conclusions

In this paper, I have presented tense and aspect categories in Ikaan verbs and their phonological, morphological and syntactic characteristics. I then proceeded to a set of morphemes which add tense, aspect or manner distinctions to the basic concept expressed by the verb root and its inflectional prefixes and inflectional tonal melodies. For each of these additional morphemes, I have given illustrative scenarios for their use and examples of their forms in combination with different tense and aspect categories of the verb. I have discussed changes that the presence of these morphemes induces in the vowel quality, vowel length, ATR value and tonal melody of the prefix and in the tonal melody of the verb root. I have also shown and discussed differences regarding the presence and location of floating L tones which trigger downstep in some of the constructions and have discussed the possible origin and the place of the floating L in relation to the additional morphemes. I have not found any effects of the presence of these morphemes on word order in the sentence or on the choice of the simple or complex verb stem.

Based on the characteristics of the morphemes established in the description, I have classified all the morphemes discussed here as affixes of the verb and have proposed a three-way split into an inflectional prefix, two lexical affixes originating from lexical verbs that are incorporated into the verb, and a set of derivational lexical affixes.

While it is not clear whether these preliminary classifications will hold, it is clear that even though the Ikaan verb system is far from being understood, it has interesting semantics and morphology to offer. I hope that with this paper I have been able to whet linguists' appetite for more research on the verb system of this language.

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Abbreviations

1, 2, 3	1st, 2nd, 3rd person	NFUT	non-future tense
AGR	agreement	OBJ	object
atr	advanced tongue root	P	plural
BEN	benefactive	PERF	perfective aspect
COND	conditional	POSS	possessive pronoun
CONT	continuous aspect	Q	question marker [or a pattern indicating interrogative]
DEM	demonstrative	REL	relative marker
EMPH	emphasis or emphatic marker	S	singular
EPV	epenthetic vowel	SEQU	sequential aspect
EXC	excessiveness marker	SUBJ	subject

FOC	focus	TAM	tense/aspect/modality
FUT	future tense	V	verb
FUTL	a floating L associated with Future tense	VER	veridical marker
HAB	habitual aspect	?	uncertain
IMP	imperative	??	unknown
LOC	locative marker	()	optional morpheme
NEG	negation marker [or a pattern or a morpheme indicating negation]		

Conventions for transcriptions and glossing

Transcriptions in this paper follow IPA conventions and represent underlying forms rather than phonetic surface realizations. Tones are marked with accents above vowels (*á* = high tone, *à* = low tone) and are abbreviated with H (high) and L (low) and L_{FL} (floating low) in the text. Register lowering is indicated with a superscript downward arrow (ꜜ) before the syllable or mora where the register is lowered (*iꜜwé* if the register is lowered on the whole syllable, *iꜜꞏꞏ* if the register is lowered on the second mora of a long vowel within a syllable).

Appendix: Selected TAM paradigms

This appendix gives paradigms for some of the tense and aspect categories mentioned in this paper. For each paradigm, the forms given here are the regular tonal patterns. For Non-Future alternative melodies exist. Continuous, Habitual and Future always occur with the tonal patterns given here. For more details on the tonal patterns see Salffner (2010).

Non-Future

Non-Future is marked with L on the verbal prefix and a HL tonal melody on the root. This HL melody surfaces as H, HL and HLL on verb roots with one, two or three moras.

	gba 'to be fat'	kʊra 'to sleep'	jõmoji 'to try'
1s	dʒègbá	dʒèkúrà	dʒèjṍmòjì
2s	ègbá	èkúrà	èjṍmòjì
3s	ɔ̀gbá	ɔ̀kúrà	ɔ̀jṍmòjì
1p	bàgbá	bàkúrà	bàjṍmòjì
2p	mánègbá	mánèkúrà	mánèjṍmòjì
3p	àgbá	àkúrà	àjṍmòjì

Future

Future is marked with *a-* as the prefix, which surfaces as *â:-* if there is no object after the verbal prefix. The verb root carries a H melody, which surfaces as H, HH and HHH on verbs with one, two and three moras.

	gba 'to be fat'	kʊra 'to sleep'	jõmoji 'to try'
1s	dʒâ:gbág	dʒâ:kúrá	dʒâ:jṍmójí
2s	â:gbág	â:kúrá	â:jṍmójí
3s	â:gbág	â:kúrá	â:jṍmójí
1p	bâ:gbág	bâ:kúrá	bâ:jṍmójí
2p	mánâ:gbág	mánâ:kúrá	mánâ:jṍmójí
3p	â:gbág	â:kúrá	â:jṍmójí

Continuous

Continuous is marked with a bimoraic prefix with a H⁺H melody where the register lowering is realised on the second of the two moras. The verb root is inflected with a H melodies, which surfaces as H, HH and HHH. The meaning for the property *gba* 'to be fat' when used in Continuous aspect as in *dʒéꜜːgbág* is 'I am becoming fat'.

	gba 'to be fat'	kʊra 'to sleep'	jõmoji 'to try'
1s	dʒɛ́ʷːgbág	dʒɛ́ʷːkʊ́rá	dʒɛ́ʷːjṍmójí
2s	ɛ́ʷːgbág	ɛ́ʷːkʊ́rá	ɛ́ʷːjṍmójí
3s	ɔ́ʷːgbág	ɔ́ʷːkʊ́rá	ɔ́ʷːjṍmójí
1P	báʷːgbág	báʷːkʊ́rá	báʷːjṍmójí
2P	mánáʷːgbág	mánáʷːkʊ́rá	mánáʷːjṍmójí
3P	áʷːgbág	áʷːkʊ́rá	áʷːjṍmójí

Habitual

Habitual is marked with a bimoraic verbal prefix carrying a HL melody. The verb root is inflected with a LH melody, which surfaces as H, LH and LHH in verbs with one, two and three moras.

	fɛɽ̥ 'to write'	kʊra 'to sleep'	jõmoji 'to try'
1s	dʒɔ̂ːfɛ́ɽ̥	dʒɔ̂ːkʊ̀rá	dʒɔ̂ːjõ̀mójí
2s	ɔ̂ːfɛ́ɽ̥	ɔ̂ːkʊ̀rá	ɔ̂ːjõ̀mójí
3s	ɔ̂ːfɛ́ɽ̥	ɔ̂ːkʊ̀rá	ɔ̂ːjõ̀mójí
1P	bâːfɛ́ɽ̥	bâːkʊ̀rá	bâːjõ̀mójí
2P	mánâːfɛ́ɽ̥	mánâːkʊ̀rá	mánâːjõ̀mójí
3P	âːfɛ́ɽ̥	âːkʊ̀rá	âːjõ̀mójí