

SOME TWI PHRASE STRUCTURE RULES

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This paper attempts to outline a set of constituent structure rules for deriving kernel sentences in Twi. The assumption here is that there is a small number of core sentence patterns in the language in terms of which all other sentence patterns can be described. The present study recognises the following five kernels:

1. N(oun) P(hrase) + V(erb) int(ransitive);

e.g.

| | |
|-----------------|------------------------------|
| kòfí ayera | Kofi is lost |
| kòfí nùà no aba | Kofi's brother that has come |

2. NP + V (t)ransitive) + NP;

e.g.

| | |
|--------------------|--------------------------|
| kòfí ayera sìká no | Kofi has lost money that |
|--------------------|--------------------------|

3. NP + Vint. comp(lement) + pronoun or noun comp. (other than locative);

e.g.

| | |
|--------------|-----------------------|
| è ye asém bi | it is matter some |
| ò ye onípa | he is (a) human being |

4. NP + Vint. comp. + Adj(ective) comp.

e.g.

| | |
|-------------------|--------------------|
| àsém no yè dɛ | news that is sweet |
| òbɛ́éma no yè den | man that is tough |

5. NP + Vint. comp. + Loc(ative) comp.

e.g.

| | |
|-----------------------|----------------------------|
| mè lóya wɔ aburokyíre | my lawyer is (in the) U.K. |
| yè wɔ há | we are here |

It is expected that if one goes through the rules picking one's way through the alternative choices, the result will be a sentence (provided the relevant morphophonemic rules are applied) reducible to one of the above five kernels.

The dialect being described is Akyem-Asante, spoken in Southern Ghana and Ashanti. Except the very few morphophonemic units, all examples are quoted in orthography.

It should be pointed out right at the beginning that these rules are not in any way complete. Some of them may have to be revised.

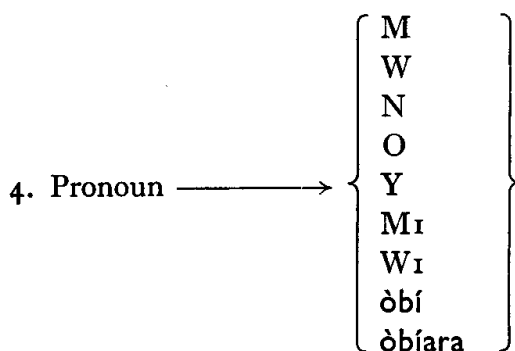
1. S \longrightarrow NP + VP

All kernels are made up of a noun phrase and a verb phrase. The arrow means 'rewrite as'; that is, a kernel is to be rewritten as an NP followed by a VP.

2. NP \longrightarrow [Prehead] + Nucleus + [Posthead]

The square brackets indicate that the constituents can be represented by zero at the terminal string.

3. Prehead \longrightarrow $\left\{ \begin{array}{l} \text{Pronoun} \\ \text{Noun} \end{array} \right\}$



Wherever desirable, morphemes are entered in morphophonemic transcription instead of orthography. Such morphemes as those we have introduced above (M – W_I) in capital letters have more than one realisation on the phonetic/phonological level. In a complete grammar of the language, a morphophonemic section would provide rules of the 'rewrite type' converting these generalised morphophonemes into a pronounceable phonetic shape.

The question as to how many levels of transcription should be recognised is at present debatable. In current linguistic analysis some linguists recognize three levels of transcription: morphophonemic, phonemic and phonetic. Recently, some grammarians, particularly Chomsky and his followers, have insisted that the phonemic stage should be side-stepped. They point out that it is uneconomical to have an intermediate level between phonetics and morphophonemics since phonemics does nothing more than deal with phonetic material systematically. They also argue that many of the conditions placed on phonemic analysis lead to an unnecessary complication of the grammar.

We are not, at the moment, interested in the arguments for and against recognizing a phonemic level in grammatical analysis since the question does not arise in this paper. All forms (apart from the few morphophonemic units) are in conventional orthography.

5. Noun → N $\left\{ \begin{array}{l} \text{animation} \\ \text{humanity} \end{array} \right\}$

6. Noun animation → N $\left\{ \begin{array}{l} \text{animate} \\ \text{inanimate} \end{array} \right\}$

7. Noun animate → $\left\{ \begin{array}{l} \text{kinship} \\ \text{non-kinship} \end{array} \right\}$

8. Noun animate kinship →

| | |
|-----------|-----------------|
| nùá | brother, sister |
| nùabéema | brother |
| nùábàa | sister |
| kúŋ | husband |
| sèwaa | aunt |
| wòfa | uncle |
| nàná | grandparent |
| nànabéema | grandfather |
| màamé | mother |

The subclass of kinship nouns behave differently from all other nouns, in, at least, one respect. Like all others, they can occur in nuclear position (see rule 2). But they alone of all the nouns can be preceded by either of the two possible third person pronoun forms *ne* and *o/c* (i.e. in prehead position). Thus in this dialect, the following English forms can be translated in two ways:

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his father - (1) né se or (2) ðsé
 his mother - (1) né ni or (2) òní
 his uncle - (1) né wòfa or (2) ðwófa

For all other nouns, only the first alternative is possible:

his teacher - nè kyérékyerefoɔ, not *ɔkyerekyerefoɔ
 his here (i.e. this place of his) - nè há, not *ɔha

9. Noun animate non-kinship —————→ àsamoá personal name
 ðkyerekyérefoɔ teacher
 ðkrámanj dog

Animate nouns and inanimate ones select different pronoun forms in certain sentence types,

e.g.

kòfí nà wába (Kofi is an animate noun)
 Kofi (it is) that he has come

ðkrámanj nà wáwu (ɔkramanj is an animate)
 Dog (it is that) he has died

but: dùá nà éábu (dua is an inanimate)
 Tree (it is that) has fallen

siká nà éáyera (sika is an inanimate)
 Money (it is that) is lost

Note that animates select w and inanimates ε.

10. Noun inanimate —————→ { Concrete }
 { Locative }

11. Noun inanimate concrete —————→ èpóŋ table
 ñwóma book
 ñtomá cloth
 àsém situation
 àduané food

12. Noun inanimate-locative —————→ { Loc. 1 }
 { Loc. 2 }

13. Noun in. loc. 1 —————→ èhá here
 èhó there
 èhánom here
 kùmási (place name in Ghana)
 kùróm in town

14. Noun in. loc. 2 —————→ àkyí back
 èsó on
 èhó beside
 èmú inside
 àńfm in front
 àńf surface

Locative nouns are distinguished from other nouns because of their unique behaviour when they are governed by a subclass of verbs of which *kó* 'go' is one. For example, although we say

ò kó ha
he goes here
ò kó kùmáse
he goes Kumase
ò kó èmú
he goes inside

we do not say *ò kó kwadwo (dua nwoma)
he goes Kwadwo (tree book)

instead, we say ò kó kwàdwó hɔ
he goes Kwadwo's there

Locative 1 and locative 2 members belong to different order classes. The order loc. 2 loc. 1 is either impossible or unusual, e.g. *akyi kumase is impossible.

15. Noun humanity → N { human
non-human }

16. Noun human → òkyerekýéfoɔ teacher
ònípa human being, person
òsófoɔ priest
òbémə man
òbáa woman

17. Noun non-human → òdáj building
àsém case
àdwyá coat
àtaadée clothing

A word about how we arrive at a distinction between human and non-human nouns. In the speech of a good many speakers of Akyem-Asante Twi, each of the numerals 2-9 has two forms, one set being used when the noun-head is human and the other when it is non-human. Thus we say:

ònípa bàanu - people two (two people)
òsófoɔ bàasā - priests three (three priests)
mpaníj bāawótwyé - elders eight (eight elders)
but: òkókɔ m̀mienú - chickens two (two chickens)
òsém nsíá - cases six (six cases)
áduplen òwɔtwyé - airplanes eight (eight airplanes)

18. Nucleus → { Pronoun }
Noun } in the environment of zero prehead and posthead

'There can be neither a prehead nor a posthead if nucleus is a pronoun.'

19. Posthead → { adjective }
adjectival } + Demonstrative Particle

Adjectives are derived from a subclass of nouns some of whose members are òtuntuń 'black, black one', òkókó 'red, red one', òfɛfɛ 'beautiful, beautiful one'. The

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corresponding adjectives are *tùmm* 'black', *kòò* 'red', *fè* 'beautiful'. The nouns have a low tone-bearing prefix. This is a characteristic feature of most nouns in Twi. The derived adjectives, on the other hand, have no tone-bearing prefix. Morphologically, then, there is some justification for distinguishing between the two classes.

Syntactically, too, they are different. Adjectives can occur in posthead position only, not in prehead. The subclass of nouns from which these adjectives are derived can occur in both positions as modifiers. For this reason if a member of this subclass of nouns occurs in posthead position (the distinctive position for adjectives) we call it an adjectival. We do not call it a noun or nominal because not all nouns or nominals can occur in this position.

20. Adjective → *tùmm* black
kòò red
fè beautiful
tètɾɛɛ wide
21. Adjectival → *òtuntum* black, black one
òkòkòó red, red one
òfɛɛfé beautiful one
òtɛtɾɛté wide one
22. Demonstrative particle → *yí* this
bí some
nó that
23. VP → Verb + { NP
Complement } +₁(Adverbial)
24. Verb → Tense affix + Verb stem
25. Tense affix → { Present
Past
Progressive
Future
Perfect }
26. Present → ∅
27. Past → E
28. Progressive → R
29. Future → B
30. Perfect → A
31. Verb stem → { Transitive
Intransitive }
32. Verb transitive → { Vt1
Vt2
Vt3
Vt4
Vt5
Vt6 }

| | | | |
|---------------------|---|------|-----------------------------|
| 33. Vt ₁ | → | dí | eat |
| | | kúm | kill |
| | | kyèè | show, teach |
| | | sáj | return, cause one to return |
| | | hú | see |

Vt₁ subclass of verbs take a direct object, e.g. ku^m no 'kill him', ò kyèè wɔŋ 'he teaches them'.

| | | | |
|---------------------|---|------|-----------|
| 34. Vt ₂ | → | kó | go |
| | | bèra | come |
| | | dú | arrive |
| | | fì | come from |

Vt₂ subclass of verbs differ from Vt₁ in how they govern non-locative nouns. For example, we say

| | | |
|----------|---------------------|--------------------|
| | ò húú asamoá | (Vt ₁) |
| | he saw Asamoá | |
| | ò kyèè no | (Vt ₁) |
| | he showed him | |
| but not: | *ɔ kɔɔ asamoá | (Vt ₂) |
| | he went (to) Asamoá | |
| | *ɔbaa no | (Vt ₂) |
| | he came (to) him | |

In all these sentences, the second NP is a non-locative: a Vt₁ is possible but a Vt₂ is not. If the second NP is a locative, however, both Vt₁ and Vt₂ are possible, e.g.

| | |
|---------------------|--------------------------------------|
| ò hūū kumase | |
| he saw Kumase | |
| ò kɔɔ kumáse | (NP + Vt ₂ + NP locative) |
| he went (to) Kumase | |

| | | | |
|---------------------|---|--------|-------------------------------|
| 35. Vt ₃ | → | didi | eat (reduplicated form of di) |
| | | sí | get down |
| | | sáj | get back |
| | | dá | sleep |
| | | sèe | destroy, get bad |
| | | dwyàre | have a bath |

Vt₃ subclass of verbs can undergo a 'wɔ - transformation'. The two kernel sentences

| | | |
|-----|-------------------|----------------------|
| (a) | ò dwaré | (NP + V) |
| | he bathes | |
| | ò wɔ adwaryé | (NP + V + NP (comp)) |
| | he is at bathroom | |

can, by transformation, give us

| |
|----------------------------|
| ò dwaré wò adwaryé |
| he bathes is (at) bathroom |

If we apply another rule, we derive from this

| |
|-------------------------|
| ò dwaré àdwaryé |
| he bathes (at) bathroom |

where wɔ is elided. All Vt₃ subclass of verbs lend themselves to this treatment. The

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result is that a sentence like

òséè kumáse

is structurally ambiguous. We can analyse it as a kernel

ò séè kumáse (NP + V + NP)
he destroyed Kumase

where the second NP is a direct object. But we can also say that ò séè kumáse is derived from

ò séè wɔ kumáse
he became corrupt at Kumase

just as òdwyaréè adwyaɣeyé is derived from òdwyaréè wɔ adwyaɣeyé; òséè wɔ kumáse is then derived from two strings:

(a) ò séè (NP + V)
he became corrupt

(b) ò wɔ kumáse (NP + V + NP comp)
he is at Kumase

36. Vt₄ → pè like
kyèɛ show
kyé give as a gift
sèɛ beg

Members of this subclass of verbs can take two NP objects by transformation, e.g.

ò pɛ me asém (NP + V + NP + NP)
he wants me trouble (i.e. he wants to put me into trouble)
ò kyeré mè adée
he shows me something
ò seré mè adée
he begs me something

On the other hand, we do not say

*osi me kofi
*ɔkɔ me sukuu

kɔ and si are not members of Vt₄ subclass.

37. Vt₅ → twyà be obligatory for
sòno be different
sè be necessary for

These may be called impersonal verbs. They occur in the environment of 3rd person singular inanimate pronouns only, e.g.

è twya sé mebà
it is obligatory that I come
è sɛ sé ɔ ba
it is necessary that he should come
è sono me
it is different (i.e. I am different)

38. Vt6 \longrightarrow sèe destroy
 bùe open
 tó close
 kyèa make crooked, become crooked
 tène straighten

These may be called middle verbs. They are capable of undergoing a 'middle' transformation, e.g.

- ò sèèè aduané no \longrightarrow àduané no sèée
 he spoiled the food the food (got) spoiled
 ò buèè dán no \longrightarrow dán no bùéí
 he opened the building the building opened

39. Verb Intransitive \longrightarrow { Vb. intr. static
 Vb. intr. complement }

40. Vb. intr. static \longrightarrow nyíŋ grow
 bère ripen
 bìri blacken
 góŋ become mellow
 hòme rest

These do not take an object NP of a complement.

41. Vb. intr. comp. \longrightarrow { with (pro)noun complement
 with adjective complement
 with locative complement }

42. Intr. with (pro)noun comp. \rightarrow yè be
 né be
 dè be called

e.g. ò yè ɔ́sɔ́fɔ́
 he is (a) priest

ò de géorge
 he is called George

43. Intr. with { adjectival
 adjective } comp. \longrightarrow yè 'be'

e.g. é yè fɛ
 it is beautiful

44. Vb. int. with loc. comp. \longrightarrow wò 'be at'

e.g. ò wò há
 he is here

ò wò ibadan
 he is (at) Ibadan

45. Complement \longrightarrow { pro(noun)
 adjective/adjectival
 locative }

46. Pro(noun) Comp. \longrightarrow asamoá kumase
 àkyí back
 mé me

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48. Locative Comp. —————→ èhá; kùmáse; àkyi
(see rules 13-14)
49. Adverbial —————→ Position 1 + 2 + 3 + 4 + 5 + 6
50. Adv. Position 1 —————→ dènéŋ hard
yíyè well
pii extraordinarily
51. Adv. Position 2 —————→ ànɔ́pá morning
ànɔ́páyi this morning
h̄nóndu ten o'clock
àwɔ́yá afternoon
ènné today
òkyéna tomorrow
- Position 2 adverbials can occur utterance – initially by transformation, e.g.
ò baa anɔ́pá yi —————→ ànɔ́pá yi òbae
he came morning this morning this he came
52. Adv. Position 3 —————→ m̄prenu twice
m̄prensa three times
bíó again
53. Adv. Position 4 —————→ dódo extraordinarily
kóraa entirely
pii extraordinarily
54. Adv. Position 5 —————→ sé really
55. Adv. Position 6 —————→ àmpá truly, indeed

In order to get pronounceable sentences, it will be necessary to apply one or more morphophonemic rules to the terminal string. Our aim, of course, has not been to cover morphophonemics. There is one point, however, worth commenting on in this regard. In rule 24 we have

Verb —————→ Tense affix + Verb-stem.

This is not adequate by itself. It has to be expanded in the morphophonemic section. As it stands, we are justified in prefixing all tense morphemes to the verb stem. In actual fact, the past tense morpheme is a suffix; *all* other tense morphemes are prefixes. A possible terminal string is

george nua no E + sera yeŋ nɛra.

This is derived as follows:

| NP | | | VP | | | | | |
|---------|---------|----------|-------------|-----------|----------|----------|-----------|--------|
| Prehead | Nucleus | Posthead | Verb | | NP | | | Adv. |
| Noun | Noun | Dem. Pt. | Tense affix | Verb-stem | Pre-head | Nucleus | Post-head | Pos. 2 |
| george | nua | no | Past | sera | ∅ | Pro-noun | ∅ | nɛra |
| george | nua | no | E | sera | ∅ | yeŋ | ∅ | nɛra |

Now, we need a morphophonemic rule to convert E into a suffix. Such a rule may be stated in some such form as

$$E + \text{sera} \longrightarrow \text{sera} + E.$$

Another rule would state the realisations of E as

$$E \longrightarrow e \text{ in the environment of a following \#.}$$

$$E \longrightarrow a \text{ in the environment of a verb-stem ending in a in non-prepausal position.}$$

Our sentence, then, finally reads as

géòrge núa no sèràà yèη nnéra

George's brother that visited us yesterday

An alternative way of dealing with the problem, of course, would be to postulate a constituent structure rule which would make the past tense affix a suffix. This, however, would seem to complicate the grammar unnecessarily. It makes description simpler in this case to give a generalized formula for the serial relationship between verb stems and tense affixes on the IC level and leave the details to be dealt with on the morphophonemic level.