

**THE INFLUENCE OF AKAN VOWEL HARMONY ON PRONUNCIATION OF
NATIVE AKAN SPEAKERS OF ENGLISH**

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ABSTRACT: *Vowel harmony is a major phonological phenomenon in the phonological system of Akan. The vowel harmony rule in Akan is governed by the [ATR] parameter. It is a phonological process of regressive assimilation in Akan. It occurs when [-ATR] vowels are followed by [+ATR] vowels. [+ATR] vowels tend to assimilate [-ATR] vowels on the left, that is, [+ATR] feature spreads leftward to all the preceding [-ATR] vowels in a word. This paper examines the impact of this phonological phenomenon in Akan on the spoken English of native Akan speakers. We formed sentences with 20 English words in which relatively low vowels are followed by relatively high vowels. The 20 native Asante Twi speakers of English from the College of Languages Education, University of Education, Winneba were purposively sampled to read the sentences. The sentences were recorded and impressionistically transcribed and analysed. The results showed that the respondents transferred the Akan vowel harmony rule into their pronunciation of the English words administered.*

KEYWORDS: Akan Vowel Harmony, Pronunciation, Twi Speakers of English

INTRODUCTION

The paper is based on the Contrastive Theory of Second Language Acquisition, which says that the acquisition of a second language (L2) is largely determined by the structure of an earlier acquired language. This means that there will be positive transfer when the structures of the first language (L1) coincide with that of the L2, but there will be negative transfer or interference when there are contrasting structures. The proponents of contrastive analysis, Lado, (1957) and Lado and Fries, (1958), believe that errors produced by second language learners are as the result of interference from the learner's native language, and that, learners' behaviours and difficulties could be predicted. Contrastive analysis refers to the process of comparing the structures of two languages to each other for the purpose of determining the degree of difference between the two languages, so that contrasting structures can be taught and practised. For instance, both Akan and English have the plosive sounds, /p/, /b/, /t/, /d/, /k/, and /g/. Native Akan speakers of English may

not therefore have any difficulties in pronouncing English words, *palm*, *body*, *tea*, *dim*, *calm*, and *gum*. They may however have difficulties in pronouncing English words, *north*, *through*, and *that*. This is because the English dental fricative, /θ/ and its voiced counterpart, /ð/ do not occur in Akan.

LITERATURE REVIEW

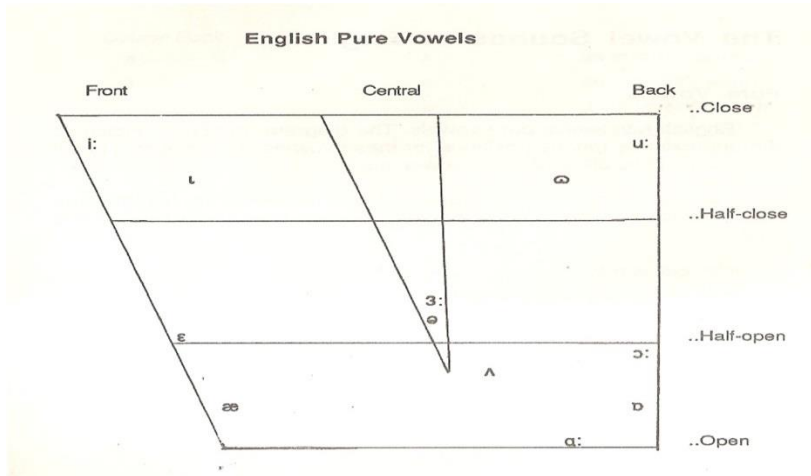
According to Lenneberg (1972), the human mind is programmed to receive and act efficiently on linguistic input only for a limited time, (during the critical period of language acquisition). After this period, there is a loss of flexibility and so language learning becomes problematic. This crucial period of language acquisition is termed critical period hypothesis. What this means is that if a second language learner does not get exposed to a language before this crucial period, he will miss his chance of ever becoming a native speaker. Selinker (1972) also says that about nine-five per cent of second language learners fail to attain a state of *nativeness*. In effect, it is difficult to learn a second language without leaving traces of an accent.

Contrastive analysis has attracted many criticisms because of its inability to predict correctly many important errors which second language learners are likely to commit (Klein, 1986, Abbas,1995) In spite of the criticisms, contrastive analysis can be useful in some areas. According to Rahimpour (2010), many language teachers still find it very useful, especially in phonology. This is because transfer is present in phonology more than any other areas of the study of grammar of a language, and it is because of this fact that we can guess the L1 of a speaker through his accent, which can be defined as the application of phonological rules, sounds, and intonation of one language to another. Thus, we posit in this paper that the native Asante Twi speakers of English, for example, may speak English using the *sounds*, *intonation*, and *rhythm* of their L1. Again, according to Cook (1999:86), contrastive analysis is *most successful in the area of pronunciation*. Richards (1974:204) also suggests that *studies of second language acquisition have tended to imply that contrastive analysis may be most productive at the level of phonology*. (Ringbom, 1994) also says that the predictions of contrastive analysis work best in the area of phonology. It is against this background that we have decided to investigate the impact of the Akan vowel harmony on the native Akan (Asante Twi) speakers' pronunciation of some English words.

When someone learns an L2, there is the tendency for him to transfer into the L2 the habits of pronunciation he has already acquired with his/her L1 as has already been made earlier in the present paper. Sound patterning of language is governed by rules, and children acquire language by internalizing these rules. One of the common difficulties that one encounters in speaking a foreign language is how to remember to suppress the phonological rules of his/her L1. Educated Ghanaians learn English as a L2. This is because they start learning English in school and at a time when an appreciable amount of their speech habits have been formed. There is therefore the tendency for them to transfer into English certain features of their L1. These features sometimes make them unintelligible to the native speakers of English.

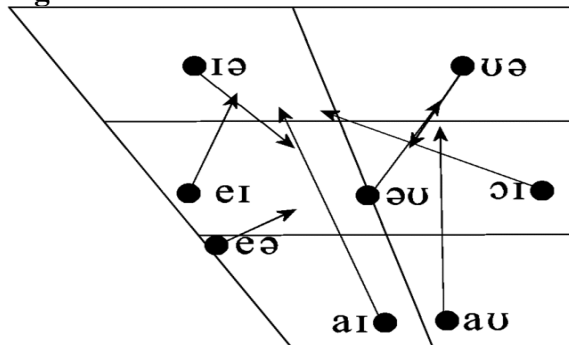
Phonologically English differs from Akan in many respects. For instance, English has twelve pure vowel sounds, as shown in Fig 1 from Dolphyne, (1989).

Fig 1



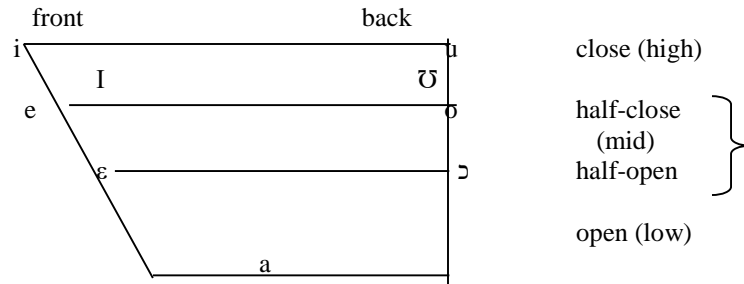
In addition to these pure vowels, English has diphthongs and triphthongs. The diphthongs are shown in Fig 2 below:

Fig 2



Akan, on the other hand, has nine distinct vowel sounds and each vowel in a vowel sequence belongs to a different syllable (Dolphyne, 1988). The Akan vowels are shown in Fig 3 below:

Fig 3



There is a tenth vowel quality in Akuapem, Asante and some Fante sub-dialects which is a variant of the low vowel [a]. This means that it is not a separate phoneme, at least, in the Twi dialects¹. It occurs mainly before syllables with the vowels [i] and [u], as in (1) and (2) below.

1. /aburo/ → [æburo] ‘maize’
2. /abisa/ → [æbisa] ‘spiritual consultation’

In the Fante dialect, the low vowel is raised to [e] when it occurs before syllables with [i] or [u], as in (3) and (4) below.

3. [eburo]
4. [ebisa]

This low vowel in Akan is symbolised as [ɹ] by Clements (1981) and Dolphyne (1988). This vowel is symbolised as [æ] in this paper. The vowel harmony in Akan is governed by the [ATR] parameter as shown in Table 1 below.

Table 1

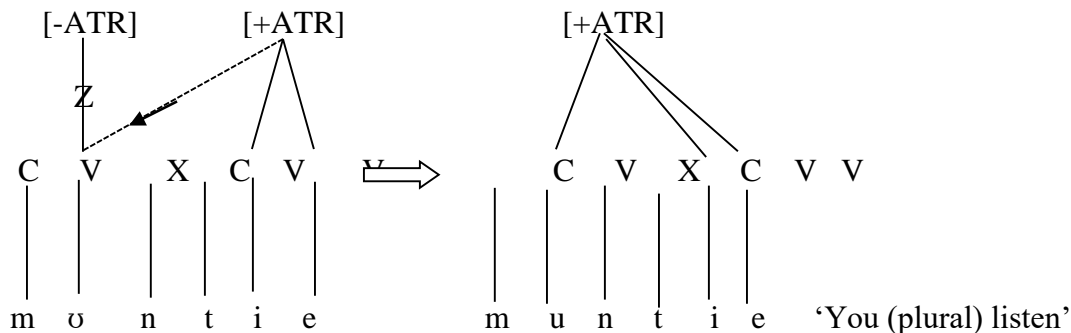
+ATR	-ATR
i	I
e	ε
o	ɔ
u	U
(æ)	a

¹ Abakah (2004, 2005, 2013) has shown that [æ] is contrastive in some Fante subdialects against an earlier postulation that this vowel is not productive in the Fante dialect. Boadi (2009), on the other hand, posits that the contrast between the two low vowels in Akan seems to be lost.

The vowel harmony rule in Akan is an assimilatory phonological process but not a phonological state (Owusu 2014). The rule allows [+ATR] vowels (with exception [æ]) to assimilate [-ATR] vowels that precede the [+ATR] vowels in words, as in 1 to 5 below. Many L2 users of Akan who speak the language with an accent do so without the vowel harmony rule. The vowel harmony rule allows the [+ATR] feature to spread leftward but never rightward. The process is therefore regressive. For this reason, in 4 below, only [-ATR] vowel /ɔ/ to the left of /u/ in /kumasi/ is affected by the spreading rule. The [-ATR] vowels, /a/ are /ɪ/ are not affected by this assimilatory process. Similarly, the /a/ in 5 is not affected by the spreading process because the /i/ in /sika/ ‘money’ can only assimilate [-ATR] vowels on the left. The autosegmental representation in Fig 2 illustrates the vowel harmony spreading rule in Akan.

1. /mɔ + ntie/ → [muntie] ‘You (plural) listen’
2. /yɛ(n) + wɔ + kuroɔm/ → [jewokrom] ‘We are in town’
3. /mɪ + di/ → [midi] ‘I eat’
4. /kɔ + kumasi/ → [kokumasi] ‘Go to Kumasi’
5. /ɔ(nɔ) + pɛ + sika/ → [opesika] ‘He likes money’

Fig 2: The Akan Vowel Harmony Rule



Since it is possible for L2 learners to apply the *phonological rules, sounds, and intonation* of their native language to a L2, it was hypothesised that native Asante Twi speakers of English would transfer the inherent knowledge of the Akan vowel harmony phenomenon into their English pronunciations. What this means is that the Akan vowel harmony rule would be noticed in the accent of the native Akan speakers of English. This does not suggest that the native Akan speakers of English must strive to speak English like the native speakers of English. There is nothing wrong in speaking English with an accent if we can understand and be understood by the native speakers of English, since after all, the function of an accent is to create variety in speech, which forms part of our rich cultural heritage, according to Ashton & Shepherd, (2013).

METHOD

For the purpose of collecting data, we selected 20 English words in which vowels like /ɪ/, /ɒ/, /ɑ/, /ɛ/, or /ɔ:/ are followed by /eɪ/, /i/, /u:/, or /əʊ/, that is, words in which relatively low vowels are followed by relatively high vowels. We formed sentences with the words, and purposively selected 20 level 100 students (who were also native Asante-Twi speakers of English) from the College of Languages Education, Ajumako to read them out as we tape-recorded them. Only level 100 students were selected because we thought that they had not gained enough knowledge in phonetics and phonology to be able to apply it the reading of the sentences. The recordings were later transcribed impressionistically using IPA symbols. The respondents' pronunciations were compared with the Received Pronunciation (RP) versions by Wells (2000). Table 2 below shows the RP versions of the words administered in the study. Table 3 also shows the vowel harmony pronunciation by the participants.

Table 2: Words Administered in the Study and their RP pronunciation

Word	RP Pronunciation
1. Regain	/rɪgeɪn/
2. Dignity	/dɪgnəti/
3. rejuvenate	/rɪdʒu:vəneɪt/
4. remove	/rɪmu:v/
5. follow	/fɒləʊ/
6. delay	/dɪleɪ/
7. delete	/dɪli:t/
8. argue	/ɑ:gju:/
9. gecko	/gekəʊ/
10. recoup	/rɪku:p/
11. devote	/dɪvəʊt/
12. delude	/dɪlu:d/
13. refugee	/refʃudʒi:/
14. refrain	/rɪfreɪn/

15. pretty	/prɪti/
16. yellow	/jɛləʊ/
17. telly	/tɛli/
18. shoddy	/ʃɒdi/
19. offshoot	/ɒʃʃu:t/
20. orgy	/ɔ:dʒi/

Table 3: THE INFLUENCE OF AKAN VOWEL HARMONY ON PRONUNCIATION

Word	Vowel Harmony Pronunciation	Frequency	Percentage
1. regain	/rigeĩ/	20	100
2. dignity	/digniti/	20	100
3. rejuvenate	/ridzu:vineet/	20	100
4. remove	/rimu:v/	20	100
5. follow	/folo/	20	100
6. delay	/dilee/	20	100
7. delete	/dili:t/	14	70
8. argue	/ægju:/	16	80
9. gecko	/dʒeko/	/dʒeko/ 13 /geko/ 7	dʒeko/ 65 /geko/ 35
10. recoup	/riku:p/	20	100
11. devote	/divoot/	20	100
12. delude	/dilu:d/	20	100
13. refugee	/refjudzi:/	12	60
14. refrain	/rifreĩ/	20	100
15. pretty	/priti/	20	100
16. yellow	/jelo/	17	85
17. telly	/teli/	11	55
18. shoddy	/ʃodi/	20	100
19. offshoot	/ɒʃʃu:t/	11	55
20. orgy	/oodʒi/	20	100

RESULTS

As shown in Table 3, all the participants pronounced 1 as /rigeĩ/. The /ɪ/ sound in the RP pronunciation changes to /i/ in Akan vowel harmony pronunciation because of the influence of the following /eɪ/ sound. The participants did not pronounce the final nasal sound, /n/. This is because the alveolar nasal does not occur in word-final positions of words in all the dialects of Akan except in Fante (Dolphyne 1988, Abakah 2005).

The /æ/ sound in 8 is not the same sounds as the English vowel sound as in *bad* and *mat*. It is the [+ATR] counterpart of the low vowel /a/ in Akan. As indicated in the introduction, this vowel is not a separate phoneme in the Asante Twi dialect. It occurs mainly before syllables with the vowels [i] and [u] (Dolphyne, 1988). 80% of the participants pronounced 8 as /æɟju:/ because of the influence of the following /u/ sound, in order to conform to the Akan vowel harmony rule. Again, the /e/ sound in the vowel harmony pronunciation is the [+ATR] counterpart of the /eɪ/ sound in Akan.

65% and 35% of the participants pronounced 9 as /ɖzeko/ and /geko/ respectively. In both cases, the /eɪ/ changes to /e/ in the vowel harmony pronunciation in order to harmonise with the following vowel, /o/. In addition to the vowel harmony pronunciation, 65% of the participants pronounced /gekəʊ/ as /ɖzeko/. This is because the non-labialised back consonants in Akan (/k/, /g/, /h/, and /ã/) become palatalised when they occur before front vowels (Dolphyne, 1988). These consonants occur mainly before back vowels and the low vowel, /a/. Before front vowels, /k/ becomes [tɛ]; /g/ becomes [ɖ]; /h/ becomes [ɛ]; and /ã/ becomes [ɲ]. This explains why most of the participants pronounced the /g/ sound in /gekəʊ/ as /ɖ/. The point being made here is that these non-labialised back consonants occur *mainly* before back vowels and /a/ in Akan. According to Dolphyne, (1988), /k/ can occur before front vowels in a few words such /ketɛ/ ‘mat’, /kesɪ/ ‘big’, /okisi/ ‘rat’, /kitiwa/ ‘small’. The respondents may therefore not have any difficulty in pronouncing the English words, *kick* and *kettle*.

The vowel harmony pronunciation was not noticed in the pronunciation of 6 of the respondents in 7, 4 of them in 8, 8 of them in 13, 3 of them in 16, 9 of them in 17, and 9 of them in 19. In most cases, most of the respondents pronounced the vowels, /ɪ/, /ɒ/, /eɪ/, and /ɔ:/ as [i], [o], [e], and [oo] respectively in order to harmonize with the following vowels, which are relatively high.

CONCLUSION

The vowel harmony is not the only phonological process in Akan. There are several phonological processes in Akan that do not occur in English. Some of these phonological processes in Akan are the *nasalisation of voiced plosives and affricates* in the Twi dialects and the *nasalisation of glides* in the Fante dialects (Owusu, 2010). These and other processes may be responsible for the unique accent with which the native Akan speakers of English speak. This paper, however, addressed the influence of *Akan vowel harmony* on pronunciation of native Akan speakers of English. The analysis of the data showed that the respondents transferred this phonological rule in Akan into

English. It recommended that teachers of English in the Akan speaking areas in Ghana should know some linguistics of Akan in order to help the learners to minimize the transfer of the phonological rules of Akan into English.

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APPENDIX

THE SENTENCES ADMINISTERED

1. The teacher is struggling to regain some dignity.
2. Nana Addo claims to have a plan to rejuvenate the sagging economy.
3. You must remove your hand from her shoulder.
4. You must follow the woman to her house.
5. We apologise for the delay in answering your letter.
6. You must delete those names from the list.
7. I don't want to argue with you.
8. The girl is afraid of the wall gecko.
9. We can recoup the initial investment in the second year.
10. The student could only devote one hour a day to his work.
11. Don't delude yourself into thinking that all is well.
12. My brother lives at the refugee camp.
13. She was advised to refrain from smoking.
14. We are pretty sure we shall win this year's election.
15. The yellow car is mine.
16. The boys spend most of their time watching telly.
17. We cannot pay any money for shoddy goods.
18. NAGRAT started as an offshoot of GNAT.
19. The soldiers went on an orgy of killing