



Phonological Analysis of Fish Naming with Particular Reference to Akans in Ghana



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Abstract

This paper analyzed the phonological processes in fish naming in Akan context on vowel harmony, assimilation and syllable structure. A lot of people have issues with fish naming. The objective of this paper was to do away with misconceptions about fish naming in Akans on phonological processes. These phonological processes were examined within the autosegmental theory framework. Both secondary and primary sources were used as a method of elicited data. In all, one hundred and twenty (120) fish mongers with aged ranging between twenty five (25) to sixty two (62) were interviewed. The information gathered were than transcribed and components needed for the analysis were used. Finally, it was established that fish naming dully conformed to the phonological processes below; vowel harmony, assimilation and syllable structure. The paper also identified that though there was correlation, with regards to vowel harmony, not all the names obeyed the surface representation of vowel harmony rule. The analysis confirmed that, syllable structure plays a significant role in the fish naming in the world in general and Ghana in particular.

Keywords: assimilation, harmony, phonological, processes, segment, syllable



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Public Interest Statement

Fish naming has become a topical issue in the scholarly world today, one school of thought advocated that, fish naming do not conform to the phonological processes and morphological rules but accepted that, semantically they are meaningful. This impression created has given authorities the advantage of exploring in different domains of names ignoring fish naming. This paper explores different aspects of phonological processes in line with fish naming with particular reference to Akan in Ghana. It started with importance of names in general and narrowed it down to the phonological processes of fish naming in Akan. It creates a unique field to decondition the idea on the formal taught. This paper can be meaningful and insightful to those who want to explore on fish naming in the domain of pragmatics, syntax, morphology and semantics.

Introduction

The concept of names is a multidisciplinary field that has occupied the attention of philosophers of language, anthropologists, linguists and ordinary people (Agyekum, 2006). The Akans attached much significance to names and naming practices. The knowledge about Akan fish naming gives insight into Akan culture, religion and language. Akan is the language of the people called Akans. The Akans are the largest ethnic group in Ghana. According to the 2010, national population census, 49.9% of the Ghanaian population were Akan and about 47% of the population speak Akan as non-native speakers. The Akans occupy the greater part of the southern sector of Ghana. Akan is spoken as a native language L1- first language in nine (9) of the sixteen (16) regions in Ghana. Agyekum (2006) Akan are sandwiched by the Ewes in Volta Region of Ghana. The Akans are made up of various dialects that are mutually intelligible. These are Asante, Akuapem, Akwamu, Fante, Akyem, Agona, Assin, Denkyira, Twifo, Wassaw, Kwawu, Bron and Buem. Some Bron speakers are found in Cote d' Ivoire. Akan is studied from primary school up to the university level. The phonological processes of fish naming has become a challenged as a results of many mutually intelligible, dialects of the Akan.

This paper examined fish naming in particular reference to Akan within the purview of phonological processes in the domain of Linguistics. Names are not arbitrary label but must have social and cultural significance and functions. Fish naming has become a bone of contention as to whether they are properly aligned with phonological processes. Names cannot be underplayed in human life. Agyekum (2010) naming started from the onset of creation. One important thing to understand is that, these names did not come any how but due processes were followed to ensure its systematic and coherence labeling. Names are identification symbols associated with a person, an animal, a place a state etc. Akrofi (2011) explains names as words that are associated

with things in the world to differentiate them from one another. In phonology, a lot of processes take place when one decided to study about names. Names are made up of segments and these sounds are embedded in the domain of syllables, harmonic features and assimilatory processes. Issah and Adomako (2019) attested to the fact that, a syllable is a unit of pronunciation that forms the whole or part of a word and usually having a vowel or vowel-like segment. Assimilation and harmonization cannot be left out in this process. Almost all the vowels found in words follow the harmonization rule either +ATR or –ATR. Issah and Adomako (2019) vowel harmony is any type of long distance assimilatory process of vowels, either progressive or regressive. This paper was to establish the concern on these phonological processes and decondition the minds of individuals on negative impression about fish naming. It has the potential of facilitating pronunciation of fish naming in the people of Akan in Ghana.

Theoretical Framework

Goldsmith (1979) autosegmental phonology is a theory of non – linear phonological representation. It was developed out of research in Generative phonology at MIT in the mid and late 1970s, as a response to certain problems in the phonological theory of that time. Autosegmental phonology was developed within the tradition of classical Generative phonological theory of Chomsky and Halle (1968) but the principal and remarkable innovations of autosegmental phonology was exemplified in Goldsmith (1976) autosegmental phonology was not a departure from the principles of Generative phonology codified in Chomsky and Halle's *Sound Pattern of English (SPE)* in 1968. It is a Non-linear version of phonological analyses of Generative phonology while SPE is a linear version of phonological analyses (Nerius, 2013). Indeed, Goldsmith (1990) confesses that autosegmental phonology is a direct continuation of the transitional works in generative phonology codified in Chomsky and Halle (1968) *Sound Pattern of English*. The only difference between the *SPE* and autosegmental theory is the development of a multi-linear phonological analysis in which different features may be placed on separate tiers, and in which the various tiers are organized by association line in autosegmental Phonology (Goldsmith, 1979). It can, best be viewed as an attempt to supply a more adequate understanding of the phonetic side of linguistic representation (Goldsmith, 1976).

Goldsmith (1976) further explains that autosegmental phonology is a theory of how various components of the articulatory apparatus, i.e. the tongue, the lips, the larynx and the velum are coordinated in the process of sound production. It, therefore, implies that phonological features lead their own independent lives and not grouped together in unordered bundles (segments) as it is made to believe in generative

phonology. In this vein, autosegmental phonology places segments and suprasegmentals (especially tone and other prosodic features) on different tiers parallel to each other with the suprasegmentals being linked to the segments by association lines (Goldsmith, 1976). Every segment on each tier is specified for a set of features specific and unique to that tier and segments on each tier are associated with segments on the other tiers by association lines. Association lines in the derived or phonetic representation indicate a relationship of simultaneity, while at deeper levels of representation they specify a more abstract relationship among the segments on the separate tiers (Nerius, 2013).

Literature Review

Marfo (2013) defined syllable as the smallest unit of speech. In the prosaic hierarchy, the syllable is the lowest unit in the hierarchy. According to Schachter & Fromkin (1968), the syllable is an important phonological unit in many languages, possibly in all languages. Dolphyne (2006), describes syllable in terms of the tone on which the consonant or vowel which make up the syllable are uttered. Ofori (2012) attested that phonotactic structure of words can be largely understood by assuming that segments are organized into syllable-size units of which words can contain several occurrences. A word can contain one, two or many syllables. These are referred to as monosyllable, disyllable and polysyllabic respectively. The syllable is made up of the onset and the rhyme. The rhyme comprises the nucleus and the coda. The nucleus is a compulsory part of the syllable. It forms the peak of sonority in a syllable. According Clements (1990), one of the crucial ways in which prosodic structure governs the distribution of segments is in terms of sonority. This deals with the arrangement of segments within the syllable. This arrangement follows a clear pattern; the most sonorous segment occupies the peak position, whilst the less sonorous ones occur towards the margins. Margin of a syllable are segments before or after the nucleus Marfo & Solace (2008). The onset and the coda which are the first and the second margin are optional in the syllable. While some languages have coda others do not have. Languages with coda in the syllable have closed type of syllable.

Katamba (1989) in early generative phonology, although the feature syllabic was used, the syllable was not given a place in the theory. It was assumed that segments, boundaries and rules stating permissible combinations of segments in morphemes and words were sufficient to describe the sound systems of languages. Today the place of the syllable is secure. Hayes (2009) among phonological entities, syllables are unusual in the degree to which they stand out to the native speaker at the conscious level. It is relatively easy for people to count the syllables of a word – much easier than counting

the segments. People also find it intuitive to count out syllables and arranged them in time whenever they used them in verse, chant, and song.

In discussing syllables, it is useful to be able to refer to certain substrings of them. The onset of a syllable is defined as the consonant or sequence of consonants at the beginning of a syllable. The coda is the consonant or sequence of consonants at the end of a syllable. The nucleus of a syllable is the vowel or diphthong found at the syllable's core and functioning as its sonority peak (sometimes peak is used instead of nucleus). It is obligatory for a syllable to have a nucleus, very common for a syllable to lack a coda, and less common for it to lack an onset.

Assimilation

Assimilation has a very precise meaning when it's related to studies of languages. Adomako & Issah (2019) is a common phonological process by which the phonetics of a speech segment becomes more like another segment in a word. In other words, it's when a letter (sound) is influenced by the letter (sound) before or after it so that it changes its sound and or spelling. Katamba (1989) the word assimilation itself is said to be assimilated; it is derived from the Latin prefix *ad-* meaning to and *simil-* meaning like but, instead of being *ad*similated, it has the easier pronunciation of assimilated. Hayes (2009) assimilation is a process whereby adjacent consonants become more similar to each other in manner or place of articulation in order to facilitate the flow of pronunciation. It can work in both directions, but the anticipatory (or regressive) type is usually assumed to be more common than the perseverative (or progressive) type. Katamba (1989) assimilation in another vain can be explained as the modification of a sound in order to make it more similar to some other sound in its neighbourhood. The advantage of having assimilation is that it results in smoother, more effortless, more economical transitions from one sound to another.

Harmony

The sound of every language are vowels and consonant. Akan has fifteen consonants and seven vowels. However, this work limits itself to the vowels of the language. As mentioned earlier, there are seven vowels in Akan used orthographically. Phonologically they are ten as a result of the fact that sounds such as /a/, /e/ and /o/ come with two sounds each (Dolphyne, 2006). Vowel harmony is a type of assimilation when vowels come to share certain features with other vowels of the same class, (Crystal, 1994). Phonetically, Akan has ten vowels or ten vowels can be identified in Akan. They are: / i, ɪ, e, ε, æ, a, o, ɔ, u, ʊ/. (Berry, 1957;, Clement, 1990;, & Schachter & Fromkin, 1968). According to Obeng (2009) within successful syllables of Akan words of more than one

syllable, one finds that the vowels that occur are either / i, e, æ, o, u, / or /ɪ, ε, a, ɔ, ʊ/. Thus, there is a restriction on the distribution of the vowels which does not generally allow the vowels of Set 1 to occur in the same word or environment with those of Set 2. Katamba (1989) posited that vowel harmony is a process whereby within a certain designated domain, usually the words or vowels are required to share one or more phonological features. The vowels of a language are divided into two exclusive sets and all vowels within a stipulated domain must be either front or back, high or low, round or unrounded. Agyekum (2010) attested that, most words are been between lexical categories such as; (noun + noun), (verb + noun), (noun + adjective) and many others. In some cases, root can also take either a suffix or prefix or even both prefix and a suffix. Assimilation and harmonization cannot be left out considering the direction of the discussion. Almost all the words formed follow the harmonization rule either +ATR or –ATR rules. (Dolphyne, 2006). Katamba (1989) a completely symmetrical vowel- harmony system of the cross-height type would have the following two harmonizing sets;

a) /i, u, e, o, æ/

b) /ɪ, ʊ,], [, a/

Normally, only the members of one set can co-occur in a root morpheme of two or more syllables. With minor but systematic exceptions, the occurrence of vowels in prefixes is restricted in a similar manner. According to Boadi (2009) reduced pronominal forms as well as noun and verb prefixes have at least two alternant each, and their selection is conditioned by the feature specifications of the vowels in the root.

Methodology

The designed used for data collection was qualitative since this paper was not to compare numbers and figures. The data used for this paper were elicited from two sources: primary and secondary sources. The primary source comprises of semi - structured interview and observation. The other source was the readings from existing literature. Purposive sampling technique was adopted because the intention of the investigation was to get people who matters in the fishing industry to provide necessary information. One hundred and twenty fish mongers were interviewed on fish naming concept. Confirmation of the fish naming on the first data collected were done through observation at the Yeji market on the week thereafter. This was to ensure and accept the names as a through data for this investigation. The ages of these fish mongers were between twenty five (25) and sixty two (62) years.

The interview outline:

- i) What is the name of this fish?
- ii) What significant does this name have on the people in this community?
- iii) What educational implication is associated with this name?

Location

The data was collected in the Bono East Region of Ghana in a town called Yeji a, predominantly fishing community in the Pru West District. According to 2010 population census there were about five thousand six hundred and ninety (5,690) Ghanaian living in the above mentioned district. This market was selected in response to the location of the Volta Lake, which creates the platform to identify all kinds of fish in the Yeji market.

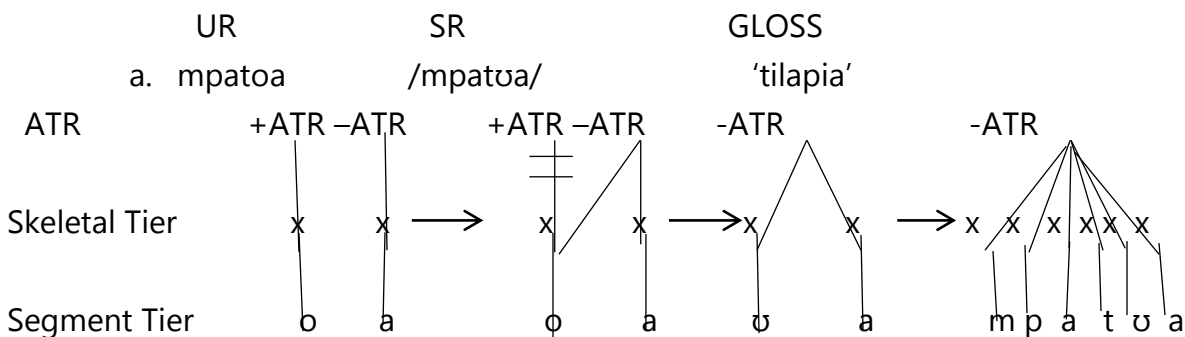
3.2 Below were some of the fish names used as data.

- | | | |
|-------------------|------------------|---------------------|
| i. Mpatoa | xi. Adwenetuntum | xxi. Agongo |
| ii. Adwene | xii. Brodovi | xxii. Aprukuso |
| iii. Amane | xiii. }d] | xxiii. Mpenab[di |
| iv. Nkwanten | xiv. Kak]m | xxiv. Nsesaawa |
| v. M]nk] | xv. Akawa | xxv. Kyikyie |
| vi. Apart[| xvi. Akwaabi | xxvi. Tasa |
| vii. Yarefo] | xvii. Pampa | xxvii. Takrasiwakyi |
| viii. Nsuomheneba | xviii. Supa | xxviii. Takra |
| ix. Abade[| xix. Duak]] | xxix. Kuboo |
| x. Pitire | xx. Akawo | xxx. Ky[nsono |

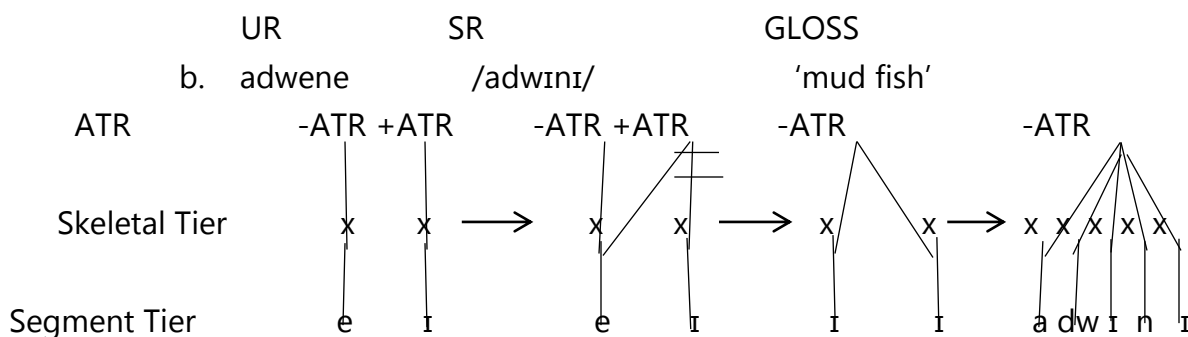
Data Analysis

Phonology is the branch of linguistics which investigates the ways in which sounds are used systematically in different languages to form words and utterances. (Katamba, 1989). With autosegmental theory as a mechanism the misconception on fish naming in phonological processes were analyzed in this section of the paper. Hayes (2009) syllabification and assimilation were treated to large extend. Harmonization was discussed with the influenced of autosegmental theory. Almost all the words formed follow the harmonization rule either +ATR or –ATR rule. Some of the data above were used for the analysis.

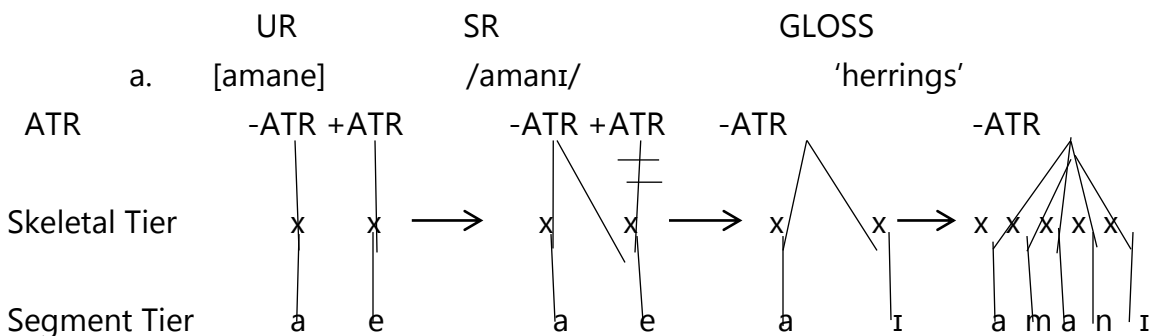
1. Vowel harmony: autosegmental representation [mpatua]



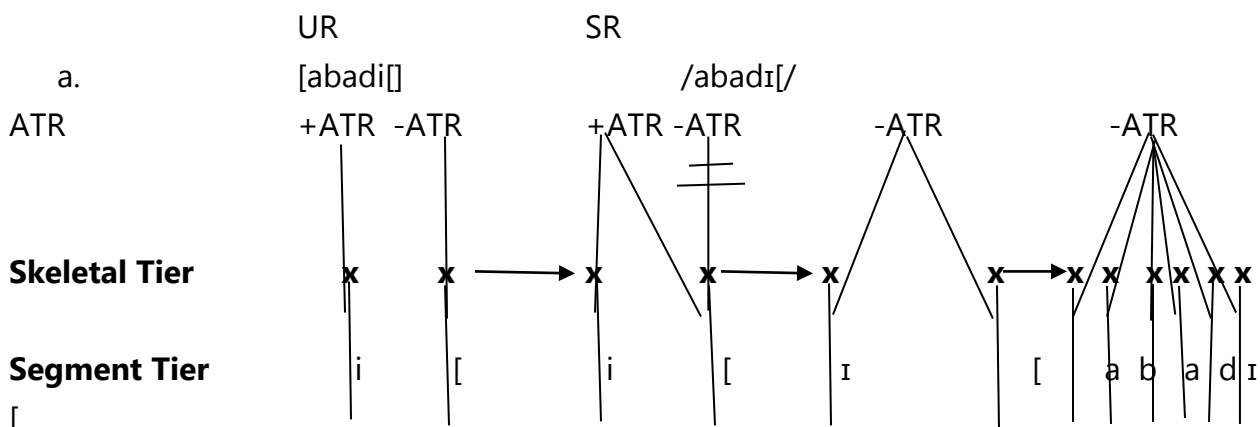
2. Vowel harmony: autosegmental representation [adwɪnɪ]



3. Vowel harmony: autosegmental representation [amanaɪ]



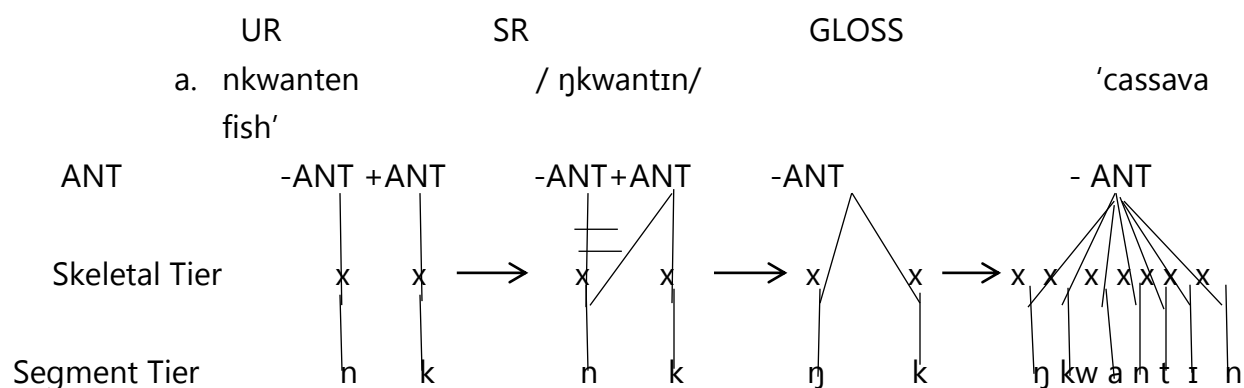
4. Vowel harmony: autosegmental representation [abadiɪ]



The above analysis supported Obeng (2009) position on vowel harmony that is within successful syllables of Akan words of more than one syllable, one finds that the vowels that occur are either / i, e, æ, o, u, / or /ɪ, ε, a, ɔ, ʊ,/. Thus, there is a restriction on the distribution of the vowels which does not generally allow the vowels of Set 1 to occur in the same word or environment with those of Set 2. The theoretical framework supported the analysis here the outcome was in line with harmony concept +ATR assumed –ATR characteristics because of the environment.

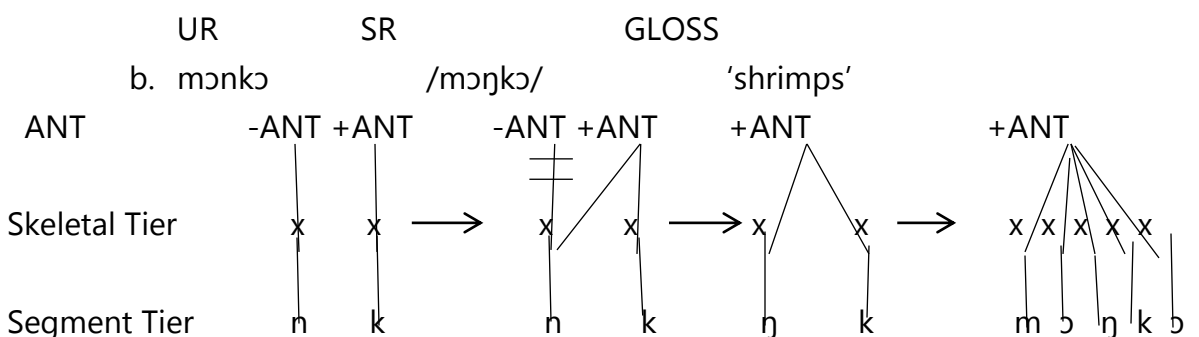
ASSIMILATION

5. Assimilation: autosegmental representation [ŋkwantɪn]



It is useful to look at processes in terms of directionality, i.e. whether a sound becomes more like either the sound that precedes it or the sound that follows it. If a sound becomes more like the sound that precedes it, the process is called regressive assimilation; if, on the other hand, a sound is modified so that it becomes more like the sound that follows it, the process is called progressive assimilation (Katamba, 1989). Through autosegmental theory this paper aligned with Katamba’s position in terms of directionality in assimilation. Here +ANT assumed the characteristics of –ANT by donated it positive property to minus anterior because of the environment /n/ then became /ŋ/ because of /k/ as – ANT influenced /n/ to change showcased regressive assimilation. Therefore nkwanten became /ŋkwantɪn/

6. Assimilation: autosegmental representation [mɔŋkɔ]



In the above structure, the sounds /n/ and /k/ are realized as /ŋ/ and /k/ phonetically. /n/ being +Anterior becomes -Anterior in the environment of -Anterior sound which is /k/. Therefore, the output eventually becomes /mɔŋkɔ/.

7. Syllabic structures:

a. C syllabic structure. For example

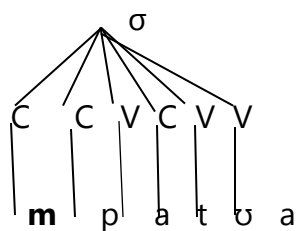
[m:pa:tʊ:a] 'tilapia'

This is realized as C:CV:CV:V

Syllabic tier

CV Tier

Segment Tier



b. V syllabic structure. For example

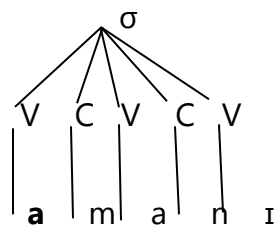
[a:ma:nɪ] 'herrings'

This is realized as V:CV:CV

Syllabic tier

VC Tier

Segment Tier



c. V syllabic structure. For example

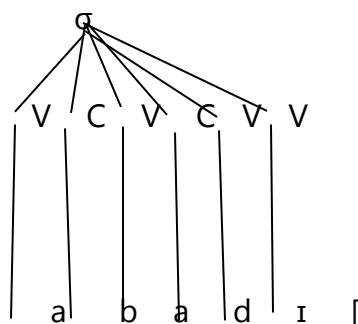
[abadi:] /a:ba:dr:[]

This is realized as V:CV:CV:V

Syllabic tier

VC Tier

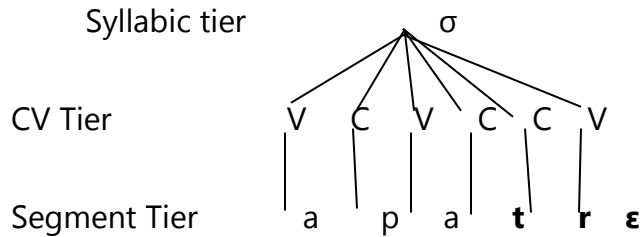
Segment tier



d. **CrV syllabic structure. For example**

[a:pa:tr:ɛ] 'star fish'

This is realized as V:CV:Cr:V



One of the most basic functions of the syllable is to regulate the ways in which lower level units (consonants and vowels) of the phonological hierarchy can combine. Knowledge of the phonological system which speakers of a language have consist in part of a knowledge of the phonemes of that language and their allophones. The discussions of the above syllable structure has confirmed the importance of syllable in Akan language. It is also justifiable manifestation that, syllable aids in smooth pronunciation of fish naming.

Conclusion

The etymology and linguistic associations of names are grasped intuitively without conscious knowledge of semantic roots. This is rightly so because names are very crucial to human existence in that they help to make distinction among creatures or things. This paper, has deeply rooted into phonological analysis of Akan fish naming. It was brought to light that Akan has a lot of indispensable fish naming. Phonologically, assimilation, syllable and vowel harmony come on board in majority of Akan fish naming. Theoretically, autosegmental, propounded by Goldsmith (1976) was used as theoretical framework in this research has proved significantly a reliable tool in support of the investigation. It can be concluded that Akan fish naming do not occur arbitrary, rather a lot of processes is considered at the phonological level. Therefore, finding out the naming, and the processes that occur in it, alongside with their formation was on point and had removed all misconceptions about fish naming and its phonological processes issues. Agyekum (2006) posited that, Akans believe that there is some inherent power and linkage in names and expect the names to reflect and indexicalised the lives and behavior of people either positively or negatively. Therefore, deconditioned the misconceptions minds of individuals on fish naming in the domain of phonological processes would have positive reflection in their lives. This paper is expected to act as catalyst to speed the chemical reaction towards more research work on fish naming in the remaining aspects of linguistics.

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