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## RESEARCH ARTICLE

# The Monophthongization of /ai/ and /ɔi/ in Kom: An Autosegmental Perspective

**Njuasi Ivo**
**Corresponding Author:** Njuasi Ivo, **E-mail:** njuasi.ivo@ubuea.cm

## ABSTRACT

A great deal of scholarship has gone into examining monophthongization as a phonological phenomenon occurring within the different chronological stages of languages. Some studies have examined it as a sociolinguistic index of dialectal variation while some others have studied it as a purely idiosyncratic matter within the same language variety. Almost all of these studies have been purely descriptive in nature. This study used the derivational phonology approach to analyze monophthongization as a synchronic phenomenon in the Kom language within the framework of Autosegmental Phonology. Derivations were constructed by mapping underlying diphthongal forms to their surface monophthongal realizations. The results show that in natural, spontaneous speech, the diphthongs /ai/ and /ɔi/ lose their gliding part and become monophthongs when they occur in a syllable that shares boundary to the right with a vowel-initial word. This vowel loss is followed by a compensatory lengthening of the new monophthongized vowel.

## KEYWORDS

monophthong, diphthong, monophthongization, diphthongization

## ARTICLE INFORMATION

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## 1. Introduction

Monophthongization is a phonological process that involves a sound change from a diphthong to a monophthong; it proceeds from a diphthong to a monophthong. So, in studies of monophthongization, a clear idea of what constitutes a diphthong in the language under study is inevitable. The phonotactics of a language generally determines what can be considered a diphthong in that language. In some languages, diphthongs are composed of a monophthong followed by a glide. In others, diphthongs are made up of a glide followed by a monophthong. Yet, in some others, any concatenation of two monophthongs constitutes a diphthong. Whether a glide is interpreted as a vowel or a consonant is a function of the phonotactical possibilities of that language. For instance, a language that permits complex codas and disallows complex peaks could interpret /ai/ at the syllable peak as /aj/ (the low back monophthong /a/ and the palatal approximant /j/) while a language which is intolerant of complex codas but allows

complex peaks would interpret it as a diphthong consisting of the low back vowel /a/ and the high front vowel /i/. Some studies distinguish between monophonomatic diphthongs and biphonematic ones, the former seen as one phoneme and the latter seen as a concatenation of two phonemes. But whether the outcome of a diphthongization process is determined by the monophonematic or biphonematic nature of the underlying form is the subject of another study. In a monophthongization process, the glide part of a diphthong such as /ai/ weakens and disappears, leaving the monophthong /a/. While a monophthong refers to a vowel that has the same sound spanning across its pronunciation, a diphthong refers to a complex vowel that exhibits the sound of one vowel at the beginning of its pronunciation and the sound of another vowel at its end.

## 2. Literature Review

The phenomenon of monophthongization can be approached from either a diachronic frame of reference or a synchronic one. From a diachronic or historical linguistic viewpoint, this refers to a situation in a language where sounds that were once diphthongs over time came to be realized in the same language as monophthongs. In this perspective of diachronic sound change, monophthonization has been accorded quite some scholarly attention in a number of languages including Arabic (Philippa, Philippa and Roeleveld, 2017), Old English (Campbell, 1959; Prins, 1972; Minkova, 2014), German (Waterman, 1966; Durrell, 1977), Greek (Allen, 1987), and French (Vaissière, 1996). It has been observed that diachronic sound change actually stems from synchronic dialectal variation; over time, one dialect usually emerges as the dominant form and eclipses the others into disuse. Synchronic studies of diphthongization mostly focus on how speakers of one dialect of the same language phonetically realize diphthongs as monophthongs. In the Austrian variety of German, the diphthongs /aɛ/ and /ɑɔ/ are pronounced as /ɛː/ and /ɔː/ respectively (Moosmüller, 1997). In the Appalachian varieties of American English, the diphthong /ai/ is frequently realized as /a/ (Reed, 2016, 2014). Evidence from sociophonetic studies shows monophthongization as one of the indicators of English speakers' dialectal roots. It sometimes happens that even within the same variety of a given language, some speakers monophthongize diphthongs while others do not. A typical example is the /eə/ monophthongization in RP (Received Pronunciation) where some speakers pronounce the so-called "square" words with /ɛː/ while others pronounce them with /eə/. For more light on this, see Saito (2007). From a synchronic perspective, a number of studies have examined monophthongization mostly as dialectal variation in the realization of some pure vowels. A few others such as Oyinloye (2020) have examined the monophthongization of diphthongal English loanwords in the Yoruba language, whose phonotactical possibilities exclude diphthongs.

## 3. Methodology

This study is based on the qualitative research paradigm. A list of diphthongal words was obtained from the Kom-English Dictionary and then put in frames (the Noun 1 of Noun 2 construction). Interviews were scheduled with native speakers and they were made to pronouns the words in isolation and later as well as in the frames of Noun 1 of Noun 2 constructions. Interview questions such as, "How do you say 'light?'", "How do you say 'someone?'", "How do you say 'someone's light?'" were asked the language consultants. These were recorded and subsequently scrutinized for phonological alternations. The alternations were accounted for using the non-linear approach to phonological analyses, specifically the X-tier theory.

## 4. Findings

The present study explains /ai/ and /ɔi/ monophthongization in the Kom associative construction. The Kom language presents a situation where a word that has a diphthong in its isolation form is pronounced with a monophthong when the diphthongal syllable immediately precedes a vowel initial morpheme.

### 4.*1* Monophthongization of /ai/

| | Underlying form | | Surface form | Gloss |
|---|---|---|---|---|
| (1) | a. /ābáin + á + wúl/ | → | [ābáːn ā wûl] | 'someone's fufu' |
| | (fufu + AM + someone) | | | |
| | b. /ī̀báin + î + wúl/ | → | [ī̀báːn ī̀ wûl] | 'someone's light' |
| | (light + AM + someone) | | | |
| | c. /àntàin + á + wáin/ | → | [àntàːn á wāin] | 'child's grasshopper' |
| | (grasshopper + AM + someone) | | | |
| | d. /wáin + ì + àntàin / | → | [wáːn àntàin] | 'child's grasshopper' |
| | (grasshopper + AM + someone) | | | |
| | e. /kâin + ì + àngù/ | → | [káːn àŋgù] | 'a fool's monkey' |
| | (monkey + AM + fool) | | | |
| | f. /ŋgàin + ì + ājúŋ́ájúŋ́ / | → | [ŋgàːn àjùŋ́ájūŋ̄] | 'senseless tale' |
| | (tale + AM + senseless) | | | |
| | g. / mbāin + ì + ātú / | → | [mbāːn àtū] | 'sanity' |
| | (screw + AM + head) | | | |
| | h. /ī̀láin + í + ɨ̄wûin/ | → | [ī̀láːn ī̀wùin] | 'personal neatness' |
| | (neatness + AM + body) | | | |

| | Underlying form | | Surface form | Gloss |
|---|---|---|---|---|
| (2) | a. /ālə̂ʔ + á + ābáin/ | → | [ālə́ʔ ābāin] | 'the location of fufu' |
| | (place + AM + fufu) | | | |
| | b. /ālə̂ʔ + á + ī̀báin/ | → | [álə́ʔ ī̀bāin] | 'a civilized place' |
| | (place + AM + light) | | | |
| | c. /ālə̂ʔ + á + àntàin/ | → | [álə́ʔ āntàin] | 'place of a grasshopper' |
| | (place + AM + grasshopper) | | | |
| | d. /āfó + á + kâin/ | → | [āfō kâin] | 'monkey's thing' |
| | (thing + AM + monkey) | | | |
| | e. /āfó + á + wáin/ | → | [āfō wāin] | 'child's thing' |
| | (child + AM + child) | | | |
| | f. /ālə̂ʔ + á + ŋgàin / | → | [ālə́ʔ ā ŋgàin] | 'place of a tale' |
| | (child + AM + child) | | | |
| | g. /ātú + á + mbāin/ | → | [ātú ā mbāin] | 'head of a nail' |
| | (head + AM + nail) | | | |
| | h. /ālə̂ʔ + á + ī̀láin/ | → | [ālə́ʔ ī̀lāin] | 'neat place' |
| | (place + AM + neatness) | | | |

In data set (1) the diphthong /ai/ occurs in a closed syllable which immediately precedes a vowel-initial morpheme. We observe that in this environment, the diphthong monophthongizes by losing its second

vowel. This happens to be an exceptionless process. However, in data set (2) where the noun with the diphthongal syllable is placed in the noun 2 position of the associative construction where it is the terminal element in a phrase, it can be observed that monophthongization does not take place. Figures 1, 2 and 3 below illustrate /ai/ monophthongization in the Kom language.

**Figure 1: Autosegmental derivation of [ābáːn ā wûl] "someone's fufu" from /ābáin + á + wúl/ "fufu + AM + someone"**

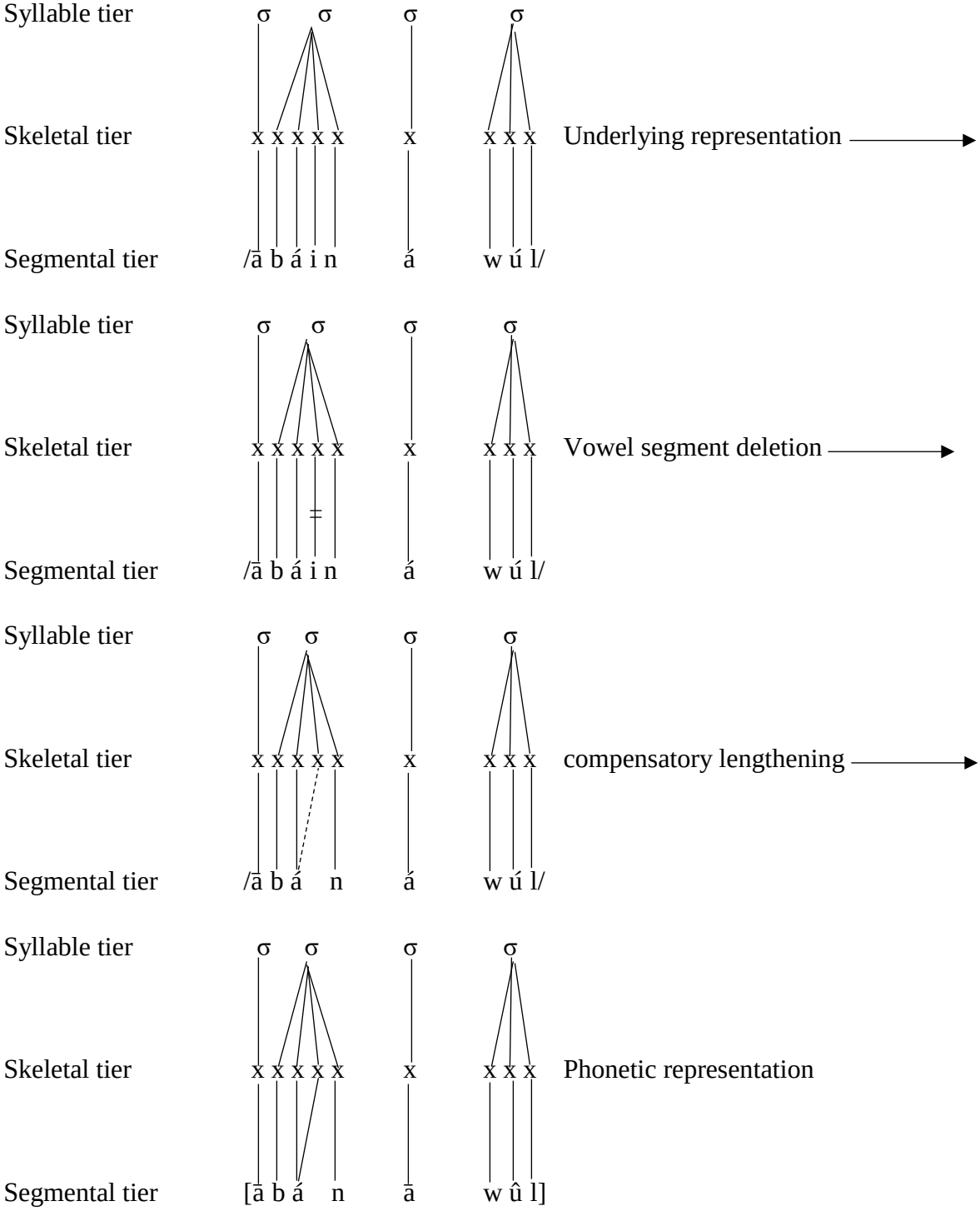


**Figure 2: Autosegmental derivation of [àntàːn á wāin] from /àntàin + á + wáin/**

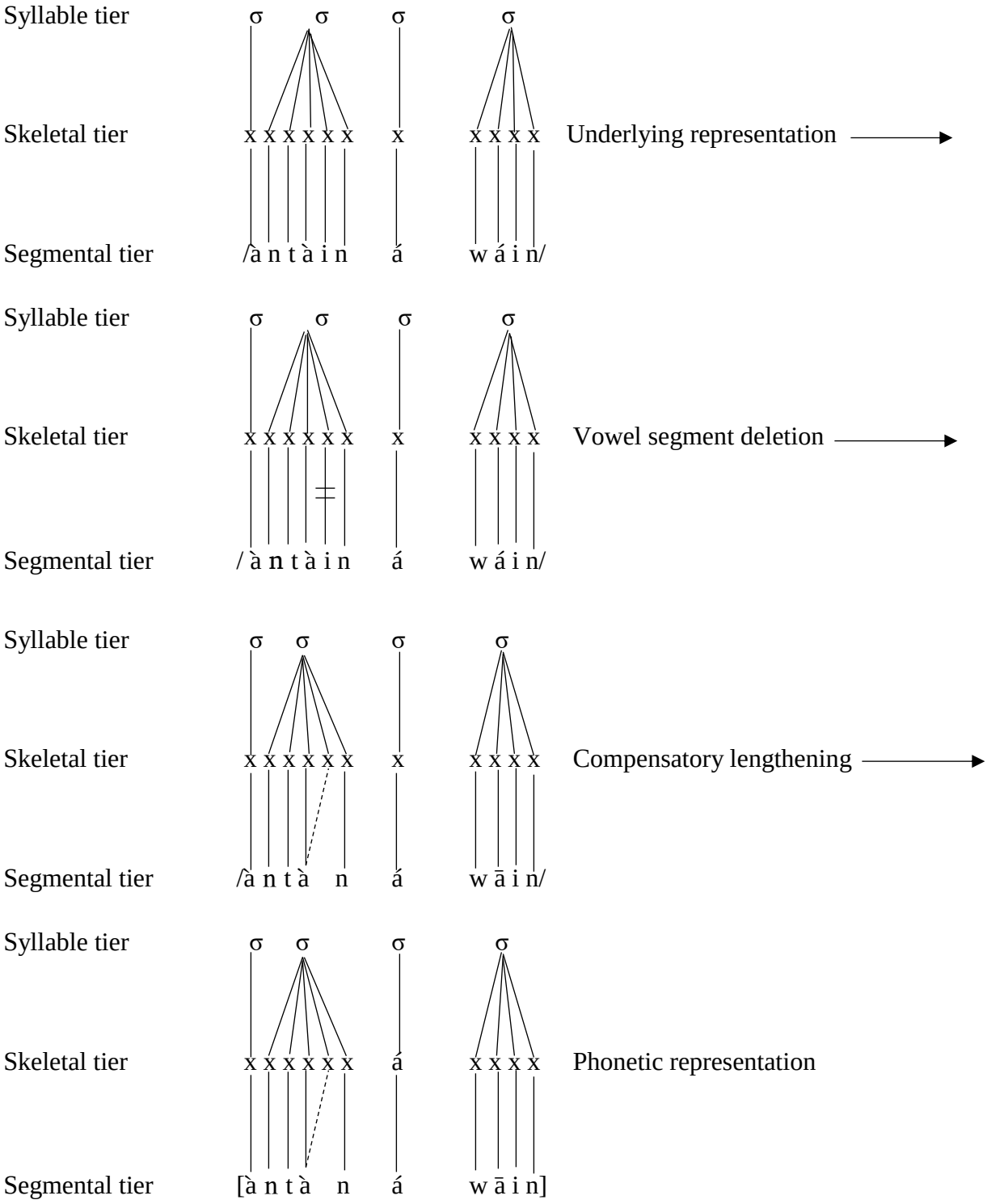
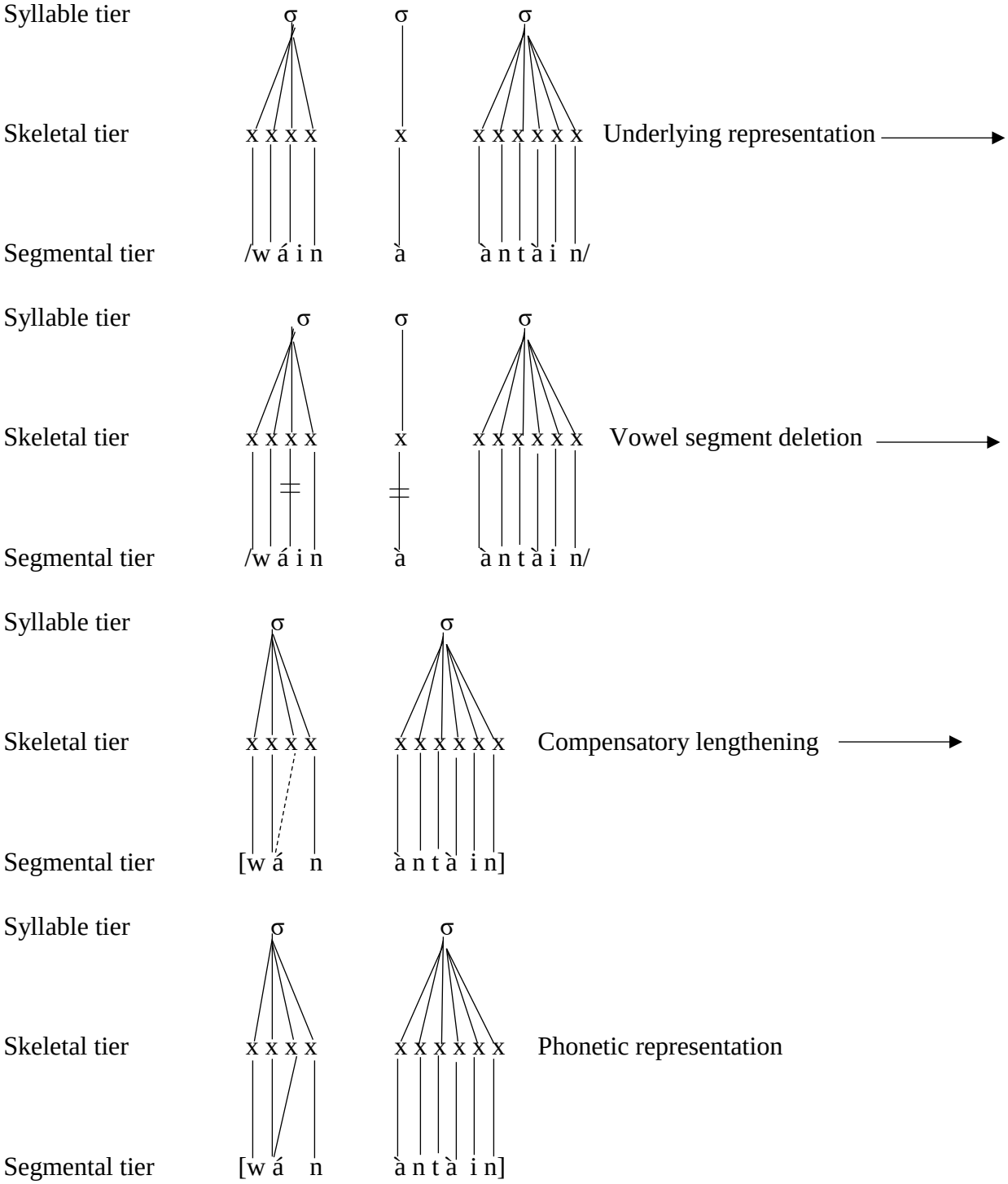


**Figure 3: Autosegmental derivation of [wáːn àntàin] from /wáin + à + àntàin/**




It should be noted that in the above autosegmental account, I employed the X-tier sub-theory instead of CV-tier to avoid a theoretical complication. Although very refined linguists have accounted for compensatory lengthening by a leftward association of a vowel to a derived floating C-slot on the timing tier (Goldsmith, 1990, p. 64), another reasoning is that since the X-slot usually is neither specified for Cs nor for Vs, it plays its rule in contributing to the duration of the word without raising the theoretical question of whether a V in the segmental tier can freely associate with a C-slot on the timing tier.

### 4.*2* Monophthongization of /ɔi/

Like the diphthong /ai/, /ɔi/ appears exclusively in closed syllables whose coda consonant is the alveolar nasal /n/. In data set (3) below, I put words whose final syllables contain /ɔi/ in the noun 1 position of the associative construction where they are immediately followed by vowel-initial words, but in data set (4), I put the same words in the noun 1 position. This time around they are immediately followed by consonant-initial syllables and not vowel-initial ones. This made their phonological behaviour in the two different phonological environments easily observable.

| | **Underlying form** | | **Surface form** | **Gloss** |
|---|---|---|---|---|
| (3) | a. /wɔ́in + ɨ́ + ātúm/ | → | [wɔ́ːn átūm] | ‘foreign children’ |
| | (children of foreign land) | | | |
| | b. /ŋgɔ̀in + ɨ̀ + ātúm/ | → | [ŋgɔ̀ːn àtūm] | ‘foreign lady’ |
| | (lady + AM + foreign land) | | | |
| | c. /fɔ̀in ₊ ɨ̀ + ātúm/ | → | [fɔ̀ːn àtúm] | ‘foreign king’ |
| | (king + AM + foreign land) | | | |
| | d. /wɔ́in ₊ ɨ́ + ātúm/ | → | [wɔ́ːn átūm] | ‘foreign children’ |
| | (king + AM + foreign land) | | | |
| | e. /ntɔ̀in ₊ ɨ̀ + ātúm/ | → | [ntɔ̀ːn àtūm] | ‘foreign pot’ |
| | (king + AM + foreign land) | | | |

| | **Underlying form** | | **Surface form** | **Gloss** |
|---|---|---|---|---|
| (4). | a. /wɔ́in + ɨ́ + wúl/ | → | [wóin wûl] | ‘someone’s children’ |
| | (children + AM + person) | | | |
| | b. /ŋgɔ̀in + ɨ̀ + ntɔ̄ʔ/ | → | [ŋgɔ̀in ntɔ̄ʔ] | ‘palace lady’ |
| | (lady ₊ AM + palace) | | | |
| | c. /fɔ̀in + ɨ̀ + nsē/ | → | [fɔ̀in nsē] | ‘king of the earth’ |
| | (king + AM + earth) | | | |
| | d. /wɔ́in ₊ ɨ́ + ntɔ̄ʔ/ | → | [wɔ́in ntɔ̄ʔ] | ‘princes and princesses’ |
| | (children + AM + palace) | | | |
| | e. /ntɔ̀in ₊ ɨ̀ + kfāŋ/ | → | [ntɔ̀in kfāŋ] | ‘metal bucket’ |
| | (bucket + AM + civilization) | | | |

What is immediately observable in data set (3) is that the /ɔi/ diphthongal syllable nucleus monophthongizes in the noun 1 position where it is followed by a vowel-initial word. On the other hand, in data set (4) where the diphthongal syllable is immediately followed by consonant-initial words, diphthongization is not feasible. Figures 4, 5 and 6 illustrate the derivation of the monophthong /ɔː/ from the diphthong /ɔi/.

**Figure 4: Autosegmental derivation of [wɔ́ːn átūm] 'foreign children' from /wóin + ɔ́ + ātúm/ 'children + AM + foreign land'**

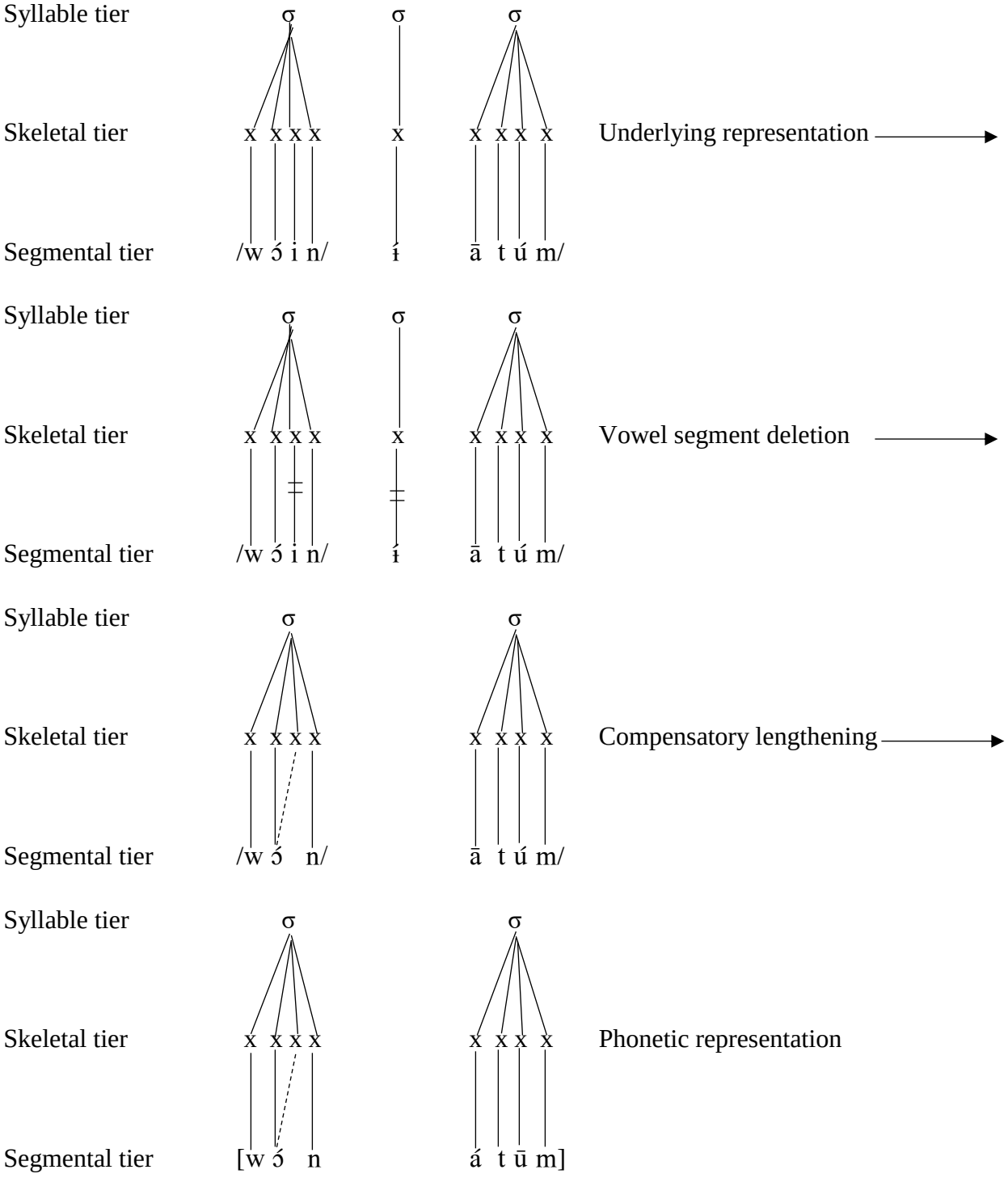


**Figure 5: Autosegmental derivation of [ŋgɔ̀ːn àtūm] 'foreign lady' from /ŋgɔ̀in + ə̀ + ātúm/ 'lady + AM + foreign land'**

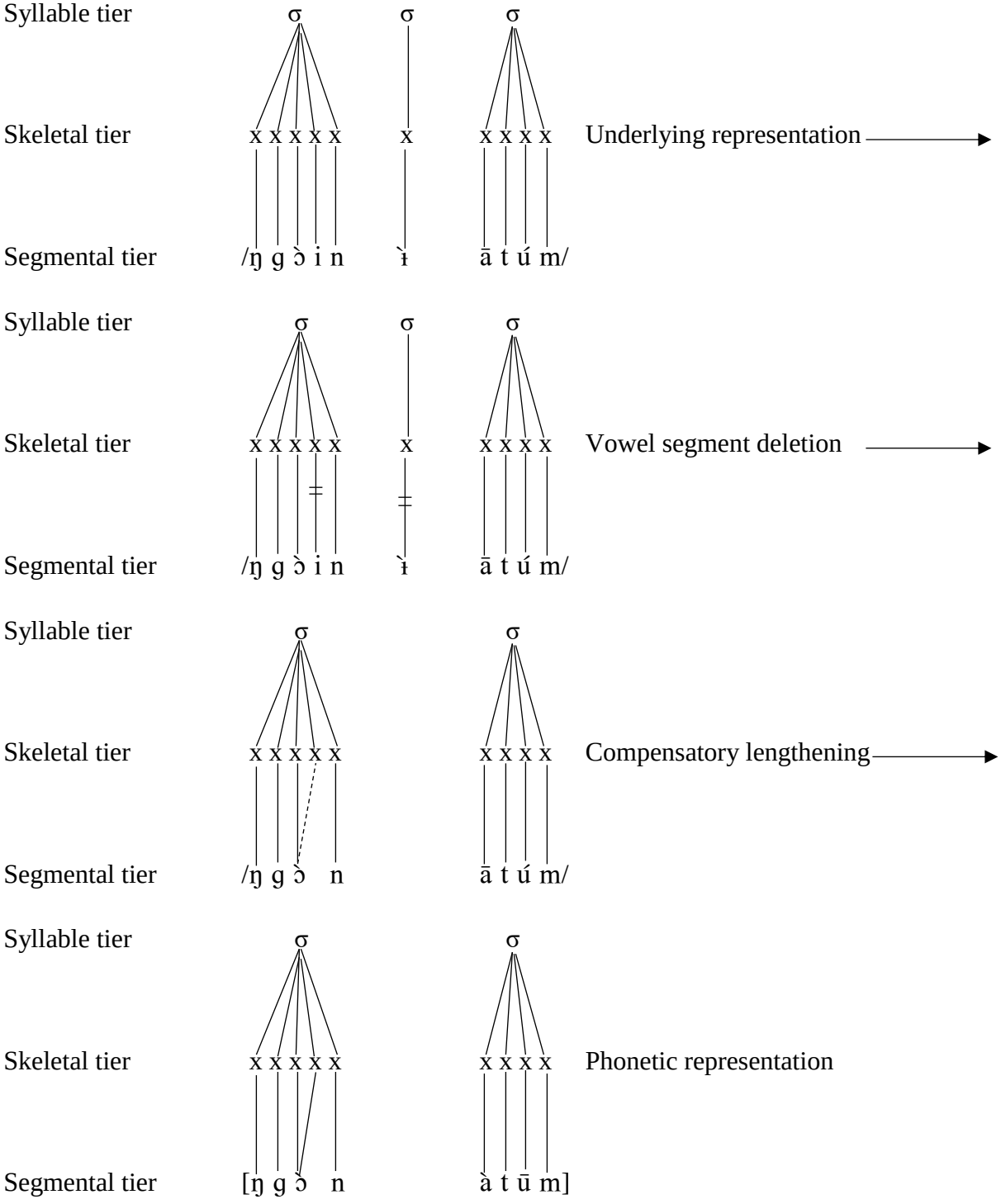
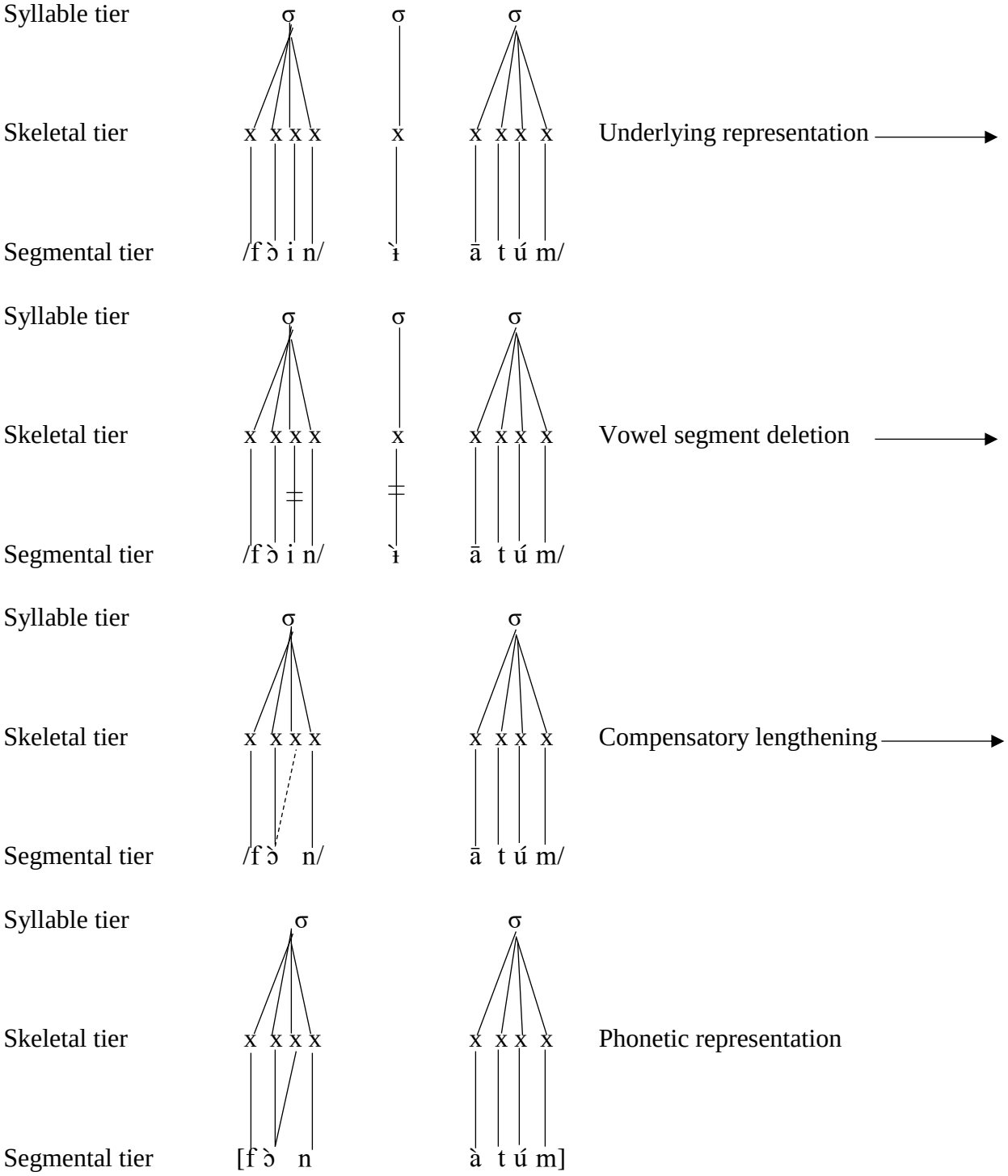
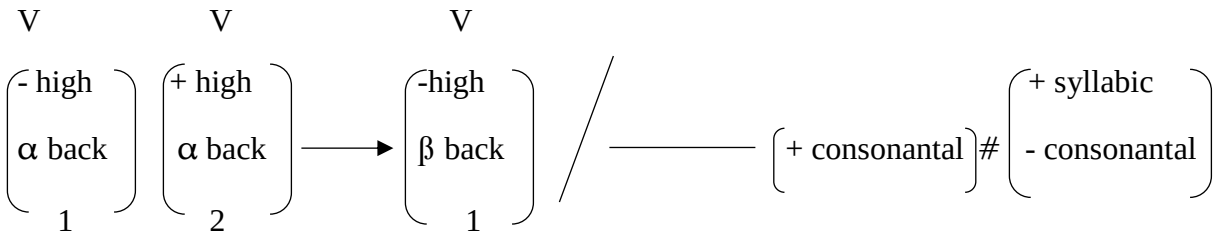


**Figure 6: Autosegmental derivation of [fɔ̀ːn àtúm] 'foreign king' from /fɔ̀in ₊ ɨ̀ + ātúm/ 'king + AM + foreign land'**




The phonomennon of monophthongization in the Kom language can be formalized in a single monophthongization linear rule as follows:

**Figure 7: Monophthongization rule**




The monophthongization rule states that a diphthong becomes a monophthong when it forms the peak of a word final closed syllable that precedes a vowel initial word.

## 5. Discussion

Unlike a language such as Limburgish where monophthongization has been demonstrated to interact with the tone of the monophthong (see de Vaan, 2004), the Kom language does not present instances where the monophthongized vowels exhibit any tendency towards a particular tone height; H, M and L tones are all found on the monophthongized vowels. Generally, in all the data above, tonal alternations are observed in the associative construction but none is observed between the underlying diphthongal syllable and its surface monophthongal realization. For instance, the derivation in Figure 3, [àntàːn á wāin] from /àntàin + á + wáin/, involves high tone lowering to mid tone in noun 2 where /wáin/ is realized at the surface level as [wāin]. However tonal alternations are a phenomenon I have endeavoured to eschew in this study and reserve it for another study at an auspicious time. This is not to say tonal alternations in the Kom language are still a virgin land for phonological scholarship; there has been some non-derivational descriptive work, including Hyman (2005) and Shultz (1993).

This study treated monophthongization as essentially involving two main derivational stages, namely, the deletion of /i/ and the compensatory lengthening of the monophthongs /a/ and /ɔ/. There is reason to believe in an alternative reasoning: an analysis that sees the same phenomenon as regressive assimilation of /i/ to /a/. In the case of /ai/, this would involve creating autosegmental tiers for the features [low] and [back] and depicting their assimilation by the monophthong /i/ through autosegmental spreading of the features from the monophthong /a/. But accounting for monophthongization in the Kom language this way would be much more complex than accounting for it simply as segment deletion and compensatory lengthening. In a straightforward explanatory process, the derivation involves three tiers: the syllable tier, the skeletal tier and the segmental tier. Elements on both the syllable and the segmental tiers are linked to elements on the skeletal tier via association lines. At the segment deletion stage, the second vowel of the diphthong is deleted but its skeletal slot remains. At the next stage of the derivation, the melody of the remaining vowel spreads onto the stranded skeletal slot without violating the *no crossing of association lines* principle. It is interesting to note that even though monophthongization in the Kom language involves segment deletion, this does not necessarily entail syllable structure changes in the diphthongal word. This is so because authosegmental phonology permits a doubly-linked representation of length. Thus, compensatory lengthening is treated as segment germination which now gets linked to the stranded skeletal slot.

It is compelling to posit that the trigger of the monophthongization process is the vowel-initial word positioned on the right edge of the diphthongal syllable. It is interesting to note that the said trigger is

separated from the target by an intermediary alveolar nasal. Thus, the relationship between the trigger and the target of monophthongization in the Kom language is not that of adjacency to one another.

## 6. Conclusion

Website localization is, in essence, cross-cultural communication. Naturally, translation theories have an important role to play in this aspect. The purpose of website localization is to make all the verbal, graphical, and technical information accepted by the target audience. So, this task has two requirements placed on a technical communicator: 1) He/She must have a good understanding of the target culture, which is the base for localization, and 2) He/She must make his/her own information products (websites) accepted by the target audience. Translation theories that favor alienation (keep the original cultural information as much as possible), such as literal translation and formal correspondence, contribute to this purpose as the TL audience can extract the maximum cultural information from the translated text. On the other hand, theories that favor adaptation (convert or customize the alien culture information), such as dynamic or functional, or free translation, contribute to maximizing the acceptability and readability of the information. But in each case, being faithful to the original works is most important; otherwise, the information would be distorted and misleading. As to how to use them appropriately, professors need to handle the relationships between subjectivity and objectivity in a proper manner. They need to play the active role of subjectivity while respecting the objective circumstances. They need to select the right translation theories in light of the course goal, the nature of the text, the purpose of the writer, and the need of their audience. Only in this manner can the course of Web Localization achieve its best results.

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