Journal of West African Languages

Volume 45.2 (2018)

VELAR PALATALIZATION IN AKAN: A RECONSIDERATION

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Abstract

This paper critically examines the palatalization rule in Akan, a Niger-Congo (Kwa) language, specifically velar palatalization. In addition to the regular Akan phonology, it provides evidence from five main domains in Akan, namely reduplication, loanword phonology, ideophonic constructions and Akan Pig Latin (APL) to show the systematic non-application of this phonological rule, and claim that the hitherto assumed very active process is not as active in the language as we had thought. It is common knowledge in the existing literature that the palatalization rule applies in Akan, just like in many other languages cross-linguistically, whenever a back consonant occurs before a front vowel. There are, however, counter-examples where this rule fails to apply or it underapplies though there is the right 'palatalizing environment'. A classical example of this non-application has been discussed in the domain of Akan reduplication. In recent times, the observation of such counter-examples has been extended to the domains of Akan loanword phonology, and the APL. The paper concludes by calling for a reconsideration of the analysis of the phenomenon in Akan.

Keywords: Akan, palatalization, reduplication, underapplication, loanword, Akan Pig Latin

Résumé

Cet article examine de manière critique la règle de palatalisation en akan, une langue du Niger et du Congo (Kwa), en particulier la palatalisation vélaire. En plus de la phonologie en akan régulière, il fournit des preuves de cinq domaines principaux en akan, à savoir le redoublement, la phonologie d'emprunt, les constructions idéophoniques et l'akan Pig Latin (APL) pour montrer la non-application systématique de cette règle phonologique, et affirme que le processus supposé très actif n'est pas aussi actif dans la langue que nous l'avions pensé. Il est de notoriété publique dans la littérature existante que la règle de palatalisation s'applique à l'akan, tout comme dans de nombreuses autres langues, à chaque fois qu'une consonne arrière apparaît avant une voyelle antérieure. Il existe cependant des contre-exemples dans lesquels cette règle ne s'applique pas ou s'applique de manière insuffisante, bien qu'il existe un 'environnement de palatalisation' approprié. Un exemple classique de cette non-application a été discuté dans le domaine du redoublement en akan. Récemment, l'observation de tels contre-exemples a été étendue aux domaines de la phonologie de l'emprunt en akan et de l'APL. Le document conclut en appelant à un réexamen de l'analyse du phénomène en akan.

1. Introduction

Palatalization in Akan has received appreciable erudite attention in the existing literature as it is one of the important phonological processes in Akan. The rule applies in Akan, just like in many other languages including Germanic, Asian, and other languages, whenever velar consonants and the glottal fricative *h* occur before front vowels. Scholars of Akan phonology, since the pioneering work by Christaller in 1881/1933, have provided examples to buttress the productivity of this phonological rule in Akan albeit many counter–examples exist; where the rule fails to apply. These counter-examples have been drawn from the domains of the regular phonology (Christaller 1933, McCarthy & Prince 1994, among others), Akan reduplication (Welmers 1946; Schachter & Fromkin 1968; Wilbur 1973; Marantz

1982; McCarthy & Prince 1994, 1995; Adomako 2012), and Akan loanword phonology (Adomako 2008, 2013; McCarthy et al 2012). There is, yet again, another domain that adds to this list of domains of the non-application of palatalization in Akan, that is, in the Akan Pig Latin (language game) (cf. Adomako 2014), which the current paper also discusses. I review all these instances of the non-application of palatalization and show that as McCarthy et al (2012) have observed, the palatalization rule might not be active in Akan phonology in general as has been assumed, hence the various instances of its non-application or failure. The current paper does not employ any theoretical framework in its discussions, but rather attempt to review how velar palatalization in Akan has been discussed in existing literature.

As a background to this current paper, I was prompted to investigate this question of whether the palatalization rule in Akan is still very active, following McCarthy et al's (2012) claim about the status of the phenomenon in Akan after considering another instance of its failure in Akan loanword in Adomako (2008). McCarthy et al (2012) thus commented, "…The absence of palatalization in *kɪ-kaʔ* is not a case of underapplication. Rather, it is the expected failure of a process that is no longer productive" (McCarthy et al 2012: 212).

This paper attempts to explore this claim by McCarthy et al (2012). The main objective of this paper is to call for a reconsideration of the generalized assumption that the palatalization rule is very active in Akan (cf. Dolphyne 2006, Boadi 2009, 2014, Abakah 2012, Adomako 2012, among others). It shows that indeed there are many more instances of failure or non-application of this rule than there are for its application; hence, it raises suspicion about the activeness of palatalization in synchronic Akan. Five main domains in Akan where palatalization fails to apply will be considered to support the claim that the phonological process is not as active as it has been assumed in Akan over the years. These domains include reduplication, loanword, Akan Pig Latin, ideophone, and the regular phonology.

1.1. The Akan language

Akan genetically belongs to the Kwa (Potou-Tano) subfamily of the Niger-Congo family of languages. It is spoken mainly in Ghana and some parts of Côte d`Ivoire both in West Africa. Three major dialects of the Akan language are Akuapem, Asante and Fante. The first two dialects together form what is commonly known as the Twi group of Akan. These three dialects are considered in this paper. In terms of speakership, together with its non-L1 speakers, it is estimated that far more than half of Ghana's over 24 million population[1] either speak or understand the Akan language. This obviously makes the Akan language the most widely used language in the present-day Ghana.

The rest of the paper is sectioned as follows: Section 2 reviews what have been discussed about the palatalization process in Akan, the triggers and the targets of the rule. In section 3, we discuss the non-application of palatalization phenomenon and review how it occurs in five domains in Akan. The section 4 of this paper will draw conclusion to the discussions made in the paper.

2. Palatalization in Akan

[1] From the outcome of the 2010 Population and Housing Census conducted, Ghana's population has been estimated at about 24.6 million.

Palatalization, which has been assumed to be a very important feature of Akan phonology, has engaged the attention of many Akan phonologists for over two centuries. The term *palatalization* is sometimes used as a cover term in the literature to refer to any phonological process that draws a non-palatal consonant towards the palatal region during its articulation (cf. Clements & Hume 1995). Boadi (1988), however, has called for the need to draw a line of distinction between the two types of palatalization, namely complete/full palatalization and partial palatalization.

Palatalization has simply been defined by Boadi (1988) as either

> "(i) a synchronic or diachronic consonantal shift towards the palatal region or (ii) the simultaneous raising of the front of the tongue towards the hard palate during the formation of a major stricture in the production of a non-palatal consonant" (Boadi 1988:4).

From the above, we observe that Boadi (1988) identifies two main types or forms of palatalization, namely type 1, which is commonly termed *complete/full* palatalization or what he terms *affrication* in which the primary stricture of the target consonants shifts, and type 2 is partial palatalization, which requires the superimposition of additional features. Boadi (ibid) also postulates that in affrication in Akan, "the occlusion does not extend to the pre-palatal [region]" (Boadi 1988: 4). He continues that the type 1 is so frequent and regular that writers refer to it as "velar palatalization". It is worth noting that the other form of the type 2, which systematically applies in all domains and all contexts in Akan is what is termed affrication (Bateman (2007) refers to this as 'alveolar palatalization'). This process is where alveolar stops get palatalized or shift backwards before front vowels. However, unlike in velar palatalization process, alveolar palatalization, which is commonly termed affrication, is induced usually by high front vowels. It is very active in the Fante dialect of Akan and we exemplify as below in (1).

(1). Affrication in Fante[2]

Orth. form	Twi	Fante	Gloss
a. etire/eti	**etiɪe/eti**	**etsiɪ**	**head**
b. ketewa	**kɪtɪwa**	**kɪtsɪkɪtsɪ**	**small**
c. gyedi	**ʤidi(e)**	**ʤeʤi**	**faith/belief**

From the examples above, /t/ is realized as [ʦ] while /d/ becomes [ʤ] before high front vowels in the Fante dialect. This is what has been termed in the literature as the 'alveolar palatalization' or affrication, which applies exclusively to the Fante dialect of Akan.

There are also examples of alveolar palatalization in the Asante Twi dialect in the following alternations. Again Abakah (2012: 63) refers to these examples as *posteriorization*.

(2). Alveolar palatalization in Asante Twi

Alternant words	Gloss
a. ɔpænĩn ~ ɔpæɲĩn(i)	**elder**

[2] It is worth pointing out that Abakah (2012: 55) refers to the cases of Fante variants in (1) as *coronalisation* instead of palatalization, following Clements & Hume (1995).

b. onĩnĩ ~ oɲĩnĩ	**python**
c. sɛ̃n ~ sɛ̃ɲ/sɛ̃ĩ	**to hang**

The current paper however focuses on discussing the status of the palatalization process that affects velar consonants, which Bateman (2007) refers to as 'velar palatalization' or coronalization by Abakah (2012). This process applies across all the so-called major dialects of Akan, and even other closely-related Volta Comoe languages such as Nzema, Ahanta, Wassa, etc. (cf. Boadi 2009).

We observe that the reason for the variation in the use of the various terminologies for the same process has been that while Boadi's (1988) and Bateman's (2007) classification have been based solely on places of articulations i.e. alveolar and velar, and for Boadi (op. cit) manner of articulation, namely affrication, Abakah (2012), on the other hand, mixes both the manner of articulation and place feature labeling up in his analysis.

2.1. Targets for palatalization in Akan

With regard to the target for palatalization in Akan, Boadi (1988) postulates that the type 2 affects both plain back stops and non-stops, however, affrication (i.e. type 1) affects only the former. In addition to these consonants, the labialized velars such as /k^w, g^w, h^w/ can also undergo labio-palatalisation in Akan[3]. According to him, the non-applicability of the rule occurs but only in few instances as he opines that, "with very minor exceptions the initial plosives occurring before front vowels become palatal affricates" (Boadi 1988:5). This present paper shows that contrary to the remarks of the non-application of palatalization being "very minor exceptions" in cases, there are rather more domains or cases of such failure than there are of its application in Akan. We assume that by his statement, Boadi (op cit) might be referring only to the usual domains of the regular Akan phonology, Akan reduplication, in limited cases, ideophones, and even that we will show later in the present paper, that there are significant examples of its failure or non-application in both domains with examples from Christaller's (1933) dictionary. In addition to these three domains, there are other domains including Akan loanword (cf. McCarthy et al 2012, Adomako 2008, 2013; etc.) and in language game (cf. Agyekum 1996, 2006; Adomako 2014, 2015) in which affrication (full/complete palatalization) fails.

Christaller (1933) explains that,

> …**gɛ**, **ge**, **gi**, does not occur, but gye, gyi; only when the *e* or *i* is nasal, we might sometimes be inclined to write merely *g* instead of *gy*; but, as the nasal consonant, when put before it, does not change it into the decided sound of *ŋ*, we must keep to gy… [Italicization is mine] (Christaller 1933: 143).

According to Schachter & Fromkin (1968),

> In all dialects, the [+Back] non-vowels [k, g, w, h, ŋw (or [w̃])] are palatalized, in syllable-initial position, when they occur immediately before the [+palatal] vowels /I/ and /E/, and are realized phonetically as [**tɕ, dʑ, ɥ, ɲɥ, (or [ɥ̃])**][4] respectively (Schachter & Fromkin 1968:89).

[3] For a detailed discussion of labio-palatalization process in Akan, see de Jong & Obeng (2000). These authors have provided acoustic evidence to expatiate the occurrence of this assimilatory process in Akan (Twi).

[4] The original symbols/sounds have been replaced by their equivalents in use currently in this present paper.

They continue to mention the context within which this rule fails, namely "if the following syllable (within the same morpheme) begins with /t/ or /s/…" (Schachter & Fromkin 1968:89). Per above the condition, words such as **wesa** 'to masticate', which is phonetically realized as [ɥɪsa] should not exist in Akan, yet they do exist.

On her part, Dolphyne (2006) postulates, "**k** is replaced by the alveo-palatal affricate **ky** [**ʧ**] before front vowels in stem words". On the voiced velar stop, she further posits that, "it does not occur before front vowels…before front vowels **g** is replaced by **gy** [**ʤ**] …" (Dolphyne 2006:33).

Accordingly, it is evident that all palatal or alveo-palatal affricates in Akan were diachronically plain back consonants **g**, **k**, **h** (cf. Koelle 1854; Christaller 1933; Welmers 1946; Schachter & Fromkin 1968; Mensah 1977; Boadi 1988; Dolphyne 2006; among others). Therefore, from the above discussion, we would expect **g, k, h** to turn into **ʤ**, **ʧ**, **ɕ** respectively before front vowels at the SR within a stem in Akan expect, as has been explained in the literature (cf. Boadi 1988, McCarthy & Prince 1995, Dolphyne 2006, among others), when the following syllable begins with a coronal consonant. For example, we would not expect form *[**gɪ**] at the SR for the word 'collect', but rather [**ʤɪ**].

2.2. Triggers of palatalization in Akan

It is a typologically established fact that front non-low vowels usually condition or induce palatalization. This fact is without exception to what obtains in palatalization in Akan. However, there is an unusual 'trigger' segment of this phonological process in Akan. Boadi (1988) explains that aside from the regular context of front non-low vowels inducing the process, there are unusual cases in which the low vowel /a/ seems to trigger palatalization in Akan, a position which Mensah (1977) had earlier completely rejected. Mensah (1977) rather posits that, "palatalization is mainly conditioned by the articulatory force operating on a syllable at a particular time" (1977:72) cited in (Boadi 1988:7). Mensah (op cit) further offers an explanation for the low vowels before palatal consonants from a purely physiological perspective that it is because of the intensity of the low vowels that shifts the place of articulation of velar stops to the palatal region, which eventually results in an affrication. However, Boadi (1988) posits that Mensah's outright rejection of the traditional view on the context of palatalization might be based solely on such instances of the irregular contexts of the low vowel [a] occurring before affricates.

Boadi (1988), on his part, discusses the issue of palatalization of consonants in the environment of /a/ as in the following examples.

(3).	Words	Gloss
	a. eʤ̟a	fire
	b. æʤ̟a	father
	c. ʤ̟a	leave behind
	d. ʧ̟aʧ̟a	gamble
	e. ʧ̟awʧ̟aw	native sandals

Boadi (1988) explains the examples in (3) that through assimilation, /a/ assumes some phonetic features of neighbouring vowels. He continues to posit that the low vowel imposes advanced tongue root and expanded pharyngeal properties on the palatal. He further proposes what he termed "two antagonistic pulls of the

same physiological mechanism" that come to play in the production of the palatal consonants: one [æ] which causes palatalization and affrication of velar consonant, and the other [a] which does not. He backs the view, especially by Koelle (1854) and Christaller (1933), that all palatal affricates, irrespective of the context within which they are found in the surface representation, are diachronically derived from velar plosives through i-insertion, so for example, the present-day surface form **edʑa** 'fire', actually has the equivalent form **edʑia** in Koelle's inventory. Therefore, /i/ and not /a/ might have triggered the palatalization rule. This is a view that Mensah (1977) rejects with the suspicion that the idea of the so-called i-insertion might be as a result of error in transcription on the part of Koelle and Christaller.

Aside from the low vowels, there are cases where palatalization (appears to) occur in the environment of back vowels, as exemplified in (4).

(4). Words — Gloss (Boadi 1988:10)

a. tɕʷʊm~tɕʷɪm	completely
b. tɕʷooboi~tɕʷeeboi	a war cry

Boadi (1988) posits about the cases in (4) that there is an alternation between front and back vowels in Akan and other sister languages though he provides examples from only Akan to back his claim. Back vowels themselves usually induce labio-palatalization in Akan (cf. de Jong & Obeng 2000).

Boadi (1988) also comments on labialized-palatal consonants and the effect of an inserted palatal glide on them. He explains that though the palatal glide can induce palatalization, in disyllabic Akan words in which the inserted [j] belongs to the second syllable, it does not induce palatalization in the examples provided. He concludes on this by claiming locality between the trigger vowel and the targeted consonants as the necessary condition for palatalization in those examples in Akan.

On palatalization due to the environment of a non-low front vowel or glide, Boadi (1988) discounts the popular blank notion of under- or non-application of palatalization in Akan as held by authors such as Schachter & Fromkin (1968), Wilbur (1973), Marantz (1982) and relatively more recently McCarthy & Prince (1994, 1995), Kager (1999), Raimy (2000) among others. He clarifies the issue that palatalization applies in all palatalizing environments, but rather the subsequent affrication, which applies to only back stop consonants may fail in some contexts. Therefore, Boadi (op cit) proposes two separate terminologies, namely palatalization, which is partial, and affrication, which is complete or full.

A similar distinction has been made by Abakah (2012) following Clements & Hume (1995), when he distinguishes three forms of palatalization, namely palatalization, affrication, and coronalisation. The last form is after Mester & Itô (1989), who according to Clements & Hume (1995:278), also attribute its original use to Morris Halle & Alan Prince. Abakah's argument is that there is only one palatal phoneme in Akan i.e. /j/ and that it is not all phonetic shifts, in articulating target consonants before high vowels, that lead to palatals. His first two distinctions had earlier been made by Boadi (1988) as well. Here, too the problem is that all affricates are coronals, so by separating affrication as distinct from coronalisation raises a question. Abakah later added what he terms posteriorisation to the list of forms of 'palatalization' in Akan. Indeed, the palatalization process in Akan affects sounds produced at two different places, namely back consonants, which get fronted

in the process leading to the velar palatalization, excluding the alveo-palatal fricative; and alveolar consonants, which move backwards leading to alveolar palatalization. We believe it suffices to make only these two distinctions to capture the full/complete palatalization (or affrication) process in Akan. So the two terms; palatalization and coronalisation, would suffice to account for the entire process in Akan without necessarily having affrication since all affricates are coronal (cf. Clements & Hume 1995).

(5). Summary of the types of palatalization in Akan.

i. partial palatalization (what Boadi 1988 calls palatalization). All consonants may undergo this process. This does not change the primary articulation of the target consonant.
ii. complete/full palatalization (what Boadi (ibid) terms affrication). Only back consonants undergo this process. In the literature, this type is what is referred to generally as Palatalization in Akan (cf. Welmers 1946, Wilbur 1973, Marantz 1982, McCarthy & Prince 1994, 1995; Kager 1999; Raimy 2000; among others). Abakah (2012) subdivides this type into two, namely affrication and coronalisation. He later introduces posteriorisation as another form.

In this paper, whenever we mention palatalization, we simply refer to the type 2. And by type 2, we specifically refer to velar palatalization (after Bateman 2007) which applies in all dialects of Akan. The type 1 is physiologically expected and phonologically it goes through some rules to be derived.

In the subsequent section, we discuss the concept of underapplication or non-application of palatalization i.e. underapplication in Akan and the domains in which such non-application occurs. The terms underapplication and non-application are used interchangeably in this paper.

3. Underapplication of palatalization in Akan

Many phonologists have contributed to the discussion of the phonological phenomenon *underapplication* since its introduction into the literature by Wilbur (1973). Among such phonologists is Kager (1999) who defines *underapplication* as "the non-application of a phonological process in the reduplicant even though this meets the structural condition… That is, a rule fails to apply in the 'right' environment" (Kager 1999: 239).

The rest of this paper discusses cases of non-application of palatalization in five domains in Akan and shows that the phonological rule is not active in Akan as has been hitherto perceived in existing literature in consonance with McCarthy et al's (2012) earlier comment to this effect.

3.1. The native/regular phonology

Literature abounds on the non-application of expected palatalization in the regular Akan phonology. Such earlier studies have been done by Christaller (1933), Schachter & Fromkin (1968), Boadi (1988), McCarthy & Prince (1994), among others. In (6), we illustrate this with examples from Akan native phonology.

(6). Data

	Word	Gloss	Expected form
a.	kɛtɛ	a mat	*tɕɛtɛ
b.	kisa~kusa	turn over (food on fire)	*tɕisa
c.	ketewa	small	*tɕɪtɪwa

d.	**kete**	a traditional dance/drum	***tɕete**
e.	**keteke**	a train	***tɕetetɕe**
f.	**ketrɛ~kotrɛ**	a lizard	***tɕɪtrɛ**
g.	**kɛtrɛma~tɛkrɛma**	a tongue	***tɕɛtrɛma**
h.	**kisie~kusie**	a rat	***tɕisie**
i.	**aketekyire**	a cricket	***atɕetekyire**
j.	**hini**	open	***ɕini**
k.	**ahina**	an earthenware pot	***æɕina**

Christaller (1933: 169-176) has provided a list of Akan words with /h/ + [+front] vowels sequences at the surface representation alone. However, the /g/ + [+front] vowel sequences occur in a very restricted context in ideophonic constructions as we shall discuss later in this paper. Specifically, he provides only five native Akan words for this example in his dictionary, and even out of the five, two are loaned words and the remaining are ideophones.

The sequence of /k/ + [+front] vowels, on the other hand, has more contexts of occurrence. Christaller (1933) provides a relatively tall list of Akan words with this sequence (cf. Christaller 1933: 232-237). These examples focus on only the back consonant + [+front] vowel occurrence in word-initial position alone; the other place such as the medial position is excluded from these.

Aside from the explanation by Schachter & Fromkin (1968) stated in subsection 1.1, McCarthy & Prince (1994) also observe that, "…palatalization is blocked when the next syllable begins with a coronal obstruent" (McCarthy & Prince 1995:94). The explanation is that there is OCP (cor) constraint that bans occurrence of coronal features in successive/adjacent syllables hence, the ill-formedness of the 'expected forms' in (6).

The non-application of palatalization in regular phonology especially in non-monosyllabic morphemes (morpheme-initial according to Boadi 1988) has been attributed to OCP effects (cf. Wilbur 1973; Marantz 1982; M&P 1994, 1995; Kager 1999; Raimy 2000; among others) in the existing literature. If indeed OCP is the reason for the non-application of palatalization, then how do we explain the existing words in the language such as the following?

(7).

	Words	Gloss
a.	**ɕɪta**[5]	spread abroad
b.	**ɕɪɪa**	bless
c.	**dɕina**	stand
d.	**ɕiɪe**	white clay
e.	**æhi~æɕi**	disgust
f.	**hi**	to wane

From the examples in (7) above, specifically (7a-d), the second syllables begin with coronal segments, yet the word-initial syllables can be palatalized.

[5] It is worth noting that the form **hita** also exists as a variant of (7a) by some speakers.

Do not we have violation of this OCP constraint in (7a-d) because the second syllables begin with coronal consonants? The other question is, would not we have had *h* palatalize into [ɛ] in (7e-f), since it doing so would not violate the OCP constraint?

These clearly tell us that the OCP effect explanations might not be entire accurate for the non-application of palatalization in Akan regular phonology. Aside from the regular Akan phonology, there are other domains in the language in which similar non-application occurs. We consider these other domains in the subsequent subsections of this paper. We show that with the exception of the regular phonology, there are robust examples to show that the palatalization rule mostly fails to apply in the other domains in palatalizing environments, which we discuss in detail in the rest of the present paper.

3.2. Reduplication

There are several definitions of reduplication which are informed by the perspective of the author. One of such definitions is by Spencer (1991) who defines reduplication from a morphophonological perspective as "a morphophonological process, in which some part of a base is repeated, either to the left, or to the right, or, occasionally in the middle" (Spencer 1991: 13).

In Akan reduplication, it has been observed that an expected palatalization rule fails when a base [+low] vowel systematically raises to [+high] when the initial consonant is [dorsal]. This has been recognized in the literature as one of the domains where *underapplication* of palatalization takes place. The following are examples of such vowel raising process in Akan reduplication.

(8). Vowel raising in reduplication in Akan

	Base form	Red. form	Gloss	Expected form
a.	**ha**	**hɪ-ha**	pester	***çɪ-ha**
b.	**ka**	**kɪ-ka**	bite	***tɕɪ-ka**
c.	**kan**	**kɪn-kan**	read	***tɕɪn-kan**
d.	**gam**	**gɪn-gam**	embrace tightly	***dʑɪn-gam**
e.	**ham**	**hɪn-ham**	quarrel	***çɪn-ham**
f.	**han**	**hɪn-han**	exaggerate	***çɪn-han**

Again, the context is the back consonants before front vowels, which could be stated as follows: [+back] + [+front, +high]. McCarthy & Prince (1995) have postulated as an explanation, the combined effects of two kinds of constraints within the Optimality Theory, namely Identity Base-Reduplicant i.e. IDENT-BR and the markedness constraint *[-high] to block the initial back consonant of the reduplicant from palatalizing. They also posit a ban on *[-high] from appearing in the surface representation in the reduplicant (see also Ofori 2013). This constraint forces a [+low] vowel to raise to [+high]. However, the subsequent effect of palatalization triggered by this raised vowel before the back consonant fails. This failure is instigated by the faithfulness constraint Identity BR.

Christaller (1933: 38) has a base Akan word **òbóŋ́kā́** 'gutter, gully'. He has the reduplicated form as **abonkyi-abonkyi** [**aboŋtɕi-aboŋtɕi**] 'rough, uneven; rough places'. We posit in this paper the 'synchronic' form **mònkyì-móńkā́**, which has

monka/**bonka** as the base and **monkyi** [**moŋtɕi**] as the reduplicant as a very rare exception to the non-application of palatalization in reduplication in Akan.

Up until this point, cases of the non-application of palatalization in Akan had been usually observed in the two domains discussed above, namely in reduplication and in the regular phonology. Very recently, two more domains have been discussed and added as potential domains for such non-application. These are Akan loanword (Adomako 2008, 2013, McCarthy et al 2012) and language game in Akan i.e. Akan Pig Latin (cf. Adomako 2014, 2015) to bring to four.

3.3. Loanword phonology

Loanword adaptation is simply a phenomenon of integrating words of a recipient language into the vocabulary of a target language. The phenomenon has not received considerable attention in the existing literature on Akan over the past decades since earlier detailed works including Matson (1956) judging from the fact that it is a very productive domain for explaining many phonological phenomena such as patterns of epenthesis and deletion. Recent attempts that have been made to contribute knowledge in this domain include those by Abakah (2006), Adomako (2008, 2013), Apenteng (2013), Apenteng & Amfo (2014), among others. In the loanword domain, there are evidence of the non-application of palatalization as reported in Adomako (2008, 2013) where illicit source-final dorsals /k/ and /g/ are usually repaired by epenthesizing a high vowel, the frontness of which depends on the shape of the source-internal vowel. In the event of the source-internal vowel being a front vowel or a central vowel, the epenthetic vowel is systematically a front high vowel. In the context of the front high vowel epenthesis, we would expect those source-final /k/ and /g/ to undergo palatalization in Akan. This expectation fails.

We provide evidence from both nativised words and loaned words; the difference between the two terms being that while the former has fully undergone nativization and almost does not have native equivalent form in the recipient language, in the latter, both the loaned word and the native equivalent co-exist and are used side by side in the language. The following nativised words have existed back in the 19th century (cf. Christaller 1881/1933).

We provide examples of some nativised words in Akan. Some of these examples are from Abakah (2006: 42), Adomako (2008, 2013), among others.

(9). Nativised nouns in Akan

	Nativised	Source	Expected form
a.	**bokiti**	bucket	***botɕiti**
b.	**krakye**[6]	clerk	**-**

[6] The nativised word **krakye** 'clerk' denoted a person who works as a clerk. Understandably it referred exclusively to males as we believe at the point of entry into the language it was the practice that it was only males who engaged in white-collar jobs. Currently the word has a generic use for all learned males, again excluding learned females, though there are now countless learned females in the society. The female equivalent term is **awuraba** (Fante) or **awurawa** ~ **awuraa** 'lady', etc. And again, there are many female clerks even perhaps more than males. We would assume a current loaned form would be **klɛke** [klɛkɪ] or **klake** [klakɪ] instead of the nativised form. It will be difficult and odd at the same time for one to hear a female clerk being addressed **krakye** irrespective of the age of the speaker as the term connoted male clerks, which has now been extended to cover all

c.	**mãhĩn**	machine	**maɕin**
d.	**hɛɛte**	shirt	**ɕɛɛtɪ**
e.	**hedi/heli**	glass for lantern	**ɕedi**

From (9c) – (9e), the two forms exist in the language presently. While in monolingual speakers (mostly the older generation without formal education) use the nativised forms, the bilingual speakers, on the other hand, employ the 'expected' forms. So here the 'expected' forms in (9c) – (9e) are not ill-forms for the bilingual speakers. In fact, they are closer to the source words phonetically than the nativised forms. We observe that the source [ʃ] is realized as a non-palatalised [h] in the nativised forms though we would have expected the speakers to be faithfully to the source segment.

In (10) below, the adapted forms are usually associated with bilingual speakers. Presently the use of loaned words, especially loaned verbs, is gaining popularity among many Ghanaians. This is usually observed in code mixing situations. In all subjects of interlocution, their use is robust especially by the bilingual speakers. In the following I present some examples of loaned verbs in Akan.

(10). Adapted verbs (cf. Adomako 2013: 181)

Adapted form	source	Expected form
a. kiki	kick	***kitɕi**
b. kuki~kuku	cook	***kutɕi**
c. ke:ki	cake	***ke:tɕi**
d. siki	seek	***sitɕi**
e. lɪkɪ	lick	***lɪtɕɪ**
f. rɪgɪ	rig	***rɪdʑɪ**
g. breki	break	***bretɕi**
h. teki	take	***tetɕi**

The contexts are two folds: either source word-internal as in the source words [kɪk] 'kick' and [keik] 'cake' or it ensues out of epenthesis especially to repair illicit coda as observed in (10).

The non-application of palatalization in loanword has also been attributed to a pressure for the preservation of contrast in the source segments. By preserving the source contrast in the adapted forms, a phonetic match between the source and the adapted forms is invariably preserved. This explains why a source-final velar plosive /k/ does not undergo palatalization before the epenthetic high front vowel, and not necessarily because the epenthetic vowels are inert to trigger the palatalization process (cf. Adomako 2008, 2013; McCarthy et al 2012; among others).

It is worth noting that loaned words into Akan undergo all the necessary assimilatory processes including homorganic place assimilation, vowel harmony (both ATR and rounding harmonies), etc. The question that then arises is, why not palatalization? We agree with the earlier account of the need to achieve as much as possible, phonetic match between source words and their equivalent adapted forms.

learned males who engage in a white-collar profession. For detailed discussions on the nativised Akan words, see Matson (1956).

In the next subsection, we consider the non-application of palatalization phenomenon in the APL.

3.4. Akan Pig Latin (APL)[7]

A similar non-application of palatalization is also observed in the Akan language game and in particular, in the Akan Pig Latin (APL). This linguistic behaviour is a very productive domain for morphological and phonological analysis though it has received very little scholarly attention. The few existing literature include Agyekum (1996, 2006) and Adomako (2014, 2015).

In (11), we provide examples of sentences in the APL in which an expected palatalization fails.

The data discussed here are adopted from Adomako (2014, 2015).

(11)

	APL form	Expected form
a.	**wegei yɛgɛ migi tigi-kyaga** **[ɥegei jɛgɛ migi tigi-ʧaga]** **Yei yɛ me tikya** 'This is my teacher.'	***[ɥeʤei jɛʤɛ miʤi tiʤi-ʧaga]**
b.	**hyege nwigi-raga nogo** **[ɕɪgɪ nɥigi-ɹaga nʊgʊ]** **Hye nwira no** 'Burn the weed.'	***[ɕɪʤɪ nɥiʤi-raga nʊgʊ]**
c.	**gyigi-naga hɔgɔ** **[ʤigi-naga hɔgɔ]** **Gyina hɔ** 'Stand there!'	***[ʤiʤi-naga hɔgɔ]**
d.	**Wigi-saga aga-dugu yaga-nigi nogo** **[ɥɪgɪ-saga aga-dugu jaga-nɪgɪ nʊgʊ]** **Wisa aduane no** 'Masticate the food.'	***[ɥɪʤɪ-saga-aga-dugu jaga-nɪʤɪ nʊgʊ]**
e.	**hyɛgɛ waga-taga-dege-jɛgɛ nogo** **[ɕɛgɛ waga-taga-dɪgɪ-jɛgɛ nʊgʊ]** **Hyɛ w'atadeɛ no** 'Put on your cloth.'	***[ɕɛʤɛ waga-taga-dɪʤɪ-jɛʤɛ nʊgʊ]**
f.	**Gyege naga-sɛgɛm nogo digi** **[ʤɪgɪ naga-sɛgɛm nʊgʊ digi]** **Gye n'asɛm no di** 'Believe in what s/he says.'	***[ʤɪʤɪ naga-sɛʤɛm nʊgʊ diʤi]**

[7] There are 3-step rules for playing the game, according to Adomako (2015:9), which I present as follows: (i) First, syllabify every existing word or morpheme. (The syllabification strictly adheres to the basic syllables structures of Akan). (ii). Second, suffix [g] to each of the preceding segmented syllable. (iii). Finally, spread the syllable-internal V of the segmented syllable to the end of the epenthetic [g].

The context here is through the epenthetic velar stop and the copied front vowels in the manipulated forms. We observe that the epenthetic consonant is invariably [g] and whenever the syllable-internal vowel, which copies to the epenthetic site i.e. after the epenthetic [g] is specified for [+front], it creates the palatalizing condition for palatalization. However, this expectation systematically fails in the APL.

The non-application of palatalization in the APL, as is observable, defies the OCP effect explanations since in many cases, the immediately following syllables do not begin with coronal consonants. It also defies pressure for the preservation of contrast explanations since the neutralization of the contrast does not result in any serious violation of constraints. Instead, 'morphological distinctiveness', a non-phonological term borrowed from Kenstowicz (1981), has been espoused in the literature as partly responsible for such non-application (cf. Adomako 2014). All that this morphological distinctiveness account seeks to posit is that some of the morphemes or words when the palatalization rule applies to them they may clash with already existing words or morphemes that have the same form. Put differently, palatalization fails to apply in the palatalizing environment created as a result of the manipulation in playing to avoid a clash of morphemes with existing words. For example, **me** [**mɪ**] '1SG', if the palatalization rule applies to the manipulated form to realize ***midʑi** instead of **mɪgɪ**, it can clash with an existing sentential word **me.gye** [**mi.dʑi**] '1SG.collect'.

If indeed the OCP effect explanation is a strong reason for the non-application of palatalization in the APL, then we would expect its application here since by so doing it would not constitute OCP violation, but this does not happen throughout the data. Again, this raises suspicion about the activeness of the phenomenon in Akan in general.

3.5. Ideophones

Ideophones in Akan have been discussed in existing literature by Agyekum (2008), Ofori (2009), Owusu (2013), among others each looking at them from different perspectives. The ideophonic constructions provide yet another domain in which expected palatalization fails. We briefly discuss this in (12) below.

(12). Ideophones in Akan (cf. Christaller 1933:236, Agyekum 2008, Ofori 2009).

	Ideophone	Gloss	Expected form
a.	**gidigidi/ kitikiti**	turbulent	***dʑididʑidi/tɕititɕiti**
b.	**kikim**	fabulous	***tɕitɕim**
c.	**kɪkɪɛ**	corking of gun	***tɕɪkɪɛ**
d.	**kɛkɛkɛ**	just like that!	***tɕɛtɕɛtɕɛ**
e.	**kɪɪkɪa**	sound of sthg falling down	***tɕɪɪkɪa**
f.	**kiɪididi**	to rush forward	***tɕiɪididi**
g.	**kintiŋkintin**	sound of a drum	***tɕintiŋtɕintin**
h.	**kɪkakɪka**	sound of something	***tɕɪkatɕɪka**

Just like all the other domains discussed thus far, before front vowels, back consonants fail to palatalize into alveo-palatals in ideophonic words against our expectations.

Though no linguistic explanations have yet been offered for such non-application of palatalization in Akan ideophonic constructions, I preliminarily

postulate two explanations, namely phonetic match between the targeted action and the sounds that the action produces or imitates for those ideophones that depict action. And also just as was postulated for the APL, the morphological distinctiveness could also be a possible explanation for such non-application of palatalization.

Boadi (2009:32) was the first to observe this, as far we know, by mentioning in passing that the ideophonic constructions as one of the domains for the non-application of the palatalization (affrication) rule in Akan aside from the oft-cited cases of reduplication, though he does not provide any explanation for such non-application in his book. We defer detailed account for the non-application of the rule for future study.

Once again we observed that the assumed active rule fails to apply in ideophones too, just as it does in other domains discussed so far. For some of the contexts, OCP effects can be espoused as the explanation, but for others, they cannot.

3.5.4. Summary of discussions

Now having considered the non-application of palatalization rule in five major domains in Akan in general, one would ask, is it the case that the once active phonological rule is no longer active in the language, or that there are strata of phonologies in the language that all these domains within which palatalization fails fall at?

We base on these discussions and claim that rather than one positing that the cases of the non-application of palatalization are cases of exceptions, we should rather consider cases of the application of palatalization in rule in Akan as exceptional cases since it seems to be active only in the regular phonology, and even that there are also few exceptions there too. Hence, we accord with McCarthy et al's (2012) observation that the phenomenon might be no longer active in Akan as has been assumed over the years.

In the following table, we summarize the status of the palatalization rule as has been discussed in the five domains in Akan considered in this paper.

Table 1: Status of palatalization in Akan

No.	**Domain in Akan**	**Status of palatalization**
1.	Reduplication	Inactive
2.	Loanword	Inactive
3.	Language game (APL)	Inactive
4.	Ideophone	Inactive
5.	Regular/native phonology	Active, but with significant exceptions

4. Conclusion

In conclusion, we have reviewed the status of the phonological process; palatalization in Akan as has been discussed in the literature over the years. We

have considered evidence from five major domains in Akan, namely regular/native phonology, reduplication, loanword, Akan Pig Latin, and ideophone in which though the right or 'palatalizing environment' is created, yet palatalization (specifically velar palatalization) fails to apply. From the explanations provided in the discussions, we obviously observe that there are more contexts in which palatalization fails than there are in which the same process applies in Akan. Though we accede to the maxim that goes *to every rule, there is an exception*. The question that then arises is, do we treat those instances of its non-application as mere coincidences or exceptional cases? If yes, then it is one exception too many. For a very productive or active phenomenon or process, we would expect the opposite scenario where indeed there would be fewer exceptions to the rule.

On the strength of these available pieces of evidence of the systematic failures or non-application of the phenomenon, this paper accords with McCarthy et al's (2012) assertion of the inactiveness or the inertia of palatalization in Akan, and concludes that perhaps the phonological process is not as productive in Akan, as it had been hitherto assumed. In other words, the enumerated domains of its non-application are counter-productive to the pontification in the literature, either implicitly or explicitly, that the palatalization rule is very active in the language. I suppose there is the need to reconsider the status of the phenomenon in Akan.

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