Research article

Neoclassicism in Bangla Word Formation Processes

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Abstract

In this paper I examine the notion of neoclassical word formation in Bangla and attempt to account for all the morpho-phonological interactions of both neoclassical and native Bangla word formation processes under the framework of Rule based Phonology. The paper has both descriptive and theoretical goals. Bangla has a vast lexicon and a rich morphological system. The abundance of the classical Sanskrit language entities makes it interesting to explore the word formation processes and observe the morphophonological interactions in light of Neoclassicism. The words and affixes in Bangla have been divided into: a) Tadbhava and b) Tatsama c) Deshi (Native) and d) Videshi (Foreign). I study the different word formation processes in Bangla affixes. A rule based account has been given to account for the morphophonological changes amd bring out the essence of Neoclassicism in Bangla lexicon and contribute towards the study of Bangla phonology and morphology.

Keywords: Bangla, Neoclassical, Morphophonology, Tatsama, Tadbhava

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Introduction

Bengali, also known as Bangla, is an Indo-Aryan language spoken in South Asia. The modern Bangla language is spoken by an estimated 210 million people around the world, making it the seventh most spoken language in the world. It is the official language of Bangladesh and official language of West Bengal and regional language of the states, Assam and Tripura of India.

Language Overview

In this section I shall study the segmental inventory of Bangla. First, I present the segmental inventory, then I proceed to describe the syllable structure of Bangla.

Segmental Inventory

The vocalic phonemes, the diphthongs and the consonantal phonemes are presented in the Bangla language.

The Vocalic Phonemes

Bangla has seven oral vowels and their nasal counterparts. I will not distinguish between them as they share similar phonological properties. Although, vowel length is orthographically distinguished in the language, there is no vowel length distinction in the vowel phonemes. According to Sanyal (2010), Bangla has a four-way height distinction, which might be expressed as high, high-mid, low-mid and low. These can be represented with respect to the features [HIGH] and [ATR]. I present the vowels of Bangla as given by Sanyal (2010):

Table 1: *Vowel Features in Bangla (Sanyal 2010)*

Height	Distinctive Features
High	[+HIGH +ATR]
High-mid	[-HIGH +ATR]
Low-mid	[-HIGH –ATR]
Low	[+LOW –ATR]

Table 2: *Vowels in Bangla (Sanyal 2010)*

	[+FRONT][-ROUND]	[-FRONT][-ROUND]	[-FRONT][+ROUND]
[+HIGH][+ATR][LOW]	*i*		*u*
[-HIGH][+ATR][LOW]	*e*		*o*
[-HIGH][-ATR][-LOW]	ɛ		ɔ
[-HIGH][ATR][+LOW]		*a*	

Let us see some examples of these vowels in the following table:

Table 3: *Vowel examples*

Vocalic Phoneme	Example	Gloss
/i/	/d̪im/	egg
/e/	/megʰ/	cloud
/o/	/kol/	lap
/u/	/mukʰ/	face
/ɔ/	/d̪ɔm/	stamina
/a/	/kʰaʈ/	bed
/ɛ/	/d̪ʰɛn/	meditation

Now, let us have a look at the nasal counterparts of these vowels, through some examples:

Table 4: *Nasal Vowels in Bangla (Barman, 2009:30)*

Nasal Phoneme	Example	Gloss
/ĩ/	/sĩd̪ur/	vermillion
/ẽ/	/kẽco/	earthworm
/õ/	/kʰõca/	scratch
/ũ/	/cʰũc/	needle
/ã/	/d̪ãt̪/	teeth
/ɛ̃/	/cʰɛ̃d̪a/	leakage

The Consonantal Phonemes

Bangla has a total of 30 consonants. Twenty of these (thirty) consonants are eitherplosives or affricates. Kar (2009:22), splits Bangla into five different classes in terms of the place of articulation. They are velar (k-class), paleto-alveolar (c-class), retroflex (ʈ-class), dental (t-class) and bilabial (p-class). The

rest of the consonants, are two fricatives [ʃ s] (considered as allophones), three nasals [ŋ m n], one lateral [l], three flaps [ɽ ɽʰ r] and one glottal [h]. In Bangla, as per our observation /s/ is pronounced as /ʃ/, in most of the cases. I shall include the Semi-vowels /j/ and /w/ also. So, I will consider that Bangla has 32 consonantal phonemes, They have been listed in a tabular form by Kar (2009):

Table 5: *Bangla Consonants:*

	Plosive	Fricative	Affricate	Nasals	Lateral	Tap/Flap	Glottal	Semi vowel
Velar (k-class)	k kʰ g gʰ			ŋ				
Palato-alveolar		ʃ						j
Palatal(c-class)			c cʰ ɟ ɟʰ					
Retroflex (T-class)	ʈ ʈʰ ḍ ḍʰ					ɽ ɽʰ		
Dental (t-class)	t̪ t̪ʰ d̪d̪ʰ	s						
Bilabial (p-class)	p pʰ b bʰ			m				w
Glottal							h	
Alveolar				n	l	r		

Salient features of Word Formation Processes

First I try to understand the notion of word formation in general. For that, I present the important features of word formation rules given by Booij (1977:45):

"i) WF-rules are part of the lexicon………,

ii) all the existing words of a language are fully specified in the lexicon,

iii) WF-rules have to specify the morphological, phonological, syntactic and semantic conditions on their bases…..

 iv) WF-rules are structure binding rules,

v) the word formation rules are Truncation Rules

vi) WF-rules for (synthetic) compounds need more than one basis word".

In some languages, it has been noticed that the origin of a word determines the way it behaves with regard to word formation rules. This is illustrated in languages like English and Dutch where words of Germanic origin behave differently from words of Latinate origin. The term 'neoclassical' has been used in the literature to describe the influence of old classical languages like Greek and Latin on modern languages.

Neoclassical Word Formation Processes

Neoclassicism vs Native Word formation processes

According to Ludeling (2005), the notion of 'neoclassical' can be expressed in terms of structural characteristics of some elements which distinguishes them from the elements present in the base of the native language. He lists the following dissimilarities on the basis of structure:

(a) phonological: neoclassical affixes may attract or bear stress, cf. cèremony – ceremònious, sincère – ìnsincere, while Germanic affixes do not. Neoclassical words may have sounds that are not phonemes in the base language.

 (b) morphological and morphophonological: neoclassical elements tend to combine mainly with other neoclassical elements…. and affix ordering principles may be sensitive to the neoclassical-native distinction (Kiparsky 1982, Aronoff&Fuhrhop 2002).

(c) orthographic: neoclassical elements may contain graphemes (for example in philosophy) that are not part of the grapheme inventory of the base language.

(d) use: neoclassical elements are often used in 'higher' or 'learned' registers".(Ludeling 2005:3).

Ludeling (2005), notes that neoclassical elements can combine with both neoclassical elements and native elements but the organization of the neoclassical word-formation is distinct from native word-formation because of these structural differences.

Research Objectives:

In this paper I examine the notion of neoclassical word formation in Bangla and attempt to account for all the morpho-phonological interactions of both neoclassical and native Bangla word formation processes under the framework of Optimalty theory. I describe the interaction of Tadbhava and Tatsama elements to introduce the notion of neoclassicism in the language and contribute towards the study of Bangla phonology and morphology.

Data Collection

Most of the data has been gathered from *"The Origin and Development of the Bengali Language."* by Suniti kumar Chatterji, and *"Adhunik Bangla Byakaran"* by Jagadish Chandra Ghosh. The data has also been gathered from previous works in this area, e.g., Kar (2009), Sanyal (2010), Dash (2012) etc. In order to gather Sanskrit words, I made use of some online dictionaries like spokensanskrit.de dictionary, Ancient Sanskrit Online. After gathering data from all the above sources, the researcher, who herself is a native speaker of Bangla, confirmed it from some other native speakers of standard Bangla. The native speaker's pronunciation was keenly observed and accordingly phonetic symbols have been used.

Lexical Stratification of Bangla

The Bangla lexicon or vocabulary is very prosperous. Apart from having a rich native vocabulary, it is enriched with elements from other sources. Backing the Indian grammarians and with a minor change, Chatterji (1926:189) provides four types of elements available in the system of Bangla vocabulary:

> i) Tatsama
>
> ii) Tadbhava
>
> iii) Deshi
>
> iv) Videshi

I shall discuss them one by one:

i) Tatsama

 The Sanskrit words which are directly incorporated into Bangla from Sanskrit.

e.g., /ʃikʃa/ 'education', /sneh/ 'adore' etc.

ii) Tadbhava

The native Bangla words.

e.g., /bʰat/ 'rice', /laʈʰi/ 'stick' etc.

iii) Deshi

The words which are borrowed from neigbouring languages.

e.g., Hindi words, /əccʰa/ 'good', /pəsənd/ 'like' etc.

iv) Videshi

The words from foreign origin.

e.g., Persian /xəbr/ 'news', Dutch /trof/ 'trump' etc.

Kar (2009:31), divides the Bangla lexicon into three groups:

1. Tadbhaba

2. Tatsama

3. Deshi and Bideshi

 'Kar adds: (2009: 35)

"A large number of natural languages show an internal stratification based on native and loan words. The stratification could be done by taking the native words as the core of the lexicon. All the loan words could form peripheral strata around the core. This is called core-periphery structure. Ito &Mester 1995 introduce such stratification for Japanese. In this core-periphery structure of Japanese lexicon, there are three strata, viz., Sino-Japanese, Foreign and Unassimilated foreign words, over the core vocabulary which consists of native Japanese words (Yamato). This type of stratification of lexicon is not entirely etymological in nature, rather some constrains can play an important role to determine certain sublexica of the whole lexicon". He thus provides the following a core periphery structure of the Bangla lexicon:

Figure 2: Bangla Lexicon (Kar 2009:36)
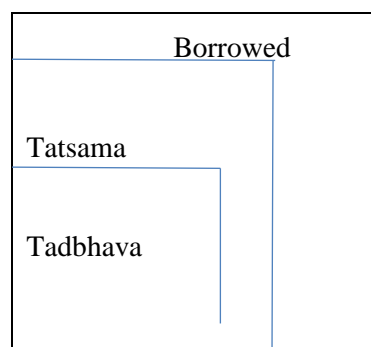
He further divides the Tatsama words into:

i) Samoccarito

These words have retained their writing style and pronunciation.

For example, the Tatsama words, /ʃriʃʈi/ 'creation' /(h)ridəj/ 'heart' remains the same in both writing and pronunciation.

ii) Asamoccarito

These words have retained the writing style but the way they are pronounced, have changed. For example, the words /mriʈju/ 'death' and /priṭʰvi/ 'world' are written in the same way in Bangla but they are pronounced differently, /mriṯ ʈu/ and /priṯṯhi/ respectively.

Data Analysis

Neoclassical Word Formation Processes in Bangla

Here I try to bring the essence of neoclassicism in the language by further exploring the interaction of the Tadbhava and Tatsama elements in the language

Given below is our classification of the Bangla lexicon bringing in the notion of neoclassical forms.

1. Tadbhava: These are the native Bangla words, affixes or compounds rooted in Bangla.

2. Tatsama: These are the words, affixes or compound words which came from the classical Indian language Sanskrit into the Bangla lexicon.

3. Neoclassicism: When the elements (either words or affixes) of Tadbhava and Tatasama combine with each other, a new form is generated in the language, which is called the neoclassical form.

Neoclassicism in Derivations

Neoclassical forms, I note, can be created in Bangla by the affixation of either

(i)   A Tadbhava affix to a Tatsama root/stem or,

(ii)   A Tatsama affix to a Tadbhava root/stem.

In the following section, I present the Tadbhava stem and word level affixes that attach to Tatsama roots/ stems, creating neoclassical forms and then proceed towards Tatsama stem and word level affixes that attach to Tadbhava roots/ stems, creating neoclassical forms.

Tadbhava Affix to a Tatsama Root/Stem:

A. Stem Level

The following are the Tadbhava suffixes present in Bangla at the stem level:

i. Nominal/adjectival suffix [-ṭi]

ii. Nominal suffixes:

a. Gerundial suffix [-a]

b. Nominal suffix [-ani]

c. Nominal suffix [-aru]

These suffixes attach not only to native Bangla roots but also to Tatsama forms.

i. Nominal/ Adjectival Suffix [-ṭi]:

They can attach to both Tadbhava and Tatsama roots. The attachment of the Tadbhava suffix [-ṭi] to Tatsama roots generates neoclassical forms.

Table 6 *Derivational suffix* [-ṭi] with Tatsama roots:

Tatsama root	Gloss	Neoclassical form	Gloss
/cɔl/	*walk*	/colṭi/	*moving*
/mɔr/	*die*	/morṭi/	*dying*

The rule of vowel harmony for Tadbhava forms applies to Tatsama forms as well. We find similar phonological changes in Tadbhava and Tatsama roots. The attachment of the suffix [-ṭi], brings about

phonological changes to the root. The vowels in most of the roots get changed (/o→u/ and /ɔ→o/). /ɔ→u/ is not attested in Bangla; this is maximum raising. There is a raising of vowel height, and a change of ATR feature which leads to harmony of vowels.

ii. Nominal Suffixes:

I have the following verbal nominal suffixes at the stem level:

a. Nominal Suffix [-a]

They can attach to both Tadbhava and Tatsama forms. In the following table I list the Tatsamawords which take the suffixes [-a]:

Table 7: *Derivational Suffixes [-a] with Tatsama roots*

Tatsama root	Gloss	Neoclassical form	Gloss
/cɔl/	*walk*	/cɔla/	*walking*
/d̪ol/	*swing*	/d̪ola/	*swinging*
/lɛkʰ/	*write*	/lɛkʰa/	*writing*
/kʰa/	*eat*	/kʰawa/	*eating*

So, the suffix [-a] triggers the rule of glide insertion in Tatsama stems, which is applicable to the Tadbhava stems as well as noted earlier. Therefore, the native rule of glide insertion is applicable to neoclassical forms too. In the above set of data it can be seen , that the suffix [-a] attaches after monosyllabic roots of closed syllables where there is no change. However, there is an insertion of a glide /w/ to the suffix [-a], when preceded by monosyllabic roots of an open syllable. Therefore, in both the cases, I find that the suffix attaches to a monosyllabic verb root. The insertion of a glide in the language is to clearly avoid V+V sequences. The suffix is [-a] with /w/ insertion due to the Onset copying the feature [+BACK] from the following vowel /a/. Bangla does not permit VV sequences as onset-less syllables are not allowed in the word medial position. According to Kar (2009:195-96), "Bangla would allow only a diphthong instead of a VV sequence". However, not all V + V sequences can become legitimate diphthongs in the language.

If a V+V sequence does not form a legitimate diphthong in the language, there is an insertion of a glide in between the two vowels. The glide insertion depends on the [±BACK] feature of the following vowel. The rule of glide insertion applies to both the Tadbhava and Tatsama stems.

Rule of glide insertion:

Insert a glide /w/ between two vowels, $V + V_{[+back]}$

b. Nominal Suffix [-ani]:

This suffix attaches to both Tadbhava and Tatsama roots. Below I provide a table showing the Tatsama stems which can attach to the suffix [_ani] generating neoclassical forms.

Table 8*: Derivational Suffix [-ni]with Tatsama roots:*

Tatsama Stem	Gloss	Neoclassical Form	Gloss
/bel/	*roll*	/belni/	*roller*
/d̪o/	*milk*	/d̪owani/	*milking instrument*

Here also I find the rule of glide insertion (as we have a sequence of /o/+/a/) like in the Tadbhava stems and vowel deletion (as in /bel/+/ani/---→/belni/)

c. **Nominal Suffix [-aru]:**

This Tadbhava suffix can attach to both the roots of the Tadbhava and Tatsama lexicon.

In the following table I present the Tatsama roots to which [-aru] can attach:

Table 9: *Derivational Suffix* /-aru/ with Tatsama roots:

Tatsama Root	Gloss	Neoclassical Form	Gloss
/baɡ/	*talk*	/baɡaru/	*talkative person*
/bɔnd̪/	*speak*	/bɔnd̪aru/	*eulogist*

The verbal nominal suffix /-aru/ doesn't trigger any morpho-phonological changes to either the Tadbhava or the Tatsamaroots.The following table sums up the behavior of neoclassical forms at the stem level:

Table 10: *Derivations-Stem Level*

Derivational Suffixes	Rules in Native forms	Rules in Neoclassical forms
Verbal adjectival suffix [-t̪i]	Vowel Harmony	Vowel Harmony
Nominal suffix [-a]	Glide Insertion	Glide Insertion
Nominal Suffix [-ani]	Glide Insertion and Vowel Deletion	Glide Insertion and vowel Deletion
Nominal Suffix [-aru]	No change	No change

B. Derivations at the Word Level

At the word level, there is presence of both Tadbhava suffixes and prefixes. First, I observe the Tadbhava derivational prefixes at the word level.

Following are the Tadbhava prefixes at the word level:

i. [ha-]:

We know that the prefix [ha-] can get attached to both Tadbhava and Tatsama stems. When it is attached to a Tatsama stem, a neoclassical form like /haput̪i/ '*a woman who longs for children'* is formed.

Table 11*: Derivational prefix* [ha-] with Tatsama stem

Tatsama Root	Gloss	Neoclassical Form	Gloss
/put̪/	*son*	/haput̪i/	*a woman who longs for children*

I note that the prefix /ha-/ can attach to the noun only after suffixation of the feminine marker [-i] as */haput̪/ is not possible. This restriction is also observed in the case of Tadbhava roots.

ii. [ad̪ʰ-]:

It can take both Tadbhava and Tatsama stems. Below we see the neoclassical forms which are generated when this prefix is attached to Tatsama stems.

Table 12: *Derivational prefix* [ad̪ʰ-] *with Tatsama stems*

Tatsama Roots	Gloss	Neoclassical Forms	Gloss
/paka/	*ripe*	/ ad̪ʰpaka/	*halfripe*
/pʰoʈa/	*bloomed*	/ ad̪ʰpʰoʈa /	*halfbloomed*

I do not find any morpho-phonological change in the above sets of data.

Tatsama Affix to a Tadbhava Stem

Tatsama suffixes attach only the Tatsama stems. Hence, there are no instances of neoclassicism here. The Tatsama prefixes mostly attach to Tatsama stems, with the exception of [ɔ-/ɔn-] and [ku-].

Neoclassicism in Tatsama Derivational Prefixes

1. [ɔ-/ɔn-]:

This Tatsama prefix can attach to native Bangla stems, apart from Tatsama stems creating neoclassical forms.

Table 13**:** *[ɔ-/ɔn-] Prefixation with Tadbhava words:*

Tadbhava Roots	Gloss	Neoclassical Form	Gloss
Cena	*to know*	ɔcena	*unknown*
ɟana	*to know*	ɔɟana	*unknown*

Here we see that the prefix can attach to the Tadbhava stems /cena/ and /ɟana/ creating neoclassical forms like, /ɔcena/ and /ɔɟana/. We observe the deletion of the nasal /n/ here as is the case in Native Bangla (compare this to the Hindi word / ɔnɟana/ 'unknown').

2. [ku-]:

This Tatsama prefix can also take both Tatsama and Tadbhava stems. The neoclassical forms are given below:

Table 14**:** *[ku-] Prefixation with Tadbhava stems:*

Tadbhava Roots	Gloss	Neoclassical Forms	Gloss
kaɟ	*work*	kukaɟ	*bad deed*
keccʰa	*scandal*	kukeccʰa	*extreme scandalous*

No phonological rules are perceived here. The following table sums up the changes at the word level.

Table 15 Derivations: Word Level

Derivations: Word Level	Rules in Native Bangla	Rules in Neoclassical forms
Nominal Adjectival Suffixes[-ik] and [-uk] and Adjectival Nominal Suffix [-oṯa]	Borrowed as 'unanalyzed whole words'.	No neoclassical forms
Prefixes: 1. [ni-]/[nir-]/[niʃ-] 2. [ḏur-/ḏuʃ-] 3. [uC-] 4. [sɔC-]/ [sɔm-]	Voice assimilation Place assimilation Degemination of /r/	No neoclassical forms
Prefixation 1. [ɔ-/ɔn-]:	Deletion of /n/	Deletion of /n/
Prefixation 2. /ku-/	No change	No change

Neoclassicism in Inflections

The verbal inflections are stem level suffixes whereas the nominal inflections are word level suffixes. In both, we find neoclassical word formation. First I deal with the Verbal Inflectional Suffixes which are all Tadbhava suffixes but can attach to both Tadbhava and Tatsama verbal roots.

Verbal Inflections

The Tatsama verbal roots are in huge number in the Bangla lexicon. They get inflected the same manner as the Tadbhava verbal roots are inflected. We find only Tadbhava inflectional suffixes in Bangla. Therefore, the word formation processes are same for the Tatsama and Tadbhava verbal roots. I provide a table below to specify the Tatsama verbal roots to which the Tadbhava verbal inflectional suffixes attach.

Table 16: *Tatsama Verbal Roots*

Tatsama
/likʰ/----- /likʰi/, /lekʰcʰo/,/likʰcʰe/
/oṭʰ/ 'rise'-----/uṭʰi/, / uṭʰcʰo/, / uṭʰcʰe/
/kɔr/ 'do'----- /kori/, / korcʰo/, korcʰe/
/kʰa/ 'eat'----- /kʰai/, kʰaccʰo/, /kʰaccʰe/

Earlier, we saw there are three rules which operate during verbal inflectional suffixation in Bangla:

1. Vowel harmony

2. Gemination

3. Glide insertion

The rules are applicable to both neoclassical and native Bangla word formation.

Table 17: *Inflections: Stem Level*

Inflections: Stem level	Rules in Native Bangla	Rules in Neoclassical Forms
Verbal Inflections	Vowel harmony, Glide insertion, Gemination	Vowel harmony, Glide insertion, Gemination

Nominal Inflections

The gender marking suffixes [-i], [-ika], [-ani/-ini] too are of Sanskrit origin. They attach to stems. e.g. [bal] 'youth, [balak] young man' and [balika]'young girl'. These suffixes do not trigger any phonological change, they definitely attach to a prosodic word, which can be a noun or an adjective. They attach to both Tadbhava and Tatsama stems.

Following are the feminine gender markers in Bangla:

Table 18: *Feminine Gender Markers*

Feminine Gender Markers	Word	Meaning
[-i]	/kaki/	'aunt'
[-ika]	/najika/	' actress'
[-ani/-ini]	/gɔjlani/	'milkwoman'

We notice that the Tatsama feminine markers can attach to the Tadbhava stems, which shows that these suffixes are productive in Bangla and generate neoclassical forms like, /kaki/, /najika/ etc. They don't any induce phonological changes.

2. **Classifiers**

The classifiers in Bangla are all native. They can attach to Tadbhava and Tatsama stems. I present these classifiers attaching with Tatsama stems in a tabular form with examples:

Table 19: *Classifiers with Tatsama stems*

Classifiers (Tadbhava)	Neoclassical Form	Meaning
[-ra/-era/-jera/]	/porira/ /lokera/ /majera/	'angels' 'people' 'mothers'
[-gulo/-guli]	/ɟɔn̪t̪rogulo/	'machines'
.[-kʰana/-kʰani]	/puʃpokʰani/	'the flower'
[-ɟɔn]	/guruɟɔn/	'the guru'

I observe morpho-phonological changes in the number classifiers**;**[-ra/-era/-jera/]:

These are word based suffixes and the suffix in question is [-era], the neoclassical forms are: /porira/, /guruɟɔn/ etc.

a) /-ra/ follows vowels.

/pori/ 'angel', /porira/ 'the girls or girls'

b) /-era/ follows consonants.

/lok/ 'person', /lokera/ 'the people or people'

c) Diphthongization

 In /ma/ + /-era/, we get /majera/. We find that /a+e/→/aj/.

3. Definiteness [-ṭa/-ṭi/-ṭo/-ṭe]

The nominal classifier markers, [-ṭa/-ṭi/-ṭo/-ṭe], which are Tadbhava free morphemes in the language can also take Tatsama words like /cʰaṭro/ 'student':

a. cʰaṭro du-ṭo

  'the two students'

4. Case

All the case markers in Bangla are Tadbhava. They can attach to both Tadbhava and Tatsama stems.

Table 20: *Case Inflections Singular vs. Plural with Tatsama Stems*

Tadbhava Case Markers	Neoclassical Form: Singular /cʰaṭroṭa/ 'the student'	Neoclassical Form: Plural /pʰɔlgulo/ 'fruits'
Nominative	/cʰaṭroṭa/	/pʰɔlgulo/
Objective [-ke]	/cʰaṭroṭake/	/pʰɔlguloke/
Genitive [-Vr]	/cʰaṭroṭar/	/pʰɔlgulor/
Locative [-ṭe]		/pʰɔlguloṭe/

We find the insertion of the vowel /o/ with the addition of the case suffix when the noun ends in a consonant cluster (e.g. s/cʰaṭroṭa/).

Table 21: *Neoclassicism in Inflections*

Inflections: Word Level	Rules in Native Bangla	Rules in Neoclassical Forms
Gender markers	-----	No change
Classifiers	Vowel deletion, Glide insertion	Vowel deletion, Diphthongization
Definiteness markers	No change	No change
Case markers	-------	Vowel insertion

Neoclassicism in Compounds

1. Sub- compounds

We have the following types of neoclassical sub compounds:

1. Tatsama + Tadbhava

e.g., a./rɔkṭomakha/ 'drenched with blood'

b. /gupṭocɔr/ 'spy'

c. /piṯriṯhakur/ 'god father'

In these cases, we find the insertion of a vowel after the consonant cluster /pt/ and /tr/ to 'nativize' them according to Bangla phonology. The Tatsama word can only be the left member of the compound. There are no instances of sub- compounds with the Tatsama word as the right member.

2. Co- compounds

We have the following types of neoclassical Co- compounds:

1. Tatsama + Tadbhava

e.g., a. /oʈʰabɔsa/, 'stand and sit'

b. /cɔlapʰera/ 'move around'

2. Tadbhava + Tatsama

e.g., a. /pɔraʃona/ 'studies'

b. /ɟanaʃona/ 'familiar'

In co- compounds, we see that two types of combinations are possible. Here, both the elements/ words are of equal rank. In such cases, a Tatsama word can be either a left or a right member of the compound.

Table 22*: Compounds: Sub-compounds and Co-compounds*

Compounds: Sub-compounds and Co-compounds	Rules in Native Bangla	Rules in Neoclassical Forms
Sub-compounds	------	Insertion of a vowel
Co-compounds	-----	No change

Conclusion

To summarize, the neoclassical forms are generated when,

i) Tadbhava suffixes get attached to a Tatsama base

ii) Tadbhava prefixes get attached to a Tatsama base

iii) Tatsama prefixes get attached to a Tadbhava base

iii) Compound forms like Tatsama +Tadbhava (both sub and co- compounds), andTadbhava + Tatsama (co-compounds) interact with each other. We saw that the phonological rules that apply to Native Bangla forms apply to the neoclassical forms as well. This is an indication of 'nativization' of borrowed forms.

Borrowed forms from Sanskrit are either taken as 'whole words' (as fully derived words) or created in the native lexicon. Overall the analysis and results of this study would be beneficial for the future works in Bangla linguistics and its applied areas.

Declaration of Conflicts of Interests

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References:

Aronoff, M., & Fuhrhop, N. (2002). *Restricting suffix combinations in German and English: Closing suffixes and the monosuffix constraint*. Natural Language & Linguistic Theory, *20*(3), 451–490.

Barman, B. (2009). *A Contrastive Analysis of English and Bangla Phonemics*. The Dhaka University Journal Of Linguistics, 4(2), 19-42.

Booij, G. (1977). *The morphology of dutch*. Cambridge university press.

Chatterji, S. K. (1926a). *The origin and development of the Bengali language (*Vol. 1). Calcutta: University of Calcutta.

Chatterji, S. K. (1926b*). The origin and development of the Bengali language* (Vol. 2). Calcutta: University of Calcutta.

Dash, N.S. (2012). *Some Milestones in NLP Journey in Indian Multilingual Panorama.* Indian Linguistics. 731-4.

Kar, S. (2009). Gemination in bangla: An optimality theoretic analysis.Dhaka University Journal of Linguistics, 1(2), 87–114.

Kiparsky, P. (1982). Word-formation and the lexicon. Mid-America Linguistics Conference.

Lüdeling, A. (2005). Neoclassical word-formation. Retrieved from https://edoc.hu-berlin.de/docviews/abstract.php?id=36935

Lüdeling, A., Schmid, T., &Kiokpasoglou, S. (2002). Neoclassical word formation in German. In *Yearbook of Morphology 2001* (pp. 253–283). Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-94-017-3726-5_10

Sanyal, P. (2010). *Prosodic well-formedness and vowel licensing in Bangla.* PhD. Dissertation. English and Foreign Languages University, Hyderabad.