

CHAPTER-III

PHONOLOGY OF BODO COINAGE WORD

3.1 Introduction

The introduction of Indo-Aryan (Sanskrit, Hindi, Bengali and Assamese) and European i.e. English languages and their coinage into Bodo language were discussed in chapter II. Along with the introduction of Indo-Aryan and European languages, the phonemes of those languages are also being discussed. Loan word is one outcome of borrowing. When one language borrows a word from another language, then a Phonological comparison is being done between the donor language and the borrower language. The comparison helps to detect the loan word transformation and the problems of native speakers. That is why in chapter II, the Phonological system of Bodo, Indo-Aryan (Sanskrit, Hindi, Bangla and Assamese) and European (i.e. English) languages have been discussed by comparing among them. The nature, motivation and causes of Bodo coinage have also been discussed. Whenever the words of Indo-Aryan and European language are coined into Bodo, then the Phonological elements or Morphological elements will have some influence and hence are coined. The researcher have attempted to find out certain Phonological differences among IA, English and Bodo and this attempt has further assisted us in finding out the difficulty areas of Bodo speakers. In this chapter the researcher will proceed to explain how the IA and English languages get assimilate with the phonological pattern of Bodo. According to Ulrike Gut (2009) *assimilation is the process whereby more or less neighbouring sounds become more similar to each other in order to make articulation easier*⁴³. The study will be the process of substitution, elision, aspiration, metathesis, epenthesis, vowel mutation, declusterization, diphthongization, simplification etc. which one perceives in the process of borrowing. The researcher will present a list of example for each of the processes to illustrate them more vividly. Further, attempt has been made to analyze a few words to explain the different type of changes that a particular borrowed items undergoes. In this chapter, the analysis will be on phoneme to phoneme. Along with them discussion will be made on some similar patterns involved.

⁴³ Gut, Ulrike (2009): *Introduction to English Phonetics and Phonology*. Frankfurt/Main: Lang. Hansen, Klaus. 1961. "Makkaronische Sprachformen-hybrid Wortbildung". 9:49-64.

3.2 The Phonological Viewpoint

Phonology mainly falls under segmental phoneme. Segmental phoneme is a sound which we can find by breaking down words.

According to David Crystal (2008) Phonology is *a branch of linguistics which studies the sound systems of language*⁴⁴

In borrowing studying of phonology is very important. Whenever a recipient language borrows word from donor language, then we observe some changes of phonemes in recipient language. It is to be noted that in order to understand the changes that take place in phonemes during the process of borrowing many linguists had found many theories. Among these, some are worth accepting whereas some are not. The words of Bodo and the adapted words of Indo-Aryan and European languages are viewed through phonological point of view and some appropriate models are selected. All of these are discussed below by giving example.

3.3 The Phonological Adaptation of Indo-Aryan and European Loan Words in Bodo

In loan word Phonology, the term ‘adaptation’ usually refers to *the sound changes that borrowed words often undergo when they are used in another language*⁴⁵. P.H. Matthews (2014) has stated that *the process by which loan words are changed to fit the sound patterns of the language into which they are borrowed*⁴⁶. In this chapter, how the words of other languages such as English, Hindi, Assamese, Sanskrit, and Bangla are received into Bodo as per the Phonological and Morphological pattern of Bodo will be discussed. In this area, to analyze the data of the present research, the concept of interference as recognized by Weinreich (1966) is considered. According to him interference refers *the rearrangement of patterns that result from the introduction of foreign elements into the more highly structure domains of language, such as the bulk of the phonemic system, a large part of the morphology and syntax, and some areas of lexicon*⁴⁷.

⁴⁴ Crystal, David (2008): *A Dictionary of Linguistics and Phonetics*. (6th ed.) Blackwell Publishing. U.S.A. P-365

⁴⁵ Lacharite, Darlene & Paradis, Carole (2002): *Addressing and disconfirming some predictions of phonetic approximation for loanword adaptation*. *Langues et linguistique*. P-71

⁴⁶ Matthews P.H. (2014): *Oxford Concise Dictionary of Linguistics*. (3rd ed.). UK: Oxford University Press. P-8

⁴⁷ Weinreich, Uriel (1953 Reprint): *Languages in Contact*. (9th ed). Publication of the Linguistic Circle of New York. P-46

In relation to loan word adaptation Danesi revealed that *in terms of degrees of nativization, loanword adaptation might be partial or total*⁴⁸. Partial adaptation implies that foreign words when incorporated into the recipient language tend to be given at least a minimal degree of phonetic adaptation. This means that loan word do not exist in a totally unadapted way. On the other hand, total adaptation refers those loanwords which have undergone total reshaping by the interaction of the morphological, phonological and phonetic systems of the native language.

The foreign sound of source language which is not equivalent to recipient language create problem in the field of Phonology. As a result of such problems, the foreign items get modified according to the sound pattern of recipient language. Such modification or adaptation of borrowed word pronunciation is clearly between two languages-phonetics or phonology interference. This type of loan word assimilation takes place in two levels viz. the phonetic level (segmental) and syllabic and prosodic level. When a loan word adaptation takes place, both the level get naturally involved.

J.C Wells (2000: 10) explains that in the borrowing process *the incorporating of a loanword from one language into another may involve not only the sounds (phonetic segments, phonemics), of which the word's pronunciation is compared, but also the positions in which those sounds are used (syllable structure, phonotactics), the phonetic processes they undergo (phonological rules) and their accompanying supra-segmental features (duration, stress/accent)*⁴⁹.

In the phonetic level, IA and English have many sounds having phonetic status which do not have any usage of long vowel, the example of which can be found in Hindi word *alu:* whose long vowel /u:/ becomes short vowel /u/ in Bodo such as *alu* < *alu:*. Similarly, Sanskrit word *pu:ja:* becomes *phuza* in Bodo. Here, the long vowel /u:/ and /a:/ of Sanskrit language is used as short vowel /u/ and /a/ in Bodo. Mostly such area is interpreted by many phonological adaptation mechanism of PSP, viz (i) phonetic substitution (ii) phonological repatterning etc. and their sub-mechanisms include phonemic approximation and phonemic reconstruction. Apart from this, there are some mechanisms in the syllabic levels such as clusters, diphthongs, stress pattern etc. these helps in understanding the areas of clusters adjustment, diphthongs,

⁴⁸ Danesi, Marcel (1985): *Loanwords and Phonological Methodology*. Studia Phonetica. Volume XX. LaSalle. Quebec: Didier. p-161

⁴⁹ Wells, J.C (2000): *Overcoming Phonetic Interference*. English Phonetics: Journal of the English Phonetic Society of Japan. 3.9-21. P-10

simplification etc. such major mechanisms also include some phonological assimilation mechanism such as epenthesis, metathesis, elision, voicing, devoicing, vowel mutation, velarization, prosthesis and so on. Whenever words of Indo-Aryan and European languages are borrowed into Bodo then the phonemes or pronunciation of IA and European language is not considered, instead as per one's convenience or phonemes and pronunciation only, the new word is pronounced or is adapted. There are many such words for example Hindi word 'pāisa' is adapted in Bodo as 'phuṛisa' (money), Assamese 'peca' as 'phesa' (owl), Bengali 'cōuki' as 'sok^{hi}', English 'bicycle' as 'saikel', 'inṭ' as 'insi' and so on, can be seen. Similarly, words of source language IA and foreign words are dropped, modified or replaced by nearest equivalents of Bodo sounds whose examples are discussed below with the help of a model.

To analyze the data adequately Danesi's theory Integrated Theory of Loan Word assimilation adapted.

3.3.1 The Segmental Adaptation of Indo-Aryan and European Loan Word

In the process of coinage the exchange of phonemes is a common phenomenon. When words of IA and European language are borrowed into Bodo, it is found many segmental phonemes being influenced. The changes in segmental phonemes of words while being borrowed into Bodo are discussed below along with an example.

3.3.1.1 Spontaneous Replacement

Spontaneous is an automatic and regular substitution process wherein non-native segment gets replacement with Bodo phonemes. Whenever there exist non identical equivalent phonemes in Bodo phonological system to express equally as other language or foreign phoneme, then this type of adaptation takes place. In the adaptation of IA and European words into Bodo, the spontaneous and regular phonemes that exist most of the time, is being discussed below:

Indo-Aryan

(i) /v/ > /b/

The Hindi labio-dental semi-vowel sound /v/ changes to voiced bilabial plosive /b/ in Bodo because there is lacking of labio-dental sound /v/ in Bodo inventory and orthography. e.g.

Initial

viṣa > bis 'poison'

vijñā:n > bigiyan ‘science’
 ve:da > bed ‘a Hindu’s holy book’
 vicār > bisar ‘viewpoint’
 vīr > bir ‘brave’

Middle

devī > debi ‘Goddess’
 jīvan > zibon ‘life’
 bhagvān > b^hogoba ‘suprem God’

Final

jīv > zib ‘creature’ or ‘a cell’

The interchange happened due to the process of assimilation. In assimilation the speaker modifies the phoneme with an adjacent sound. Such type of alteration is fairly common in phonology. It is to be noted that the phoneme which lies initial, middle and final position of the words are seen to be adapted in Bodo.

(ii) /ʃ/ > /s/

The loan phonemes voiceless palatal fricatives /ʃ/ is substituted by voiceless alveolar fricative /s/ in Bodo while it is borrowed from Hindi or Sanskrit. e.g.

Initial

ʃa:sən > sason ‘ruled’
 ʃa:nti > santhi ‘peace’
 ʃika:r > sikhar ‘hunt’

Middle

ʼa:ʃa: > asa ‘hope’
 k^huʃi: > khusi ‘happy’

This is because the palatal fricatives /ʃ/ does not exist in the Bodo inventory. It occurs in all position of the words but in Bodo only those words that lie in the initial and middle is seen to be coined in this manner.

(iii) /tʃ/ > /s/

The affricate post alveolar sound of Hindi /tʃ/ changes to voiceless alveolar fricative /s/ in Bodo while it borrowed from Sanskrit and Hindi language. For example:

Initial

ʃa:dar > saduɾ ‘a type of garment used by women’

ʃa:la:n > salan ‘bill of lading’

ʃəkka: > sakha ‘tire’

ʃəndən > səndən ‘chandal wood’

Final

ʃəmməʃ > saməs ‘spoon’

k^harʃ > k^hərəs ‘expenditure’

Bodo does not have the Hindi affricate post alveolar sound /ʃ/ so it is substituted by the equivalent sound /s/ in Bodo. Because /s/ is the nearest sound to the /ʃ/ in tongue position.

(iv) /y/ > /z/

The voiced approximant palatal /y/ of Hindi is substituted by voiced alveolar fricative /z/ in Bodo. That is why, when words of Indo-Aryan and European borrowed into Bodo, the /y/ phoneme in the beginning of the word is replaced by /z/ phoneme in Bodo e.g.

Initial

yəntərə > zənt^hrə ‘a machine’

yagya: > zəigə ‘sacrifice’

yam > zəm ‘the god of death’

The approximant palatal /y/ does not exist in Bodo because of this the alveolar fricative /z/ occurs in place of approximant palatal /y/ during borrowing from Indo-Aryan. The voiced palatal glide /y/ is present in the beginning of Indo-Aryan words only, but is not present in the middle and final position of the word.

(v) /ɽ/ > /r/

The retroflex sound of Hindi /ɽ/ is replaced by voiced alveolar trill /r/ in Bodo while it is borrowed from Hindi. There is no use of tap unaspirated retroflex sound /ɽ/ in Bodo and the nearest sound to Hindi /ɽ/ is Bodo /r/. e.g.

Middle

ghəɽi: > g^həri ‘watch’

ga:ɽi: > gari ‘vehicle’

ghəɽa > gərai ‘horse’

Only the phonemes present in the middle position of Hindi word is seen to be replaced in Bodo.

(vi) /x/ > /s/

The voiceless glottal fricative sound of Assamese /x/ changes to voiceless alveolar fricative /s/ in Bodo during borrowing from Assamese e.g.

Initial

xərgə (< Skt. swərg) > sʊrgʊ ‘heaven’

xoitjo (< Skt. sətʲə) > sʊitʲʊ ‘true’

xondeɦ (< Hd. səndeɦ) > səndeɦə ‘doubt’

xial (< Skt. srigal) > sial ‘fox’

xəmbi (< Skt. samāya) > səmai ‘time’

xilikha > silik^ha ‘haritaki’

xənman > sənman ‘respect’

Middle

axa (< Skt. a:ʃa) > asa ‘hope’

əɦiŋxa (< Skt. aɦiŋsa) > əɦiŋsa ‘injustice’

əxanti (< Skt. aʃanti) > əsant^hi ‘anxiety’

Final

bisax (< Skt. viʃva:s) > bisas ‘belief’

əibɦjax (< Skt. abhya:s) > əibas ‘practice’

xahəx (< Skt. sa:has) > sahəs ‘courage’

bix (< Skt. viʃa) > bis ‘poison’

It is worth mentioning that if Assamese borrowed words from Sanskrit and Hindi have uses of /s/, then it is converted to velar, fricative voiceless phoneme /x/ in Assamese and Indo-Aryan words borrowed to Bodo through Assamese having /x/ is replaced by /s/ phoneme. This is clear from the above example. The fricative voiceless phoneme /x/ is a special feature of Assamese language and Bodo does not

have such phoneme. So, the voiceless alveolar unaspirated fricative /s/ occurs in place of /x/ during borrowing from Assamese.

(vii) /t/ > /d/

The Hindi plosive dental sound /t/ is changes to voiced alveolar unaspirated plosive /d/ in Bodo during borrowing from Persian through IA language e.g. ha:lət (p) halʊd because there is no use of this sound to the end of the word in Bodo language. The Hindi plosive dental sound /t/ does not exist in Bodo. The consonant charts of both the languages indicates that the Hindi /t/ and Bodo /d/ are both of the dental sound and they have a very small difference in the height of the tongue position.

(viii) /k/ > /g/

The unaspirated plosive velar sound /k/ is replaced by unaspirated voiced plosive velar /g/ in Bodo while we borrow from Bengali and Hindi respectively e.g.

ʃərək > sərəg ‘way’

fərək > p^harag ‘difference’

It is worth mentioning that there is no sound ending with /g/ and /k/ in Bodo basic vocabulary but it occurred in loan words and it is found in ending of words only.

(ix) /q/ > /k/

The sound /q/ is replaced by /k/ in Bodo whenever it is borrowed from Perso-Arabic through Hindi or Assamese but Bodo has no use of /k/ and /q/ sound. But it is used in Bodo loan word borrowed from Indo-Aryan and other language. Such as:

qua:nu:n > kanun ‘rules’

ba:qi: > baki ‘balance’

Both the phoneme does not exist in Bodo even though it is borrowed through the Hindi plosive velar sound /k/. The words has been assimilated to the Hindi pronunciation and spelling and then borrowed to the Bodo.

English

(x) /f/ > /p^h/

English language word with voiceless labio-dental fricative /f/ changes to voiceless bilabial aspirated plosive phoneme /p^h/ in Bodo. This method of change takes place in all the three parts of a word. Such as-

Initial

fæʃən > p^heson ‘fashion’

feɪsbʊ:k > p^hesbuk ‘facebook’

fɒsəl > p^hɔsil ‘fossil’

Middle

rɒɪfəl > raip^həl ‘rifle’

mʌflər > map^hlar ‘muffler’

Final

dʒɪrɑ:f > girap^h ‘giraffe’

pærəgrɑ:f > p^heregrap^h ‘paragrap^h’

There is no use of voiceless labio-dental fricative /f/ in Bodo but while English word having this phoneme is borrowed in Bodo it is substituted by bilabial aspirated plosive phoneme /p^h/. On the other hand the aspiration sound /p^h/ is not a phonemic feature in English.

(xi) /dʒ/ > /z/

We find that Bodo’s voiced alveolar fricative /z/ is frequently used phonological correspond in place of English voiced palato alveolar affricate /dʒ/. This replacement though may not be found in all the three positions but is found in initial and middle positions. Such as-

Initial

dʒeɪl > zɛl ‘jail’

dʒu:s > zʊs ‘juice’

Middle

mænɪdʒə > menazar ‘manager’

dɪdʒɪtl > dizitel ‘digital’

ɛndʒɪn > inzɪn ‘engine’

This is because the palato alveolar affricate /dʒ/ does not exist in the Bodo inventory. The nearest sound is the alveolar fricative sound /z/ in Bodo. So, the alveolar fricative sound /z/ used in place of palato alveolar affricate /dʒ/ in Bodo. In Bodo a word ending with /z/ phoneme is hard to find. It is found that only the word /aroz/ ‘pray’ for an example. Apart from this in Bodo, words ending with /z/ phoneme are borrowed from Indo-Aryan, English or other languages. Such as-

Final

dʒʌdʒ > zʌz ‘judge’

səma:dʒ > səmaz ‘society’

jəha:dʒ > zahaz ‘ship’

(xii) /tʃ/ > /s/

The English voiceless palato alveolar affricate /tʃ/ is changes to voiceless alveolar fricative /s/ in Bodo. Some examples of such change are:

Initial

tʃɛk > sek ‘check’

tʃɛər > siar ‘chair’

tʃeɪn > sen ‘chain’

Middle

lektʃər > leksar ‘lecture’

ti:tʃə > t^hisar ‘teacher’

Final

bentʃ > bens ‘bench’

ɪntʃ > insi ‘inch’

lʌntʃ > lans ‘lunch’

The palato affricate sound /tʃ/ does not exist in Bodo inventory. A look at the consonant charts of both the languages indicates that the English palato affricate /tʃ/ and Bodo fricative /s/ are both of voiceless and alveolar type with a small difference in the height of the tongue position.

(xiii) /v/ > /p/ or /b/

The English voiced labio-dental fricative /v/ changes in the place of voiced bi-labial unaspirated plosive /b/ in Bodo. e.g.

faɪv > p^haɪp ‘five’

sevn > seben ‘seven’

(xiv) The Pronunciation of /r/

In English the voiced post alveolar approximant /r/ is not pronounced if the next sound is a consonant. But the /r/ sound at final position is properly pronounced by the Bodo speaker. e.g.

ka: > kar ‘car’

ka:pɪt > k^harp^het ‘carpet’

kæɪndə > khelendar ‘calender’

draɪvə > draiber ‘driver’

sentə > senthar ‘centre’

sɪlɪndə > silindar ‘silinder’

3.3.1.2 Aspiration

In this character of phonological change an unaspirated phoneme changes to aspirated during the borrowing. According to David Crystal *A term in phonetics for the audible breath which may accompany a sound's articulation, as when certain types of plosive consonant are released. It is usually symbolized by a small raised [h] following the main symbol. In example such as English pin [p^hin]*⁵⁰. The unaspirated phonemes /p/, /t/, /k/ of Indo-Aryan languages (Sanskrit, Hindi, Bangla Assamese and English) are replaced by aspirated phonemes /p^h/, /t^h/, /k^h/ in Bodo. For example:

Indo-Aryan

(i) /p/ > /p^h/

Initial

pəisa > p^huɪsa ‘money’
 pukhuri (Ass.) > p^huk^hri ‘pond’
 parə (Ass.) > p^haruɪ ‘penguin’
 peca (Ass.) > p^hesa ‘owl’
 pərda (Ass.) > pərda: (Hd.) p^hərda ‘curtain’

Middle

sipa:hi: > sip^hai ‘military’
 kripon > k^hirp^hin ‘miser’

Final

pa:p (Skt.) > p^hap^h ‘sin’

Same as some of the English word is also adapted through this process. The bilabial, unaspirated plosive /p/ of English changes to bi-labial aspirated plosive /p^h/ in Bodo while it borrowed from English. For example:

Initial

pa:s > p^has ‘pass’
 paip > p^haib ‘pipe’
 pəli:s > p^hulis ‘police’
 pəustmən > p^hosman ‘postman’

⁵⁰ Crystal, David (2008): *A Dictionary of Linguistics and Phonetics*. (6th ed.) USA. Blackwell Publishing. P-38

Middle

səplai > sap^hlai ‘supply’

peipər > pep^har ‘paper’

ʃæmpu: > simphu ‘shampoo’

It is worth mentioning that there is no use of aspirated phoneme /p^h/ in the final position of Bodo origin word.

(ii) /t/ > /t^h/

The dental plosive /t/ and unaspirated plosive retroflex /ɖ/ is replaced by voiceless alveolar aspirated plosive /t^h/ in Bodo while it is borrowed from Indo-Aryan and European i.e. English. Because there is only usage of aspirated alveolar voiceless sound /t^h/ in Bodo. e.g.

Initial

tombu > t^humbu ‘penda’

ɖupi: > t^hɒp^hi ‘cap’

Middle

bətən > bet^hən ‘salary’

pəθai > p^hʊt^har ‘field’

pəta:l Ass. (< pa:ta:lə Skt.) > p^hat^hal ‘hell’

In English too, examples of replacement done through this process can be found. It is found only middle in the word. *Such as-*

Middle

læntən > lent^hən ‘lantern’

bətəl > bət^həl ‘bottle’

məʊtə > mət^hər ‘vehicle’

(iii) /k/ > /k^h/

The unaspirated plosive velar sound /k/ of Indo-Aryan is replaced by voiceless velar aspirated plosive /k^h/ in Bodo. For instances:

Initial

kəmbəl > k^həmbəl ‘blanket’

kələm > k^hʊlʊm ‘pen’

kəm > k^həm ‘less’

Middle

sɔki (< cɔuki Bang.) > sɔk^hi ‘bed’

hukm > huk^hum ‘order’

thi:ka: > t^hik^ha ‘contract’

beka:r > bek^har ‘jobless’

paŋka (< peŋkha: Hd.) > p^haŋk^ha ‘fan’

Final

ʃa:la:k > salakh ‘clever’

The unaspirated phonemes /p/, /t/, /k/ are not phonemic in Bodo. Another possible explanation would be that the aspirated phonemes /p^h/, /t^h/, /k^h/ are very close to unaspirated phonemes /p/, /t/, /k/ in tongue position. So, in Bodo the aspirated phonemes /p^h/, /t^h/, /k^h/ are considered equivalents to unaspirated /p/, /t/, /k/ for usage and adaptation from Indo-Aryan and English language.

3.3.1.3 De-aspiration

It has been observed that in Bodo pronunciation there is disappearance of aspiration /b^h/, /d^h/, /g^h/ since these sounds are not features of Bodo. Apart from this, aspirated stop voiced bi-labial /b^h/, voiced dental /d^h/, and voiced velar /g^h/ of Indo-Aryan language are replaced by unaspirated stop voiced bi-labial /b/, alveolar /d/, and velar /g/ in Bodo language spontaneously. Because there is lacking use of aspirated voiced bi-labial /b^h/, voiced dental /d^h/ and voiced velar /g^h/ sounds in Bodo phonemic inventory. e.g.

(i) **b^h > b**

The bi-labial aspirated plosive /b^h/ of Hindi or Assamese replaced by bi-labial unaspirated plosive /b/ in Bodo. For example:

Initial

bhut > buhut ‘evil’

bhəl > bəhəl ‘gourd’

bhaji > bahaza ‘fry’

In Bodo, the replacement of this phoneme is seen to be present only in the first position of the word.

(ii) d^h > d

IA word having voiced aspirated plosive dental /d^h/ phoneme, when coined into Bodo is replaced until alveolar unaspirated plosive /d/ and it sets only in the initial and middle part of the word in certain examples as-

Initial

d^hɒn > duɰhuɰn ‘wealth’

d^hərm > duɰhuɰruɰm ‘religion’

d^hu:p > duhup ‘incense’

Middle

xadhu > sa:dhu sadu ‘Hindu priest’

xubidha (< suvidha: Skt.) > subida ‘chance’

(iii) g^h > g

The voiced aspirated plosive velar /g^h/ is substituted by voiceless unaspirated plosive velar /g/ in Bodo while it borrowed from IA. Such replacement is found in the initial position of word and even in middle a few can be found but is not found in the final position of the word. e.g.

Initial

ghəɾa > gərai ‘horse’

ghərial > guɾler ‘crocodile’

ghi: > gihi ‘butter’

Middle

bi:gha: > biga ‘measurement of area of a land’

But sometimes just like in Indo-Aryan language it is kept. For example b^hara.

3.3.1.4 Metathesis

Metathesis means when two neighboring phonemes of one word interchanging their positions with each other. According to P.H. Matthews metathesis is a *change or process by which the order of successive sounds is changed*⁵¹. According to David Crystal it refers to an alteration in the normal sequence of elements in a sentence-

⁵¹ Matthews, P.H. (2014): *Oxford Concise Dictionary of Linguistics*. (3rd ed.) UK: Oxford Dictionary Press. P-243

*usually of sounds, but sometimes of syllables, words, or other units*⁵². When two sounds or group of sounds interfere with each other, result is sometimes an exchange of places, a process which is called metathesis. Some Indo-Aryan noun and adjectives words are borrowed by this process in Bodo language. Many examples of Bodo borrowed words as a result of metathesis process can be found in Bodo. e.g.

Indo-Aryan

xɔbdɦɔ > ʃabda sɔɖdɔɓ ‘word’
 manuɦ > manuʃya mansi ‘men’
 riska > riksa ‘rikshaw’
 bemaɾ > beɾam ‘disease’
 paɔl > pa:ɔl p^hagli ‘mad’
 kuɖumbə > k^hurma ‘relative’
 ka:mreɲa > ka:mraɲa k^hambreɲga / k^hambreɲa ‘star fruit’
 sɔla > ɔsla ‘cloth’
 ɣɦɔɾial > ɣuɾler ‘crocodile’
 kasɔ (< kɔssɔp Skt.) > khaseu ‘tortoise’

Apart from Indo-Aryan, example of English word can also be found. e.g.

English

dɛsk > deks ‘desk’
 keɾəl > keɾli ‘kettle’
 keɾəsɪ:n > keɾasin ‘kerosine’
 fiɾm > p^hlim ‘film’

In order to make the pronunciation easier and due to insincerity of speaker some Indo-Aryan and English words borrowed by this process in Bodo language.

3.3.1.5 Epenthesis

In phonetics and phonology epenthesis is *a type of intrusion, where an extra sound has been inserted in a word*⁵³. It is addition of one or more sound to a word. The addition of sound to a word or Epenthesis is of two types’ vowel and consonant. Prosthesis, Anaptyxis and Paragoge are the different types of epenthesis. Some words of Indo-European and other language are borrowed by this process too in Bodo language.

⁵² Crystal, David (2008): *A Dictionary of Linguistics and Phonetics* (6th ed.). USA. Blackwell Publishing, P-303

⁵³ Crystal, David (2008): *A Dictionary of Linguistics and Phonetics* (6th ed.). USA. Blackwell Publishing, P-171.

3.3.1.5.1 Prosthesis

In this type of phonological change any vowel or consonant phonemes are added in the beginning of a word in order to make the pronunciation easier. This type of phonological change is called Prosthesis and it is found being used in Bodo borrowed from English. For example:

English

sku:l > iskhul 'school'
 skru: > iskrub 'screw'
 steɪʃən > isteson 'station'
 stænd > isten 'stand'
 istəp > istop 'stop'

It is mentionable that there is no word being borrowed by this process from IA language in Bodo.

3.3.1.5.2 Anaptysix

The insertion of vowel or consonant in the middle of a word is called Anaptysix. This type of example can be seen in Bodo which are adapted from IA (Sanskrit, Hindi, Assamese, and Bengali) and English languages. For example:

3.3.1.5.2.1 Insertion of Vowel

jənm (Skt.) > zuɲuɲm 'born'
 dhar (Hd.) > dahar 'wave of water'
 bhəl (Ass.) > bəhəl 'gourd'
 lathi (Hd.) > laət^{hi} 'stick'
 garm (p.) > gərəm 'hot'
 gla:s (Eng.) > gilas 'glass'
 dʌbl (Eng.) > dabəl 'double'
 bɒtl (Eng.) > bət^həl 'bottle'
 di:zl (Eng.) > dizel 'diesel'

In the above examples, the insertion of vowel is observed to be only in the middle of the word. In the borrowed words of Bodo from Indo-Aryan and European languages, the insertion of vowel in the beginning and end of word cannot be seen.

3.3.1.5.2.2 Insertion of Consonant

It can also be found being inserted consonant phoneme in the middle of the word while borrowed from Indo-Aryan into Bodo.

səi (Bang.) > səhi 'sign'

zika (Ass.) > ziŋk^ha ‘a kind of gourd’

dhɛki (Ass.) > diŋk^hi ‘rice grinder’

It is to be noted that while borrowing from Indo-Aryan and European, the insertion of vowel and consonant is to pronounce the word easily or to adapt according to the pronunciation nature of Bodo.

3.3.1.5.3 Paragoge: It is the addition of a sound to the end of a word. The word borrowing by this process is also found in Bodo. For instances:

3.3.1.5.3.1 Addition of Vowel

sah > sah-a ‘tea’

dehi (Skt.) > deh-a ‘health’

dormɔha > dormɔhi-a ‘salary’

grəh (Skt.) > grəh-ɔ ‘satellite’

xɔndehi (< sɔndehi Skt.) > sɔndeh-ɔ ‘doubt’

əŋg (Skt.) > əŋg-ɔ ‘organ’

kəst (Skt.) > khəst-ɔ ‘struggle’

git (Skt.) > gidu/gid-u ‘song’

da:g (Hd.) > dag-u ‘spot/mark’

band (Ass.) > band-u ‘dum’

dukh (Skt.) > dukh-u ‘sorrow’ or ‘unhappy’

sukh (Skt.) > sukhu ‘peace’ or ‘happy’

laj (< lajjā Hd.) > laz-i ‘shame’

təŋk (Eng.) > thenkh-i ‘water tank’

ɪŋʃ (Eng.) > ins-i ‘inch’

It is observed that the above mentioned borrowed words of Bodo from Indo-Aryan and European languages the vowels /-a/, /-ɔ/, /-u/ and /-i/ are added at the end of the word to adapt and use. It is necessary to mention that in Bodo origin word, there is no word having /h/ phoneme at the end. Which is why it can find vowel phoneme added at the word end by relating to the nature of Bodo. Phukan Basumatary (2005) too in his book *An Introduction to the Boro Language* has made it clear by saying /h/: *It has no final occurrence in basic Boro vocabulary*⁵⁴.

3.3.1.6 Elision

Elision is the loss of phonemes or deletion of phonemes of a word. *A term used in*

⁵⁴ Basumatary, Phukan (2005): *An Introduction to the Boro Language* (1st ed.). Mittal Publications. New Delhi. P-19

*phonetics and phonology to refer to the omission of sounds in connected speech. Both consonants and vowels may be affected, and sometimes whole syllables may be elided*⁵⁵.

This loss may be of a consonant or of a vowel. Elision is of three types i.e. Procope, Syncope and Appocope.

3.3.1.6.1 Procope: The loss of a sound from the beginning of a word or elision in the initial position of the word is called Procope. The English word stool stu:l > tul ‘stool’ is an example of such word.

3.3.1.6.2 Syncope: The loss of a sound from the middle of a word is called Syncope. A term used in compative philology, and sometimes in modern phonology, to refer to the deletion of a vowel within a word; often contrasted with aphaeresis and Apocope⁵⁶.

Among the Bodo borrowed words from Indo-Aryan and English languages it can also find coined words following the process of syncope. e.g.

Indo-Aryan

i:swar (Skt.) > isur ‘God’

mekhela (Ass.) > mekhla ‘an Assamese traditional dress’

daroga > darga ‘sub inspector’

English

pəʊstmən (Eng.) > pɔsmen ‘postman’

əla:rm (Eng.) > elam ‘alarm’

distɜ:rb > disthab ‘disturb’

3.3.1.6.3 Apocope: *The loss of a sound or sounds at the end of a word*⁵⁷. Such kinds of words are also found in Bodo adapted from IA and European. e.g.

mulɒk (Skt.) > mula ‘radish’

siment (Eng.) > simen ‘cement’

sɛnd (Eng.) > sen ‘send’

kʌrənt (Eng.) > k^haren ‘current’

læmp (Eng.) > lem ‘lamp’

pəmp (Eng.) > pam ‘pump’

dɪpɑ:tmənt (Eng.) > dipharment ‘department’

⁵⁵ Crystal, David (2008): *A Dictionary of Linguistics and Phonetics* (6th ed.). Blackwell Publishing. P-166

⁵⁶Ibid. P-469

⁵⁷ Matthews, P.H.(2014): *Oxford Concise Dictionary of Linguistics* (3rd ed.) UK: Oxford University Press. P-23

bɒm (Eng.) > bɔm ‘bomb’

bɛl (Eng.) > bel ‘belt’

It can be observed that Bodo has no use of unaspirated phonemes /p/, /t/, /k/ and while borrowed from Indo-Aryan into Bodo these phonemes get replaced by aspirated /p^h/, /t^h/, /k^h/. It is worth mentioning that aspirated phonemes /p^h/, /t^h/, /k^h/ have no final occurrence in basic Bodo vocabulary. Therefore, unaspirated phonemes /p/, /t/, /k/ get deleted while adapted from Indo-European.

3.3.1.7 Vowel Mutation

Vowel mutation is the exchange of vowel of the words. Vowel mutation occurs when the words of Indo-European languages is borrowed into Bodo. It is worth mentioning that Bodo does not have the uses of long vowels. So, all the long vowels of Indo-Aryan and European i.e. English languages have become short vowel in Bodo. For example:

Indo-Aryan

(i) /u:/ > /u/

In the any syllable of the word Bodo substitutes the vowel /u/ for Hindi long vowel /u:/. Bodo does not have long vowel /u:/. Such as:

guru: > guru ‘master’

aŋgu:r > aŋgur ‘grapes’

pu:rnima: > p^hurnima ‘full moon’

The substitution of Bodo /u/ for Hindi /u:/ occurs because both these phonemes are very close in tongue position.

(ii) /i:/ > /i/

The long vowel of Hindi /i:/ is changes to short vowel /i/ in Bodo. For instance:

mantri: > mɔnthri ‘minister’

ga:ɽi: > gari ‘car’

There is no use of long vowel in Bodo. It occurs because the front close unrounded Hindi vowel /i:/ is very near to high front un-rounded Bodo vowel /i/.

(iii) /ə/ > /ʊ/

The Hindi /ə/ Central unrounded vowel is changes to high back un-rounded vowel /ʊ/ in Bodo word like:

bər > buɽ ‘blessing’

bəli: > buɽli ‘sacrifice’

kənya (Beng.) > k^hɽina ‘bride’

xɔrgɔ (Skt. swərg) > suɾɔɔ 'heaven'
 sətyə (Skt.) > suɾiθu 'true'
 sa:gəɾ > saɔɾ 'sea'
 ba:mən > baɔuɾ 'hindu priest'
 ha:lət > haɔd 'condition'
 nəgəɾ > nəɔɔɾ 'city' / 'town'

The phoneme /ə/ is the only one central phoneme of Hindi and it uses in all positions whether stressed or unstressed. It could be explain by saying that it is nearer sound to /u/ and it may have been the spelling of the word which might have given rise to the replacement.

(iv) /u/ > /ɔ/

Hindi back half close unrounded phoneme /u/ is changes to back mid rounded vowel /ɔ/. For instances:

kɔda:l > k^hɔdal 'spade'
 ɔlam > ɔlam 'slave'

The interchange of /u/ and /ɔ/ is due to the process of assimilation. It is worth mentioning that the vowel charts of both the languages indicates that the Hindi /u/ and Bodo /ɔ/ are both of the back half close type with a very small difference in the height of the tongue. The Bodo /ɔ/ is slightly lower than Hindi /u/.

(v) /ə/ > /a/

We find that the Bodo low central un-rounded vowel /a/ is replaced by Hindi central un-rounded vowel /ə/ while borrowed from Hindi or any Indo-Aryan language. For instances:

kɔta:l > k^hant^hal 'jackfruit'
 ɔəzal > ɔəzɔl 'pin/ nail'
 ɔəmla: (Hd.) > ɔəmla 'bowl'
 kəɾəsi:n > k^hərasin 'kerosine'

The substitution between the two vowels is due to the assimilation process because both the phonemes are central unrounded and very close in tongue position and the Bodo /a/ is slightly lower than Hindi /ə/.

(vi) /ə/ > /u/

There are some loan word where Hindi central un-rounded vowel /ə/ become to Bodo high back rounded vowel /u/. For instances:

ghəri: (Hd.) > guri ‘watch’
 xɔtru (< sətru) > sut^hur ‘enemy’

This is because the Hindi central vowel /ə/ is near to Bodo high back un-rounded vowel /u/.

English

(vii) /æ/ > /e/

The changes of phonemes occur while we borrow from English too. The English open mid front unrounded vowel /æ/ is substituted by front middle /e/ in Bodo. For instances:

gæ > ges ‘gas’
 bæŋk > beŋ ‘bank’
 gæt > get ‘gate’
 bæɡ > beg ‘beg’
 tæŋk > thenk^{hi} ‘water tank’

It is observed that the interchange of /e/ and /æ/ is due to the assimilation process. Both are the front and open type of phonemes with a very small difference in the position of the tongue.

(viii) /ə/ > /ʊ/

The English Half open center vowel phoneme /ə/ become /ʊ/ a high back un-rounded in Bodo while borrowed words from English. For instances:

bʌndəl > bandʊl ‘bundle’
 teɪbəl > tebʊl ‘table’

Assimilation process is the main reason for this replacement. The pronunciation of both has a slightly different in phonemic structure where /ə/ is center on the other hand /ʊ/ is back sound.

(ix) /ʌ/ > /a/

The English open mid back unrounded vowel /ʌ/ is replaced by low central un- rounded vowel /ɔ/ in Bodo. e.g.

dʌbl > dabɔl ‘double’
 bʌs > bas ‘bus’
 trʌk > trak ‘truck’

kʌp > kap ‘cup’

brʌʃ > bras ‘brush’

(x) /ɒ/ > /ɔ/

The open front unrounded vowel phoneme of English /ɒ/ changes to back mid rounded vowel /ɔ/ of Bodo. e.g.

bɒks > bɔks ‘box’

bɒm > bɔm ‘bomb’

bɒtl > bɔtʰɔl ‘bottle’

Some plosive phonemes such as /pʰ tʰ kʰ/ and /g/ have no final occurrence in Bodo basic vocabulary but occurred during borrowing from other languages. These phonemes do not occur at the end of word, as said by Phukan Basumatary is given accordingly.

/pʰ/ : It has no final occurrence in basic Boro vocabulary ;but occurred in loan words e.g. /bɔrɔpʰ/ - ice, snow⁵⁸.

/tʰ/ : It has no final occurrence in basic Boro vocabulary; but used in loan words e.g. /gatʰ/ -bundle⁵⁹.

/kʰ/ : It has no final occurrence in basic Boro vocabulary⁶⁰. However, it can be found in words adapted from other language. For example:

ʃɔla:kh > salakʰ ‘clever’

la:kh > lakʰ ‘lac’

sukh > sukʰ ‘peace’

dukh > dukʰ ‘grief’ etc.

/g/ : It has no final occurrence in basic Boro vocabulary⁶¹. We can also find some words ending with /g/ phoneme which are borrowed from other language into Bodo. For example:

fəɾək > pʰarag ‘deference’

səɾak > sɔrɔg ‘way’

mu:lg > mulug ‘world’

dʒʌg > zɔg ‘jug’

⁵⁸ Basumatary, Phukan (2005): *An Introduction to the Boro Language* (1st ed.). Mittal Publications. New Delhi P-19

⁵⁹ Ibid P-19

⁶⁰ Ibid P-19

⁶¹ Ibid p.19

mug > mɔg ‘mʌg’ etc.

It is worth mentioning that the above mentioned words ending with /k/ sound changes to the equivalent sound of Bodo /g/. This is because both are the velar unaspirated plosive sound and have a small difference whereas /g/ is voiced and /k/ is voiceless only. On the other hand some example mentioned in the above are end with /g/ in Indo-Aryan or English and in Bodo they do not change to any other phonemes.

The fricative phoneme /s/ cannot be pronounced or do not occur at the end in Bodo origin words, but it occurs in borrowed or adapted words. For example:

bis ‘poison’
 k^hɔrɔs ‘expenditure’
 samɔs ‘spoon’
 bas ‘bus’

It is mentionable that the Indo-Aryan and English words ending with /tʃ/, /ʃ/, /ʒ/, /s/ are replaced by /s/ in Bodo during borrowing. Because fricative phoneme /s/ sound is the nearest sound of /tʃ/, /ʃ/, /ʒ/.

Similarly, *The phoneme /z/ has rare occurrence in final position of words; e.g. /aroz/ (prayer)⁶²* because most of words used in Bodo ending with this phonemes are borrowed from Indo-Aryan origin and other sources of language. This example can be found as below:

fɪ:dʒ > phiz ‘fees’
 dʒʌdʒ > zaz ‘judge’
 zahaz (<zahaz Arabic) ‘ship’
 sɔmaz (<Skt. sɔma:j) > sɔmaz ‘society’

3.3.2 Supra-Segmental Adaptation of Indo-Aryan and European Language Coined in Bodo

Above, the focus is on the assimilation of Indo-Aryan and European borrowed words by Bodo segmental phoneme. Now, Indo-Aryan and European loan words are of higher level as how adaptation is done in the field of syllable or prosodic and sequential structure is clearly studied. Danesi (1985) has mentioned as *In the Integrated Model of Loanword Nativization, the adjustments to syllable structure of*

⁶² Basumatary, Phukan (2005): *An Introduction to the Boro Language*. (1st ed.). Mittal Publications. New Delhi. P-19

*incoming words are an example of phonological repatterning*⁶³. Through this framework some sub-mechanisms are also operated which includes syllable deletion, syllabic consonant conversion, consonant lengthening (gemination), de-clusterization, monophthongization, and change in vowel duration (i.e. quantity). The syllable structure modification of some loan words of Indo-Aryan and European languages is listed below:

3.3.2.1 Syllabic Consonant Conversion

The syllabic consonant of Bodo borrowed word from English language is converted to non-syllabic consonant. A consonant that is a whole syllable a syllabic consonant i.e. the /l/ at the end of ‘bottle’ is a syllabic consonant. In other words, every syllable whose peak is a syllabic consonant is converted as a syllable with a vowel as the syllable nucleus and the syllabic consonant as its coda margin. For example:

sændl > sendel ‘sandle’

mɒdl > mɒdel ‘model’

keɪbl > kebel ‘cable’

baɪbl > baibel ‘baible’

dɪdʒɪtl > dizitel ‘digital’

di:zl > dizel ‘diesel’

In every example given above, the syllabic consonant /l/ at the end of the word becomes non-syllabic consonant as a result of vowel harmony. It is noteworthy that, English words are found to be coined in Bodo by loan formation nature, but such nature of coinage is not found in Indo-Aryan languages.

3.3.2.2 Syllable Syncope

In syllable syncope middle syllable of the word is cut off. When words of IA language are borrowed into Bodo, it is adapted through this technique too. For example:

bɔgɔɪ > buɪgri ‘plum’

darwazɑh (PA.) > dorza ‘door’

gɔɦali > gɔli ‘barn’

The above example of IA languages all trisyllabic and the moment their middle syllabic is cut off it is converted to disyllabic in Bodo.

⁶³Danesi, Marcel (1985): *Loanword and Phonological Methodology*. Marcel Didier Inc. Quebec. P-379

3.3.2.3 Syllable Apocope

On the other hand, in this process the final syllable of the word is cut off. Bodo borrowed words from IA are found to be adapted by this process. For example:

si:ma:na: (Bang.) > sima ‘boundary’

dɔɪmɔha > dɔɪma ‘salary’

sipa:hi: > sip^hai ‘soulder’

Trisyllabic words of IA language have their last syllable cut off and form disyllabic in Bodo can be found in the above example.

3.3.2.4 Diphthongization Simplification

(i) /ɔi/ > /ɯi/

The Indo-Aryan words with diphthong /ɔi/ changes to /ɯi/ in Bodo. e.g.

pɔisa > p^hɯisa ‘coin’/ ‘rupee’

mɔina > mɯina ‘mynah bird’

xɔjtɔ > sɯit^hɯ ‘truth’

(ii) /a/ > /ai/

Indo-Aryan words ending with central vowel /a/ changes to diphthong /ai/ in Bodo. e.g.

pɔrha > p^hɔrai ‘read’

bɔna > banai ‘make’

sɔla > salai ‘drive’

buza > buzai ‘teach’

The reason of such occurrence is to make the Indo-Aryan pronunciation more ease with phonological pattern of Bodo.

Apart from the discussed above some English diphthongs have been simplified to accord with Bodo vowel system. Here, eight English diphthongs, viz. /eɪ, eə, aɪ, aʊ, ɪə, əʊ, ɔɪ, ʊə/ are attested.

It is observed that English diphthongs /əʊ/ and /ɔɪ/ is replaced by middle back /ɔ/ phoneme of Bodo. e.g.

(iii) əʊ > ɔ

həʊtəl > hɔtəl ‘hotel’

səʊfa > sɔpha ‘sofa’

məʊbaɪl > mɔbaɪl ‘mobile’

ləʊn > lɔn ‘loan’

nəʊtɪs > nɔtɪs ‘notice’

nəʊt > nɔt 'note'

(iv) ɔɪ > ɔ

taiford > tayp^hɔd 'typhoid'

sɔɪə > sɔya 'soya (beans)'

Another middle front vowel phoneme of Bodo /e/ is also substituted in the place of English diphthong /ei/:

(v) ei > e

reɪl > rel 'real'

treɪn > tren 'train'

feɪsbʊ:k > phesbuk 'facebook'

feɪl > p^hel 'fail'

English diphthongs /əʊ/, /ɔɪ/ mentioned in the above example is changed to/ɔ/ vowel phoneme in Bodo and /ei/ to /e/ vowel phoneme. It is to be noted that these diphthongs are present in Bodo also, but when English word is used in Bodo, these are not pronounced or used as diphthongs, rather changes to phoneme.

3.4 Conclusion

From the analysis it has been seen that the various assimilation processes like spontaneous replacement, aspiration, de-aspiration, metathesis, epenthesis, elision, addition, vowel mutation, syllabic consonant conversion, diphthongization simplification effect the borrowed words from one language to another. In order to accommodate with the phonological pattern of the Indo-Aryan and European i.e. English language the Bodo replaces, deletes, adds and rearranges the certain pattern of donor language.

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