Derivational Morphology of Assamese Lexical Word Categories

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Abstract: Word formation by derivation is very productive in Assamese. A significant amount of words in Assamese owe their origin to derivation. The analysis in this paper takes into account the derivational processes related with lexical word categories, and, numerous bound morphemes that are used in the derivational process in the language. This analysis helps us to understand some of the important aspects of Assamese morphology. These aspects are - role of class maintaining and class changing morphemes, derivation of word from synonyms, productivity of derivational morphemes, morphophonemic changes in root as a result of affixation of derivational morphemes, presence of allomorphs of various bound morphemes, ability of a morpheme to derive words from different word categories. The significance of this paper lies in the fact that these word formation processes could help develop morphological rules that can be used for developing computational morphological tools like - stemmer, spell checker, tagger etc.

Keywords: Assamese, Lexical words, Derivation morphology, Class maintaining, Class changing.

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1. Introduction

It is assumed that the origin of the Assamese language is from the Magadhan group of the Indo-Aryan language family. G. C. Goswami (1982) states: “It is supposed that like other Aryan languages, Assamese was also born from Apabhramsa dialect developed from Magadhi Prakrit of the eastern group of Sanskrit language”.

North East India is the home of five language families: Indo-Aryan, Austro-Asiatic, Tibeto-Burman, Tai Kadai and Dravidian. Speakers of these languages have been maintaining a close socio-political-economic relationship from a very long time. Kakati (1941:57- 89) discusses at length about the non-Aryan neighbouring languages impacting on Assamese. Close contact between these language families, especially between the Indo-Aryan and Tibeto-Burman language families have led to convergence. Before the reorganization of North East India into seven states the entire North East India was known as Assam. Assamese was the official language and Assamese was used as the lingua franca by speakers of different language groups. Due to years of contact and eventual convergence Assamese language has acquired some distinct properties which make it distinct from other Indo-Aryan languages.
1.1 Scope of the analysis

Assamese, with about 15 million\(^1\) native speakers, is the Eastern-most language of the Indo-Aryan language family. Typologically speaking the morphology of Assamese exhibit both agglutinating and inflectional features. The analysis in this paper takes into account the derivational processes related with lexical word categories in Assamese. This helps us to find out different bound morphemes that are used in the derivational process. An important insight into a major word formation process is provided by the analysis. The analysis will also be helpful for developing morphological rules for Assamese. Morphological rules can be used for developing computational morphological tools like stemmer, spell checker, tagger etc. for Assamese. In this age of information technology languages need to keep pace with the digital world. Assamese does not have a very strong digital presence. Hence the present analysis will help to bridge the gap to some extent by facilitating morphological rule development which is very crucial for a language like Assamese that lack digital resources.

2. Derivation

Trask (1999: 47) defines derivation as a way of constructing new words by adding affixes to existing words. Derivation is one of the basic ways of obtaining new words in most languages. According to Booij (2012:51) derivational process enables the users of a language to create new lexemes. Payne (2006:38) explains derivation in its difference from inflection which is another major word formation process. Derivation is best explained in its difference form inflection which is another major branch of morphology. Inflection is a word formation process that helps us to get grammatically distinct form of the same word. On the other hand derivation helps us to get new words. For example the inflected forms of the word write- writes, writing, written are only grammatically distinct form of the same word. On the other hand writer is a new word obtained with derivation from the word write. Inflectional affixes add grammatical information to the root, but derivational affixes contribute meaning to the root. Haspelmath and Sims (2010:86-89) listed common derivational meanings of word categories using terms like deverbal noun, deadjectival noun, denominal verb, deverbal adjective etc.

Derivation is closely linked with the notion of lexicon in Anderson (1995: 180-184). Lexicon here is not analogous to a dictionary or a kind of list or database. It is the knowledge a speaker has of how words can interpret positions in a syntactic structure. As part of the lexicon this knowledge forms derivational rules. The function of these rules is to establish relation among stems to create new lexical stems on the basis of the existing one when required. Anderson further defines derivation as a class of word formation rules within the lexicon. These rules contain information about the lexical category, syntactic sub-categorization, semantics and argument structure, etc. of the stems to which they apply. Thus, there is not much difference between inflectional and derivational word formation rules. But there is a core difference between both of them. Inflection brings structural changes affecting the phonological form of the word. On the other hand derivation results in the semantic as well as syntactic modification of a word. Derivational pattern in languages can be broadly understood from the schema in Fig. 1.

![Derivation pattern in Assamese](image)

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\(^1\) According to 2011 population census
3.0 Derivation in Assamese

A significant amount of words in Assamese owe their origin to derivation. Knowledge about the morpheme structure of Assamese words is very important to understand the derivational word formation process in Assamese. Categories like nouns, adjectives, verbs and adverbs are open class words. These words take derivational suffixes to form new words which may belong to the same category or may form a new category. These derived words can take inflections to indicate its status as a noun, verb, adjective or adverb. In the lines of Haspelmath and Sims (2010: 87) we are going to look into the deverbal noun, deadjectival noun, denominal verb, deverbal adjective etc. These derivational patterns in case of Assamese are discussed below.

3.1 Derivation of Assamese Nouns

Creating new words for new concepts is one of the chief functions of derivational morphology. We also have a greater need for naming diverse nominal concepts; this explains why languages generally have more means for deriving nouns than for deriving verbs and adjectives (Haspelmath and Sims 2010: 87). In Assamese, both prefixes and suffixes are used to derive nouns. Use of prefix to derive nouns in Assamese is shown in Table 1 for deriving nouns than for deriving verbs and adjectives.

Categories like nouns, adjectives, verb etc. take inflections to indicate its status as a noun, verb, adjective or adverb. In the lines of Haspelmath and Sims (2010: 87) we are going to look into the deverbal noun, deadjectival noun, denominal verb, deverbal adjective etc. These derivational patterns in case of Assamese are discussed below.

From Table 1 it can be seen that the prefixes in the table have both negative as well as positive connotation. ɔcomoi, pol and kal are synonyms i.e. different words with same meaning. However, the difference in their usage is shown in (1).

1. (a) tumi ɔcómoi-tumnup koi mœ-loi p^hun nœ-kœ-ib-a
   Lit: ‘You don’t call me without considering appropriateness of time.’
   ‘You don’t call me at wrong time.’

(b) tumi ɔcómoi-ta-loi na-za-b-a
   Lit: ‘You do not go there at wrong time.’
   ‘Don’t come at an inconvenient time’.

(c) kʰbœ bœ-bœ a-kœ hœ
   draught-gen for DNOM-time be
   ‘Famine is caused by draught.’

(d) pol ɔcómmlœ-lo-pœ ło-pœ
   time fraction of time be-NF time pass be
   ‘Time passes in fraction.’

From (1a-d) it can be seen that although the meaning of both ɔcómmlœ, kal and pol are same the derived nouns ɔcómmlœ, akal and polupol have different connotation. ɔcómmlœ means ‘wrong time’ akal means ‘famine’ and polupol means ‘fraction of time’. (1.a) shows that ɔcómmlœ is not followed by any other bound morpheme. But in (1.b) ɔcómmlœ is followed by the locative case marker -t.

Table 1 Derivation in Assamese

| Prefix | Root      | Gloss      | Prefix+root | Gloss      |
|--------|-----------|------------|-------------|------------|
| ɔ-     | ɔcómmlœ   | time       | ɔcómmlœ     | wrong time |
| α-     | kalœ      | time       | akalœ       | famine     |
| αɔ-    | batœ      | path       | αubatœ      | wrong path |
| ɔkα-   | αzœ       | pride      | αzkœcœcœ     | malign     |
| ɔnu-   | polœ      | time       | polœkœ       | fraction of time |
| ɔnu-   | ρadœnœ    | obstacle   | ρadœnœkœ     | request    |
3.1.1. De-verbal noun (V→ N)

Crystal (2008:141) defines de-verbal noun as noun that originates as a verb but used as noun in sentence structure. Deverbal noun in Assamese is shown in Table 2.

| Root | Gloss | Suffix | Root+ Suffix | Gloss |
|------|-------|--------|--------------|-------|
| nasV | dance | -oni   | nasɔniN     | dancer |
| kʰəlV | play | -uoi   | kʰəluoiN     | player |
| kʰənV | eat  | -uia   | kʰəuiaN      | eater  |
| kəŋV | do   | -ɔta   | kəɔtaN       | doer   |
| gaV  | sing | -jɔk   | gajɔkN       | singer |

Table 2 shows how the derivational suffixes -oni, -uoi, -uia, -ɔta and -jɔk/ɔk derive nouns from a verb. For example, suffixation of -oni to the verb nas ‘dance’ derives the noun nasɔni ‘dancer’. Suffixation of -uoi to the verb kʰəl ‘play’ derives a noun kʰəluoi ‘player’, and, when kʰən is suffixed by -uia, it derives the noun kʰəuia ‘eater’. Suffixation of -ɔta to the verb kəŋ ‘do’ derives the noun kəɔta ‘doer’. Suffixation of -jɔk derives the noun gajɔk ‘singer’ from the verb ga ‘singer’. Deverbal nouns in Assamese are shown in (2a-b).

1. (a) nas-ɔni-ɛ bihu nas-is-ɛ
dance-NMZ-ERG b ihu dance-PRG-3

‘The dancer is dancing Bihu dance.’

(2a) and (2b) the verbs nas ‘dance’ and kʰəl ‘play’ are nominalised by the suffixes -oni and -uoi and the derived nominals can function like pure nouns. The derived nominals which occur in the subject position in (2a-b) takes the ergative case marker -e in nasɔnis (2a) and in (2b) kʰəluoi takes the collective suffix -ɔk/ɔk to indicate that it patterns like regular nouns. In (2a) the subject is an ‘agent’ i.e. doer of an action and in (2b) the subject is a ‘theme’ to which the reference is made.

3.1.2. Deadjectival noun (A→ N)

De-adjectival noun involves derivation of a noun from an adjective and Crystal (2008:130) defines it as noun that originates as an adjective but used as noun in sentence structure. Table 3 shows deadjectival nouns in Assamese.

| Root | Gloss | Suffix | Root+suffix | Gloss |
|------|-------|--------|-------------|-------|
| nɪmbaG | silent | -ɔta | nɪmbɔtaN | silence |
| bɪxɛG | special | -ɔɔt | bɪxɛɔɔtN | specialty |
| shuʃtɛG | superior | -ɔɔt | shuʃtɔɔtN | superiority |

As evident from Table 3 the derivational suffixes are attached directly to the adjectives in order to derive nouns. These suffixes are further elaborated in (3).

1. (a) amí mondú-ɔt nɪmbɔta-ɔta kɔkʰʃa kɔ-ɑ usit
   we temple-LOC silent-DNOM maintain do-NF should
   ‘We should maintain silence in temple.’
The derived deadjectival noun takes plural marker and classifier as shown in (4a-b).

4. (a) 
   bejɔ-buɔ tʰɔ-i di-a
   bad-PL keep-CP give-2
   ‘Keep the bad ones.’

(b) tumi bʰal-kʰini lɔ.q
   you good-QTF take.2
   ‘You take the good ones.’

(4a-b) shows derivation of nouns from adjectives in Assamese. In (4a) the plural marker -buɔ is suffixed to the adjective bejɔ ‘bad’ to derive noun. In (4b) the quantifier -kʰini is suffixed to the adjective to derive the object noun bʰalkʰini. The derived nouns bejɑbruɔ and bʰalkʰini function as direct object of verb in the sentence structure.

From (3) and (4) we find two types of deadjectival nouns: those in Table 3 which take suffixes like -ɔta, -twɔ etc. and those which do not take a derivational suffix as in (4a-b). But in both (3) and (4) the derived nouns function as nouns. niɑbɔta and bixexɔtwɔ in (3a-b) are nouns derived from adjectives and function as nouns in sentence structure. Similarly, te ɲaɓuɔ (4a) and kola-tu (4b) can be considered as noun as they sit in the subject and object position in the sentences without taking a derivational suffix.

### 3.1.3. De-nominal nouns  (N→N)

De-nominal nouns are nouns derived from another noun. Derivation of denominal nouns in Assamese is shown in Table 4.

**Table 4** Derivation of denominal nouns in Assamese

| Root   | Gloss     | Suffix | Root+Suffix | Gloss     |
|--------|-----------|--------|-------------|-----------|
| gɔlpɔn | story     | -kɔn  | gɔlpɔkɔn   | story writer |
| gɔlbkn | globe     | ikɔn/kɔn | gɔlbikɔn    | globalization |
| bスポn | steam     | bɔwɔn | bスポbɔwɔn   | act of converting liquid to steam |
| naɔn  | boat      | -jɔn  | naɔɔjɔn    | boatman    |
| bjkti’n | person  | -twɔ | bjktitwɔn  | personality |
| nagɔikɔn | citizen | -ɔtwɔ | nagɔikɔtwɔn | citizenship |

Table 4 shows derivation of nouns from nouns in Assamese with the help of suffixes -kɔn, -ikɔn/kɔn, -bɔwɔn, -jɔn, -twɔ/twɔ. From the table it can be seen that the derived nouns are different from the source noun in meaning. For example, suffixation of -kɔn to the noun gɔlpɔ story’ derives the noun gɔlpɔkɔn ‘story writer’. Suffixation of -ikɔn to the noun gɔlbik ‘globe’ derives another noun gɔlbikɔn ‘globalization’. -ikɔn has an allomorph -kɔn. When the morpheme -bɔwɔn is suffixed to nouns like bスポsteam’ it derives the noun bスポbɔwɔn’act of converting liquid to steam’. The morphophonemic change /ɔ/→/i/ can be seen as a result of this suffixation. When the morpheme -jɔn is suffixed to the noun naɔ ‘boat’ it derives the noun naɔɔjɔn ‘boatman’. Suffixation of the morpheme -jɔn to naɔ triggers the morphophonemic change /ɔ/→/w/. Similarly the suffix -twɔ derives the noun bjktитwɔ ‘personality’ from the noun bjkti ‘person’. -twɔ is one of such suffixes.
which can be used to derive words from more than one word categories. -twɔ has an allomorph -tɔwɔ which derives nagɔɔikɔtɔwɔ from nagɔɔik. -tɔwɔ can derive noun from adjective (Table 3) and noun form noun (Table 4). The examples in (5a-b) show some denominal nouns in the subject position of the declarative clauses.

5. (a) giti-kɔɔ-zɔn mʊ bɔal bɔndu (hoi)
   lyric-DNOM-CLF my good friend be
   ‘The lyricist is my good friend.’
(b) zʊddʰɑ-xɔkɔlɛ zʊddʰɔ ɑmbbɔ kɔ-ɪlɛ
   warrior-COL-ERG war start do-FUT-3
   ‘The warriors started the war.’

3.1.3.1. De-nominal nouns with negative connotation

Bound morphemes ɔ-, duɹ- and du- derive nouns which have negative connotation as shown in Table 5, 6 and 7. These bound morphemes are prefixes and they are class maintaining prefixes. Table 5 shows derivation of denominal nouns with the help of the prefix ɔ-, followed by Tables 6 and 7 with the duɹ- and du- prefixes respectively.

| Prefix | Root     | Gloss    | Prefix+root | Gloss   |
|--------|----------|----------|-------------|---------|
| ɔ-     | biswɔxN  | trust    | ɔbiswɔxN   | Distrust|
| ɔ-     | nidɔN    | sleep    | ɔnidɔN     | Sleeplessness|

| Prefix | Root     | Gloss          | Prefix+root | Gloss  |
|--------|----------|----------------|-------------|--------|
| duɹ-   | bʰagjN   | fate/fortune   | duwbʰagjN   | misfortune|
| duɹ-   | dinN     | day            | duwdinN     | bad day |
| duɹ-   | namN     | name           | duwnamN     | bad name|

| Prefix | Root     | Gloss    | Prefix+root | Gloss |
|--------|----------|----------|-------------|-------|
| du-    | sintaN   | thought  | dusinton    | worry |
| du-    | xɔŋbadN  | news     | duxɔŋbadN   | bad news|
| du-    | xɔɔxN    | courage  | duxɔɔxN     | audacity|
| duh-   | xɔɔmɔiN  | time     | duhxɔɔmɔiN  | bad time|

3.2 Derivation of Assamese Verbs

In Assamese verbs can be derived both by prefixation and suffixation. In the sections to follow we will look into the derivation of verbs in the language.

3.2.1. De-nominal verb (N⇒V):

Crystal (2008: 135) defines de-nominal verb as verb that originates as a noun but used as verb in sentence structures. De-nominal verb formation is not very productive in Assamese.
Table 8 De-nominal verbs in Assamese

| Root    | Gloss | Suffix | Root+Suffix | Gloss           |
|---------|-------|--------|-------------|-----------------|
| gʰusə → | fist  | -iʃa   | gʰusija  IPv | hit with fist   |
| sɔi →   | slap  | -iʃa   | sɔiʃa IPv  | to give a slap  |
| pʰɔni → | comb  | -jɑ     | pʰɔniʃa IPv| to comb hair    |

Table 8 shows derivation of a verb from a noun with the derivational suffix -iʃa. Suffixification of -iʃa derives the verbs gʰusija ‘hit with fist’, sɔiʃa ‘to give a slap’, pʰɔniʃa ‘to comb hair’ from nouns gʰusə ‘fist’, sɔi ‘slap’ and pʰɔni ‘comb’ respectively. Morphophonemic change /a/→/i/ can be seen as a result of the suffixation of the morpheme -iʃa with the noun gʰusə. There is an instance of vowel assimilation when ‘-iʃa’ suffices with pʰɔni. /i/ in -iʃa gets assimilated with the word final /i/.

In (6) we have instance of de-nominal verbs functioning as a main verb.

6. (a) jadu-ɛ mɔdʰu-k gʰusija-l-ɛ
   jadu-ERG madhu-ACC fist.DVRB-PST-3
   Jadu hit Madhu with fist.’

(b) tumi suli-kʰini pʰɔni-ʃa-i lɔɑ
   you hair-QTF comb-DVRB-CP take.2
   ‘You comb your hair’

The sentences in (6) show derivation of a verb from a noun with the derivational suffix -- iʃa /-iʃa. In (6a) the derivational suffix -iʃa derives the verb gʰusija ‘hit with fist’ from the noun gʰusə ‘fist’. The back open vowel /a/ of the second syllable in gʰusə is dropped and the deverbal morpheme -iʃa is suffixed to derive the verb gʰusija. In (6b) the derivational suffix -i ʃa which is an allomorph of -iʃa, follows the noun pʰɔni ‘comb’ to derive the verb pʰɔniʃa. -iʃa is followed by the conjunctive participle -i to form the compound verb pʰɔni-ʃa-i lɔɑ ‘comb’ which includes the tense and agreement features.

3.2.2. Deverbal verbs (Negative verbs)

Barbora (2001:101) states that negatives in Assamese are bound morphemes. The bound morpheme n- prefixes to a root verb and copies its vowel as shown in Table 9.

Table 9 Derivation by the n- morpheme

| Prefix | Root | Gloss | Prefix+root | Gloss  |
|--------|------|-------|-------------|--------|
| n-     | lɔv  | take  | nɔlɔv       | do not take |
| n-     | pɔjv | read  | nɔpɔjv       | do not read |
| n-     | kʰɑv | eat   | nəkʰɑv       | do not eat |
| n-     | likv | write | nilikv       | do not write |

Table 9 shows derivation of verbs with the help of negative morpheme n-. Barbora (2001:101) explains in detail that negative prefix n- copies the vowel of the root word. In (7a-b) we have examples of negative sentences in Assamese.

7. (a) xɨ am na-kʰɑ-i
   he mango NEG-eat-3
   ‘He does not eat mango’
In (7a-b) shows derivation of negative verbs in Assamese. In (7a) the derivational morpheme n- is prefixed to the verb kʰa to derive the negative verb nəkʰa. Here the negative morpheme is n. n takes /a/ as a result of vowel copying from the verb root kʰa. In (7b) the derivational morpheme n- is prefixed to the verb pəəh to derive the negative verb nɔpəəh. Here also we see instance of vowel copying when the negative morpheme n- copies the vowel /ɔ/ from pəəh.

3.2.3. De-adjectival verb

De-adjectival verb is an instance of derivation of a verb from an adjective. Crystal (2008: 130) defines de-adjectival verb as a verb that originates as an adjective but used as verb in sentence structure. In Assamese there are some adjectives which sit in the position of a verb without taking any derivational suffix. However, when they sit in the position of a verb, they take inflectional morphemes like causative, tense, aspect and person markers as shown in (8a-b).

8. (a) pəni-kʰini təpot-ɔə
   water-QTF hot-CAUS2.2P
   'Boil the water.'
   (b) nɪtu-ɛ səul-bəɭ kumɔl-ə-is-ɛ
   nɪtu-ERG rice-PL soft-CAUS1-PRG-3
   Lit: 'Nitu is softening rice.'
   'Nitu is soaking the rice to soften.'

   In (8a) the causative -ɔə is causing indirect causation and in (8b) we have direct causation, where the subject is doing the job of softening the rice. Barbora (2016:115) labels the direct causative -a as CAUS 1 and the indirect causative -ɔə as CAUS 2.

3.3 Derivation of Assamese adjectives

Derivation of adjectives in Assamese is a very productive process. In Assamese adjectives are derived from noun, adjective and verb.

3.3.1. De-nominal adjective

Denominal adjectives are adjectives derived from a base noun. Crystal (2008: 135) defines denominal adjective as adjective that originates as a noun but used as an adjective in a sentence. In Assamese adjectives are formed from nouns by the following class changing derivational suffixes as shown in (9).

9. (a) xi kʰa kahini-tə kalpon-ik (hoi)
   he say.NF story-CLF imagination-DADJ (be)
   'The story he told is imaginary.'
   (b) am bʰarət-ɔə rəstriyə pʰɔl (hoi)
   mango India-GEN national fruit (be)
   'Mango is the national fruit of India.'
   (c) jɪtu-ɛ səsti-mulək kam bʰal po-i.
   rɪtu-ERG creation-DADJ work good get-3
In (9a-d) shows how adjectives are derived from nouns in Assamese. In (9a) the noun kalpona  ‘imagination’ is suffixed with the derivational suffix -ik to derive the adjective kalponik  ‘imaginary’. Derivation of the word kalponik from kalpona shows morphophonemic change where the where the back vowel between close and half close changes to a back open vowel that is, /ɔ/ → /ɑ/. The word final ɑ of kalpona is dropped before suffixing -ik. In (9b) the adjective rastijɔ  ‘national’ is derived from the noun rastɔ  ‘nation’. Here, when the derivational morpheme -ijɔ is suffixed to the noun rastɔ vowel dropping takes place as a result of which the word final /ɔ/ of rastɔ is dropped before suffixing -ijɔ. The derivational suffix -muljɔ that derives the adjective in (9c) is a typical bound morpheme that is actually derived from a noun muljɔ  ‘root’ by suffixing the -ɔk morpheme. However, -muljɔ is a bound morpheme that derives an adjective from a noun sasti  ‘creation’ in (9c). (9d) gives an instance of a derivational prefix -ɔ that derives the adjective omuljɔ  ‘priceless’ from a noun muljɔ  ‘price’.

### 3.3.1.1. De-nominal adjective with negative connotation

When bound morphemes ni-, ni- and -hin are affixed to a noun they derive adjectives and the derived adjectives give the sense of ‘devoid of / without something that is referred by the noun’. These are shown with examples in Table 10, 11 and 12.

#### Table 10 Derivation by ni- morpheme

| Prefix | Root | Gloss | Prefix+root | Gloss  |
|--------|------|-------|-------------|--------|
| ni-    | xɔbdɔn | sound | nixɔbdɔnADJ | silent |
| ni-    | xulkɔn | fee   | nixulkɔnADJ | free of cost |
| ni-    | sintɔn | worry | nisintɔnADJ | worry-less |
| ni-    | xɔŋkʊs | hesitation | nixɔŋkʊsADJ | without hesitation |

#### Table 11 Derivation by ni- morpheme

| Prefix | Root | Gloss | Prefix+root | Gloss |
|--------|------|-------|-------------|-------|
| ni-    | jibn | life | nijibnADJ | lifeless |
| ni-    | gunn | quality | niguunADJ | something that cannot be attributed with any quality |
| ni-    | crɔɔɔdɔn | crime | niɔɔɔdɔnADJ | innocent |
| ni-    | bɔdɔn | knowledge | niʃbɔdɔnADJ | innocent/dull |

#### Table 12 Derivation by -hin morpheme

| Root | Gloss | Suffix | Root+suffix | Gloss |
|------|-------|--------|-------------|-------|
| buddn | intelligence | -hin | buddhĩhnADJ | dull/stupid |
| xɔktln | strength | -hin | xɔktihnADJ | weak |
| ɔftɔn | meaning | -hin | ɔftihnADJ | meaningless |
| xɔbdɔn | sound | -hin | xɔbdɔhinADJ | soundless/silent |
3.3.2. De-verbal adjectives

As the name suggests, de-verbal adjectives are adjectives realized through derivational process by suffixing a derivational morpheme to a verb. In Table 13, we have instances of derivation of adjectives from verbs.

Table 13  De-verbal adjectives in Assamese

| Root | Gloss | Suffix | Root+Suffix | Gloss |
|------|-------|--------|-------------|-------|
| ḍɔsV | compose | -ɔt | ḍɔsADJ | composed |
| kandV | cry | -u | kandADJ | cry baby |
| pɔlɑV | flee | -ɔg | pɔlADJ | one who flees / escapist |

Table 13 shows derivation of adjectives from verbs in Assamese with the suffixes -ɔt, -u, ɔju. Suffixation of -ɔt derives adjective ḍɔsiɔ ‘composed’ from the verb ḍɔs ‘compose’. Suffixation of the derivational suffix -u to the verb kand ‘cry’ derives the adjective kanduo ‘cry baby’. Suffixation of -ɔju to the verb pɔla ‘flee’ derives the adjective pɔluɔju ‘one who flees’. This derivation in Assamese is shown in examples (10a-d).

10. (a) tumi likʰ-ɔt pudmo dia 

you write-DADJ proof give-2

Lit: ‘You give written proof.’
‘You provide written proof.’

(b) teũ- ḍɔs-ɔt kɔbita pɔɹu-is-o

he-GEN compose-DADJ poem read-PRF-1

‘I have read poem/poems composed by him.’

(c) loa-ãtɔ bɔr kand-ɔmanga (hɔi)

boy-CL very cry-DADJ.M (be)

‘The boy is a crybaby.’

(d) sɑal-CLUD-ɪ kand-ɔmanga (hɔi)

girl-CL-F very cry-DADJ.F (hɔi)

‘The girl is a crybaby.’

In (10a) and (10b) the derivational suffix -ɔt derives an adjective from a verbs likʰ ‘write’ and ḍɔs ‘compose’. Derivational suffix -u derives an adjective kanduo ‘a boy who is a crybaby’ from a verb kand ‘cry’ in (10c). The feminine counterpart of -u is -uĩ which derives kanduĩ ‘a girl who is a crybaby’ from the verb kand ‘cry’ in (10d).

3.3.3 De-adjectival adjective

De-adjectival adjectives are adjectives derived from adjectives. Affixation of a bound morpheme with adjective changes the meaning of the root adjective and in this process derives another adjective which is shown in Table 14:

Table 14 shows derivation of adjectives from adjectives in Assamese with the prefix -ɔ. The prefix ɔ- derives adjectives like ḍɔcbuɔ ‘uncivilised’, ɔcbukɔ ‘unreasonable’, ḍɔcbuɔ ‘extraordinary’ and ɔcbuɔ ‘incomparable’ from another adjective ḍɔcbuɔ ‘civilized’, ɔcbukɔ ‘reasonable’ ḍɔcbuɔ ‘ordinary’ and ɔcbuɔ ‘comparable’ respectively. Thus ɔ- is a class maintaining derivational prefix. Thus we can see that prefix ɔ- derives an adjective having a negative meaning as well as positive meaning.
Table 14 Deadjectival adjectives in Assamese

| Root      | Gloss   | Prefix | Prefix+Root | Gloss    |
|-----------|---------|--------|-------------|----------|
| ɔbɔbɔ ADJ | civilized | -ɔ-   | ɔbɔbɔ ADJ   | uncivilized |
| zuktik ADJ | reasonable | -ɔ-  | zuktik ADJ   | unreasonable |
| xɔdɔma ADJ | ordinary | -ɔ-  | xɔdɔma ADJ   | extraordinary |
| tulɔni    | comparable | -ɔ-   | -tulɔni ADJ | incomparable |

However, the morpheme is more productive in deriving adjective having a negative meaning. Sentences (11 a-b) show the derived adjectives occur as a complement in the predicate phrase.

11. (a) tɛʊ̃ ɹbjktiwɔɔ (hɔ)  
his personality DADJ-common (be)  
‘His personality is exceptional.’

(b) gɔwɛ xe-ɔ-bhutɔɔ phɔlɔ ɫabʰ ɫɔ-ɪl-ɛ  
research-LOC he DADJ-former success gain do-PST-3  
‘He got unprecedented success in research.’

From the above analysis it is evident that ɔ- is a very productive derivational morpheme that derives adjective from adjective (see Table 15) and noun form noun (see Table 1). This prefix is more productive in deriving an adjective from another adjective.

3.4 Derivation of Assamese Adverbs

Adverbs in Assamese are derived from word categories like noun and adjective by affixing derivational morphemes. In Table 16 we have instances of derived adverbs from nouns:

3.4.1. Denominal Adverbs

Denominal adverb is an adverb derived from a noun. Derivation of an adverb from noun is very frequent in Assamese. Morphemes -ɛ, and -ai are suffixed with a noun to derive an adverb from a noun which is shown in Table 15.

Table 15 Denominal adverbs in Assamese

| Root   | Gloss | Suffix | Root+Suffix | Gloss   |
|--------|-------|--------|-------------|---------|
| begN   | Speed | -ai    | begal ADV   | speedily |
| nipunɔta N | Skill | -ɛ    | nipunɔta ADV | skillfully |

Table 15 shows derivation of adverbs from nouns in Assamese with the suffixes -ai, and -ɛ. Suffixation of -ai derives the adverb begal ‘quickly, fast, speedily’ from the noun beg ‘speed’. Suffixation of -ɛ to the noun nipunɔta ‘skill’ derives the adverb nipunɔta ADV ‘skilfully’. In examples (12 a-b) we have adverbs in the imperative sentence (12a) and (12b).

12. (a) beg-ai zu-ɑ  
speed-DADV go-2P  
‘Go quickly.’

(b) boideu-ʃ-dɔɛ ɫikh-ɑ  
SISTER-GEN-LIKE WRITE-2  
‘Write like your sister.’
The morpheme -ɑi can be directly suffixed to the noun to derive an adverb as in (12a). But (12b) shows that the morpheme -dɔɛ cannot be suffixed directly to the stem. The genitive morpheme -ɹ is suffixed first with the noun stem which is followed by the derivational suffix -dɔɛ.

3.4.2. De-adjectival adverbs

Following Crystal (2008:130) de-adjectival adverb can be explained as an adverb that originates as an adjectival but can be used as an adverb in a sentence. De-adjectival adverbs is formed with the derivational suffixes -koi and -ɑi. These two bound forms are very productive in the language.

Table 16 Deadjectival adverbs in Assamese

| Root     | Gloss | Suffix | Root+Suffix | Gloss      |
|----------|-------|--------|-------------|------------|
| sizil ADJ | neat  | -koi   | sizilkoi ADV | neatly     |
| kʰɔɹ ADJ | fast  | -koi   | kʰɔɹkoi ADV | speedily   |
| gʰɔɹ ADJ | dense | -ɑi    | gʰɔɹɑi ADV  | densely/frequently |
| bɔhɔ ADJ | broad | -ɑi    | bɔhɔɑi ADV  | broadly    |

Table 16 shows derivation of adverbs from adjectives in Assamese with the suffixes -koi, and -ɑi. Suffixation of -koi to the adjectives sizil ‘neat’ and kʰɔɹ ‘fast’ derives the adverbs sizilkoi ‘neatly’ and kʰɔɹkoi ‘speedily’ respectively. Suffixation of -ɑi to adjectives gʰɔɳ ‘dense/frequent’and bɔhɔi ‘broad/wide’ derives adverbs gʰɔɳɑi ‘densely/frequently’ and bɔhɔɑi ‘broadly’ respectively. In (13a-c) we have sentences where the adverbs derived by -koi and -ɑi function as adverb of manner.

12. (a) tumi gɑn-tʊ bʰal-koi gʊ.ɑ
    you song-CL good-DADV sing-2
    ‘You sing the song nicely.’

(b) bɪʁɛn gʰɔ-ɑi bɔrzɑu-ɑloi go-i as-ɛ
    biren dense-DADV market-DAT go-NF exist-3P
    ‘Biren is going to the market frequently.’

(c) tumi kʰɔɹ-koi lɪkʰ-ɪbɔloɪ sɛsta kʊ-ɑ
    you fast-DADV write-INF try do-2
    ‘You try to write fast.’

3.4.3. Complete reduplication

In Table 17 we have a few examples of complete repudlication in Assamese. The suffix -ɛ adjoins to the adjective and the reduplicated form functions as an adjective.

Table 17 Complete reduplication to derive adverbs

| Adjective | Gloss | Suffix | Adverb | Gloss           |
|-----------|-------|--------|--------|-----------------|
| bʰɔl     | good  | -ɛ     | bʰɔl-ɛ | bʰɔl-ɛ          |
|           |        |        |        | Safely/nicely/ properly |
| bɛɡ     | quick | -ɛ     | bɛɡ-ɛ  | quickly         |
| lahɛ     | slow  |        | lahɛ lahɛ | slowly         |
In Table 17 we have a reduplicated adverb lahe lahe ‘slowly’ which does not take the adverbial marker -ɛ. Complete reduplication is one of the strategies to derive manner adverbs. In (13) the derived adverb indicates the manner in which the subject has arrived.

13. (a)  nắngen bʰal-ɛ bʰal-ɛ pa-l-ɛ-hi
    nắngen good-DADV bʰal-ɛ get-PST-3-ASS
    ‘Nagen arrived safely.’

### 3.4.5 Denominal adverbs

In Table 18, we have instances of derivation of manner adverbs from nouns. Here too the adverbial marker -koi and the reduplicated marker -ɛ suffixes to the noun to derive adverbs.

| Noun | Gloss | Suffix | Adverb | Gloss |
|------|-------|--------|--------|-------|
| xaiN | row   | -koi   | xai-koi | ‘in a row’ |
| kaiN | ear   | -ɛ     | kane kane_ADV | ‘whisper’ |

The adverbial marker -koi suffixes to the noun xai ‘row’ to derive the adverb xai-koi ‘in a row’. The suffix -ɛ derives the adverb kane kane ‘silently whisper in the ear’ from the noun kai ‘ear’. In (14a-b) the derived adverbs modify the main verbs.

14. (a)  xi kʰobɔq-to kan-ɛ kan-ɛ ko-l-ɛ
    he news-CL ear-DADV ear-DADV tell-PST-3
    ‘Lit: He told the news ear to ear.’
    ‘He whispered the news.’

(b)  puli-bɔɾi xaii xaii-koi ju-m
    sapling-PL row row-DADV plant-1.FUT
    ‘I will plant the saplings in rows.’

### 6. Conclusions

The analysis of the derivational process in Assamese shows that the language uses both prefixes and suffixes to derive a new category or maintain the same category. Of the two affixation processes suffixation is more productive in the language than prefixation. The class maintaining derivational affixes in the language are: -ɛ, au-, ɛpɔ-, ɛnʊ-, du-, du-, n-, -a, -ikau /kau/, -ikɔɹɔn/kɔɹɔn, -bʰɔwɔn -ɔi, -two. The class changing derivational affixes are: -ɔni, -woi, -ɔia, -uta, -jɔk/ok, ɔta, ɔtwo, -two, -iɑ, -iɔk, ɔj, ɔn, ɔn, ɔn, ɔn, ɔn, ɔn, ɔn, -wɔ, -ai, -koi, -ɛ, -koi, -ai, -mubk, ɔhin. Derivational affixes with negative connotation are: -hɔn, du-, ɔn, ɔn, ɔn, ɔpɔ, du-. The prefix -ɔ can be both class changing and class maintain. This prefix can also derive words with negative connotation. The group of bound morphemes du-, ɔhin, du-, ɔn, ɔn, ɔn, etc. When affixed to nouns the derived word carries the meaning ‘devoid of or absence of the quality referred by the root’. In contrast the negative morpheme ɔn- is class maintaining and the derived negative verb functions as a matrix verb in a clause. Some derivational morphemes like -ɔni, -mubk and -ɔta are very productive in the language. On the other hand morphemes like -bʰɔwɔn are not very productive.

Morphophonemic change of the stem is observed in cases like naωɔiia ‘boatman’, when the bound morpheme -ɔiia is suffixed to nau ‘boat’ here we observe morphophonemic change where /ɔj/→/w/. Also we have instances of vowel copying when the negative morpheme ɔn- is prefixed to a verb root. Also some allomorphs observed in our analysis are -ikau/kau, ikɔɹɔn/kɔɹɔn, -jɔk/ok, ɔtwo/two, -iɑ/ja. Lastly we have observed some bound morphemes have the ability to affix with different word categories to derive new words. For example, -two can derive noun from adjective and noun form noun.
Abbreviation

1 - first person
2 - second person
3 - third person
ass - assertive
caus - causative
clf - classifier
col - collective
cp - complimentizer
dadv - deadverbal
dadj - deadjectival
dat - dative
dnom - denominal
dverb - deverbal
erg - ergative
F - feminine
fut - future
gen - genitive
inf - infinitive
loc - locative
M - masculine
neg - negative
nf - non finite
nmz - nominalizer
prf - perfect
prg - progressive
pst - past
qtf - quantifier

References

Anderson, S. R., (1995), A-Morphous Morphology. Cambridge University Press. New York. USA.

Barbora, M. (2001). 'COMPs in Assamese: Implications for Second Language Acquisition'. Ph. D. Thesis, Tezpur University, Tezpur, Assam.

Barbora, M. (2016). 'Causative Constructions in Assamese'. In Barbora, M., and Borah, G., editors, Aspects of Modern Assamese. Pages 115-132. Bhabani offset Pvt. Ltd. Guwahati for Tezpur University.

Booij, Geert. (2012). The Grammar of Words: An Introduction to Linguistic Morphology. Oxford University Press. UK.

Crystal, D. (2008). Dictionary of Linguistics and Phonetics. Blackwell Publishing. UK.

Goswami, G. (1982). The Structure of Assamese. Gaauhati University Press.
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