CHAPTER 5

Assamese Suffixes and their Productivity

We talked about the negative prefixes and their productivity in the earlier chapters. Now, suffixes are discussed in these chapters. The reason why there are more suffixes than prefixes is already been discussed in Chapter 1, and in this chapter, we analyse the semantic relevance of the suffixes as well as the morphological rules of derivation and their productivity using corpus (sample A) and dictionary data (sample B).

5.1 Semantic relevance of the Assamese Suffixes

5.1.1 -*ɔk* -অক

It is an adjective and noun forming suffix which can be added to an adjective $(bud^{h}ijsk \text{ `intelligent'} \rightarrow bud^{h}i \text{ `intelligence'} + sk)$, noun $(natsk \text{ `drama'} \rightarrow nat \text{ `drama'})$ (lek^h) and verb ($lek^h)$ 'A writer' $\rightarrow lek^h$ 'to write' $+ \beta k$, salpk 'a driver' $\rightarrow spl$ 'to move' + $\mathfrak{o}k$) bases. It is derived from O.I.A. - $\mathfrak{a}ka > M.I.A^{13}$. - $\mathfrak{a}kka$ (Kakati, 1995). Although, Kakati (1995) says "it is a secondary suffix found in a few words used adjectively", but this suffix is used as a primary suffix too, i.e., it is used in the verbal bases as well. For example, *lek^hok*, *salok* as mentioned above. However, other linguists have described it as both a primary and secondary suffix. In some words, this suffix confirms or indicates the existence of certain qualities or elements or expertise. When it comes to semanticity, the suffix activates the domain of agenthood, where one performs an action, such as $xad^h 2k$ 'who or what accomplishes or effects', gaj2k 'singer', utxahok 'one who encourages' etc., domain of characterisation which denotes the traits or features mentioned in the root, such as $nat \partial k \rightarrow nat$ 'drama' + ∂k , which means related to drama or the drama itself, dol > dol 'to swing' + 2k, which means the globe, as the globe keep on moving, it is related to the characteristics of swinging. Similarly, *and*^hak 'a blind person', *ziwak* 'animal' etc.

When it comes to adjectivisation, it gives rise to the domain of relation as well as evaluation. It gives rise to the domain of relation such as $hinxatmak \rightarrow hinxa + atma + ak$, where hinxa means violence and the derived word means anything related to violence. $amurtak \rightarrow amurta$ 'bodiless, immaterial' + ak, which means marked by

¹³ O.I.A. Old Indo-Aryan

M.I.A Middle Indo-Aryan

the intensity or violence. *hiŋxatmɔk, ɔmurtɔk* can be viewed from the domain of evaluation, as it describes the type of quality that the base and the derivation hold.

5.1.2 -*ɔn* -অন

on- is a nominaliser, it mostly forms verbal nouns such as *xowon* 'the act of sleeping' and qualitative nouns such as *molijon* 'dirty' and attached to nominal and verbal bases. It also forms a few adjectival derivatives. It has extensions in (a) -ana, (b) -ani (Kakati, 1995). The suffix prototypically indicates an action.

on- primarily activates the domain of process, i.e., the act of a kind when it is attached to a verbal base. For example, k^hawon 'the act of eating' $\rightarrow k^ha$ 'to eat' + on, *pindhon* 'the act of wearing' $\rightarrow pind^h$ 'to wear' + on, *porhon* 'the act of studying' $\rightarrow porh$ 'to study' + on, *xowon* 'the act of sleeping' $\rightarrow xo$ 'to sleep' + on etc. When the suffix is attached to a nominal base or root, it activates the domain of possession. It means the possession of the traits or quality mentioned in the root, such as *molijon* 'dirty' $\rightarrow moli$ 'dirt' + on.

5.1.3 -əna -অনা

It is an "extension of *-an* with the addition of definitive *-a* (<-aka) to denote connected objects" Kakati (1995). While describing the previous suffix *-on*, he stated that it is the same as O.I.A. primary suffix *-ona*. In this view, we have the scope to believe that these two suffixes are competing suffixes. *-ona* is a nominal suffix added to verbal bases (*bazona* 'musical instrument' $\rightarrow baz$ 'to play' + *ona*) and in a few nominal bases (*xubaxona* 'one having pure desires' $\rightarrow xubax$ 'a sweet smell' + *ona*). When it comes to the semantic roles, it activates the domain of characterisation to denote a connected activity or object or to the characteristics of the base that the derived word displays. For example, *k*^h*elona* means a toy or a playing object. The base *k*^h*el* means to play and the derived word suggests that the object is connected to playing. Similarly, *rosona* 'the act of creating' $\rightarrow ros$ 'to create' + *ona*, *xantona* 'consolation' $\rightarrow xanto$ 'calm' + *ona* etc.

5.1.4 *- эti* - অতি

-*oti* is attached to verbal (xisoroti 'distribution' \rightarrow xisor 'to scatter' + oti) and nominal (*namoti* 'one who sings' \rightarrow *nam* 'name' + *oti*) bases and the resultant derivatives are nouns (namoti 'one who sings', xasoti 'one who saves') and adjectives (bowoti 'flowing'). Along with other nominal and adjectival words, the suffix is also used to express feminine gender in some words (xoub^hagjowoti 'lucky women' \rightarrow xoub^hagjo 'luck' + 2ti). -2ti as a feminine form is considered as the parallel form of the masculine ota (Kakati, 1995). -oti also has other diminutive forms -ti and -ta. The suffix activates the domain of agenthood and characterisation when it comes to nominal derivatives. For example, in the agenthood domain, *rowsti* 'A woman who implants paddy seedling' \rightarrow *ro* 'to implant' + *sti*, *namsti* 'one who sings $naam^{14} \rightarrow nam + sti$ ', *xassti* 'one who saves' \rightarrow xas 'to save' + *sti* etc. Again, for the domain of characterisation we take an example, xukoti which means dried fish. The base of this word is xuka meaning 'to dry' and the derived word carries the characteristics of the root. In the case of adjectival derivatives, it activates the domain of possession and relation. For example, xoub^haigjowoti \rightarrow xoubhaigo 'luck' + oti means a fortunate woman who possesses luck in her favour. Similarly, $g_{2}rb^{h} g_{2}rb^{h} g_{2}$ $d^{h}up$ 'incense stick' + 2ti means creating fragrance with incense stick, meaning the fragrance is related to the incense stick. Similarly, $bow_{2}ti \rightarrow b_{2}$ 'to flow' + 2ti means flowing, xisoroti 'scattered' \rightarrow xisor 'to scatter' + oti etc.

5.1.5 - *oni* - অनि

It is a nominaliser which is added to verbal $(rand^h ni 'cook' \rightarrow rand^h 'to cook' + oni)$ and nominal base $(d^h an ni 'rice field' \rightarrow d^h an 'rice' + oni)$. It also works as an agentive marker $(rand^h ni)$. It was originally a feminine suffix, but over the course of time, its sense was lost and the form remained (Kakati, 1995). We are unable to fully concur with this assertion, however, as many words continue to be seen as having a feminine connotation. Instead, we could claim that its meaning has expanded to include

¹⁴ Verses in praise and prayer of a deity, a hymn

more meaning. In the older, more traditional Assamese society, men and women had different jobs to do. While some tasks were meant to be completed by men, others, such as cooking, weaving, harvesting crops in paddy fields, etc., were typically completed by women. Work division has gradually begun to obscure the gender gap, and today men also get involve in tasks that were formerly only carried out by women. To distinguish this representation, *-i* (short *-i*) is therefore used for male (*rowoni*, *randhoni*, *bowoni*), whereas *i*: (long *-i*) is used for female (*rowoni*:, *randhoni*:, *bowoni*:) in Assamese. This helps to identify the gender of the doer. However, this distinction is lost in spoken form and only survived in writing. It uses non-feminine words to communicate related ideas. This suffix produces many expressive words in the language as well (*tirbironi* 'The act of glittering, sparkle', *g^horg^horoni* 'A rumbling or creaking sound').

The suffix activates the domain of agenthood such as *randhoni* 'One who cooks', *rowoni* 'one who transplants paddy seedlings'; the domain of process as an action or result, for example, *xikoni* 'the process of teaching' \rightarrow *xika* 'to teach' + *oni*, *koponi* 'the state of trembling' \rightarrow *kop* 'to tremble' + *oni* etc; the domain of representation such as *kathoni* \rightarrow *kath* 'wood' + *oni*, which indicates a vast area covered with forest, *kosuwoni* \rightarrow *kosu* 'arum'+ *oni* represents a plantation of arum, *kaitoni* \rightarrow *kait* 'thorns' + *oni* means a jungle or bush full of thorns, *ghumoni* \rightarrow *ghum* 'sleep' + *oni* means the state of being lost in thought or abstractness etc.

5.1.6 - *onija* - অনিয়া

A compound suffix made up of -an+-iya (Kakati, 1995). It is mostly attached to verbal bases (*pohonija* 'domestic' \rightarrow *poh* 'to nurture'+*onija*) and in a few noun bases ($at^{h}uwonija^{15}$ 'till the knee' \rightarrow $at^{h}u$ 'knee' + *onija*) and its derivatives belong to the category of adjectives (*uronija* 'flying' \rightarrow *ur* 'to fly' + *onija*) and nouns (*bilonija* 'one who distributes food' \rightarrow *bila* 'to distribute' + *onija*).

However, when it comes to the semantic roles, it activates the role of agenthood in nouns, such as $mogonija \rightarrow mag$ 'to beg' + onija means a person who does the act of

¹⁵ This word is found in the autobiography of Laxminath Bezbarua's "Mor Jiwan Xowaran". However, it is not found in the dictionary as well as in the corpus sample.

begging. Similarly, *bilonija* 'one who distributes food' \rightarrow *bila* 'to distribute' + *onija*, *duwonija* 'an interpreter' \rightarrow *duwan* 'dialect' + *onija* etc. As an adjective, it activates the domain of voice which points to the mode of an action, such as *uronija* \rightarrow *ur* 'to fly' + *onija* which means capable of flying i.e., capable of doing the action mentioned in the root. Similarly, *pelonija* 'Fit to be thrown away as worthless or defiled' \rightarrow *pela* 'to throw' + *ija*, *pohonija* 'domesticated' \rightarrow *poh* 'to domesticate' +*onija* etc. It also activates the domain of relation, which means something that relates to the characteristics mentioned in the root such as *g*^h*uronija* \rightarrow *g*^h*ur* 'to circle' + *onija*. Here, *g*^h*uronija* means something that has the shape of roundedness. Similarly, *tulonija* 'fostered, adopted' \rightarrow *tul* 'to foster' + *onija*, *k*^h*ohonija* 'The act of falling off/erosion, as a river water' \rightarrow *k*^h*oh*

5.1.7 *- วานพล -* অৰুৱা

-*oruwa* is a parallel formation to -*ariya* and is an extension of -*ata* > -*ara*- > -*ara* with Assamese -*uwa* (Kakati, 1995). It produces adjectival (*dekerua* 'Full-fledged, fullgrown' \rightarrow *deka* 'young' + *oruwa*) and noun (*batorua* 'A traveler, way-farer, travelling' \rightarrow *bat* 'path/road' + *oruwa*) derivatives which are attached to noun bases only (*dekerua* \rightarrow *deka* 'young' + *oruwa*) derivatives which are attached to noun bases only (*dekerua* \rightarrow *deka* 'young' + *oruwa*, *batorua* \rightarrow *bat* 'path' + *oruwa*). It produces words from the domain of agenthood, such as *batoruwa* 'A passerby', *hatoruwa* 'A person who goes to the market' \rightarrow *hat* 'market' + *oruwa*. In adjectives, it activates the domain of resemblance such as *modoruwa* 'Brownish colour' \rightarrow *mad* 'clay' + *oruwa*. Similarly, in *dekeruwa* \rightarrow *deka* + *oruwa*, the root *deka* means young and the derived word *dekeruwa* means something which is similar to the quality of the root i.e., fully grown up or fullfledged. It also activates the domain of evaluation, where it evaluates the character or the type of the resultant object or action, such as *ad^horuwa* \rightarrow *ad^ha* 'half'+ *oruwa* and it means the state of an action, i.e., something which is half done or not completely done. However, the words *modoruwa* and *dekeruwa* can also be counted under the category of evaluation, as they mean having the quality or characteristics mentioned in the root.

-al is attached to both verbal (b^hezal 'impure' $\rightarrow b^{h}eza$ 'to mix'+al) and nominal (*nodijal* 'a fisherman' \rightarrow *nodi* 'river' + *al*) bases and it results in nominal (*gowal* 'a milkman' $\rightarrow go$ 'cow' + al) and adjectival ($k^h 2\eta al$ 'of an angry temper' $\rightarrow k^h 2\eta$ 'anger' + al) derivatives. The suffix has an extension in -ali and the source of this suffix is O.I.A. ala meaning 'possessing', 'pertaining to' (Kakati, 1995). When it comes to noun derivatives, it activates the domain of characterization, which depicts the apparent features such as *nodijal* 'fisherman'. Here, the root *nodi* means river and as the activity of fishing is closely associated with the river, *nodijal* carries this feature in it. Similarly, $uzonijal \rightarrow uzoni$ 'upper' + al means living or relating to the upper part of a stream or place, $tonjjal \rightarrow tongi$ 'a dovecoat' refers to a person who watches over cultivation from the above etc. As an adjective, it activates the domain of resemblance such as $tezal \rightarrow tez$ 'blood' +al which means resembling blood, containing or composed of blood. Similarly, $telal \rightarrow tel$ 'oil' + al meaning oily, fatty; the domain of evaluation such as irxal \rightarrow irxa 'envy' + al which talks about the type of nature i.e., envious, $kobal \rightarrow kob$ 'speed' + al indicates the nature of movement which is speedy; the domain of possession such as $p^{h}ulam \rightarrow p^{h}ul$ 'flower' + am which means adorned with figurative flowers or something which is full of flowery design.

5.1.9 -alu - আলু

-alu is one of the adjectives forming suffixes of the language, which is attached to noun bases (kripalu \rightarrow kripa 'mercy' + alu 'of a friendly, generous, or warm-hearted nature', dojalu \rightarrow doja 'kindness' + alu 'the quality of helping and giving away freely to the needy'). It activates the domain of evaluation or possession such as *irxalu* \rightarrow *irxa* 'envy' + alu which is the evaluation of the type of nature which is jealous or it can be said that it indicates the possession of a quality. Similarly, krod^halu \rightarrow krod^h 'anger' + alu means the nature of being angry, swopnalu \rightarrow swopno 'dream' + alu means the state of being dreamy etc.

5.1.10 -aru -껰좍

-aru is attached to verbal bases and the resultant derivatives are nouns (zuzaru \rightarrow zuz 'to fight' + aru 'A fighter'). It activates the domain of agenthood such as xikaru \rightarrow xik 'to learn' + aru 'A learner', dubaru \rightarrow dub 'to dive' + aru 'A diver' etc. The suffixes -alu and -aru are different from each other, which is not only apparent phonologically but also in their syntactic distribution. While -alu is attached to nominal bases, for example, swopno (N) 'dream' + alu \rightarrow swopnalu 'dreamy', doja (abstract N) 'kindness' + alu \rightarrow dojalu 'kind, gracious'; -aru is attached only to verbal bases, for example, dub (v) 'to drown' + aru \rightarrow dubaru 'a diver', xik (v) 'to learn' + aru \rightarrow xikaru 'a learner' etc. Again, the suffix -alu results in adjectival words which bear the essence of the noun, but the suffix -aru forms nominal derivatives, which are solely agentive words.

5.1.11 -ami -আমি

It forms noun (*bandɔrami* \rightarrow *bandɔr* 'monkey'+*ami* 'The nature of monkey') derivatives and is attached to nominal bases (*bandɔrami*, where the base *bandɔr* is a noun), verbal bases ($t^h 2gami \rightarrow t^h 2g$ 'to cheat' + *ami* 'deceit, fraud') and adjectival bases (*dustami* \rightarrow *dustɔ* 'wicked' +*ami* 'dishonesty'). However, there is no mention of the origin of this suffix or about the formation of this suffix in Kakati's book. It activates the domain of characterisation, such as *bandɔrami* which means having the characteristics of a monkey, *pɔgɔlami* means having the quality of being mad etc.

5.1.12 *-ahi* -আহি

-ahi forms adjective (solahi 'deceitful' \rightarrow sol 'to deceit' + ahi) and noun (modahi 'alcoholic, drunkard' \rightarrow mod 'alcohol' + ahi) derivatives and it is added to noun bases (modahi \rightarrow mod 'alcohol' + ahi 'alcoholic, drunkard) and verbal bases (melahi \rightarrow mel 'to open' + ahi 'wide-mouthed'). It is originated from -ah + -i (pleonastic); -i adjectival (Kakati, 1995). It activates the domain of relation as in modahi, the meaning of the base mod is alcohol and modahi means one who consumes alcohol. Similarly, the meaning of the base mel is to open in melahi and it means something that is related to opening.

<mark>5.1.13 *-ija -*ইয়া</mark>

-*ija* is attached to noun ($\tilde{k}aitija \rightarrow \tilde{k}ait$ 'thorn' + *ija* 'thorny') bases and verb (*rok^hija \rightarrow rok^h* 'to guard' + *ija* 'guard, watchman') bases and it results mostly in adjectival (*zulija* 'Liquid' \rightarrow *zol* 'water' + *ija*) and nominal (*mowamorija*¹⁶ \rightarrow *mowamora* 'name of a place' + *ija*) derivatives. The suffix is originated from *ija* < -*ika* + -*aka* (Kakati, 1995). In case of adjectives, it primarily activates the domains of relation and resemblance. For example, in *porhaxolija* \rightarrow *porhaxali*+*ija*, the base means school and the derived word means anything related to school. Similarly, *xotrija* means pertaining to *xotra* (*Sattra*¹⁷), *potfimija* \rightarrow *potfim* 'west' +*ija* means related to west, *paharija* \rightarrow *pahar* 'hill' + *ija* means hilly or related to a hilly, mountain area. In case of nouns, it activates the domains of characterisation, such as *duporija* \rightarrow *dupor* 'noon' +*ija*, which means midday, and agenthood such as *d*^h*ulija*, one who plays the Dhol, *dulia* \rightarrow *dul*+*ija* meaning a Palki bearer.

5.1.14 -ua -ওৱা/-উৱা

A noun (*rɔnua* 'Warrior' \rightarrow *rɔn* 'battle'+*ua*) and adjective (*elehua* 'Lazy' \rightarrow *elah* 'laziness' +*ua*) forming suffix which is added to noun bases. According to Kakati (1995), it is a pleonastic expression that indicates resemblance. As a noun it activates the domain of agenthood such as, *bihua*, a male person who performs Bihu¹⁸, *bɔnua* \rightarrow *bɔn* 'work' + *ua* means a worker, *rɔnua* is someone who fights in warfare. As an adjective, it activates the domain of resemblance as in *keselua* \rightarrow *kesa* 'unripe' + *ua*, the meaning of the base is unripe or raw and the derived word means something related to the state of not fully ripe. Similarly, *ad^hɔruwa* 'half-done' \rightarrow *ad^ha* 'half' + *ua*, *b^hagɔrua* 'tired, exhausted' \rightarrow *b^hagɔr* 'tiredness' + *ua* etc.

5.1.15 -ual - উরাল/-ওরাল

-ual is primarily used to form adjectives $(b^{hit} jruwal$ 'privative' $\rightarrow b^{hit} jr$ 'in' + uwal) and a few nouns (guwal 'milkman' $\rightarrow go$ 'cow' + uwal). It is added to noun bases (guwal 'milkman' $\rightarrow go$ 'cow' + uwal) and verbal bases (rak^howal 'guard, watchman' \rightarrow rok^h 'to guard' + uwal). It is derived from -uwa, adj + pleonastic -la (Kakati, 1995).

¹⁶ The Moamoria were the adherents of the egalitarian, proselytizing Mayamara Satra of 18th-century Assam, who initiated the Moamoria rebellion against the Ahom kingdom in the 18th century.

¹⁷ Sattras are monastic institutions created as part of the 16th century Neo-Vaishnavite reformist movement started by Vaishnavite saint-reformer Srimanta Sankaradeva (1449-1596) in Assam.

¹⁸ Bihu is an Assamese harvest festival which traditionally celebrates the change of seasons.

When it comes to semantic roles, as a noun, it denotes agenthood, such as $g^{hatowal}$ 'A man who operates a ferry/boat to carry persons from one side of the river to another side of the river' $\rightarrow g^{hat}$ 'port' + *uwal*. When it comes to adjectivisation, it activates the domain of possession such as, *pahowal* \rightarrow *pah* 'edge' + *uwal* meaning one who plumpy or fat, $dzt \delta wal \rightarrow dat$ 'teeth' + *uwal* means one who owns teeth or having tasks. It also activates the domain of relation as in $b^{hit}zruwal$, where the base $b^{hit}zr$ means inside or inner and the derived word denotes something related to the inside of one's house, or someone to whom secrets are entrusted.

5.2 Morphological rules of derivation:

5.2.1 - *ck* suffixation

1. Noun_x \leftarrow Noun_y - $\mathfrak{s}k$

Meaning: Having the property of Nouny

- a) *natok* 'drama' = $[[nat 'drama']_N ok]_N$
- c) səndrək 'moon, nail'= [[səndrə 'moon']_N ək]_N
- e) podok 'trophy'= [[pod 'designation'
]_N ok]_N
- b) golsk 'globe' = [[gol 'round']_N sk]
- d) gond^hok 'a strongly smelled thing' =
 [gond^ho 'smell']_N ok]_N
- f) sitrok 'painter' = [sitro 'drawing']_N
 ok]_N

2. Noun \leftarrow Verb $-\beta k$

Meaning: Doer of an action, where the action is expressed by a verb

- a) *lik^hok* 'a writer' = [[*lik^h* 'to write']_V *ok*]_N
 b) *gonok* 'an astrologer' = [[*gon* 'to count']_V *ok*]_N
 c) *protipalok* 'a protector'= [[*proti*]_{prefix} d) *xad^hok* 'A devotee' = [[*xad^h* 'to persevere']_V *ok*]_N
- 3. Noun_x \leftarrow Noun_y - $\mathfrak{o}k$

Meaning: Doer of an action, where the activity is mentioned in the Nouny

a) xewsk 'A worshipper' = [[xewa b) snubadsk 'A translator' = [[snubad 'service']_N ∂k]_N 'translation']_N ∂k]_N c) $pat^h j k$ 'A reader' = [[pat^h 'A lesson']_N d) $xik^h j j k$ 'teacher' = [[$xik^h j a$ 'education']_N $(\Im k]_{N}$ $(jk]_N$ e) $krix_2k$ 'A farmer' = [[krixi 'farming']_N f) awiskar2k who discovers' 'One $\Im k$]_N =[[*awiskar* 'to discover']_N ∂k]_N

4. Adjective \leftarrow Noun - \mathfrak{sk}

Meaning: Quality of having the property of a Noun

- a) *sputrsk* 'without child' = $[[s]_{prefix}$ b) *protixed^hok* 'preventive'= [[*protixed^h* [*putro* 'son']_N]_N ∂k]_{Adj} 'to prevent']_N ∂k]
- c) $x_{2}\eta k^{h}j_{2}k$ 'related to number'= $[[x \supset \eta k^h ja \text{ `number'}]_N \supset k]_{Adj}$
- e) xirxxx 'headed' = $[[xirxx 'peak']_N$ *эk*]_{Аdj}
- d) zatsk 'borne' = [[zat 'caste']_N sk]_{Adj}

5.2.2 -*on* suffixation

1. Noun \leftarrow Verb -n

Meaning: The activity of the verb or the act of doing something

a) <i>orzon</i> 'earning' = $[[arz 'to earn']_N on]_N$	b) gənən 'counting'= $[[gən 'to count']_V on]_N$
c) k^hawon 'eating' = [[k^ha 'to eat'] _V on] _N	d) <i>palon</i> 'nurturing' = $[[pal \text{ 'to nurture'}]_V$
	on] _N
e) k^h undon 'grinding' = [[k^h und 'to grind'] _V	
1	

 $(n)_{N}$

2. Noun_x \leftarrow Noun_y - $\Im n$

Meaning: Having the property of Noun_y

a) $b^{h}ozon$ 'the act of eating' = [[$b^{h}oz$]	b) <i>kəthopəkəthən</i> 'conversation'= [[<i>kətha</i>
'feast'] _N <i>ɔn</i>] _N	'talk'][$up\sigma$] _{prefix} [$k\sigma t^{h}a$ 'talk'] _N σn] _N
c) <i>ziwon</i> 'lifetime'= [[<i>ziwo</i> 'alive'] _N <i>on</i>] _N	d) alapon 'The act of talking' = [[alap
	'conversation'] _N ∂n _N

5.2.3 -*ona* suffixation

1. Noun \leftarrow Verb -on

Meaning: An instance or an entity, whose activity is expressed by the verb

- a) $k^{h}undona$ 'a grinding instrument' = b) rosona 'essay' = [[ros 'to compose']_V [[$k^{h}und$ 'to grind']_V ona]_N ona]_N
- c) gonona 'counting' = [[gon 'to d) bind^hona 'a boring or drilling tool' = count']_V ona]_N
 d) bind^hona 'a boring or drilling tool' = [[bind^h 'to pierce']_V ona]_N
- 2. Noun_x \leftarrow Noun_y -on

Meaning: Pertaining to the property of Nouny

a) kamona 'desire' = [[kam 'action']_N
b) xomb^hawona 'possibility, likeliohood' = [[xomb^hob 'possible']_N ona]_N
c) kolpona 'imagination' = [[kolpo d) b^hauna 'drama'= [[b^hau 'acting']_N

 na_N

5.2.4 ->ti suffixation

1. Noun ← Verb - oti

'dream']_N *ona*]_N

Meaning: Doer of an action expressed by the Verb

a) $b^{h}az ti$ 'a woman who fries'= [[$b^{h}az$ b) rowsti 'a woman who implants 'to fry']_V sti]_N paddy seedling'= [[ro 'to plant']_V

Эti]_N

- c) xuk > ti 'dried fish'= [[xuka 'to dry']_V d) xas > ti 'one who saves'= [[xas 'to save']_V save']_V save']_N
- 2. Noun_x \leftarrow Noun_y -oti

Meaning: Doer of the activity expressed by Noun_y, or related to the activity mentioned by the Noun_y

- a) boxoti 'dwelling' = [[bax 'to live']_N b) hasijoti 'a kind of herb which excites oti]_N sneezing'= [[hasi 'sneeze']_N oti]_N
- c) d^hunoti 'The girl who is very d) sworgoti 'death' = [[sworgo stylish'= [[d^hun 'fashion']_N oti]_N 'heaven']_N oti]_N
- 3. Adjective \leftarrow Verb - oti

Meaning: A quality related to an action, which is expressed by the verb

- a) k^hirɔti 'a cow that gives milk' = b) xisɔrɔti 'scattered' = [[xisɔr 'to [[k^hira 'to extract milk']_V ɔti]_{Adj} scatter']_V ɔti]_{Adj}
 c) mɔrijɔti 'dead and dry as fuel' = d) bowəti 'flowing' = [[bo 'to flow']_V
- $[[mor 'to die']_V oti]_{Adj}$
- 4. Adjective \leftarrow Noun - \neg ti

Meaning: Related to the quality or property mentioned in the root

- a) $xoub^haigjowoti$ 'lucky women' = b) puwoti 'related to morning' = [[puwa[[$xoub^haigjo$ 'luck']_N oti]_{Adj} 'morning']_N oti]_{Adj}
- c) xudəti 'one who borrows money to
 d) gərb^həwəti 'Pragnant lady' =
 repay with interst'= [[xud [[gərb^hə 'womb']_N əti]_{Adj}
 'interest']_N əti]_{Adj}

5.2.5 -*oni* suffixation

1. Noun ← Verb -oni

Meaning: Doer of an action

- a) $rand^h 2ni$ 'cook' = [[$rand^h$ 'to cook']_V b) dawoni 'reaper'= $[[da 'to reap']_V$ $(n)_{N}$ $(n)^{N}$
- d) bowoni 'a weaver' = [[bo 'to c) *nasoni* 'a dancer' = $[[nas]_V oni]_N$ weave']_V *oni*]_N
- 2. Noun ← Verb -oni

Meaning: An activity or action of the verb, or the act of doing something

- a) *eroni* 'the act of abandoning'= [[*er* b) xikoni 'learning' = $[[xik 'to learn']_V$ 'to abandon']_V *oni*]_N oni]_N
- d) basoni 'selection' = [[bas 'to tremble']v oni]N select']v oni]N
- 3. Noun_x \leftarrow Noun_y -oni

Meaning: Female counterpart of the male entity expressed by Noun_y

- a) sakərəni 'maid' = $[[sakər 'servent']_N$ ∂ni _N
- c) \tilde{b}^{h} or align i 'a women married to man of this tittle'= $[[\tilde{b}^h rali$ 'a tittle']_N $(n)_{N}$
- b) k^hjotrijani 'a Kshatriya woman'= $[[k^h j \circ trij \circ^{19}]_N \circ ni]_N$
- d) gohaijoni 'a women married to man of this tittle' = $[[gohai 'a tittle']_N$ $(n)_{N}$

4. Noun_x \leftarrow Noun_y -oni

¹⁹ according to the old *Varnasrama* classification of Hindu society, a man of the second or military class of the society

Meaning: Related to the entity or property expressed in Nouny

- a) d^hanoni 'a paddy field'= [[d^han
 'rice']_N oni]_N
- c) bənəni 'a grass plot'= [[bən 'grass']_N
 əni]_N
- b) $\tilde{k}aitoni$ 'a place full of thorns'= [[$\tilde{k}ait$ 'thorns']_N oni]_N
- d) p^husp^husoni 'whispering'= [[p^hup^hus 'to whisper']_N oni]_N

5. Adjective ← Noun -oni

Meaning: Relating to the quality mentioned in the noun

a) ketketoni 'Scolding'= [[ketket 'to b) xoyxod^honi 'amending'= [xoyxod^h 'to scold']_N oni]_{Adj}
b) xoyxod^honi 'amending'= [xoyxod^h 'to correct']_N oni]_{Adj}

5.2.6 -*onia* suffixation

1. Adjective← Verb -onija

Meaning: Doer of an action

a) sərənija 'grazing' = [[sər 'to b) məgənija 'begger'= [[mag 'to beg']_v graze']_v ənija]_{Adj} = nija_{Adj}

c) *pelonija* 'fit to be thrown away'
 =[[*pela* 'to throw']_v onija]_{Adj}

2. Noun_x \leftarrow Noun_y -onija

Meaning: Pertaining to the entity mentioned in the Nouny

a) $at^{h}uwonija$ 'till the knee'= [[$at^{h}u$ b) $kot^{h}onija$ 'holding one katha or half a 'knee']_N onija]_N seer' = [[$kot^{h}a^{20}$]_N onija]_N

²⁰ a unit of land measurements

5.2.7 - *oruwa* suffixation

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1. Adjective ← Noun -oruwa
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Meaning: Having the quality mentioned in the noun

a) dekeruwa 'younger' = $[[deka 'young']_N$ b) zakoruwa 'in a group'= $[[zak 'a group']_N$ oruwa]_{Adj} oruwa]_{Adj}

2. Adjective \leftarrow Verb ->ruwa

Meaning: Relating to the activity expressed by the verb

a) *xɔsɔruwa* 'something which is saved' = [[*xas* 'save']_V *ɔruwa*]_{Adj}

3. Noun_x \leftarrow Noun_y -5ruwa

Meaning: A doer that deals with the entity mentioned in the Nouny

a) batɔruwa 'a pedestrian' = [[bat 'path']_N b) hatɔruwa 'a buyer' = [[hat 'market']_N oruwa]_N oruwa]_N

5.2.8 -al suffixation

1. Noun_x \leftarrow Noun_y -al

Meaning: Related to the thing expressed in the Nouny

- a) gowal 'a milkman' = $[[go 'cow']_N al]_N$ b) tonjjal 'a dovecote' = $[[tonji 'a framed net']_N al]_N$
- c) tezal 'having much blood, strong' = [[tez d) nodijal 'a fisherman' = [[nodi 'river']_N 'blood']_N al]_N al]_N
 - 2. Noun \leftarrow Verb -al

Meaning: Related to the action expressed by the verb

- a) eral 'a tether' = [[er 'to leave']_V al]_N
 b) xoral 'the shedding of the feathers or horns for removal' = [[xor 'to fall off']_V al]_N
- 3. Adjective \leftarrow Noun -al

Meaning: Projection of a characteristics related to the noun

- a) $k^h \mathfrak{z} \mathfrak{y} \mathfrak{a} l$ 'angry' = $[[k^h \mathfrak{z} \mathfrak{y}$ 'anger']_N b) mz \mathfrak{y} \mathfrak{z} h \mathfrak{z} l'fleshy'= $[[mz \mathfrak{y} \mathfrak{z} h h]_N dj$ $al]_{Adj}$ $al]_{Adj}$
- c) nomal 'hairy' = $[[nom 'hair']_N al]_{Adj}$
- 4. Adjective \leftarrow Verb -al

Meaning: A quality related to an action expressed by the verb

a) $b^{h}ezal$ 'to pollute' = [[$b^{h}ez$ 'to mix']_V b) $\tilde{z}okal$ 'easily roused'= [[$\tilde{z}ok$ al]_{Adj} 'frenzy']_V al]_{Adj}

5.2.9 -alu suffixation

Adjective ← Noun -alu

Meaning: Quality bearing the essence of the base noun

- a) kripalu 'warm-hearted nature' = b) $nidralu = [[nidra 'sleep']_N alu]_{Adj}$ [[kripa 'kindness]_N alu]_Adj
- c) dsjalu 'of kind nature' = [[dsja d) $krod^halu$ 'of angrey nature' = [[$krod^h$ 'generosity']_N alu]_{Adj} 'anger']_N alu]_{Adj}

5.2.10 -aru suffixation

Noun← Verb -aru

Meaning: Doer of an action

- a) xikaru 'learner' = $[[xik 'to learn']_V$ b) zuzaru 'fighter' = $[[zuz 'to fight']_V$ $aru]_N$ $aru]_N$
- c) *lek^haru* 'writer' = [[*lek^h* 'to write']_V
 ok]_N

5.2.11 -ami suffixation

1. Noun← Noun -*ami*

Meaning: Having the quality of the entity mentioned by the noun

bandsrami 'the nature of monkey' = $[[bandsr 'monkey']_N ami]_N$

2. Noun← Verb -ami

Meaning: An activity expressed by the verb

 $t^h gami$ 'the act of cheating'= $[[t^h g 'to cheat']_V ami]_N$

3. Adjective ← Adjective -ami

Meaning: Related to a quality mentioned in the root

dustami 'nature of being dishonest or naughty' = [[dusto 'naughty']Adj ami]Adj

5.2.12 -ahi suffixation

1. Adjective← Verb -ahi

Meaning:

a) solahi 'deceiving' = [[sol 'to trick']_V b) *melahi* 'wide-mouthed' = [[*mel* 'to

open']_V ahi]_{Adj}

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ahi]_{Adj}

2. Noun \leftarrow Noun -ahi

Meaning: Related to the entity expressed by the root

modahi 'alcoholic' = [[mod 'alcohol']_N ahi]_N

5.2.13 -ija suffixation

1. Adjective ← Noun -ija

Meaning: Possession of the characteristics of the noun

a) *onzonija* 'related to eye-liner' = b) *oĥija* 'reted to fibre'= [[*aĥ* 'fibre']_N [[*onzon* 'eye-liner']_N ija]_{Adj} *ija*]_{Adj}
c) *ag^honija* 'related to the month of

 $Aghon^{21} = [[ag^{h}on]_{N} ija]_{Adj}$

2. Adjective ←Verb -ija

Meaning: Related to the action expressed by the verb

- a) $r_{2k}h_{ija}$ one who is guarding' = [[$r_{2k}h$ b) $b^{h_{2}z_{ija}}$ or transformed to fry' = [[$b^{h_{az}}$ to fry']_V i_{ja}]_{Adj} fry']_V i_{ja}]_{Adj}
- 3. Adjective \leftarrow Adjective_y -ija

Meaning: Having the quality expressed by the root adjective_y

- a) zɔkmɔkija 'sparkling' = [[zɔkmɔk 'to b) lob^hija 'greedy'= [[lob^h 'greed']_{Adj}
 sparkle']_{Adj} ija]_{Adj} ija]_{Adj}
- 4. Noun_x \leftarrow Noun_y -ija

²¹ An Assamese month

Meaning: Agent and related to the entity or object mentioned in the root

- a) $d^h u li j a$ 'a drummer'= [[$d^h o l$ 'a drum']_N i j a]_N
- c) d^hupija 'one who prepares incense'=
 [[d^hup 'incense']_N ija]_N

5.2.14 -ua suffixation

1. Noun_x \leftarrow Noun_y -ua

Meaning: Doer of an activity expressed by the Nouny

a) ronua 'a fighter' = [[ron 'battle']_N b) bonua 'labour' = [[bon 'work']_N ua]_N ua]_N

b) damodorija 'a follower of Damodar

 dev^{22} = [[damodor]_N ija]_N

c) $k^{h}elua$ 'player' = [[$k^{h}el$ 'sport']_N ua]_N d) nstua 'An actor' = [[nat 'drama']_N ua]_N

2. Noun_x \leftarrow Noun_y -ua

Meaning: Related to the entity expressed by Nouny

- a) tolua 'the sole of the foot' = [[tol
 b) potua 'The sheath of a plantain tree' = [[pat 'leaf']_N ua]_N
- c) *halua* 'peasant'= [[*hal* 'plough']_N *ua*]_N

3. Adjective \leftarrow Noun -ua

Meaning: A quality that possesses the characteristics of the noun

- a) elehua 'The nature of being lazy'=
 b) adorua 'seeking affection'= [[ador [[elah 'laziness']_N ua]_{Adj}
 c) show a failed in a failed in a' [[lubra failed in a' [[lubra failed in a' [[ubra failed i
- c) g^{h} related to home or household' d) $k^{h}arua$ 'alkaline'= $[[k^{h}ar$ 'alkali']_N

²² Sri Damodardev, a well-known 16th-century religious preacher in the Ekasarana tradition of Vaishnavism, who was born in 1488.

$$= [g^{h} \sigma r \text{ 'home'}]_{N} ua]_{Adj} \qquad ua]_{Adj}$$

4. Noun \leftarrow Verb -ua

Meaning: A thing or an activity related to an action expressed by the verb

a) $d^h skua$ 'The sheath of a *tamul* tree' = b) $b sgua = [[b sga 'to crawl']_V ua]_N [[d^h ak 'to cover']_V ua]_N$

5.2.15 -uwal suffixation

1. Noun_x \leftarrow Noun_y -uwal

Meaning: A doer, who does an activity related to the Nouny

- a) gowal 'milkman' = [[go 'cow']_N b) $g^{h}atowal$ 'a ferryman' = [[$g^{h}at$ uwal]_N 'dock']_N uwal]_N
- c) \tilde{d} one who has teeth which can be seen prominently' = $[[\tilde{d}at \text{ 'teeth'}]_N uwal]_N$
- 2. Noun \leftarrow Verb -uwal

Meaning: Noun of agency

 $rak^{h}owal$ 'herdsman' = [[rsk^{h} 'to keep']_V uwal]_N

5.3 Result of Sample A (Corpus) and Sample B (Dictionary)

In this section, we have presented the statistical data for samples A and B. After extracting the total number of types, tokens, and hapax legomena from both samples, we arrive at the following result: Table 5.1 presents data from sample A, and Table 5.2 presents data collected from sample B.

Sl	Suffixes	Type (V)	Token (N)	Hapax (n1)
1	-অক <i>-</i> ১k	41	220	17
2	-অন <i>-</i> ১n	84	459	37
3	-অনা - <i>ɔna</i>	28	193	7
4	-অতি <i>-ɔti</i>	8	17	5
5	-অনি <i>-ɔni</i>	48	159	22
6	-অনিয়া <i>-ɔnija</i>	5	14	1
7	-অৰুৱা <i>-ɔruwa</i>	1	1	1
8	-আল <i>-al</i>	7	19	2
9	-আলু <i>-alu</i>	NIL	-	-
10	-আৰু -aru	1	2	0
11	-আমি <i>-ami</i>	3	4	1
12	-আহি -ahi	NIL	-	0
13	-ইয়া -ia	110	418	71
14	-ওৱা/-উৱা <i>-ua</i>	14	51	7
15	-উৱাল -ual	1	2	0

 Table 5.1 Number of Types, Token and Hapax Legomena in Sample A

Table 5.2 Number of Types in *Hemkosh* ed. 2006 and 2016, the number of newly added words in10 years (Sample B)

		- • J • • • • • • • • • • • • •	,	
Sl	Suffix	2006	2016	Nos. of new words
1	-অক - ১k	231	315	86
2	-অন <i>-</i> ১০	456	586	130
3	-অনা <i>-əna</i>	49	59	10
4	-অতি <i>- วti</i>	17	19	2
5	-অনি <i>-ɔni</i>	371	390	19
6	-অনিয়া <i>-ɔnija</i>	21	21	0
7	-অৰুৱা - ɔruwa	7	7	0
8	-আল <i>-al</i>	36	38	2
9	-আলু <i>-alu</i>	4	12	8
10	-আৰু <i>-aru</i>	6	6	0
11	-আমি <i>-ami</i>	6	8	2

12	-আহি <i>-ahi</i>	4	4	0
13	-ইয়া <i>-ia</i>	783	823	38
14	-উৱা - uwa	159	167	9
15	-উৱাল <i>-ual</i>	3	8	1

5.4 Observation:

5.4.1 - *ɔk* - অক

The corpus consists of 41 types, 220 tokens and 17 hapaxes for -sk, whereas it contains 231 types in the 2006 edition and 315 types in the 2016 edition. A total of 86 new words were added in the later edition. The suffix is mostly attached to nominal and verbal bases and it is observed that noun derivatives outnumber the adjective category. Amongst the nouns, again, it predominantly forms agentive nouns. For example, $lik^h sk \rightarrow$ 'writer' lik^h 'to write' + sk, xewsk 'A service provider' \rightarrow xewa 'service' + sk, pat^hsk 'a reader' \rightarrow pat^h 'lesson' + sk etc.

Along with the independent base or root, the suffix is also attached to many nonindependent bases. In many words, the bases are a cumulation of more than one root, prefixes and suffixes. It indicates that the suffix can be attached to multimorphemic bases. These bases can be divided into the following ways depending on the segmentation-

Base (root) + suffix. Example: *natok* নাটক 'drama' = *nat* 'drama' + *sk* Base (root+root) + suffix²³. Example: *moupalsk* মৌপালক 'Apiculturist' = *mou* 'honey' + pa 'to nurture' + *sk* Base (root+prefix+root) + suffix. *ziwoddipsk* জীরোদ্দীপক 'full of life' = *ziws* 'being' + *ut*

²³ These are sandhized compounds in Indian languages where we can see two roots

'prefix' + *dip* 'light' + ok. In this word *ziwo* is a root, while *ut* is prefixed to the base *dip* and

all three together form the base where -3k suffix is attached. The origin of these kind of bases

are found in Sanskrit.

Base (prefix+root) + suffix. Example: *poribrazok* পৰিৱাজক 'Tourist' = *pori* 'prefix' +*broz* 'to travel' + *ok, protipalok* প্ৰতিপালক = *proti* 'prefix' + *pal* 'to nurture' + *ok, ab^hig^hatok* অভিঘাটক = *ab^hi* 'prefix' + *g^hat* 'port'

Base (prefix+root+root) + suffix. Example: *opotrinonaxok* অপতৃণনাশক 'herbicide' = *opo* 'prefix' + *trino* 'grass' + *nax* 'to destroy' + *ok*; *papnaxok* পাপনাশক 'purifier of sin' = *pap* 'sin' + *nax* 'to destroy' + *ok*

Base (root + suffix) + suffix. Example: krironok की ज़न्म 'A toy, one who is made the tool of another' = krija 'game' + on 'suffix' + ok. It says that the suffix -ok allows another suffixation with the root before it is being attached.

-*ok* is sometimes used to form compound suffixes such as *-mulok* in *protizogitamulok* প্রতিযোগিতামূলক 'competitive'. *-ok* is attached to another morpheme *mul* and together it forms the compound suffix *-mulok*. *-mulok* is considered a compound suffix, as it is not used as a word independently and is attached to a base or root to mean 'type of the instance or entity expressed by the root'. From this, we can see that *-ok* is allowing compound suffixation as well.

However, many words that are segmented as above look like compounds. Although it was decided to exclude compounds from the counting, there are many words that are lexicalised to an extent that they are accessible through the 'direct access route' in the speaker's mind.

Again, amongst the newly added words in the dictionary in the latest edition, there is a sizable number of new agentive nouns in the list. Therefore, it is an indication that the function of -3k as an agentive noun is getting increased. Example: 3p3bad3kঅপবাদক 'one who reviles' $\rightarrow 3p3 + bad$ 'process of doing something' + 3k 'agentive noun suffix', *spoxorpok* অপসর্পক 'Spy, messenger' $\rightarrow opo + xorpo$ 'snake' ok 'agentive noun suffix', $ag^{h}atok$ আঘাতক 'A destroyer' $\rightarrow ag^{h}at$ 'bruise' + ok 'nominal suffix', aworok আৱৰক 'Something that covers' $\rightarrow awor$ 'to cover+ ok 'nominal suffix', ussedokউচ্ছেদক 'abolisher' \rightarrow 'to abolish' + ok 'nominal suffix', ক্ষোদক 'sculptor' \rightarrow 'to sculpt' + ok 'nominal suffix' etc.

5.4.2 - In - অন

It has 84 different types which have 459 tokens and 37 hapaxes in total in sample A, and in sample B, it has 456 types in the 2006 edition and 586 types in the 2016 edition by adding 130 new words. The suffix is attached mostly to verbal bases and fewer nominal bases, however, in many words, the base does not look like a verbal base apparently. By looking at these bases closely, we find that like *-ok*, these are combinations of more than one root or affixes. However, the suffix is attached to the verbal root; and other roots or affixes can only be added before the verbal root. For example, $k_{2t}h_{0p}k_{2t}h_{2n}$ करशाशका 'conversation' $\rightarrow k_{2t}h_{a}$ 'speech' + u_{p2} 'prefix' + $k_{2t}h$ ' to speak' + on, utzapon উৎযোগন 'celebration' $\rightarrow ut$ 'prefix' + $(za+nis)^{24}$ 'to execute' + on, punorziwon গুণজীৱন 'reincarnation' $\rightarrow punor$ 'again' + zija 'to live' + on etc.

Another observance for $-\partial k$ and $-\partial n$ is that both can be used as co-suffixes to form words for the agent and the action respectively. Example:

a)	<i>xɔŋrɔkʰjɔk</i> 'a conserver'	b)	<i>bjobost^hapok</i> 'one who	c)	<i>xad^hɔk</i> 'Who or what
	<i>xɔŋrɔkʰjɔn</i> 'The act of		makes rules or guides'		accomplishes or effects' -
	saving'		bjobost ^h apon 'The laying		<i>xad^hon</i> 'The act of
	-		down of rules and regulations'		accomplishing'
d)	xewok 'A worshiper'	e)	xəmərt ^h ək 'A supporter' -	f)	xad ^h ɔk 'who
					accomplishes or effects'

²⁴ Page 1130, Hemkosh ed. 2016 **योशक** विंग [সং या + भिष्ठ (याशि) + जरु] zapok [za + nis (zapi) + \mathfrak{sk}]. As zapok and zapon have the same bases and the only difference is the suffix attached to the bases, we have taken reference of zapok during segmentation of zapon.

	<i>xewon</i> 'The act of	xəmərt ^h ən 'support'			<i>xad^hon</i> 'implementation'
	serving'				
g)	<i>xoxɔk</i> 'that which sucks or dries up' <i>xoxɔn</i> 'The act of sucking'	h)	<i>lek^hok</i> 'a writer' <i>lek^hon</i> 'the act of writing'	e)	<i>b^hɔk^hɔk</i> 'One who eats' – <i>b^hɔk^hɔn</i> 'The act of eating'
f)	<i>rɔkʰjɔk</i> 'a protector' - <i>rɔkʰjɔn</i> 'protection'	g)	<i>binodɔk</i> 'provider of amusement' - binodɔn 'pleasure'		

5.4.3 - ana - অনা

It has 193 tokens of which 7 are hapaxes for 28 types in the corpus sample. In the dictionary sample, it has 49 types in the 2006 edition and 59 types in the 2016 edition. There are three words in the corpus which are unlisted words in the dictionary-*xosetona* **স**(**bon**] 'consciousness' $\rightarrow xo$ 'with (prefix)' + *sit* 'mind' + *ona* 'noun suffix', *zonosetona* **S**(**bon**] 'mass consciousness' $\rightarrow zon$ 'people' + *sit* 'mind' + *ona* 'noun suffix' and *deuna* (**F**(**Sn**] 'gate' $\rightarrow deu$ 'footstep' + *ona* 'nominal suffix'. As the word *setona* 'sense' is listed in the dictionary, probably it is though that the meaning of the prefixed words *xosetona* and compound *zonosetona* will be graspable. However, *deuna* is a common established word of the language which is not considered for listing by the lexicographer.

Based on the words of the samples, *-ona* is attached to the bases which can be found in the following segmented form:

5.4.4 *-১ti -*অতি

It has 8 types and 17 tokens, 5 hapaxes in the sample A and in the sample B, it has 17 and 19 types in 2006 and 2016 editions of Hemkosh respectively. In sample A, we can find that, for a few words it plays the role of a feminine suffix, for example-

 $xoub^{h}aigjowoti$ সৌভাগ্যৱতী 'A lucky women', $gorb^{h}owoti$ গর্ভরতী 'Pregnant lady', bowotiবোরতী 'A female weaver or flowing water'. In Assamese, except for the river Brahmaputra, all other rivers and tributaries are considered feminine. Therefore, the bowati is turned into an adjective by suffixing -oti in $bo \triangleleft$ 'to flow' which carries the sense of femininity. The sample A registers only one word with a base consisting of root+root, i.e., zonoboxoti জনবসতি = zon + bax + oti. In the case of sample B, only two words are added in the 2016 edition, $d^{h}upoti$ and xudoti, and both are adjective words.

5.4.5 - *oni -* অনি

This suffix has 159 tokens, 22 hapaxes for 84 types in the sample A. In sample B, it has 371 and 390 types in 2006 and 2016 edition respectively.

There are three words formed by this suffix from the sample that are not listed in the dictionary, these are *xunani* শুনানি 'hearing', *bəruwani* বৰুৱানী 'the wife a Barua titled man, i.e., Mrs. Barua', *ub^hətəni* উভতনি 'returning'. Like *-əti*, it is also a feminine suffix, examples of which can be cited from the list- *rand^həni* ৰান্ধনী 'a female cook', *zənəni* জননী 'mother', the same can be considered agentive nouns as well. This suffix also produces many expressive words in the language, such as- *tirbirəni* 'The act of glittering, sparkle', *g^hurg^hurəni* 'The sound of a small wheel in motion', *dəpdəpəni* 'The act of showing one's own greatness or power' etc. It is also a compound suffix which is the composition of two suffixes *-ən* + *-i*.

There are three words other than the words bearing 'root+suffix' segmented form in the list, the bases of which are found in the following way:

Base (pre + root) +suffix. Example: $x \exists y x a d^h \exists ni$ 'Amending, correcting' $\rightarrow x \exists y$ 'pre'+ $x a d^h$ 'to correct' + $\exists ni$, $pr \exists d \exists rx \exists ni$ 'exhibition' $\rightarrow pr \exists$ 'pre' + drix 'see' + $\exists ni$

Base (root + root) +suffix. Example: $pakg^{h}urcni$ 'Giddiness caused by turning round and round very quickly' $\rightarrow pak$ 'round' + $g^{h}ur$ 'to circle' + circle ' + circle' + circl In the corpus sample, it has only 5 types and 14 tokens. However, in the dictionary sample it has equal number of types in both editions of the dictionary, i.e., 21 and in 10 years it has not added new words. The bases of this suffix only consist of a root and it is either a verbal or nominal base, that is Base (root) + *onija*, example: $k^h oyal$ 'angry' $\rightarrow k^h oy$ 'anger' + *al*.

5.4.7 -*ɔruwa -*অৰুৱা

In the entire sample A, there is only one word formed by this suffix, *dekerua* ($\Box \Box \Phi = a$) *dekerua* 'Full-fledged, full grown' and it is an adjective. Similar to *-onija*, it also has not added any new words and only 7 words are found for this suffix in both the editions. This suffix also takes only a root as a base and that base is generally a nominal base. Example, $b^hagoruwa$ 'tired' $\rightarrow b^hagor$ 'tiredness' + *uwa*.

z5.4.8 -al -আল

While it has a total of 19 tokens for 7 types of words, it has 36 and 37 types in 2006 and 2016 editions of sample B respectively. All the resultant types are adjectives except one word which is a noun, *eral* 'a tether'. There is a word *nirbhezal* new field whose segmentation is 'prefix + root + suffix'. Other than this, all others have the form 'root+suffix'. However, it appears that it may allow only prefixation as multimorphemic bases.

5.4.9 -alu -আলু

The sample A which consists of approximately 1 lac words, does not register any words formed by this suffix. However, in the sample B, it has 4 and 12 types in the editions respectively. It is one of the adjectives forming suffixes of the language, which is attached to the noun bases (*kripalu* 'kind', *dojalu* 'kind'). Generally, the bases of this

5.4.10 -aru -আৰু

It also has only one word in the corpus sample, *xikaru* শিকাৰু 'A learner' and 6 types in both editions of the dictionary in sample B. It is added to bases consisting of one root which is a verbal base. Example, *xikaru* 'learner' *xikaru* \rightarrow *xik* 'teach' + *aru*.

5.4.11 -ami -আমি

This suffix has 4 tokens for 3 different types in the sample A and 6 and 8 types in sample B. It is an adjectival suffix. It has a word *gorami* গোড়ামী 'orthodox' \rightarrow *gora* 'stubborn' + *ahi*, which is not listed in the dictionary, although it is a common word in the language. This suffix is also attached to monomorphemic bases. It is also a compound suffix in the sense that it is the extension of am+i.

5.4.12 -ahi -আহি

No words could be found by this suffix in the sample. However, *-ahi* is the extension of -ah + -i, which means that it is a compound suffix too. It does not record any word in sample A, and in sample B, it has 4 types in both the years. It is added to monomorphemic root, such as, *sɔlahi* 'deceitful' \rightarrow *sɔl* 'deceit' + *ahi*.

5.4.13 -ija -ইয়া/-ঈয়া

In the sample A, among the 15 suffixes, this suffix has the highest number of types and hapaxes. 116 types of words are found for *-ia* from the sample, which results in 432 tokens. A lot of words formed by this suffix from the sample are not listed in the dictionary. Another significant observation is that a lot of expressive words can be found by this suffix in the corpus sample. In the sample trace 12 such expressive words. In the sample B, there are 783 and 823 types in 2006 and 2016 editions respectively which is again the highest amongst others.

-ija can be attached to mono monomorphemic as well as multimorphemic bases. It is found in the following forms:

Base (root) +suffix. Example: *oxomija* 'Assamese' = *oxom* 'Assam'+ *ija*

Base (root + root) +suffix. Example: $zet^hmohija$ 'month of Jeth'= jet^{h25} + mah 'month' + *ija, rozadinija* 'related to the days of a King' = roza 'king' + din 'day'+*ija, otiawoisjokija* 'very necessary' = oti 'very'+awoisjok 'necessary' + *ija*.

-*ija* itself is not a compound suffix, but there are a few suffixes, which are extensions or combinations of two suffixes, which can be called as compound suffixes. *ia* is a part of many compound suffixes or we can say that -*ija* helps in forming a few compound suffixes. E.g., -3riya = -3r + -ija, -3tija = -3ti + -ija, -ekija = ek 'one' +-ija

However, -*ija* also form a few compound suffixes by getting attached to certain roots as well, for example, -*mohija* 'related to month' = *mah* 'month' + *ija*, -*bulia* 'related to colour' = *bul* 'colour' + *ija*, -*poriya* = *par* 'edge' + *ija*, -*dinia* 'related to day' = *din* 'day' + *ija* etc.

5.4.14 -ua -ওৱা/-উৱা

It has 18 types and 55 tokens in the corpus sample and the only word *nibonua* 'unemployed' $\rightarrow ni$ 'pre' + *bon* 'work' + *on* has a base including a prefix. The sample B contains 159 and 167 types in respective editions. However, regarding the category of the derived words, although the dictionary registers most of the words as adjectives, a few words having the same property are mentioned as noun in the dictionary. For example, *bonua* 'one who works' $\rightarrow bon$ 'work' + ua and *bihua* 'a man or boy who performs Bihu²⁶ $\rightarrow bihu + ua$ as an adjective, but *ronua* 'a person engaged in warfare' $\rightarrow ron$ 'battle' + ua is registered as noun. In this case, the words can be regarded both as adjectives and noun depending on the usage.

5.4.15 -uwal -উৱাল/-ওৱাল

²⁵ The second month of the Assamese year

²⁶ Bihu is the major harvest festival of Assam

In the corpus sample only one adjective word is found, i.e., *pahual* 'Fat, plump' $\rightarrow pah$ 'edge, side' + *uwal*; while the sample B contains 3 and 8 types in 2006 and 2016 edition in the sample respectively. It is a compound suffix, which is the extension of two suffixes -*uwa* and -*la*, i.e., -*uwa*+*la* = -*uwal*. It is added to monomorphemic bases.

5.5 Interpretation

In the sample words, we notice that some word types recur frequently in the sample, which leads to a high token frequency. Token frequency is greatly influenced by pragmatic factors. The sample's size and the type of text it contains, to start, have an impact on the frequency of occurrence. It is already established that the productivity of morphological processes can vary depending on the size and nature of the corpora. The same affix might have a different value of productivity in varying corpora (Aronoff & Fudeman, 2005). Here, we observe that the word *axomija* 'Assamese', appears 97 times. As it is a study on the Assamese language and also because the sample texts have been collected from online Assamese newspapers and literary platforms, discussion of the Assamese community, language, and society is likely to take place frequently. Consequently, it is assumed that the tokens for the type *axomija* 'Assamese' are high.

Similarly, the word *xeuzija* 'green' has 41 tokens in the sample, and the word *nijomija* 'regular' has 23 tokens. The reason is that a few writings that fall under the heading of travelogue are descriptions of journeys to remote, forested locations. There are more tokens for the word *xeuzija* 'green' due to the addition of such texts. Additionally, the news texts were taken from one of the most well-known Assamese newspapers, '*niyamiya barta*', which is how we were able to obtain a large number of tokens for the term *nijomija* 'regular' in the news texts. Again, sample B contains several words that are scarcely used and some are no longer used.

5.6 Measure-based productivity- Sample A

Based on table 5.1 and applying the measuring methods mentioned in chapter 2, we have arrived at the following results. The calculated values are presented for each suffix against the methods in Table 5.3

Suffixes	Туре	Token	Нара	Type/token	Token/Type	(P)	Hapax/Type
	(V)	(N)	x (n ₁₎	(Mean token frequency) V/N	(Mean type frequency) N/V	n ₁ /N	n ₁ /V
-অক - <i>ɔk</i>	41	220	17	0.187	5.366	0.078	0.414
-অন - <i>э</i> n	84	459	37	0.183	5.464	0.080	0.440
-অনা - əna	28	193	7	0.146	6.892	0.036	0.25
-অতি <i>-ɔti</i>	8	17	5	0.470	2.125	0.294	0.667
-অনি <i>-ɔni</i>	48	159	22	0.301	3.312	0.138	0.480
-অনিয়া <i>-ənija</i>	5	14	1	0.358	2.8	0.071	0.2
-অৰুৱা <i>-oruwa</i>	1	1	1	1	1	1	1
-আল <i>-al</i>	7	19	2	0.369	2.714	0.106	0.286
আলু -alu	NIL	-	-	-	-	-	-
-আৰু <i>-aru</i>	1	2	0	0.5	2	0	0
-আমি <i>-ami</i>	3	4	1	0.75	1.333	0.25	0.333
-আহি - ahi	NIL	-	-	-	-	-	-
-ইয়া -ia/-ija	110	418	71	0.263	3.8	0.170	0.646
-ওরা/-উরা - ua/ -	14	51	7	0.274	3.642	0.138	0.611
uwa							
-উৱাল <i>-ual/ -</i> uwal	1	2	0	0.5	2	0	0
and		1	L			1	1

Table 5.3 Results of Type Frequency, Token Frequency, Hapax Legomena, Token/Typeratio, Type/Token ratio and Token/Type ratio based on Table 5.1

5.6.1 Type frequency

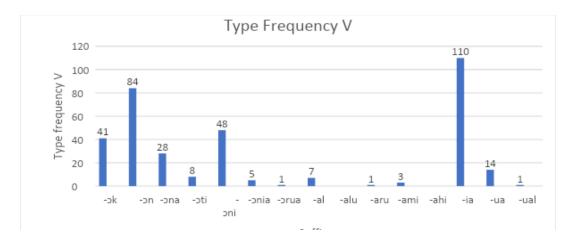
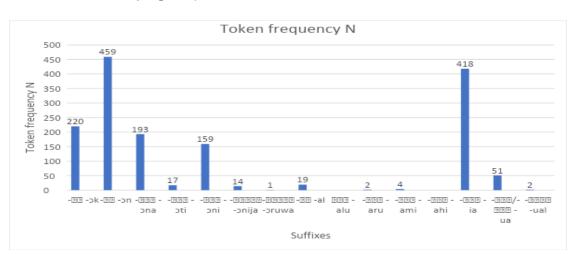


Fig 5.1 Type frequency of the suffixes

According to the first method Type frequency V, *-ia* has the highest number of types (110) followed by *-on* (84), while the three suffixes *-oruwa, -aru* and *-ual* have the lowest number of types, only 1 type against each suffix. Again, *alu* and *-ahi* have no instances at all in the sample A. If we calculate the Mean, then the average number is 20.2 and those that are above this number can be considered more productive than the suffixes that are below this number. Based on this, *-ok*, *-on*, *-ona*, *-oni* and *-ia* are more productive than the suffixes *-oti*, *-onia*, *oruwa, -al*, *-alu*, *-aru*, *-ami*, *-ahi*, *-ua* and *-uwal*.

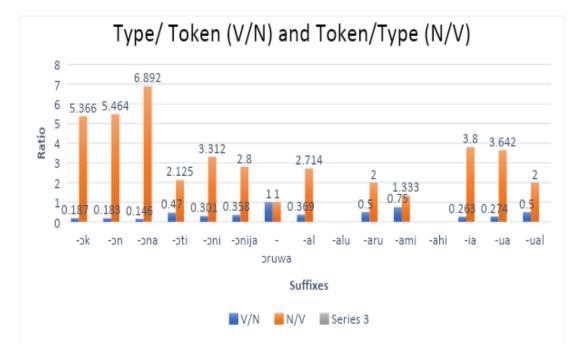


5.6.2 Token frequency

Fig 5.2 Token frequency of the suffixes

For this method, the number of all the occurrences counted for each suffix separately. The graph shows that *-on* (459) has the highest token frequency among all the

suffixes, and if we put aside *-alu* and *-aru* as they have no instances at all, *-oruwa* has only 1 token in the entire sample. Suffixes *-ok, -on, -ona, -oni* and *-ia* are more productive than the suffixes *-oti, -onija, -oruwa, -al, -alu, -aru, -ami, -ahi, -ua* and *-ual*, which are comparatively less productive.



5.6.3 Type/Token (V/N) and Token/Type (N/V) frequency

Fig 5.3 V/N and N/V ratio of the suffixes

As in the Type/Token (V/N) method, the higher ratio means higher productivity, and in Token/Type method, the higher ratio indicates lower productivity; *-\sigmaruwa* (1) and *ami* are the highest productive suffixes and *-\sigmana* is the lowest productive suffix in both.

5.6.4 Productivity in the strict sense (P): n1/N

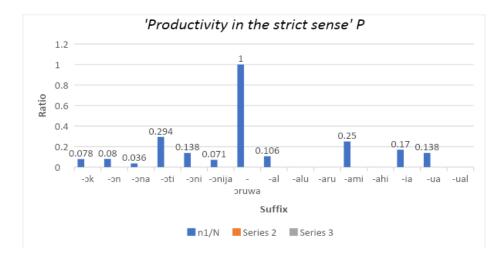
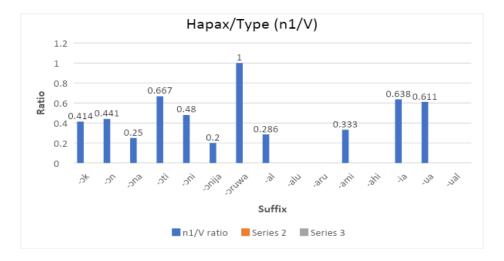


Fig 5.4 'Productivity in the strict sense': n1/N ratio for the suffixes

Fig 4 shows that the productivity of *-oruwa* (1) is much higher than the rest, while *-ona* (0.036) is the least productive suffix.



5.6.5 Hapax/Type method

Fig 5.5 n1/V ratio of the suffixes

From the calculation we see that *-orua* (1), *-oti* (0.667), *-ia* (0.638), *-ua* (0.611) are productive suffixes and *-aru* (0), *-ual* (0) are unproductive suffixes.

Now based on Table 5.3, according to the productivity rate, the suffixes are presented in descending order for each method in Table 5.4 below.

Ranking	Туре	Token	Hapax	Type/token	Token/ Type	(p)	Hapax/Type
	(V)	(N)	legomena	(V/N)	(N/V)	n ₁ /N	n_1/V
			(n ₁)				
1.	-ia	-ən	-ia	-əruwa	-əruwa	-əruwa	- <i>э</i> ruwa
2.	-ən	-ia	- <i>э</i> п	-ami	-ami	-əti	-əti
3	-əni	-ək	-əni	-aru -ual	-aru -ual	-ami	-ia
4	-ək	-əna	-ək	-əti	-əti	- ia	-иа
5	-əna	-əni	-эпа - иа	-al	-al	-эпі - иа	-əni
6	-иа	-иа	-əti	-ənija	-ɔnija	-al	-ən
7	-əti	-al	-al	-иа	-əni	-ən	-ək
8	-al	-əti	-ənija -əruwa -ami	-ia	-иа	-ək	-ami
9	-ənija	-ənija	-aru -alu -ahi -ual	-əni	-ia	-ənija	-al
10	-ami	-ami		-ək	-ɔk	-əna	-əna
11	-əruwa -aru -ual	-aru -ual		- <i>э</i> п	-วท	-alu -aru -ahi -ual	-ənija
12	-alu -ahi	-əruwa		-əna	-əna		-alu -aru -ahi -ual
13		-alu -ahi		-alu -ahi	-alu -ahi		

Table 5.4 Ranking of suffixes in descending order of productivity by each method based on Table 5.3

5.7 Interpretation

From Table 5.3 and Table 5.4, the first thing to note in sample A is that while the results of the first three methods type, token and hapax frequency show similarity, the similarity of results can also be seen in the later probabilistic methods. The later methods, however, portray a ranking that contrasts with the first three, i.e., the suffixes which are less or least productive in the first three occur as the most productive suffixes in the later methods.

In the productivity scale, Type frequency V, Token frequency N and hapax frequency, n1 do not have stark differences. Every suffix has altered just one step to the higher or lower rank in the methods. When we compare them, we see that *-ia* and *-on* occupy the first and second highest rank in terms of V, whereas *-on* becomes first and *-ia* occupies the second position from the top in N. Similarly, *-oni*, *-ok* and *-ona* also altered their ranks from 3, 4 and 5 in V to 5th, 3rd and 4th in N. *-oti* and *-al* occupy 7th and 8th ranking in V and 8th and 7th ranking in N respectively. On the other hand, for the suffixes *-ua*, *-onija*, *-ami*, *-oruwa*, *-aru* and *-uwal*, the ranking remains unchanged in V and N. From these three, we see that while *-ia* is the most productive suffix in V, *-on* is the most productive one in N. Overall the suffixes *-ia*, *-ok*, *-on*, *-ona* and *-oni* are relatively more productive than the rest in these two methods.

-oruwa, which has the lowest productivity rate V and N, occupies the highest rank in the probabilistic methods, V/N or N/V, n1/N and n1/V. In table 5.4, the other low ranking suffixes of V and N, *-ami*, *-aru* and *-uwal* are located higher in the ranking in the probabilistic methods. Similarly, suffixes *-on*, *-ok*, *-ona* which are relatively in the upper position in V and N methods, get a lower rank in the latter. However, a few suffixes *-al*, *uwa* relatively remain in the middle position in the productivity scale for all the methods.

From this we get to know that different suffixes are productive in different aspects. Raw counting required for V and N talks about the current and past productivity of suffixes on the basis of existing words, and inferring past and present productivity, the ranking shows that the suffixes *-ia*, *-on*, *-ok*, *-oni* and *-ona* are comparatively more productive than the others in V and N methods.

V/N or N/V, *Productivity in the strict sense* (*P*) and n_1/V are probabilistic methods and they involve more than one variable in measuring productivity. Hence, they predict the future productivity rate of a suffix, unlike past or present productivity. The suffixes *->ti, -ami, -aru, ->ruwa* appeared more productive only by the latter methods, suggesting that they may have a greater potential for creating new words than the others.

Again, some of the suffixes exhibit somewhat consistent productivity rates across all the methods. The productivity of the suffixes *-ia*, *-oni*, *-ua* and *-oti* is slightly higher across all five techniques, as their distribution can be found higher in the middle section of the table. As a result, these suffixes can be regarded as productive suffixes, as the suffixes that are distributed from upper to middle place in all the methods can be considered as the most productive suffixes. The suffix *-ok* which is on the upper side in V and N, is found in the lower side in N/V or V/N, and towards the middle position in n1/N and n1/V. As its frequency is on the higher side in all the methods except one, the productivity of this suffix can also be considered as high. Again, the rank of *-al* and *-onija*, on the other hand, can be found in the middle of the hierarchy in all the methods, making them semi-productive suffixes. Nearly in all of the approaches, *-aru*, *-ual*, *-alu*, *-ahi can* be found in the lower strata, hence indicating them as lowly productive suffixes.

However, one of the classic problems of the probabilistic measuring method is that the extreme number of instances disrupts the true picture. The most prolific suffix in the entire sample according to the V/N and N/V, n1/N, and n1/V techniques is *-ɔruwa*, which only has one instance, *dekerua* 'young, full-grown'. The productivity status of a certain suffix is somewhat in doubt if it receives the highest productivity rating while only appearing once in the sample of one lac words. Again, the absence of the two suffixes *-alu* and *-ahi* from sample A does not imply that they are not at all productive in the language. The sample employed here is rather small, and because the suggested statistical approaches are better suited for large-scale corpora, the concerned suffixes do not come across any words in them. This brings up the issue of the language's lack of well-designed adequate resources once more, the lack of all-inclusive productivity measurement tools and non-alignment between measuring methods and sampling.

However, regarding the measuring methods, we feel that results by all the measuring methods should be compared to get a comprehensive picture of productivity of the affixes. Also, as different methods display different aspects of productivity, abandoning one method may deprive us of getting some other important insights.

5.8 Measure-based productivity- Sample B

Based on the type frequency of the suffixes in the 2006 and 2016 edition of Hemkosh presented in table 5.2, the suffixes are arranged in descending order of frequency:

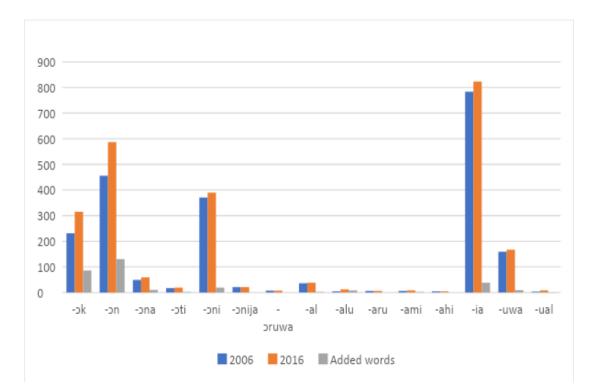


Fig 5.6 Type Frequency, V of the suffixes of Hemkosh (Ed. 2006 and 2016)

SI	2006	1016	In terms of newly added words
1	-ia	-ia	-ən
2	-ən	-ən	-ək
3	-əni	-əni	-ia
4	-ɔk	-ɔk	-əni
5	-ижа	-uwa	-əna
6	-əna	-əna	-uwa
7	-al	-al	-alu
8	-ənija	-ənija	-əti, -al, -ami
9	-əti	-əti	-ual
10	-əruwa	-alu	-ənija, -əruwa, -aru, -
			ahi
11	-aru -ami	-ami, -uwal	
12	-alu -ahi	-əruwa	
13	-uwal	-aru	
14		-ahi	

Table 5.5 Ranking of suffixes in descending order of productivity based on Table 5.2

5.8.1 *Type frequency V* in 2006 and 2016

Firstly, the hierarchical order of the suffixes in terms of productivity is similar in both the years, i.e., in 2006 and 2016. *-ia* followed by *-on*, *-oni*, *-ok*, *-uwa*, *-ona*, *-al* display the highest type frequency in both the years. On the other hand, a few suffixes *- oti*, *-onija*, *-oruwa*, *-alu*, *-aru*, *-ami*, *-ahi*. *-uwal* have a very lower number of types resulting in their type frequency being low. The suffixes *-oruwa*, *-alu*, *-aru*, *-ahi* and *- uwal* change their order in the later year, though differing slightly.

5.8.2 Type frequency V of newly added words

In terms of new words that are added after ten years in 2016, -n has the highest number of candidates that are considered worth adding by the lexicographer. -k has the second highest frequency with 86 and -ia is third with 38. One of the interesting

observations is that the correlation between the number of new words added for the suffixes and their ranking in 2006 and 2016. The suffixes that have added a greater number of words in ten years are the same suffixes that have more frequency than the others in the respective years. For example, -on has 130 new words in 2016 which is the highest in number, its ranking, as we can see is second in 2006 as well as in 2016. Similarly, 86 new words were added to the list for -3k in 2016, which has the fourth highest type frequency in 2006 and 2016; 38 words were added newly for *-ia* in 2016 which is the highest frequency in both years. Again, the suffixes like *-uwal*, *-oruwa*, *-aru*, -ahi which are lowly frequent in 2006 and in 2016, also have the lowest number of new words in the latest edition. While -uwa registers one new word in ten years, the word count for -*oruwa*, -aru and -ahi remain the same in both years, hence no new words are found. This shows that the more frequent suffixes are more likely to provide the language with new words or word formations. To put it another way, specific new word combinations for specific suffixes are deemed worthy of listing, and it turns out that they are the same suffixes that already have the higher type frequency in the language. The choice confirms the productive nature of these suffixes, assuming that the lexicographer was least aware of the productivity features of the particular suffixes.

5.9 General analysis of Suffixes: Sample A and B

Now, coming to the comparison between sample A and B, which we already know that it is a comparison of only one method, i.e., Type frequency V, we find that although the nature and sizes of the samples vary greatly, the ranking of the suffixes is identical between the two. Both samples' suffixes are arranged in descending order according to Type Frequency, which is remarkably similar. From the top in both samples, *-ia, -on, -oni* and *-ok* remain unaltered. In sample A, *-ona* appears before *-uwa*; in sample B, the reverse is true. Similarly in the case of *-oti, -al*, and *-onija*, the suffixes *-al* and *-onija* overtake *-oti* just by one ranking. Again, the suffixes *-ami, -oruwa, -aru*, and *-uwal* that appear less frequently in sample A also appear less frequently in sample B. On the other hand, *-alu* and *-ahi*, which have no instances in sample A, have 4 types for both the suffixes in the 2006 edition in sample B and 12 and 4 types respectively in the 2016 edition. As a result of their lower frequency compared to the others, these two suffixes

can be seen towards the end in both samples. We may conclude that despite two distinct samples, as there is a similarity of the ranking based on Type frequency in both, the productivity status of the suffixes is supposed to be accurate.

As we have estimated the productivity rate of each suffix in two separate samples by using various measuring techniques, we realise the situation is far from obvious as a variety of factors influence the overall output of suffixes. The aforementioned methods provide statistical evidence of overall output, but if we focus on certain aspects of productivity, we may find that different suffixes are productive differently in various areas.

While some suffixes are more productive in specific areas, others are productive in several areas, making them more productive overall. Although the list is not exhaustive, let us look at the productivity of the suffixes in terms of word class, the quantity of noun and adverb derivatives, agency, femininity, expressivity, suffix composition, and morphological structure of the bases in the following chapter.