



Derivation and Inflection as Morphological Processes in English and Gujarati: A Comparative Linguistic Study

Abstract

Every language has various mechanisms to create new words and different forms of the existing words. New words are required to make the language more expressive and different forms of the available words are for some semantic as well as syntactical purposes. In English and Gujarati, derivation is one of the important processes for creating new words and inflection is a process for producing different forms of the words. Both of them are morphological processes as they affect the forms of words. Generally, both of them are considered to be the same and are referred under an umbrella term – affixation. The reason for this misunderstanding is the common nature of both these processes – both derivation and inflection use the existing lexicon of the language to generate new words and different forms of words respectively.

The purpose of this paper is to clear the misconception that both of them are word-formation processes. The paper seeks to explain how they are different; why one is a word-formation process and the other is not; how they are applied in English and Gujarati; how they are similar or different to each other in both of these languages. The researcher wishes to throw some light on the morphological, syntactical and semantic aspects of both of these processes. It would be interesting to note the similarities displayed in the behaviour of these processes in these two drastically different languages.

Key words: *English, Gujarati, derivation, inflection, prefix, suffix, sandhi*

The store of words in human languages is by no means fixed for ever. In any language, words may be altered, added or lost. The meaning of words may broaden, narrow or shift. The lexicon may also shrink as older words become obsolete. There are lots of new words brought to the language both consciously by language trends or advertising and unconsciously through language change over time. New words may be introduced into a language by borrowing or by coinage. There are a number of word-formation processes which help producing new words according to the current requirement of the user.

Derivation, also called affixation, and inflection are commonly found processes in English and Gujarati. In Gujarati, they are called aNgsiddhi and padsiddhi respectively. Both of them have to do with the affixes in both the languages. Affixes are bound morphemes. They are divided into two categories: derivational (lexical) and inflectional (grammatical). The process using the derivational affixes is related to different lexemes whereas the process using the inflectional affixes is related to different forms of the same lexeme. Informally, derivation rules form new words (lexemes), while inflection rules yield variant forms of the same word (lexeme). Therefore, though both of them use affixes, derivation is a word-formation process but inflection is not.

Derivation is a highly productive word-formation process. Compared to inflection, it is complex too. But the focus of this paper is neither the creativity nor the complexity of the process of derivation. The focal point here is the comparison of derivation and inflection in English and Gujarati. The similarities would strengthen the belief in the inherent resemblance found in the characteristics of languages. And, the differences would make the learners pay more attention to the peculiarities of both the languages.

The major difference between the two is that the new words produced by adding the derivational affixes may or may not change the part of speech; whereas the words generated by adding the

inflectional affixes do not change their part of speech. Rather, they are added for purely grammatical purpose. Inflectional affixes are all suffixes; derivational affixes occur both as prefixes and suffixes.

- For example: Derivation: create (v) – creative (adj) – creation (n)
rātuN (red) (adj) – ratāsh (redishness) (n), het (n) (love) – hetāl (adj) (loving)
- For example: Inflection: play (v) – playing (v-continuous) – played (v-past)
paNkhī (bird) (singlar) – paNkhīo (birds) (plural)

Derivation is the process of adding one or more affixes to a root. The roots and affixes are combined along their edges. One morpheme follows the next and each one has identifiable boundaries. The morphemes do not overlap. For example: encircle, befriend, hopeful, happiness, multinational

Gujarati morphology also has the same concepts. Root (dhātu) is an element to which various types of affixes are attached and which cannot be further divided into smaller parts. Base (aNg) is an element to which an affix may be attached. It may but need not be a root morpheme. Stem is an element or combination of elements to which an affix is attached. It is thus synonymous with the term 'base'.

Base means the remaining part of a word from which all the case-markers are removed. A base (aNg) may consist of one or more roots or one or more suffixes. It may produce another base with an affix or may produce an independent word with an affix. A word (pad) means a self-contained element which directly becomes a part of a sentence. It does not take any other affixes.

Bound lexical morphemes are called derivational affixes and bound grammatical morphemes are called inflectional affixes. Inflectional affixes of English are all suffixes; derivational affixes occur both as prefixes and suffixes.

Inflectional suffixes modify the meanings of the lexical morphemes to which they are joined in fixed and regular ways. For example: the case suffix's attached to nouns always shows possession. Derivational affixes, on the other hand, may change the meanings of different lexical morphemes in different ways. For example: the addition of the suffix -ness to an adjective gives a noun: useful + ness = usefulness. In other words, while the effects on meaning of the bound grammatical morphemes are predictable, those of bound lexical morphemes are not.

Desai notes: "અંગસાધક પ્રત્યય ઘણુંખરું પ્રકૃતિ કે મૂળ અંગને એટલેકે લિંગવાચક પ્રત્યયો બાદ કરતા બાકી રહેતા અંગને લાગે. ઉ.દા. છોકર + મત, ઘડ + પણ, બચ + પણ ... જ્યારે પદસાધક પ્રત્યયો લિંગવાચક, વિભક્ત્યંગ કે બહુવચનના પ્રત્યયવાળા અંગને લાગે. ઉ.દા. છોકરીઓને, છોકરીને, છોકરાઓને (-ઈ – લિંગવાચક, -અ વિભક્ત્યંગ, -ઓ બહુવચનવાચક પ્રત્યય)" (204) Derivational suffixes are generally attached to the root after removing the gender suffixes; whereas inflectional suffixes are attached to the stem after the gender-number-case suffixes.

The addition of grammatical affixes to words is controlled by the essential rules of language. They change the form of a word to relate it to other words in the sentence. The addition of lexical affixes to words is controlled by the choice of the user of the language. He attaches lexical affixes to existing words to produce new words which can express exactly the meanings he wants to communicate.

Desai writes: "પદસિદ્ધિ વાક્યાત્મક કોટિ બદલવા માટે કારણરૂપ બનતી નથી, જ્યારે અંગસિદ્ધિ વાક્યાત્મક કોટિ બદલવા પ્રેરે છે." (204) Inflection does not affect the syntactic category of the stem but derivation affects the same.

Each inflectional affix represents a grammatical category, and performs the grammatical function associated with that category. Thus, the plural affix represents the grammatical category 'number', and performs the function of pluralizing the noun to which it is attached.

Desai notes: "પદસિધ્ધિ પાયાની વાક્યાત્મક કોટિને સ્પર્શતું નથી, પણ અર્થનાં અને વ્યાકરણિક પ્રકાર્યનાં વધારાનાં તત્વો ઉમેરે છે. જે પદસાધક પ્રત્યયના યોગથી એકસાથે કેટલીયે વ્યાકરણિક કોટિની સૂચના દ્વારા મળે. જેમકે: વચન, વિભક્ત્યંગ, કારક ... વગેરે કે વાચ્ય, કાળ-અર્થ-અવસ્થા, પુરુષ, વચન... વગેરે. જ્યારે અંગસાધક પ્રત્યયોના યોગથી આ રીતે સામૂહિક અર્થની અભિવ્યક્તિ ન થાય." (204) Inflection does not touch the basic syntactic category of the word but adds to its meaning and grammatical function. It simultaneously indicates more than one grammatical category, but derivation cannot do that.

The inflected word forms of lexemes are arranged into paradigms which are defined by the requirements of syntactic rules whereas the rules of word formation are not restricted by any such corresponding requirements of syntax. Thus inflection is related to syntax but word formation is not. Inflectional suffixes call for agreement; whereas derivational suffixes do not. For example: a rose is – roses are (inflectional suffix – plural); an organisation is – an organisational issue is (derivational suffix – adjective)

The inflectional categories used to group word forms into paradigms cannot be chosen arbitrarily; they must be categories that are relevant to stating the syntactic rules of the language. For example: English follows the concord rules claiming the agreement between subject and verb in person and number. Gujarati follows the concord rules claiming the agreement between subject and verb in person, number, gender and case.

The number of derivational affixes is much larger than the number of inflectional affixes. They cannot be usefully classified on the basis of the part of speech of the word to which they are attached. Derivation does not allow any generalizations. No common derivational rule can be applied to all the forms of a language. On the other hand, inflection can be explained by generalizations.

Quirk and Greenbaum note: "Once a base has undergone a rule of word-formation, the derived word itself may become the base for another derivation; and so, by reapplication, it is possible to derive words of considerable morphological and semantic complexity." (430) they give the example – friend → friendly → friendliness → unfriendliness. The same can be found in Gujarati: ઉદાર → ઉદારતા →

ઉદારતાપૂર્ણ

Derivational affixes are identified as those affixes which are attached to stems not in order to express a grammatical contrast in accordance with some rule of grammar, but in order to create a new word which enables the speaker to express a new idea. By adding derivational affixes to existing words, the speaker creates for himself a bigger store of words from which he can choose the most appropriate words to express his ideas. The new words created by the addition of derivational affixes are treated as separate words and are listed separately in dictionaries. Contrarily, the word forms containing inflectional suffixes are not treated as separate words and not listed separately in dictionaries. Desai

observes: "મૂળ પાયાના ઘટકને અંગસાધક પ્રત્યય લાગતાં નવો શબ્દઘટક રચાય છે, જ્યારે પદસાધક પ્રત્યય લાગતાં કોઈ નવો શબ્દઘટક ન રચાય. એટલે અંગસાધક પ્રત્યયોના યોગથી શબ્દકોશીય અર્થોની સૃષ્ટિ રચાય, જ્યારે પદસાધક પ્રત્યયોના યોગથી માત્ર વ્યાકરણિક રૂપોની સિધ્ધિ થાય. એટલે અંગસાધકને કોશગત અર્થ છે, પદસાધકને વ્યાકરણિક પ્રકાર્ય છે." (204) Derivation creates new words whereas inflection creates various grammatical forms of a single word. Derived words have lexical meaning and inflected words have grammatical function.

Derivational affixes modify the meanings of the stems but not in a regular and fixed way as do inflectional affixes. The effect of derivational affixes on the meaning of the stems cannot be predicted with regularity, though subsets of stems may show partial regularities. For example: the suffix -fy creates verbs from nouns and adjectives.

N → V: beauty – beautify, class – classify

A → V: pure – purify, clear – clarify

Derivational affixes may change the part of speech of the stem though they do not always do so. Thus child – childish, childlike involves a change in the part of speech but obey - disobey, build – rebuild, etc. do not. Derivational prefixes, in particular, do not affect the part of speech of the stem.

"The inflectional morphology of a language is the study of the way in which bound grammatical morphemes combine with stems to be realized as grammatical words.....Inflectional affixes differ from derivational affixes in these ways: they never change the grammatical category of the stem, they are all suffixes, they form the outer layer of a complex word, and they modify the meaning of the stem in regular ways." (IGNOU 44)

Inflectional affixes are attached to a stem after all the derivational affixes have already been attached and usually only one inflectional suffix is attached to a word. Therefore, once an inflectional affix has been attached to a word, no other affix can be added to it. As a result, the inflectional affix forms the outer layer in the structure of a word, while derivational affixes form the inner layers. Desai **comments:** "આથી પદસાધક પ્રત્યયો બાહ્ય સ્તરની રચના છે, જ્યારે અંગસાધક પ્રત્યયો આંતરિક સ્તરની રચના છે. એટલે પદસિદ્ધિ શબ્દની પરિધી પર – સીમાંત છે. આમ, કોઈ પણ રૂપશાસ્ત્રીય રીતે સંકુલ રૂપ અંગસાધક અને પદસાધક પ્રત્યયો ધરાવતું હોય તો પદસાધક પ્રત્યય અંગસાધક પ્રત્યયને અનુસરે." (203)

Derivational affixes are not restricted to one part of speech. Some affixes can be attached to more than one part of speech. For example: dis-, the negative prefix, can be attached to adjectives (disloyal), nouns (disorder) or verbs (disobey); the suffix -hood can be attached either to nouns (boyhood) or to adjective (falsehood) and so on. In contrast, inflectional affixes are restricted to only one predetermined part of speech. For example: the plural suffix -s can only be used with nouns. The genitive case-marker's is attached to nouns or noun phrases only.

Desai notes: "જો કે અંગસાધક પ્રત્યયો આપેલા શબ્દવર્ગના અમુક જ સભ્યો સાથે આવવાનું વલણ દાખવે છે, જ્યારે પદસાધક પ્રત્યયો આપેલા બધા જ વર્ગના સભ્યોને અસર કરે છે. આથી પદસાધક રૂપાખ્યાન વધુ સત્તા અને સામ્યતા મેળવે છે." (136-137) Inflectional suffixes affect all the members of a given word class. Therefore, some generalizations are possible. Unlike inflectional suffixes, derivational affixes are never attached freely to all the members of a particular part of speech. For example: though -er is attached only to verbs, it cannot be attached to all the verbs – dancer, player, worker, reader, runner, writer are acceptable but stealer, hopper, expresser, arranger are not acceptable. Similarly, though -ness is attached only to adjectives there are some adjectives with which -ness is odd and unusual if not impossible. For example: clearness, longness, fatness, freeness, corruptness.

Desai writes: "અંગસાધક રચનાના પ્રત્યયો બહુસંખ્ય છે. જ્યારે પદસાધક રચનાના પ્રત્યયો અલ્પસંખ્ય છે. વળી, દરેક પદસાધક પ્રત્યય તે તે વર્ગના દરેક સભ્યને લગાડી શકાય છે.... એટલે પદસાધકનો દરેક પ્રત્યય ઘણાં રૂપો બનાવી શકે. પરંતુ દરેક અંગસાધક પ્રત્યય ઘણાં રૂપો બનાવી શકે નહીં. અંગસાધક રચનાના દરેક પ્રત્યય તે તે વર્ગના ગણતર અંગોને જ લગાડી શકાય. એટલે દરેક અંગને દરેક પ્રત્યય ન લાગે." (203)

English and Gujarati have numerous derivational affixes but only a few inflectional ones. Inflectional suffixes are attached to all the words of a class in one or the other form; whereas derivational affixes cannot be attached to all the words of a class.

Words having derivational suffixes can be replaced by any other similar words; whereas words having inflectional suffixes cannot be replaced, the only exception being the plural-marker -o. For example: ghar (house – neuter) has two forms for plural – ghar and gharo; chhokro (boy – masculine) has two forms for plural – chhokra and chhokrao; bakri (goat – feminine) has two forms for plural – bakri and bakrio

English plural allomorphs -s and -es are phonologically conditioned. But the other plural allomorphs -en and zero suffix are morphologically conditioned. All of them are in complementary distribution.

Desai notes: "ગુજરાતી ભાષામાં સંજ્ઞાનું બહુવચન દર્શાવવા -આ, -આં, -ઓ અને કોકવાર શૂન્ય પ્રત્યય એમ ચાર ઉપરૂપો વપરાય છે જે પરિપૂરક વિતરણમાં છે ... ગુજરાતી સંજ્ઞાના બહુવચન દર્શાવતા આ રૂપો રૂપશાસ્ત્રીય રીતે અનુબંધિત છે." (31) In Gujarati also, there are four plural morphemes – -a, -aN, -o and zero suffix. They are also in complementary distribution. They are morphologically conditioned.

Desai remarks: "વળી, ગુજરાતીમાં તેમજ અંગ્રેજીમાં સાર્વનામિક રૂપોમાં બહુત્વ પદસાધિત નથી; કોશગત છે. ત્યાં પ્રતિસ્થાપિત (replacive) રૂપો દ્વારા બહુત્વ વ્યક્ત થાય છે." (64) Both in English and Gujarati, the pluralisation of pronouns is not inflectional but lexical. Plurality is demonstrated through replacive forms.

Inflectional Suffixes Related to Derivation

The comparative degree suffix -er is an inflectional suffix. But it can also be used as a derivational suffix. It creates new words instead of giving a different form of the same words. For example: learn (v) – learner (n), dance (v) – dancer (n), blow (v) – blower (n)

The same is true for the suffixes -ed/en and -ing. They are verb suffixes. But when they are used to create past and present participles, they become derivational suffixes as participles can be used as nouns and adjectives. For example: read – reading, fry – fried

In Gujarati, the gender suffixes are inflectional suffixes. But when used as diminutives they are derivational suffixes. For example: pāghḍī (f) – pāghḍo (m) (turban)

Sandhi – A Peculiar Feature of Gujarati

This is a peculiar feature of Gujarati language. When two words or an affix and a word are put together to form a single word, the last letter of the first word and the first letter of the last word affect each other. This causes a change in the final form of the word. The nature of this change is phonological as well as morphological. It is reflected in the pronunciation and the spelling of the resultant word. Thus, Sandhi becomes a morpho-phonological process and follows certain rules. One important thing to be noticed here is that the Sandhi rules are applied only on tatsam words, i.e. the words accepted directly from the source language Sanskrit.

In order to understand the process and master the rules of Sandhi, one must have the knowledge of the phonological complexities of Gujarati language. The ease of pronunciation is supreme. When two consonant or vowel sounds or one consonant and one vowel sound are to be produced together, the problem of clear and correct pronunciation occurs. Hence the Sandhi rules are required.

Generally, the process of Sandhi takes place simultaneously with two word-formation processes: derivation and compounding. But every single word resulting from the process of Sandhi may not be a derived or a compounded word. And, every derived or compounded word does not undergo the process of Sandhi. Again, the process of Sandhi occurs with inflection too.

- Derivational prefixes – no Sandhi rules can be applied
- Derivational suffixes – Sandhi rules are applied when the suffix starts with a vowel
Examples: het (love) – hetāḷ (loving); shaher + ī = shaherī (urban);
a- + dekhuN = adekhuN + -āī = adekhāī (jealousy)
- Inflectional prefixes – None
- Inflectional suffixes – Sandhi rules are applied when the suffix starts with a vowel (gender, number, case suffixes)
Examples: chokr + o = chokro (a boy)
chokr + ī = cokrī (a girl)
chokr + ū = chokrū (a child)
chhokr + -āN = chhokrāN (children)
sudip + -e = sudipe (Sudip – Nominal)
- Stem-enlarging suffixes – Sandhi rules are applied when the suffix starts with a vowel

Examples: daḍo +-uliy- = daḍuliyo (a ball)

- Upasarg – Sandhi rules are applied when necessary

Examples: niḥ + ākār = nirākār (shapeless)

niḥ + rav = nīrav (soundless)

prati + uttar = pratyuttar (answer)

ati + aNt = atyaNt (very much)

In English, very few changes take place during the process of inflection.

Examples: refer + ed = referred

knife + es = knives

try + ed = tried

Conclusion

English and Gujarati are two drastically different languages. But the inflectional and derivational affixes in both these languages behave in almost similar way:

- Inflection is grammatical and derivation is lexical.
- Inflection triggers agreement; derivation does not.
- Very few derivational prefixes are there.
- No inflectional prefixes are there; only suffixes are found.
- Inflectional suffix comes at word final position.
- More than one derivational affix but only one inflectional suffix can be used at a time.
- Prefixes are class-maintaining and suffixes (derivational) are class-changing affixes.
- Inflectional suffixes are attached to all the members of a class though in variety of forms. But derivational suffixes cannot be.

The major point of difference is the morpho-phonological process called Sandhi. The shape and pronunciation of the words undergoing this process are changed in Gujarati.

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