

Hypocoristic Formation in Gujarati*

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Abstract

This paper examines the morphology and phonology of hypocoristic formation in Gujarati, an Indo-Aryan language, within the framework of Optimality Theory and applying the Theory of Prosodic Morphology (McCarthy & Prince 1986). The intention of the speaker using a hypocoristic to address someone can range from affection to annoyance to even contempt or anger (Desai 1994). Consequently, there are different types of hypocoristic forms found in the language. Gujarati hypocoristics are formed through the truncation of a personal name, attaching a suffix to a personal name, or by attaching a suffix to a truncated personal name. These can be classified according to the suffix attached and the extent of truncation involved. The data shows that the hypocoristic formation process satisfies the Prosodic Morphology Hypothesis (McCarthy & Prince 1990) as the base is always a prosodic unit: a heavy syllable (CVC) or a prosodic word, thereby meeting the Template Satisfaction Condition.

Keywords: hypocoristic forms; truncation; Gujarati; nicknames; Optimality Theory

Resum. Formació hipocorística en gujarati

Aquest treball examina la morfologia i fonologia de la formació d'hipocorístics en gujarati, una llengua indoària, en el marc de la Teoria de l'Optimitat i amb l'aplicació de la teoria de la Morfologia Prosòdica (McCarthy & Prince 1986). La intenció del parlant que utilitza un hipocorístic per adreçar-se a algú pot anar des de l'afecte a l'enuig, el menyspreu o la ira. Conseqüentment, hi ha diferents tipus de formes hipocorístiques en la llengua. Els hipocorístics del gujarati es formen pel truncament d'un nom personal, afegint un sufix al nom de persona o afegint un sufix al nom de la persona truncat. Es poden classificar segons el sufix afegit i el grau de truncament que presenten. Les dades mostren que el procés de formació d'hipocorístics' adiu amb la hipòtesi de la Morfologia Prosòdica (McCarthy & Prince 1990) ja que la base és sempre una unitat prosòdica: una síl·laba pesant (CVC) o un mot prosòdic, que satisfan la *Template Satisfaction Condition*.

Paraules clau: formes hipocorístiques; truncament; gujarati; sobrenoms; Teoria de l'Optimitat

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1. Introduction

This paper examines the morphology and phonology of hypocoristic formation in Gujarati, an Indo-Aryan language, within the framework of Optimality Theory and applying the theory of Prosodic Morphology (McCarthy & Prince 1986).

Gujarati is an Indo-Aryan language spoken in the state of Gujarat in the western part of India. The 2011 census of India¹ reports that there are 55,492,554 speakers of Gujarati in the country. The majority live in the state of Gujarat and a substantial number can be found in the neighbouring state of Maharashtra. Gujarati speaking communities can also be found in major Indian cities outside Gujarat like Kolkata, Hyderabad, Mumbai, etc. Outside the country, there are established immigrant communities in some East African countries, the US, the UK, Canada, and Australia. Gujarati is an under-researched language with limited published research which too seems to have halted in the last four decades in India, with no corpora and very few resources available. This paper examines Hypocoristic formation in Standard Gujarati, an area that finds no mention in any of the existing literature on Gujarati linguistics. Data was collected through informal conversations and interviews with L1 speakers of Standard Gujarati. Standard Gujarati is the accepted standard dialect of the speech of the area from Vadodara (formerly Baroda) to Amdavad (formerly Ahmedabad).²

Hypocoristic formation is a type of word formation strategy of a language by which personal names are altered in order to depict the attitude of the speaker to the person referred to by the hypocoristic. Gujarati hypocoristic forms are required to be (a) based on the person's given name (part or whole), (b) indicating gender,³ and (c) used only in the context of familiarity between the addresser and addressee. The level of familiarity and the nature of relationship (familial or otherwise) along with attitude towards the addressee determines the hypocoristic used. This is the reason why Gujarati has different kinds of hypocoristics and also why more than one hypocoristic can be used for the same name.

The intention of the speaker using a hypocoristic to address someone can range from affection to annoyance to even contempt or anger (Desai 1994), consequently there are different types of hypocoristic forms found in the language. Familiarity

1. The census report for population numbers by mother tongues can be found at: <<https://censusindia.gov.in/census.website/data/census-tables>>.
2. There are many other major language varieties, like Surati, Kathiawadi, Bombay Gujarati etc. to name a few.
3. Most hypocoristics are inflected for gender, except for one type, Type 4.

between the speaker and the person being spoken to or talked about is a given. Gujarati's rich morphology which recognises three genders, masculine, feminine and neuter, allows for variation in hypocoristic formation. All the hypocoristic forms created in the language, except one, irrespective of the type or process involved, are inflected for gender.

2. Types of Hypocoristic Forms in Gujarati

Gujarati has five different types of hypocoristic forms, which are listed and described below, where HC stands for 'hypocoristic' and TF stands for 'truncated form'.

2.1. Type 1: HC = TF + Gender Inflectional affix (-i/o)

In Table 1, we see an inflectional affix *-i/-o* attaching to the truncated form. In this type of hypocoristic formation, the base word is clipped and the gender marker *-o* (masculine) or *-i* (feminine) is added.

- (1) a. [ʃʌnk-o] from [ʃʌn.kəɾ]
 b. [dʒʌmn-i] from [dʒʌm.nɑ]

Table 1. Type 1: HC = TF + Gender Inflectional affix (-i/o)

HC	HC = TF + affix(es)	Original name	Gender
[dʒʌm.ni]	[dʒʌmn-i]	[dʒʌm.nɑ]	F
[lʌ.i]	[lʌ-i]	[lʌ[ɪtʃɑ]	F
[ʃʌn.ko]	[ʃʌnk-o]	[ʃʌn.kəɾ]	M
[dʒe.tʰo]	[dʒe.tʰ-o]	[dʒe.tʰɑ.[ɑl]	M

This form is commonly used as a short form for addressing a person. When elders address young people using this form, it conveys that the addressee is a junior or a young person. However, when age is not a factor, it could denote a lack of respect. If someone of a lower socio-economic status, a worker/labourer/domestic helper, is addressed similarly, it denotes a clear class/status difference. When uttered in an angry/aggressive tone - it denotes anger or contempt. The use of this form is quite widespread and can be applied to many names.⁴

This affix attaches to the right edge of the whole name, or part of the name. If the original name is monosyllabic and ends in a consonant sound, then the affix directly attaches to the right edge of the name (as in /vir/+o/ = [viro]). However, if

4. Some names end in an *-o/i/*. In such names, the final vowel segment is not an affix but a part of the original name's internal structure. For example, [ka.no] and [dʒi.vi]. In such cases, there will be no change.

the name ends in a vowel sound, the affix attaches after the deletion of the vowel (as in [dʒʌmn-i] from [dʒʌm.nɑ]) or if the name is disyllabic with a consonant ending only the onset consonant /k/ of the second syllable is retained and the rest of the second syllable is clipped (as in [ʒʌnk-o] from [ʒʌn.kəɾ]).

What can be observed is that the final hypocoristic form that is created, has the shape CV(C).CV, that is, a disyllabic foot ending with a vowel (the vowel, the final vowel, is the gender inflection). When the first syllable is truncated with the onset of the following syllable intact (as in [dʒʌmn-i] from ([dʒʌm.nɑ]), it leads to the creation of a superheavy syllable.

If the disyllabic name ends in a vowel sound, which is the case with some women's names, the affix attaches after the deletion of the vowel (as in /mʌdʰu/+i/ = [mʌdʰi]). The final HC created has the shape CV(C).CV.

2.2. Type 2: HC = TF + Derivational suffix /l/ + Gender-Inflectional affix (-i/o)

In this form, the base is truncated to a bimoraic syllable and then the derivational suffix /l/ and the gender marker /-o/ or /-i/ are added.

- (2) a. [ɾʌgʰ-[-o]] from [ɾʌ.gʰu]
 b. [ɾʌm-[-i]] from [ɾʌ.mɑ]
 c. [pʌbʰ.[o]] from [pʀʌbʰəkəɾ]
 d. [sʌv.[i]] from [sʌvʲɪtɑ]

Table 2. Type 2: HC = TF + Derivational suffix /l/ + Gender-Inflectional affix (-i/o)

HC	HC = TF + affix(es)	Original name	Gender
[ɾʌgʰ.[o]]	[ɾʌgʰ-[-o]]	[ɾʌ.gʰu]	M
[ɾʌm.[i]]	[ɾʌm-[-i]]	[ɾʌ.mɑ]	F
[pʌbʰ.[o]]	[pʌbʰ-[-o]]	[pʀʌbʰəkəɾ]	M
[sʌv.[i]]	[sʌv-[-i]]	[sʌvʲɪtɑ]	F

This form mainly denotes a sense of contempt, disgust, rudeness or impoliteness. However, when used for children, it denotes affection. It can also convey annoyance or exasperation when used among friends. This form has a restricted scope, and its use is not very widespread.

This affix attaches to part of a name, the part it attaches to needs to be of a CVC shape. Therefore, in a name like [ɾʌ.gʰu] or [ɾʌ.mɑ], where the personal name is of the shape CV.CV, the final vowel (from the right edge) is deleted to get a truncated form of the shape CVC and the affixes /-l/ and /-o/i/ attach to it. The /-l/ affix attaches to the truncated form and the gender inflection attaches after the affix. In longer names like [pʀʌbʰəkəɾ] and [sʌvʲɪtɑ], the name is first reduced to a truncated form with the shape CVC /pʌbʰ/ and /sʌv/ respectively. This deletion is from the

right edge of the personal name. The affix then attaches to the right edge of the truncated form and the gender inflection attaches after the affix. Thus, the base for this hypocoristic formation has to be a bimoraic syllable. In Gujarati, a bimoraic syllable can either be a closed syllable or a syllable with a diphthong, that is, CVC or CVV. If a woman's name is [kəi|ɑʂ], it will be truncated to form a CVV /kəi/ and then /-l/ will be affixed followed by /-i/ resulting in the hypocoristic [kəi.l̪i]. If a man's name is [pɾʌbʰɑkəɾ], it will go through the same process as the name [kəi|ɑʂ]. It will also undergo cluster simplification resulting in the hypocoristic [pɾʌbʰ.l̪o].

2.3. Type 3: HC = TF + Derivational suffix /d/ + Gender-Inflectional affix (-i/o)

In this form, the base is truncated to a disyllabic form and then the derivational suffix /d/ and the gender marker -o or -i is added.

- (3) a. [ɾʌdʒni-d-o] from [ɾʌdʒ.ni]
 b. [ɾe.kʰɑ-d-i] from [ɾe.kʰɑ]
 c. [mʌŋi-d-o] from [mʌ.ŋi.l̪ɑ]
 d. [ʂʌku-d-i] from [ʂʌkunt̪ə|ɑ]

Table 3. Type 3: HC = TF + Derivational suffix /d/ + Gender-Inflectional affix (-i/o)

HC	HC = TF + affix(es)	Original name	Gender
[mʌ.ŋi.d̪o]	[mʌŋi-d-o]	[mʌ.ŋi.l̪ɑ]	M
[ʂʌ.ku.d̪i]	[ʂʌku-d-i]	[ʂʌ.kunt̪ə.l̪ɑ]	F
[ɾʌdʒ.ni.d̪o]	[ɾʌdʒni-d-o]	[ɾʌdʒ.ni]	M
[ɾe.kʰɑ.d̪i]	[ɾekʰɑ-d-i]	[ɾe.kʰɑ]	F

This form mainly denotes a sense of anger, contempt; rude/impolite attitude when used in a non-family context. When used by siblings, it is unclear whether it can have an element of affection towards the addressee. This form has a widespread use and the affix can attach to any name to form this hypocoristic.

This affix attaches to the right edge of the whole name or part of the name depending on the length of the name. If the name is disyllabic and ends in a vowel sound, it directly attaches to the whole name (as in [ɾʌdʒni-d-o] from ([ɾʌdʒ.ni])). However, if the name is longer, it is first truncated to a CV(C)CV shape (that is, a disyllabic form).

This affix, therefore, attaches to the CV(C).CV shape and after the affixation, the gender inflection attaches to it. For a name like [ɾʌdʒ.ni] or [ɾe.kʰɑ], the process is straightforward as the affix can attach directly to the right edge of these names and then the gender inflection attaches resulting in the hypocoristics [ɾʌdʒni|d̪o] for the man's name and [ɾekʰɑ|d̪i] for the woman's name. If, however, the name is trisyllabic or longer it is first reduced to the truncated form CV(C).CV for the hypocoristic to

form. For instance, if a man's name is [mʌ.ŋi.ɭɑ] and a woman's name is [ʂʌ.kun.ɬə.ɭɑ], these names will first be reduced to the truncated forms /mʌ.ŋi/ and /ʂʌ.ku/ and then the hypocoristics [mʌŋɪɖo] and [ʂʌkuɖi] will be formed. Here again, we see that the base is prosodically determined for the hypocoristic to be formed through the morphological processes of derivational suffixation and inflection.

In both Types 2 and 3, an affix is attached to a name (man's or woman's name) followed by the gender inflection, but this is where the similarities end. The end-product in Type 2 is always disyllabic whereas in Type 3, it is always trisyllabic. For Type 2, the stem to which the affix attaches is a bimoraic syllable whereas for Type 3 it is a disyllabic foot.

2.4. Type 4: HC = TF + Derivational suffix /u/

In this form, the base is truncated to a bimoraic syllable and then the derivational suffix /u/ is added.

- (4) a. [ɖip-u] from [ɖi.pa]
 b. [vin-u] from [vi.nəʃ]
 c. [nim-u] from [nir.mə.ɾɑ]
 d. [mʌn-u] from [mʌ.no.hər]

Table 4. Type 4: HC = TF + Derivational suffix /u/

HC	HC = TF + affix(es)	Original name	Gender
[ɖi.pu]	[ɖip-u]	[ɖi.pa]	F
[vi.nu]	[vin-u]	[vi.nəʃ]	M
[ni.mu]	[nim-u]	[nir.mə.ɾɑ]	F
[mʌ.nu]	[mʌn-u]	[mʌ.no.hər]	M

This form denotes an attitude of affection towards the addressee. It is usually given by parents to their children and becomes the default form of address by family, relatives, and even friends. When this form starts functioning as the default name of the person in all contexts, the addresser cannot be presumed to have an attitude of affection toward the addressee. This hypocoristic is also used to simply shorten a person's name. If the addressee is someone older/senior and must be shown respect/deference, then [bən] or [bʰai] is attached to the hypocoristic according to their gender (meaning 'sister' or 'brother'). The use of this hypocoristic is widespread and regular as it can apply to any name. This is the only hypocoristic that is not inflected for gender.

This affix attaches to a truncated form by reducing the given name to a bimoraic syllable. If the name is disyllabic and ends in a vowel sound, the vowel is deleted

and the affix /-u/ attaches to the truncated form (as in [ɖip-u] from [ɖi.pa]). If the name ends in a consonant, then the entire rime is deleted and then the affix attaches to the truncated form (as in [mʌn-u] from [mʌ.no.hər]).

If a man’s name is [vi.nəj] and a woman’s name is [ɖi.pa], then the rime is deleted from the second syllable and the affix attaches to the consonant at the right edge, that is , to /vin/ and /ɖip/ forming the hypocoristics [vi.nu] and [ɖi.pu]. For names that have three syllables or more, the name is reduced to the truncated form CVC formed of the word initial CVC and the affix is then attached to it.

2.5. Type 5: HC = Whole name + Derivational suffix /ij/ + Gender-Inflectional affix (-o)

- (5) a. [ʌrvind-ij-o] from [ʌrvind]
- b. [pɛhlaɖ-ij-o] from [pɛh.laɖ]

Table 5. Type 5: HC = Whole name + Derivational suffix /ij/ + Gender-Inflectional affix (-o)

HC	HC = TF + affix(es)	Original name	Gender
[ʌr.vin.ɖi.jo]	[ʌrvind-ij-o]	[ʌrvind]	M
[pɛh.la.ɖi.jo]	[pɛhlaɖ-ij-o]	[pɛh.laɖ]	M

This hypocoristic is very widespread and can apply to any name (+Male, +Masculine). It is more commonly used to address workers/labourers etc., that is men of lower socio-economic status. It can also be used to convey anger or annoyance. This affix attaches to the whole name. This is the only known affix that applies to a single gender.

This affix attaches to the whole name. Of all the hypocoristics formed in the language, this is the only one that can be as long as four syllables. Hence, it is more like Vocative formation and not hypocoristic by the usual definition. This type is restricted to names of men.

Examples cited in (1) to (3)⁵ clearly show that the hypocoristic is formed by affixation to truncated forms. In examples cited in (4), which belong to type 4, we see a derivational affix -u⁶ attaching to the truncated form. In examples (2a-d) and (3a,b), which belong to types 2 and 3, we see either a derivational affix -[or /ɖ/ followed by the gender inflectional affix -i/-o, attaching to the truncated form. However, in examples (1a,b), which belong to type 1, we only see the gender-inflectional affix -i/-o attaching to the truncated form. Thus, we find four types

5. Data cited in this paper was collected from eight L1 speakers of Gujarati through conversations and interviews.
 6. In Gujarati, -u is also the inflectional affix for neuter gender. For example, [ʃʰok.r-o] is a “boy”, [ʃʰok.r-i] is a “girl” but [ʃʰok.r-u] is a “child” and is used to refer to a small child irrespective of the gender or when the gender is not known.

of hypocoristics here which are similar since they all are formed from affixation to a truncated form but each of which is unique in the type of affixation applied to form the hypocoristic. This is further reinforced by the existence of more than one hypocoristic form for the same name.

- (6) a. [mʌq̣ʰi] from [mʌq̣ʰu] b. [mʌq̣ʰi] from [mʌq̣ʰu] (F) (Types 1 and 4)
 (7) a. [ɾʌʂmiɔ] from [ɾʌʂmi] b. [ɾʌʂu] from [ɾʌʂmi] (M)⁷ (Types 3 and 4)
 (8) a. [dʰruvɔ] from [dʰruv] b. [dʰruvijɔ] from [dʰruv] (M) (Types 3 and 5)
 (9) a. [dʒagu] from [dʒagruʈi] b. [dʒagudʒi] from [dʒagruʈi] (F) (Types 3 and 4)

All these examples indicate that there are some regular patterns followed in the formation of Gujarati hypocoristics. Before we embark on a detailed and systematic analysis of the five different types of hypocoristic formation, here are a few characteristics that can be generalised from the examples we have enumerated so far:

- The hypocoristic formation is always left-aligned, that is, material is always deleted or circumscribed from the right edge of the name.
- The hypocoristics are always formed by affixation and this affixation can be derivational or inflectional or both.
- The true hypocoristics (since one type (Type 5) is actually a vocative) are always formed using truncation with affixation.
- Most hypocoristics have to be inflected for gender.
- More than one form can apply to a name sometimes.

Hypocoristic formation in Gujarati is an instance of a word formation process that clearly falls in the domain of prosodic morphology. It is possibly the only word formation process in Gujarati that involves truncation. In languages like Catalan (Cabr  1994), German (Wiese 2001), English (Arndt-Lappe 2007) etc. we find instances of hypocoristics that result from truncation alone. However, all hypocoristics in Gujarati (except type 5) are the result of truncation followed by affixation and hence belong to concatenative morphology.

In the sections below, we first look at the relationship between Gujarati hypocoristics and prosodic morphology. We then classify each type of hypocoristic form and attempt to provide a morpho-phonological account for the same.

3. Prosodic Morphology

Prosodic Morphology (McCarthy & Prince 1986) is the theory of how the phonology and morphology of a language interact and influence each other while satisfying the constraints of the grammar of a language. Phenomena ranging from affix-driven word formation within a language to adaptation of loanwords of another

7. In Gujarat, [ɾʌʂmi] is one of those names which can be a man's name or a woman's name. Here, we have taken a man's name and indicated that by M within brackets.

language fall under the purview of this theory. The three main principles governing the theory and its application are:

(10) a. Prosodic Morphology Hypothesis

Prosody determines the shape of the template. That is, the template must be shaped like a prosodic unit (a mora/syllable/foot/prosodic word).

b. Template Satisfaction Condition

The templatic constraints, determined by universal and language specific prosodic conditions, must be satisfied.

c. Prosodic Circumscription

The demarcation of the domain for the morphological process to occur in, can be determined prosodically as well as morpho-syntactically.

Thus, prosodic morphology dictates that the template and circumscription have to be determined using prosodic constraints even though word formation is a morphological process.

The Gujarati data shows that the hypocoristic formation process satisfies the Prosodic Morphology Hypothesis (McCarthy & Prince 1990) as the base is always a prosodic unit. For instance, types 2 and 4 clearly indicate that the truncation template is a heavy syllable (CVC-a bimoraic syllable), thereby meeting the Template Satisfaction Condition. The onset of the second syllable becomes the coda of the first to form the base to which the suffix attaches and /r/ is also deleted from the word initial cluster in [pʌb^h-[-o] ← [pɾʌb^hakər] (M) to satisfy the template. In contrast, in Types 1, and 3, the base is a disyllabic template. Either way, the base is either bimoraic or disyllabic, i.e. a prosodic word. The resulting hypocoristic for all the types is at least disyllabic as in type 2 and can even be longer as in type 3. The truncation, where applicable, is from the right edge of the word leaving the initial syllable intact (except for word initial consonant clusters, where we see the emergence of the unmarked). Type 5 is the only one that allows longer forms.

Notice that this difference in the shape of the templates for these various types of hypocoristic forms can be explained in terms of different strata in the lexicon. Stratal OT treats prosody and morphology as separate modules of grammar and is characterised by stratification and a parallel constraint system. The application of stratal OT explains the difference in constraint ranking between some types since the process of hypocoristic formation takes place at different levels, namely, syllable, foot and prosodic word. According to Kiparsky (2015), there are two main hypotheses on which Stratal OT operates:

(11) Hypothesis 1:

a. Default: All strata have the same ranking of phonological constraints.

b. Stratum-specific ranking: The constraint system of stratum n+1 may differ in ranking from constraint system of stratum n by promotion of one or more constraints to undominated status.

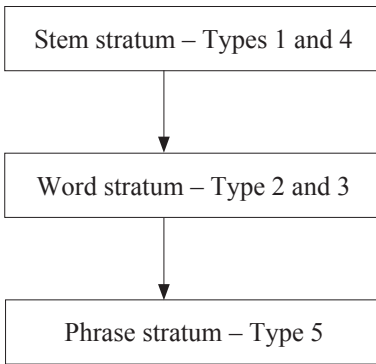
(12) Hypothesis 2:

Affixes are specified for which level/strata they attach to:

- a. Stem-to-stem affixes: [[X] Stem + Affix]Stem
- b. Stem-to-word affixes: [[X] Stem + Affix]Word
- c. Word-to-word affixes: [[X] Word + Affix]Word (Kiparsky 2015: 7)

Stratal OT subscribes to three hierarchically ordered strata which are stem, word, phrase, with stem being the lowest in the hierarchy as seen in 13.⁸

(13)



Types 1 and 4 are hypocoristic forms wherein the truncated form is the stem, to which the inflectional/derivational affix attaches to create a word. On the other hand, Types 2 and 3 take derived words as the base to which the inflectional affixes attach to form words. Type 5 is unique as it is more like a vocative form created at the post-lexical phrasal level.

4. Truncation with Affixation

Before attempting an Optimality-theoretic analysis of hypocoristic formation in Gujarati, we need to establish the difference between truncation and truncation with affixation. This is crucial since Gujarati hypocoristics are the result of truncation with affixation and we do not find a single instance of hypocoristic formation as a result of truncation alone. In fact, the language on the whole does not employ truncation in isolation for any word formation process.

A truncated form, also known as a bare truncate in the literature, is a fully formed word in languages like Catalan. On the other hand, a truncated form which acts as the base for affixation in order to form a word, is not an independent word.

8. Figure 1 is a modified version of Kiparsky's depiction of the three strata given as (4) in Kiparsky (2015: 6).

This is evident in the case of Gujarati hypocoristic formation where we see that the truncated base of affixation does not exist independently like the truncated forms in Catalan and English. In Gujarati, the affix triggers the process of simultaneous truncation and affixation, leading to hypocoristic formation.

As mentioned at the beginning of the paper, Gujarati hypocoristics are formed as a result of interleaving of morphological and phonological processes. Without affixation, a purely morphological process, Gujarati hypocoristics cannot be formed. Without prosodically circumscribed truncated forms, the affixes will not have a base to attach to in order to form the hypocoristics in the first place. The truncated form is either a disyllabic or bimoraic prosodic unit, that is, a prosodic word.

5. An Optimality-Theoretic Analysis

Optimality Theory (OT) (Prince & Smolensky 2004) is a framework that is built on the premise that the grammar of natural languages evolves due to the conflict between faithfulness and markedness constraints. These constraints are violable and are ranked differently in different languages. They influence the surface forms that emerge in a language. They also determine the relationship between the underlying and surface forms, that is, the input and output. Recent scholarship has established that Optimality Theory is most successful for phonological analysis. As we will see in this section, it is just as successful for a morpho-phonological analysis.

Gujarati hypocoristics result from the truncation of an original name followed by affixation to this truncated form (where the truncated form is an intermediary form and not a free-standing element). A hypocoristic has to be a prosodic constituent but it is not identical to the name from which it is derived. It needs to resemble the original name, which is why some of the material (syllable or foot) is preserved and the affix is kept intact. However, since the base to which the affix attaches is a truncated form, some segmental material will always be deleted or lost owing to prosodic circumscription. We find that Positional Faithfulness plays a major role here, as it is always the onsets of the first two syllables and the first syllable that are preserved. Syllable onsets and root initial syllables are counted among privileged linguistic positions (Beckman 1998), therefore, even in Gujarati hypocoristic formation, both are positionally strong.

Thus, we will need an OT constraint like STEM = PRWD for template satisfaction as the truncated form is always a prosodic word, being either disyllabic or bimoraic. We will need an undominated constraint to keep the affix from being deleted, that is, MAX (affix). Since hypocoristic formation in Gujarati is compulsorily left aligned, we will need the alignment constraint ALIGN-L. Most Gujarati hypocoristics have to have gender agreement so we will need a constraint for gender agreement⁹ MAX_{gender}. A comprehensive analysis of hypocoristic formation will involve interaction between alignment constraints and faithfulness constraints.

9. A similar constraint has been noted for Spanish (Sanz 2015) where hypocoristics for original names that could refer to both men and women are inflected for gender.

Since hypocoristic formation cannot occur without truncation, we will need MAX constraints that allow permitted deletion that satisfies prosodic circumscription while preserving material from the left edge. Therefore, MAX- σ 1 will be high ranked but MAX-IO will be low ranked. Some of the examples show that the second syllable in the hypocoristics, which is not the affix containing syllable, has an onset. Therefore, we will need MAX-ONSET to prevent any deletion of the syllable onsets in those hypocoristics. We can see the importance of this constraint in tableaux (21) and (22) which examine the formation of hypocoristics of Type 1. Since Gujarati hypocoristics involve cluster simplification, a higher-ranked *COMPLEX is needed. We see the relevance of this constraint for Type 5 exemplified in tableau (27).

Apart from these, we will need a few more constraints specific to the type of hypocoristic being formed. This is due to the fact that most of the hypocoristics vary greatly from each other. Type 4 does not need gender agreement as it does not inflect for gender. Hence the constraint MAX_{gender} is irrelevant there. Type 5 is formed without any truncation, which means that in this case, faithfulness constraints are ranked higher than markedness constraints, Faithfulness >> Markedness. In Types 2 and 4, the truncated form has to be a bimoraic syllable, so we will need the constraint STEM = PRWD_{μμ} there.

For Types 1 and 3, we will need a slightly modified STEM = PRWD constraint since these hypocoristics need a disyllabic stem. Therefore, we will need STEM = PRWD_{σσ} since it is affixation to a disyllabic truncated form that yields the hypocoristic. For Types 1 to 4, a uniform set of ranked constraints can account for the forms with minor changes in the composition of the constraints.

We can see that the OT analysis of Gujarati hypocoristics overwhelmingly relies on phonological constraints. This shows that truncation in Gujarati is prosodically conditioned unlike Bangla (Lowe 2004) where it can be morphologically conditioned¹⁰ too.

These are the constraints we will need for our OT analysis of Gujarati hypocoristics:

STEM = PRWD

A stem equals a prosodic word, which is disyllabic or bimoraic. (Here, the truncated form is the stem.)

MAX (affix)

Every affix in the input has a correspondent in the output which is the hypocoristic.¹¹

10. Lowe gives the example of the name Indrajit [in̪d̪rod̪ʒit] formed by compounding two free morphemes /in̪d̪ro/ and /d̪ʒit/. The hypocoristic for this name, in Bangla, could be [in̪d̪ro] or [d̪ʒit] both formed by morphological truncation.

11. This constraint applies to the affixes that attach to the truncated form to form the hypocoristic. If the internal structure of the truncated form contains any affixes already, this constraint will not apply to them.

***COMPLEX**

No complex syllable margins.

MAX-ONSET (segment)

Assign one violation mark for each segment in the onset in the input that is not present in the onset in the output. (Here, the output is the affixed truncated form, that is, the hypocoristic.)

MAX- σ_1

Assign one violation mark for each segment in the initial syllable in the input that is not present in the initial syllable in the output.

MAX-IO

Assign one violation mark for each segment in the input that is not present in the output.

ALIGN-L

The left edge of the Grammatical Word coincides with the left edge of the PrWd.

MAX_{gender}

The hypocoristic and input name must agree in the gender feature.

Table 6a. Summary of hypocoristic types¹²

HC Type	HC	HC = TF + affix(/es)	Original name	Gender
Type 4	[ni.mu]	[nim-u]	[nir.mə.ɾɑ]	F
	[mΛ.nu]	[mΛn-u]	[mΛ.no.hər]	M
Type 2	[rΛg ^h .[o]	[rΛg ^h -[o]	[rΛ.g ^h u]	M
	[rΛm.[i]	[rΛm-[i]	[rΛ.mɑ]	F
Type 1	[dʒΛm.ni]	[dʒΛmn-i]	[dʒΛm.nɑ]	F
	[ʂΛn.ko]	[ʂΛnk-o]	[ʂΛn.kəɾ]	M
Type 3	[rΛdʒ.ni.də]	[rΛdʒni-d-o]	[rΛdʒ.ni]	M
	[re.k ^h a.dʒi]	[re.k ^h a-d-i]	[re.k ^h a]	F
Type 5	[Λr.vin.dʒi.jo]	[Λrvindʒ-ij-o]	[Λrvindʒ]	M
	[pəh.la.dʒi.jo]	[pəhlaɖ-ij-o]	[pəh.laɖ]	M

12. Tables 6a-6e summarise the five hypocoristic types in the order of their OT analysis presentation in this section. The type under analysis is shaded in the summary table presented at the beginning of the analysis of the type.

5.1. Type 4

Let us start with the analysis of Type 4. In this form, the truncated form is a bimoraic stem and the hypocoristic, formed with the addition of affix /u/, is disyllabic. The constraints relevant to account for this hypocoristic are STEM = PRWD_{μμ}, MAX (affix), HC = σσ, ALIGN-L, MAX-ONSET, MAX-σ1 and MAX-IO. Among these, the high-ranking constraints are STEM = PRWD_{μμ}, MAX (affix), HC = σσ, ALIGN-L which are unranked with respect to each other. MAX-ONSET which dominates MAX-σ1 is ranked lower than these. Since the truncated form has to be bimoraic, the repair strategy used is deletion of segments from the right edge making MAX-IO the lowest-ranked constraint.

(14) Constraint ranking: STEM = PRWD_{μμ}, MAX (affix), HC = σσ, ALIGN-L >> MAX-ONSET >> MAX-σ₁ >> MAX-IO

(15)

/nir _m Λ _r α/ + /u/	STEM = PRWD _{μμ}	MAX (affix)	ALIGN-L	HC = σσ	MAX-ONSET	MAX-σ ₁	MAX-IO
a. [☞] ni.mu						*	****
b. ni.ru					*!		****
c. nir.mΛ.rα	*!	*		*			
d. nir.mΛ.ru	*!			*			*
e. mΛ.ru			*!			***	****
f. nir.mu	*!						***
g. nir		*!		*			****

The truncated part in this case is /nim/, to which the affix /-u/ is attached to create the form /ni.mu/. So, candidate a. is the optimal candidate as it violates only the lower-ranked constraints. Candidates c., d. f. and g. violate the highest-ranked constraint STEM = PRWD_{μμ} or MAX (affix), which is a fatal violation. The reason the truncated form is not /nir/ is because of the high-ranked constraint MAX-ONSET which states that the onset of the syllables be preserved. It is a positional faithfulness constraint as onsets are more salient than codas in terms of perception. The form /nir.mu/ violates the constraint STEM = PRWD_{μμ} as the truncated form (/nirm/) in this case, would be trimoraic (assuming that the consonants in the coda are weight-bearing units and have moras assigned to them). Hence, it becomes sub-optimal. The following tableau too illustrates how a. is optimal.

(16)

/mʌnohər/ + /u/	STEM = PRWD _μ	MAX (affix)	ALIGN-L	HC = σσ	MAX-ONSET	MAX-σ ₁	MAX-IO
a. $\text{m}\lambda.\text{nu}$							****
b. $\text{m}\lambda.\text{no}.\text{h}\text{ər}$	*!	*		*			
c. $\text{m}\lambda.\text{no}$		*!					***
d. $\text{m}\lambda.\text{no}.\text{hu}$	*!			*			**
e. $\text{m}\lambda.\text{no}.\text{h}\text{ə}.\text{ru}$	*!			*			
f. $\text{no}.\text{hu}$			*!			**	****
g. $\text{m}\lambda\text{n}$		*		*!	*		****

Table 6b. Summary of hypocoristic types

HC Type	HC	HC = TF + affix(es)	Original name	Gender
Type 4	[ni.mu]	[nim-u]	[nir.mə.ɾa]	F
	[mʌ.nu]	[mʌn-u]	[mʌ.no.hər]	M
Type 2	[ɾʌg ^h .lɔ]	[ɾʌg ^h -[o]	[ɾʌ.g ^h u]	M
	[ɾʌm.lɪ]	[ɾʌm-[i]	[ɾʌ.mə]	F
Type 1	[dʒʌm.ni]	[dʒʌmn-i]	[dʒʌm.nə]	F
	[ʃʌn.ko]	[ʃʌnk-o]	[ʃʌn.kər]	M
Type 3	[ɾʌdʒ.ni.dɔ]	[ɾʌdʒni-d-o]	[ɾʌdʒ.ni]	M
	[re.k ^h a.dʒi]	[re.k ^h a-d-i]	[re.k ^h a]	F
Type 5	[ʌr.vin.dʒi.jo]	[ʌrvindʒ-ij-o]	[ʌrvindʒ]	M
	[pəh.la.dʒi.jo]	[pəhlaɖ-ij-o]	[pəh.laɖ]	M

5.2. Type 2

Unlike Type 4, the remaining hypocoristics are inflected for gender and thus a derivational affix /ɾ/ as well as an inflectional affix -i/o is attached to the truncated form. Therefore, with the addition of the constraint MAX_{gender}, the constraints

posited for Type 4, can account for Type 2 as well. Tableaux (18) and (19) show the constraint interactions for the formations of the hypocoristics [ɾΛm.ɿ] and [ɾΛg^h.ɿ] respectively.

(17) Constraint ranking: STEM = PRWD_μ, MAX (affix), HC = σσ, MAX_{gender}, ALIGN-L >> MAX-ONSET >> MAX-σ₁ >> MAX-IO

(18)

/ɾΛma/ + /ɿ + /i/	STEM = PRWD _μ	MAX (affix)	HC = σσ	MAX _{gender}	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. ɾΛm.ɿ								*
b. ɾΛ.ma		**!						
c. ɾΛ.ma.ɿ			*!					
d. ɾΛm.ɿo				*!				*
e. ma.ɿ	*				*!		**	**
f. ɾΛm		**	*!					*
g. ɾΛ.mi		*!						*
h. ɾΛ.ɿ	*!					*		**

The truncated part in this case is /ɾΛm/, to which the derivational affix /ɿ/ is attached, followed by the gender-inflectional affix /i/ to create the form [ɾΛm.ɿ]. Though [ɾΛ.ma], [ɾΛm.ɿo], [ɾΛm], and [ɾΛ.mi] as in b., d., f. and g. all have the right truncated part they are sub-optimal due to lack of affixation or incorrect/incomplete affixation. The form [ɾΛ.ma.ɿ] in c. has the right affixation but is not truncated thereby violating HC = σσ. The tableau given below illustrates how candidate a. is the optimal candidate.

(19)

/rΛg ^h u/ + /l/ + /o/	STEM = PRWD _{μt}	MAX (affix)	HC = σσ	MAX _{gender}	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. rΛg ^h .[o]								*
b. rΛ.g ^h u		**!						
c. rΛ.g ^h u.[o]			*!					
d. rΛg ^h .[i]				*!				*
e. g ^h u.[o]	*				*!	*	**	**
f. rΛg ^h		**	*!					*
g. rΛ.g ^h o		*!						*
h. rΛ.[o]	*!					*		**

Table 6c. Summary of hypocoristic types

HC Type	HC	HC = TF + affix(es)	Original name	Gender
Type 4	[ni.mu]	[nim-u]	[nir.mə.rɑ]	F
	[mΛ.nu]	[mΛn-u]	[mΛ.no.hər]	M
Type 2	[rΛg ^h .[o]	[rΛg ^h -[o]	[rΛ.g ^h u]	M
	[rΛm.[i]	[rΛm-[i]	[rΛ.mɑ]	F
Type 1	[dʒΛm.ni]	[dʒΛmn-i]	[dʒΛm.nɑ]	F
	[ʃΛn.ko]	[ʃΛnk-o]	[ʃΛn.kər]	M
Type 3	[rΛdʒ.ni.dʒo]	[rΛdʒni-dʒ-o]	[rΛdʒ.ni]	M
	[re.k ^h ɑ.dʒi]	[re.k ^h ɑ-dʒ-i]	[re.k ^h ɑ]	F
Type 5	[Λr.vin.dʒi.jo]	[Λrvindʒ-ij-o]	[Λrvindʒ]	M
	[pəh.lɑ.dʒi.jo]	[pəhlaɖ-ij-o]	[pəh.lɑɖ]	M

5.3. Type 1

Type 1 differs from Types 2 and 4 as it is formed by only an inflectional affix attaching to the truncated form. In this form, the truncated form is a disyllabic stem and the hypocoristic, formed with the addition of the gender marker –i/-o, is disyl-

labic. Therefore, we will need the constraint $STEM = PRWD_{\sigma\sigma}$ instead of $STEM = PRWD_{\mu\mu}$ for this type. The remaining constraints will be the same as those posited for Types 2 and 4. Tableaux (21) and (22) show the constraint interactions for the formations of the hypocoristics [dʒʌm.ni]¹³ and [ʒʌn.ko] respectively.

(20) Constraint ranking: $STEM = PRWD_{\sigma\sigma}, MAX(\text{affix}), HC = \sigma\sigma, MAX_{\text{gender}}, ALIGN-L \gg MAX\text{-ONSET} \gg MAX\text{-}\sigma_1 \gg MAX\text{-IO}$

(21)

/dʒʌmna/ + /i/	STEM = PRWD _{σσ}	MAX (affix)	MAX _{gender}	HC = σσ	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. [☞] dʒʌm.ni								*
b. dʒʌm.na		*!						
c. dʒʌ.mi	*!					*		**
d. dʒʌm.no			*!					*
e. dʒʌ.ma		*!				*		*
f. dʒʌm	*	*		*!				**
g. dʒʌ.ni	*!						*	**

The truncated part in this case is /dʒʌmn/ (as explained in footnote 12), to which the affix /-i/ is attached to create the form [dʒʌm.ni]. The reason the truncated form is not /dʒʌm/ (as in f.) is because of the high-ranked constraint $STEM = PRWD_{\sigma\sigma}$ which states that a stem equals a prosodic word, which is disyllabic. (Here, the truncated form is the stem.) It is a prosodic constraint that determines the shape of the truncated form for the formation of the hypocoristic. The forms [dʒʌm], [dʒʌ.mi] and [dʒʌ.ma] (as in b.c.f.) violate the high-ranked constraint $STEM = PRWD_{\mu\mu}$ as the truncated form, in this case, would be monosyllabic. Hence, they become sub-optimal. The following tableau illustrates how candidate a. is optimal.

13. The truncated form for the hypocoristic [dʒʌm.ni] is /dʒʌmn/ making /n/ the onset of the second syllable in the hypocoristic. Analysing the stem as a monosyllable (CVC = /dʒʌm/) followed by a catalectic syllable (Kager 1995) satisfies the disyllabic requirement for the formation of this hypocoristic. This shows that template satisfaction of the truncated form is important for the formation of the hypocoristic.

(22)

/ʃʌnkəɾ/ + /o/	STEM = PRWD _{σσ}	MAX (affix)	MAX _{gender}	HC = σσ	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. ʃʌn.ko								**
b. ʃʌn.kəɾ		*!						
c. ʃʌn.kə.ɾo				*!				
d. ʃʌn.ki			*!					**
e. ʃʌnk ¹⁴		*!						**
f. ʃʌ.no	*!					*		***
g. /kə.ɾo	*				*!	*	***	***

Table 6d. Summary of hypocoristic types

HC Type	HC	HC = TF + affix(es)	Original name	Gender
Type 4	[ni.mu]	[nim-u]	[nir.mə.ɾa]	F
	[mʌ.nu]	[mʌn-u]	[mʌ.no.həɾ]	M
Type 2	[ɾʌg ^h .lɔ]	[ɾʌg ^h -lɔ]	[ɾʌ.g ^h u]	M
	[ɾʌm.lɪ]	[ɾʌm-lɪ]	[ɾʌ.mə]	F
Type 1	[dʒʌm.ni]	[dʒʌmn-i]	[dʒʌm.nə]	F
	[ʃʌn.ko]	[ʃʌnk-o]	[ʃʌn.kəɾ]	M
Type 3	[ɾʌdʒ.ni.dɔ]	[ɾʌdʒni-dɔ]	[ɾʌdʒ.ni]	M
	[ɾe.k ^h a.dʒi]	[ɾe.k ^h a-dʒi]	[ɾe.k ^h a]	F
Type 5	[ʌɾ.vin.dʒi.jo]	[ʌɾvɪndʒ-ij-o]	[ʌɾvɪndʒ]	M
	[pəh.la.dʒi.jo]	[pəhlaɖ-ij-o]	[pəh.laɖ]	M

14. Though not shown in the tableau, this candidate also violates the high-ranked constraint *COMPLEX.

5.4. Type 3

Type 3 is similar to Type 1 as the truncated form here is also a disyllabic stem. Where this type differs from Types 1, 2 as well as 4 is that the hypocoristic formed is trisyllabic. Therefore, by simply modifying $HC = \sigma\sigma$ to $HC = \sigma\sigma\sigma$, the constraints posited for Type 1 can account for Type 3 as well. Tableaux (24) and (25) show the constraint interactions for the formations of the hypocoristics [re.k^ha.d̪i] and [rʌd̪ʒ.ni.d̪o] respectively.

(23) Constraint ranking: $STEM = PRWD_{\sigma\sigma}$, MAX (affix), $HC = \sigma\sigma\sigma$, MAX_{gender} , $ALIGN-L \gg MAX-ONSET \gg MAX-\sigma_1 \gg MAX-BA$

(24)

/rek ^h ɑ/ + /d̪/ + /i/	STEM = PRWD _{σσ}	MAX (affix)	MAX _{gender}	HC = σσσ	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. $\text{re.k}^h\text{ɑ.d̪i}$								
b. $\text{rek}^h\text{.d̪i}$	*			*!				*
c. $\text{re.k}^h\text{ɑ}$		**		*!				
d. $\text{re.k}^h\text{i}$	*	*		*!				*
e. $\text{re.k}^h\text{ɑ.d̪o}$			*!					
f. $\text{k}^h\text{ɑ.d̪i}$	*			*	*!	*	**	**
g. rek^h	*	**		*!				*

In tableau (24) we see that the base to which the affixes attach is not truncated since the name is already of a disyllabic shape. If the name had been longer, like a man's name /mʌ.ŋi.[ɑ]/, the truncated part would have been /mʌŋi/. Therefore, in the case of the base /rek^hɑ/, the affix /-d̪/ attaches directly, followed by the gender inflection affix /-i/ to create the form /re.k^hɑ.d̪i/. The reason the truncated form is not /rek^h/ (as in g.) is because of the high-ranked constraint $STEM = PRWD_{\sigma\sigma}$ which states that a stem equals a prosodic word, which is disyllabic. (Here, the truncated form is the stem.) It is prosodic constraint that determines the shape of the truncated form for the formation of the hypocoristic. Hence, the form /rek^h.d̪i/ becomes sub-optimal (as in b.). Tableau (24) shows how candidate a. is optimal.

(25)

/rʌɖʒni/ + /d/ + /o/	STEM = PRWD _σ	MAX (affix)	AGREE _{gender}	HC = σσσ	ALIGN-L	MAX-ONSET	MAX-σ ₁	MAX-IO
a. rʌɖʒ.ni.ɖo								
b. rʌɖʒ.ni		**		*!				
c. rʌɖʒ.niɖ		*		*!				
d. rʌɖʒ.ɖo	*			*!		*		**
e. rʌɖʒ.ni.ɖi			*!					
f. rʌ.ɖʒiɖ	*	*		*!				*
g. ni.ɖo	*			*!	*	*	***	***

Table 6e. Summary of hypocoristic types

HC Type	HC	HC = TF + affix(es)	Original name	Gender
Type 4	[ni.mu]	[nim-u]	[nir.mə.rʌ]	F
	[mʌ.nu]	[mʌn-u]	[mʌ.no.hər]	M
Type 2	[rʌg ^h .ʌo]	[rʌg ^h -ʌo]	[rʌ.g ^h u]	M
	[rʌm.i]	[rʌm-ʌi]	[rʌ.mʌ]	F
Type 1	[ɖʒʌm.ni]	[ɖʒʌmn-i]	[ɖʒʌm.nʌ]	F
	[ʒʌn.ko]	[ʒʌnk-o]	[ʒʌn.kər]	M
Type 3	[rʌɖʒ.ni.ɖo]	[rʌɖʒni-ɖo]	[rʌɖʒ.ni]	M
	[re.k ^h a.ɖi]	[re.k ^h a-ɖi]	[re.k ^h a]	F
Type 5	[ʌr.vin.ɖi.jo]	[ʌrvindʒ-ij-o]	[ʌrvindʒ]	M
	[pəh.la.ɖi.jo]	[pəhlaɖ-ij-o]	[pəh.laɖ]	M

5.5. Type 5

The final type, Type 5, is formed by affixation to the whole name and does not involve any truncation. As mentioned earlier, this type is more like Vocative formation and not hypocoristic by the usual definition. Here, the affix attaches to the whole word and not to a stem like the four hypocoristics we examined earlier. As there are

no phonological changes noted here, we assume that Faithfulness >> Markedness for this form. However, we do note the emergence of the unmarked (TETU) (McCarthy & Prince 1994) in this form as complex margins are not permitted in this form. We note that a complex onset becomes simple ([prɛh[ɑ̃d] becomes /pɛh[ɑ̃d/).

(26) Constraint ranking: MAX (affix), MAX_{gender}, *COMPLEX >> MAX-IO

(27)

/prɛh[ɑ̃d/ + /ij/ + /o/	MAX (affix)	MAX _{gender}	*COMPLEX	MAX-IO
a. pɛh.[ɑ̃.ɖi.jo				*
b. prɛh.[ɑ̃.ɖi.jo			*!	
c. pɛh.[ɑ̃.ɖi.ji		*!		*
d. prɛh.[ɑ̃.ɖo	**		*!	
e. pɛh.[ɑ̃	***!			*

The ranking for Type 5 is different from what we posited for Types 1 to 4 as it is a type of word level affixation rather than a stem level affixation. As mentioned in the second section, this difference in ranking patterns can be accounted for in Stratal OT (Kiparsky 2015). Here, the affixation is taking place at the post-lexical level and therefore no truncation is required. Since *COMPLEX is high-ranked, [prɛh.[ɑ̃.ɖi.jo] is sub-optimal. Candidates c. d. and e. violate the higher-ranked constraints and are thus sub-optimal. Candidate a. emerges as the optimal one.

6. Conclusion

This paper clearly shows that hypocoristic formation in Standard Gujarati is a morpho-phonological process and therefore can be elegantly accounted for using prosodic morphology. Each type involves truncation and affixation/affixation and inflection/inflection. For the creation of a hypocoristic, we have truncation of the base, then affixation to the truncated form, followed by inflection of the affixed truncated form. Through the interaction of alignment and faithfulness constraints, what emerges is a less marked form as evidenced by cluster simplification, where applicable.

Thus, we see that Gujarati differs greatly from the commonly cited cases of hypocoristic formation found in languages like Catalan, German, English, etc. where even a bare truncated form can be a hypocoristic. Additionally, Gujarati hypocoristics have to fulfil gender agreement with the exception of Type 4 which

has only the affix /u/ attaching to the truncated form. A significant implication for the phonology of the language that emerges from the analyses of these hypocoristics is that Gujarati is a quantity sensitive language. In Catalan too, hypocoristic formation requires truncation to prosodically bimoraic or disyllabic shapes, and becomes empirical evidence for the establishment of the language as quantity-sensitive. This finding for Gujarati will have a huge impact on the study of word stress in the language as linguists have so far considered Gujarati word stress¹⁵ to be either positional (Bowers 2019; Master 1925; Shih 2018; Turner 1921) or quality sensitive (Adenwala 1965; Cardona 1965; Doctor 2004; Mistry 1997; Modi 1983) and not quantity sensitive.

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15. Currently, my thesis examining word stress in Gujarati is under progress.

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