

ChiHwesa Diminutives: Morphology, Semantics, and a Radial Category Analysis

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Abstract

Diminutive systems in Bantu languages have undergone diverse morphological and semantic developments, resulting in considerable cross-linguistic variations. However, the extent to which these developments are reflected in ChiHwesa remains unknown. This study investigated the morphology and semantics of diminutives in ChiHwesa, an under-described Bantu language spoken in Zimbabwe. Particular attention was paid to their formation within the noun class system and the meanings associated with diminutive constructions. Guided by Jurafsky's (1996) Radial Category Theory, data were collected through semi-structured interviews, focus group discussions, participant observation, virtual ethnography, and corpus analysis. The findings show that ChiHwesa marks diminutivity through the prefixes /ka-/ (class 12) and /tu-/ (class 13), and employs the morphological processes of substitution and pre-prefixation, while class 13 exhibits allomorphic variation in certain contexts. Unlike some neighbouring Bantu languages that use suffixal diminutive strategies, ChiHwesa relies exclusively on noun class reassignment for diminutive formation. The findings further reveal that ChiHwesa diminutives form a radial semantic network in which the core meaning 'child' extends through metaphor and inference to related meanings such as 'young', 'small', 'affectionate', and 'pejorative', indicating the cognitive interconnectedness of diminutive meanings. The study contributes to Bantu evaluative morphology by demonstrating how an under-described language preserves a productive noun class-based diminutive system while developing language-specific semantic extensions.

Keywords: ChiHwesa; Diminutives; Noun class reassignment; Evaluative morphology; Semantic extension; Connotative meanings

1 Introduction

Cross-linguistically, diminutives are broadly defined as linguistic elements that contribute a semantic value related to size (Stoll, 2024). However, research has consistently shown that their functions extend far beyond merely expressing physical smallness. Jurafsky (1996), for instance, establishes that diminutives may also encode meanings such as 'young', 'insignificant', 'incomplete', and 'approximate', while simultaneously conveying pragmatic meanings including affection, admiration, intimacy, disdain, and contempt. As noted by Gibson, Guérois & Marten (2017), diminutives in Bantu languages are commonly expressed through noun-class morphology,

in which nouns are reassigned from their original classes to dedicated evaluative classes to achieve particular semantic and pragmatic effects. The rich noun-class system of Bantu languages has made them an important testing ground for studies of evaluative morphology and semantic extension. Consequently, diminutives have been examined in several Bantu languages, revealing both shared tendencies and language-specific patterns in their morphological formation and semantic interpretation (Mudzingwa, 2010; Van der Spuy & Mjiyako, 2015; Akumbu & Kiessling, 2020; Kandolo, 2021; Ndomba, 2022). The studies have indeed enhanced our understanding of the relationship between noun-class morphology and evaluative meaning, while also highlighting the diversity of diminutive systems across the Bantu language family.

Despite the extensive literature on diminutives in Bantu languages, it remains unclear whether the morphological and semantic patterns reported elsewhere adequately account for diminutive formation in ChiHwesa, a minority Bantu language spoken in eastern Zimbabwe. Although ChiHwesa exhibits the noun-class morphology that characterises many Bantu languages (Chirimaunga, 2026), the considerable variation reported in diminutive formation and interpretation across Bantu languages made it impossible to assume that existing findings would apply directly to ChiHwesa. An empirical investigation was therefore necessary to determine whether the language follows broader Bantu patterns or exhibits language-specific morphological and semantic characteristics. This gap is significant because Bantu languages differ considerably in the ways they express diminutivity, with some relying primarily on noun class reassignment and others employing additional evaluative strategies. Consequently, it cannot be assumed that the morphological and semantic patterns reported for other Bantu languages apply directly to ChiHwesa. Against this background, the present study investigated the morphology and semantics of diminutives in ChiHwesa. Specifically, it sought to identify the diminutive morphemes employed in the language, examine the morphological mechanisms through which they interact with the noun-class system, and analyse the semantic meanings associated with diminutive constructions. The study is guided by Jurafsky's (1996) Radial Category Theory, which explains diminutive meanings as interconnected semantic extensions organised around a central prototype. The framework provides a useful basis for analysing the relationship between morphological form and semantic interpretation in ChiHwesa diminutives. It also enables comparisons between language-specific patterns and other tendencies reported in the literature on evaluative morphology. Investigating diminutives in ChiHwesa contributes not only to the documentation of an under-described language but also to discussions on the nature and diversity of diminutive systems in Bantu languages.

2 Literature review

Existing research demonstrates that diminutives constitute an important component of Bantu evaluative morphology and exhibit considerable variation in their formal realisation across languages. In many Bantu languages, diminutives are formed through noun class reassignment involving classes 12 and 13, typically marked by the affixes /ka-/ and /tu-/ (Akumbu & Kiessling, 2020). Other Bantu languages employ additional morphological processes such as affixation, reduplication, and compounding to express diminutive meanings (Gibson, Guérois & Marten, 2017; Kandolo, 2021). Studies of individual languages, including Swahili (Kandolo, 2021; Ndomba, 2022), Zulu (Van der Spuy & Mjiyako, 2015), and Shona (Mudzingwa, 2010), reveal both shared and language-specific patterns in the formation of diminutives. While some languages rely predominantly on noun-class reassignment, others have developed supplementary strategies that coexist with or partially replace the inherited noun-class system. Comparative studies further indicate that the productivity of diminutive marking and its interaction with noun-class systems vary

considerably across the Bantu family (Mtenje-Mkochi, 2018). These findings highlight the diversity of morphological strategies by which diminutivity is encoded and emphasise the importance of examining individual languages to understand both common patterns and language-specific innovations in Bantu evaluative morphology.

Semantically, diminutives in Bantu languages extend well beyond the expression of physical smallness. Akumbu and Kiessling (2020) observe that diminutives commonly encode meanings related to youthfulness, dependency, and reduced size, while Amfo and Appah (2019) note that they may also express pejorative, individuating, and other evaluative meanings. Cross-linguistic studies similarly demonstrate that diminutives frequently convey speaker attitudes such as affection, admiration, intimacy, disdain, and contempt (Stoll, 2024). In many contexts, the diminutive functions not merely as a marker of objective size but also as a linguistic resource through which speakers express emotional attachment, social distance, approval, or disapproval. Jurafsky (1996) argues that these diverse meanings are not arbitrary but are cognitively related through a network of semantic extensions originating from a central prototype. This perspective has significantly influenced research on diminutives by demonstrating that semantic meanings traditionally treated as separate can be understood as interconnected components of an evaluative system. The semantic complexity of diminutives has therefore made them an important area of inquiry within cognitive semantics, pragmatics, and evaluative morphology.

Historical and comparative studies provide further insights into the development of diminutive systems in Bantu languages. For instance, Proto-Bantu employed class 12 /ka-/ for singular diminutives and class 13 /tu-/ for plural diminutives (Ndomba, 2022). The widespread occurrence of these markers across contemporary Bantu languages provides evidence for their historical significance, although their productivity and semantic scope vary significantly from one language to another. Some languages have retained the inherited prefixal system as the principal strategy for diminutive formation, whereas others have developed additional innovations that have altered the original structure of the evaluative system. In Shona, for example, classes 7 and 8 are also used in diminutive formation, while the suffix *-ana* has become an important diminutive marker in many southern Bantu languages (Déchaine et al., 2014; Mtenje-Mkochi, 2018). These developments demonstrate that diminutive systems are dynamic and subject to historical change. Research further shows that diminutives frequently acquire evaluative meanings such as contempt, ridicule, inferiority, or endearment, which illustrates the close relationship between morphological marking and speaker attitude (Tshikota & Mphasha, 2023). Consequently, the study of diminutives offers valuable insights not only into morphological structure but also into the processes of semantic extension and language change within the Bantu family.

Despite these advances, the morphology and semantics of diminutives in ChiHwesa have not been systematically investigated. Consequently, it remains unclear whether the language follows the morphological and semantic patterns reported elsewhere in Bantu, whether it employs additional evaluative strategies, and how diminutive meanings are organised within its noun-class system. This lack of evidence limits our understanding of the extent to which generalisations about Bantu evaluative morphology apply to under-described languages and restricts opportunities to refine cross-linguistic models of diminutive formation and interpretation. The present study addresses this gap by providing a detailed account of the morphology and semantics of diminutives in ChiHwesa. As an under-described Bantu language spoken in eastern Zimbabwe, ChiHwesa (also known as ChiBarwe) provides an important opportunity to broaden current understanding of evaluative morphology and noun-class behaviour. A detailed examination of its diminutive system has the

for semantic extension: Metaphor (M), Inference (I), Generalization (G), and Lambda Abstraction (L). Metaphor involves the transfer of meaning from one conceptual domain to another by extending characteristics associated with the prototype 'child', such as youthfulness, dependency, weakness, or smallness, to other referents. Inference, also known as context-induced reinterpretation, occurs when meanings that initially arise from contextual interpretation become conventionalized as part of a form's semantic meaning. Generalisation refers to the broadening or bleaching of meaning whereby specific semantic features are weakened, resulting in wider and less restricted evaluative meanings. Lambda abstraction accounts for the development of higher-order and more abstract meanings from concrete semantic representations, thereby explaining meanings such as approximation, exactness, and other non-literal extensions.

As observed by Appah and Amfo (2011), a major strength of Radial Category Theory lies in its predictive power. The theory proposes that diminutive meanings tend to develop from central meanings towards more peripheral meanings through regular processes of semantic change. Consequently, languages may differ in the specific meanings expressed by their diminutives, but these meanings are expected to originate from the same central prototype and follow related developmental pathways. On the synchronic level, the model explains how diverse diminutive meanings form a coherent semantic category. On the diachronic level, it captures the developmental pathways through which meanings historically expand from the central prototype to more peripheral senses. Perceived this way, the model accounts for the coexistence of seemingly contradictory meanings, such as affection and contempt, by showing how they emerge through different but related processes of semantic extension. In the present study, the framework provides the analytical basis for examining how the meanings associated with ChiHwesa diminutives are organised, related, and extended within the noun-class system. It is therefore particularly appropriate for investigating both the language-specific characteristics of ChiHwesa diminutives and their relationship to broader patterns of evaluative morphology in Bantu languages.

4 Methodology

This study adopted a qualitative linguistic approach to facilitate an in-depth examination of the morphology and semantics of diminutive constructions in ChiHwesa. The approach was appropriate because the phenomenon under investigation depends heavily on speaker intuitions, contextualised language use, and the internal organisation of the noun-class system. The study involved 30 ChiHwesa mother-tongue speakers selected to ensure demographic and dialectal representativeness. The sample size was sufficient to achieve data saturation, as no new morphological patterns or semantic extensions emerged beyond this point. Participants were drawn from three age cohorts (18-35 years, 36-65 years, and 66 years and above) to capture possible intergenerational variation in diminutive usage. Data were also collected from speakers of two major ChiHwesa varieties: the variety spoken around Ruwangwe Growth Point, which shows considerable Shona contact influence, and the more conservative variety spoken in Chapatarongo, Kaitano, Fombe, Kazozo, and other communities along the Gairezi River, which borders Mozambique. This distribution ensured adequate coverage of sociolinguistic and dialectal diversity within the ChiHwesa speech community and strengthened the reliability of grammaticality judgments and semantic interpretations. The participants provided the primary linguistic data, including noun stems, diminutive forms, acceptability judgments, and naturally occurring examples of diminutive usage. In addition, three language academics were consulted during the later stages of analysis. Their role was not to generate data but to provide scholarly input that strengthened the interpretation of the findings within established theoretical frameworks, particularly Jurafsky's (1996) Radial Category Theory.

Drawing on insights from comparable studies of Bantu evaluative morphology, such as Gibson et al. (2017) and Ndomba (2022), these specialists helped refine the analysis and ensure that the interpretation of the data remained both theoretically grounded and linguistically robust.

The data were gathered using a combination of techniques that allowed for a rich and reliable dataset. In-depth interviews and focus group discussions were used to elicit noun forms, including their class prefixes and stems, and to test the acceptability and grammatical behaviour of diminutive constructions across a range of noun classes. Focus group discussions supported this process by enabling participants to assess the acceptability of specific diminutive forms, including the use of substitution and pre-prefixation strategies, and to discuss their meanings and usage patterns. Furthermore, a corpus-based examination of the ChiBarwe/ChiHwesa Language Database was conducted. Developed as part of the Cross-Border Languages (CROBOL) Project, the corpus comprises approximately 1.5 million words of digitised and transcribed ChiHwesa texts collected for linguistic description and lexicographic development. The corpus was searched using the corpus query interface developed as part of the CROBOL Project. Preliminary data were obtained through interviews and focus group discussions identified /ka-/ and /tu-/ as the primary markers associated with diminutivity in ChiHwesa. These forms were subsequently used as search terms in the corpus to retrieve naturally occurring examples of diminutive constructions. The resulting concordance lines were analysed for patterns of noun-class reassignment, allomorphic variation, and semantic usage. These corpus findings were subsequently compared with data from interviews, focus group discussions, and observations as a form of triangulation, thereby enabling the validation of recurring morphological and semantic patterns. Before embarking on data collection, the principal researcher had the advantage of being a ChiHwesa speaker. Chirimaunga (2025) notes that there is an added advantage to a linguist who researches a language with which he or she is familiar. When a researcher has prior knowledge of a language's linguistic operations, it becomes easier to recognise and interpret underlying grammatical patterns. However, awareness of potential researcher bias remained an important methodological consideration. To minimise subjectivity, the analysis relied not only on the researcher's intuition but also on data elicited from multiple mother-tongue speakers, whose judgments were compared and cross-checked. In addition, corpus evidence and expert consultation were used to validate the interpretations, ensuring that the findings reflected the grammatical behaviour of ChiHwesa rather than the researcher's individual linguistic intuition.

The semantic and pragmatic data were analysed thematically. Recurring meanings associated with diminutive constructions were identified across the corpus, interviews, and focus group discussions and grouped into broader semantic categories. These categories included meanings related to smallness, youthfulness, affection, pejoration, and evaluation, which were subsequently interpreted within Jurafsky's (1996) Radial Category Theory. The collected data were transcribed and subjected to qualitative linguistic analysis. Noun stems were coded with labels such as CL (noun class), DIM (diminutive), SG (singular), PL (plural), PREF (prefix), and STEM (stem), enabling systematic identification of morphological patterns. Each diminutive construction was first analysed morphologically to establish the strategy of formation, namely substitution or pre-prefixation. The forms were subsequently analysed for their semantic and pragmatic functions using contextual evidence from the corpus, interviews and FGDs data. Particular attention was paid to meanings related to smallness, youthfulness, affection, pejoration, and evaluation, and the semantic relationships among these meanings were analysed within Jurafsky's (1996) Radial Category Theory. Ethical approval was obtained from the relevant institutional review board, and all participants provided informed consent. Anonymity and confidentiality were maintained throughout the study.

5 Findings

This section presents the findings on the morphology and semantics of diminutives in ChiHwesa. The findings are organised into two broad areas. The first section focuses on the morphological structure of diminutives, specifically the noun classes associated with diminutive formation, the diminutive morphemes employed, and the morphological processes through which diminutive forms are derived. The second part highlights the semantic meaning expressed by diminutive constructions and describes how these meanings are structured within a radial semantic network. The findings are presented using data obtained from elicitation, corpus analysis, and virtual ethnography.

5.1 Morphological strategies

The findings show that diminutive formation in ChiHwesa is closely linked to the noun-class system and is primarily marked by the prefixes /ka-/ (class 12) and /tu-/ (class 13). Analysis of the data revealed two morphological processes by which diminutives are formed: pre-prefixation and substitution. The following sections describe these processes and illustrate their operation across different noun classes.

5.1.1 Pre-prefixation (secondary prefix stacking)

Pre-prefixation is the most common form of diminutive formation in ChiHwesa. In this strategy, the diminutive prefix is stacked onto an already prefixed noun stem, which results in a structure of two prefixes. The diminutive prefix functions as a secondary prefix, a term used in Bantu linguistics to denote an evaluative prefix added to a noun that already carries its primary class prefix (Mudzingwa, 2010). Unlike substitution, where the original class prefix is completely removed, pre-prefixation preserves the primary prefix and adds the secondary (diminutive) prefix before it, creating a layered morphological structure. This strategy often carries a slightly different semantic tone, sometimes emphasising the diminutive meaning more strongly or conveying a degree of affection or contempt.

In ChiHwesa, pre-prefixation is compatible with most noun classes, including classes 1/2, 3/4, 5/6, 7/8, 9/10, 11, 12, 13 and 14, provided the noun has an overt primary prefix. The only classes that do not permit pre-prefixation are class 15 (infinitives), classes 16, 17, 17a and 18 (locatives), and classes 7 and 8 when functioning as augmentatives, as augmentative meanings are incompatible with diminutive stacking. For nouns without an overt class prefix, including those belonging to classes 1a, 5, 9 and 10, pre-prefixation is also available. Although the primary prefix is not realised on the surface, it is represented at an abstract morphological level, allowing the diminutive prefix to attach to the underlying class position. Such nouns, therefore, form diminutives through pre-prefixation as well, not exclusively through substitution. Table 1 presents representative examples of pre-prefixation across selected noun classes in ChiHwesa. The examples illustrate how nouns from different classes take the diminutive prefixes /ka-/ and /tu-/ while retaining their original class prefixes, thereby forming diminutive constructions through a layered prefixal structure.

Table 1: Diminutive formation across noun classes in ChiHwesa

Class pair	Base form	Gloss	Diminutive form	Diminutive gloss	Class shift
1/2 (a)	mu-nhu	person	ka-mu-nhu	small/insignificant person	1 → 12
1/2 (b)	wa-nhu	people	tu-wa-nhu	small/insignificant people	2 → 13
3/4 (a)	mu-ti	tree	ka-mu-ti	tiny tree (emphatic smallness)	3 → 12
3/4 (b)	mi-ti	trees	tu-mi-ti	tiny trees (emphatic smallness)	4 → 13
5/6 (a)	(ri-)dziso	eye	ka-(ri-)dziso	tiny eye (emphatic smallness)	5 → 12
5/6 (b)	ma-dziso	eyes	tu-ma-dziso	tiny eyes (emphatic smallness)	6 → 13
7/8 (a)	chi-gayo	grinding mill	ka-chi-gayo	small grinding mill	7 → 12
7/8 (b)	zvi-gayo	grinding mills	tu-zvi-gayo	small grinding mills	8 → 13
9/10 (a)	nyoka	snake	ka-nyoka	small snake	9 → 12
9/10 (b)	nyoka	snakes	tu-nyoka	small snakes	10 → 12
14/14 (a)	u-ta	bow	ka-u-ta	small bow	14 → 12
14/14 (b)	u-ta	bows	tu-uta	small bows	14 → 13

In each of these examples, the original class prefix (mu-, wa-, mi-, (ri-), ma-, chi-, zvi-, N-, u-) is retained, and the diminutive prefix /ka-/ or /tu-/ attaches to its left, forming a sequence of two prefixes. This stacking produces a layered structure where the original class identity is preserved. The examples from classes 3/4 and 5/6 illustrate that pre-prefixation can convey emphatic smallness, as seen in *ka-mu-ti* ‘tiny tree’ and *ka-(ri-)dziso* ‘tiny eye’, where the meaning of smallness is intensified beyond what substitution alone would express. In nouns denoting humans from classes 1/2, the stacked forms *ka-mu-nhu* ‘little person’ and *tu-wa-nhu* ‘little people’ often carry pragmatic connotations such as belittlement or affection, depending on context. Table 1 also demonstrates that pre-prefixation applies productively to nouns with overt prefixes from classes 7/8 (e.g., *ka-chi-gayo* ‘small grinding mill’ from class 7 and *tu-zvi-gayo* ‘small grinding mills’ from class 8), to those with a nasal prefix in class 9/10 (e.g., *ka-nyoka* ‘small snake’ and *tu-nyoka* ‘small snakes’), and to vowel-initial prefixes in class 14 (e.g., *ka-u-ta* ‘small bow’ and *tu-u-ta* ‘small bows’). Pre-prefixation thus allows speakers to layer evaluative meaning while retaining the original class prefix, and its high frequency in ChiHwesa suggests that speakers prefer to preserve original class information when forming diminutives.

5.1.2 Substitution (class reassignment)

The second strategy of diminutive formation in ChiHwesa is substitution. This is when the diminutive prefix replaces the original class prefix. In substitution, the noun undergoes a genuine class reassignment, moving from its original gender to the diminutive gender (class 12 for singular, class 13 for plural). Table 2 below shows examples of substitutions from the data.

Table 2: Noun class reassignment in ChiHwesa diminutive formation

Class pair	Base form	Gloss	Diminutive form	Diminutive gloss	Class Shift
1/2 (a)	mu-phare	boy	ka-phare	small boy	1 → 12
1/2 (b)	wa-phare	boys	tu-phare	small boys	2 → 13
7/8 (a)	chi-gubhu	plastic container	ka-gubhu	small plastic container	7 → 12
7/8 (b)	zvi-gubhu	plastic containers	tu-gubhu	small plastic containers	8 → 13

In each case shown in Table 2, the original class prefix (mu-, wa-, chi-, zvi-) is omitted, and the diminutive prefix /ka-/ (class 12) or /tu-/ (class 13) attaches directly to the noun stem, effecting a genuine class reassignment rather than mere derivational affixation. The stem remains unchanged, which confirms that class information is encoded exclusively in the prefix, a canonical Bantu pattern. This substitution strategy applies uniformly across noun classes. In the class 1 noun *mu-phare* ‘boy’, the original class prefix *mu-* is replaced by the class 12 diminutive prefix *ka-*, yielding *ka-phare* ‘small boy’. Similarly, in the class 2 plural *wa-phare* ‘boys’, the prefix *wa-* is replaced by the class 13 diminutive prefix *tu-*, resulting in *tu-phare* ‘small boys’. The same process is observed in classes 7 and 8, where *chi-gubhu* ‘plastic container’ becomes *ka-gubhu* ‘small plastic container’ through the replacement of *chi-* by *ka-*, while *zvi-gubhu* ‘plastic containers’ becomes *tu-gubhu* ‘small plastic containers’ through the replacement of *zvi-* by *tu-*. These examples validate that substitution operates consistently across noun classes by replacing the original class prefix with the appropriate diminutive prefix and thereby reassigning the noun to classes 12 or 13. These examples show that substitution operates consistently across different noun classes by replacing the original class prefix with the diminutive prefix.

The data further reveal that not all noun classes are equally compatible with diminutive formation. Classes 15 (infinitives), 16, 17, 17a and 18 (locatives) do not permit diminutive prefixation, whether by substitution or pre-prefixation. For instance, the infinitive *ku-ner-a* ‘to beat’ (class 15) cannot become **ka-ku-ner-a*, or **tu-ku-ner-a* with a diminutive meaning. Similarly, the locative *pa-nyumba* ‘at/near the house’ (class 16) does not allow **ka-pa-nyumba* or **tu-pa-nyumba* with a locative diminutive reading. The class 17 locative *ku-tari* ‘far’ cannot become **ka-kutari* or **tu-kutari*, and the class 17a locative *mberi* ‘forward’ cannot become **ka-mberi* or **tu-mberi*. This restriction is semantic: infinitives denote actions or states, and locatives denote spatial relations; neither readily lends itself to the concept of smallness or the pragmatic connotations associated with diminutives. Classes 7 and 8, which in some Bantu languages function as diminutive classes, are in ChiHwesa dedicated to augmentative meanings. The analysis has revealed that the strategy is less frequent than pre-prefixation but remains productive, particularly for nouns that lack an overt primary prefix or for speakers who wish to avoid a layered structure.

5.2 Allomorphic variation

In ChiHwesa, the class 13 plural diminutive prefix exhibits allomorphic variation. While the canonical form is /tu-/, the variant /ti-/ is also attested in the speech of some ChiHwesa speakers. Examples from the corpus include the following.

Table 3: Allomorphic variation of the class 13 diminutive prefix in ChiHwesa

Example	Base Noun	Gloss	Canonical Form /tu-/	Variant Form /ti-/	Diminutive Gloss
(a)	muphare	boy	tu-waphare	ti-waphare	small boys
(b)	mbewa	rodent	tu-mbewa	ti-mbewa	small rodents
(c)	mbuzi	goat	tu-mbuzi	ti-mbuzi	small goats
(d)	motika	car	tu-motika	ti-motika	small cars

Table 3 demonstrates that the Class 13 diminutive prefix in ChiHwesa exhibits free allomorphic variation between /tu-/ and /ti-/, with no evidence of phonological conditioning. The alternation applies uniformly across different phonological environments, including consonant-initial stems (-*phare* ‘boy’, -*mbuzi* ‘goat’, -*motika* ‘car’) and nasal-initial stems (-*mbewa* ‘rodent’), which confirms that the variation is not triggered by segmental context. Instead, the distribution of /tu-/ and /ti-/ reflects dialectal and contact-induced variation, with /ti-/ associated with speakers in contact with neighbouring varieties such as Korekore (Mkanganwi, 2011), ChiBarwe (Mangoya, 2012) and Tsonga/Shangani (Gondo, 2009). The absence of the /-tw-/ allomorph (which is present in other Bantu languages such as Shona) further reinforces the language-specific constraints on diminutive morphology in ChiHwesa. The stability of the singular prefix /ka-/, in contrast, indicates an asymmetry in morphological variation between singular and plural diminutive marking.

5.3 Agreement patterns

A defining feature of noun classes in Bantu languages is concordant agreement. Diminutive nouns in classes 12 and 13 control agreement on modifiers, demonstratives, and verbs. The agreement prefixes replicate the diminutive class prefix, providing further evidence that the diminutive forms constitute genuine noun- class reassignment rather than mere derivational affixation. Examples from the data illustrate this.

- (1) (a) *Ka-mu-nhu ka-thu ka-ri ku-seenz-a.*
 DIM12-person 12-our 12-SM be working
 ‘Our little person is working.’
- (b) *Tu-wa-nhu ta-thu tu-ri ku-seenz-a.*
 DIM13-2-person 13-our 13-SM be working
 ‘Our little people are working.’

In these examples, the head nouns *ka-mu-nhu* ‘little person’ (class 12) and *tu-wa-nhu* ‘little people’ (class 13) control agreement on the possessive pronoun and the subject marker on the verb. The possessive -*thu* ‘our’ takes the class 12 prefix *ka-* in 1(a) and the class 13 prefix *ta-* in 1(b), showing that the agreement morphology matches the diminutive class rather than the original class of the noun stem. Similarly, the subject markers on the verb appear as auxiliary verb *ka-ri* ‘is’ (class 12) and *tu-ri* ‘are’ (class 13), again replicating the diminutive class prefixes. This consistent pattern of agreement confirms that nouns reassigned to classes 12 and 13 function as full members of those classes, controlling agreement across the syntactic domain.

5.4 Semantic and pragmatic meanings

In this section, ‘semantic’ refers to the stable, conventionalised meanings encoded by the diminutive morpheme, such as ‘small’ or ‘young’. ‘Pragmatic’ refers to context-dependent speaker intentions

and attitudes, such as affection or contempt, which arise from inferences in specific discourse situations. The diminutive constructions in ChiHwesa encode a range of meanings that go beyond mere physical smallness. Drawing on Jurafsky's (1996) radial category model, this study identified the following senses, organised around a central prototype.

5.4.1 Core Sense: Child

The sense 'child' constitutes the semantic prototype predicted by Jurafsky's (1996) Radial Category Theory and serves as the starting point for analysing diminutive meanings in ChiHwesa. The ChiHwesa data confirm the presence of this prototype through nouns that directly denote offspring or immature beings. Examples include:

- (2) (a) *ka-mwana*
 DIM12-child
 'small child' (from *mwana* 'child')
- (b) *ka-shere*
 DIM12-kid
 'kid' (young goat)

These examples demonstrate that diminutive marking in ChiHwesa is associated with referents characterised by immaturity or early stages of development. While the existence of the child prototype is not unique to ChiHwesa, its identification in the language provides the semantic foundation from which other diminutive meanings extend. The significance of this finding lies not in establishing the prototype itself, which is predicted by the theory, but in showing how subsequent meanings such as young, small, affectionate, and pejorative develop from it within the ChiHwesa semantic system.

5.4.2 Physical smallness

Consistent with findings reported for other Bantu languages, ChiHwesa diminutives encode physical smallness. The ChiHwesa data show that this meaning is productively expressed across nouns originating from several noun classes, including classes 9/10 and 1/2, suggesting that physical smallness constitutes the default semantic interpretation of diminutive marking in the language. Example 3 illustrates this.

- (3) (a) *ka-nyumba*
 DIM12-house
 'small house'
- (b) *tu-motika*
 DIM13-car
 'small cars'

In (3a), the singular noun *nyumba* 'house' (class 9) is reassigned to class 12 via the prefix /ka-/, denoting a reduced physical size. In (3b), the plural form *motika* 'cars' (class 10) takes the class 13 prefix /tu-/, indicating multiple small cars. Both examples reflect the core semantic extension from 'child' to 'small' and demonstrate that the diminutive operates on both singular and plural nouns without additional pragmatic nuance.

5.4.3 Youth and immaturity

Closely related to smallness is the sense of youth or immaturity. In many languages, diminutives are used not only to indicate reduced size but also to identify referents that have not yet reached full physical, social, or biological maturity. This association arises from the close conceptual relationship between childhood and developmental incompleteness, whereby young beings are often perceived as smaller, dependent, and not fully developed. In ChiHwesa, this meaning is particularly evident in nouns denoting humans and animals, where the diminutive signals that the referent is in an early stage of development rather than merely being reduced in physical size. For instance,

- (4) (a) *ka-phare*
DIM12-boy
'small boy' (not necessarily small in stature, but young)
- (b) *tu-mathimbura*
DIM13-young she goats
'young she-goats' (not necessarily small in stature, but young)

The ChiHwesa data show that the diminutive may indicate youth or developmental immaturity independently of physical size. In examples such as *ka-phare* 'young boy' and *tu-mathimbura* 'young she-goats', the primary interpretation concerns age rather than dimensions. This finding supports Jurafsky's (1996) proposal that the sense 'young' emerges directly from the prototype 'child'. At the same time, the data demonstrate that ChiHwesa speakers distinguish between physical smallness and developmental immaturity, even though the two meanings frequently overlap. The youth interpretation is particularly salient with human and animal referents, suggesting that age-based categorisation constitutes an important semantic extension of the diminutive in the language.

5.4.4 Affectionate meaning

The ChiHwesa data show that diminutive marking is productively used to express emotional attachment even when the referent is neither physically small nor young. In example (5), the diminutive signals the speaker's positive evaluation of the referent rather than any objective property of size. This finding demonstrates that diminutive morphology in ChiHwesa functions not only as a marker of physical description but also as a resource for expressing interpersonal stance and affective meaning.

- (5) *ka-foni ka-mbuzi*
DIM12-phone 12-small button phone
'my little phone' (used affectionately, even though the phone is of normal size)

The affectionate meaning is derived from the association of smallness with the intimacy of parent-child relationships, which then extends to other objects or persons. A key insight of the radial category model is that the same diminutive form can convey opposite meanings depending on context; the affectionate sense arises when the speaker invokes positive associations with smallness, while the pejorative sense (discussed below) draws on negative associations.

5.4.5 Pejorative meaning

Conversely, diminutives can encode contempt, disdain, or belittlement. In this sense, the speaker uses the diminutive not to indicate physical size but to reduce the perceived importance, value, status, or significance of the referent. The pejorative interpretation arises when the notion of smallness is extended metaphorically to imply inferiority, triviality, inadequacy, or lack of worth. As a result, diminutive forms may be employed to express negative attitudes towards people, objects, or situations. Examples from the data include:

- (6) (a) *tu-hembe ta-mubhero*
 DIM13-clothes 13-second-hand
 ‘second-hand clothes’ (dismissive)
- (b) *ka-tukutu ka-nyayi*
 DIM12-basket 12-small
 ‘small woven basket’ (in a context implying insignificance)

The ChiHwesa data show that diminutive marking can be employed to downgrade the social or functional value of a referent. In example (6a), the diminutive contributes to a dismissive evaluation of the clothing, implying that it is of lower quality or lesser status. Similarly, in example (6b), the diminutive conveys insignificance rather than physical size. These examples demonstrate that diminutive morphology in ChiHwesa serves important evaluative functions beyond denoting smallness. The data further indicate that positive and negative evaluations may arise from the same diminutive morphology, with interpretation depending largely on the discourse context and the speaker's intention. The pejorative meaning, therefore, represents an inferential extension from the notion of smallness, whereby what is perceived as small may also be construed as unimportant, inferior, or unworthy of serious consideration.

6 Discussion

The findings place ChiHwesa within the canonical Bantu pattern of using noun classes 12 and 13 to encode diminutives through the prefixes /ka-/ and /tu-/ respectively, a pattern widely attested across Bantu languages (Akumbu & Kiessling, 2020; Ndomba, 2022). Similar class-based diminutive systems have been reported in languages such as Swahili, where diminutives are formed by reassignment to dedicated noun classes, and in several Central Ring Grassfields Bantu languages, as discussed by Akumbu and Kiessling (2020). The ChiHwesa data, therefore, confirm the continued productivity of the inherited Proto-Bantu diminutive system in some contemporary Bantu languages. However, the findings further show that diminutive formation in ChiHwesa is realised through two distinct morphological strategies, namely substitution and pre-prefixation. While substitution reassigns nouns to classes 12 and 13 through replacement of the original class prefix, pre-prefixation retains the original noun class prefix and adds a diminutive prefix as a secondary evaluative marker. The coexistence of these strategies demonstrates that diminutivity in ChiHwesa involves both noun class reassignment and prefix stacking within the noun-class system. Furthermore, the analysis reveals that diminutivity in ChiHwesa is expressed exclusively through prefixation with classes 12 and 13, with no evidence of suffixal diminutive formation, reduplication, or compounding.

The semantic relationships identified in the data reveal that the meanings associated with ChiHwesa diminutives are not isolated semantic values but form an interconnected network organised around the prototype sense ‘child’. The semantic network is constructed through several cognitive

mechanisms proposed by Jurafsky (1996). Through metaphor, the prototype sense ‘child’ extends to ‘young’. Through generalisation, meanings originally associated with human offspring become applicable to a wider range of animate and inanimate referents, including animals such as *tu-mathimbura* ‘young she goats’ and objects such as *ka-nyumba* ‘small house’. Through inference, the notion of smallness gives rise to affectionate and pejorative interpretations, while lambda abstraction accounts for the emergence of individuation as a more abstract semantic category. The sense ‘young’, illustrated by *ka-phare* ‘young boy’ and *tu-mathimbura* ‘young she goats’, emerges as an extension of the child prototype. The sense ‘small’, exemplified by *ka-nyumba* ‘small house’ and *tu-motika* ‘small cars’, represents a further extension within the semantic network. From this notion of smallness arise the evaluative meanings of affection and pejoration. Forms such as *ka-foni ka-mbuzi* ‘my little phone’ express positive emotional attachment, whereas forms such as *tu-hembe ta-mubhero* ‘second-hand clothes’ and *ka-tukutu ka-nyayi* ‘small woven basket’ convey negative evaluation or insignificance. The data therefore support Jurafsky’s (1996) argument that apparently contradictory meanings associated with diminutives are not random but are related through identifiable cognitive pathways. The same diminutive morphology can consequently generate positive or negative evaluations depending on the inferential context in which it is used. The analysis further suggests that the individuation meaning occupies a prominent position within the ChiHwesa semantic network. This meaning is accounted for through lambda abstraction, whereby the diminutive extends beyond the concrete notion of ‘child’ to denote an individuated or bounded entity. While the general architecture of the ChiHwesa semantic network closely corresponds to Jurafsky’s (1996) universal model, the prominence of individuation and the clear separation of affectionate and pejorative meanings via distinct inferential routes constitute language-specific characteristics of the ChiHwesa diminutive system.

The ChiHwesa findings also reveal important differences from neighbouring Bantu languages. In Shona, for example, diminutives are commonly formed through suffixation with *-ana*, often alongside reassignment to classes 7 and 8, marked by the prefixes /*chi-*/ and /*zvi-*/ (Mudzingwa, 2010; Déchaine et al., 2014). Similarly, Van der Spuy and Mjijako (2015) show that Zulu employs evaluative suffixes in diminutive formation rather than relying exclusively on noun-class reassignment. Kandolo (2021) also notes that some Bantu languages employ reduplication and compounding as supplementary diminutive strategies. In contrast, the ChiHwesa data show no evidence of such strategies. The findings further reveal that classes 7 and 8 in ChiHwesa function primarily as augmentative rather than diminutive classes. This contrasts sharply with Shona, where these classes may encode both augmentative and diminutive meanings depending on context (Mudzingwa, 2010; Déchaine et al., 2014). The ChiHwesa system, therefore, maintains a clearer semantic distinction between augmentative and diminutive categories than that reported for some neighbouring Bantu languages, suggesting a more conservative pattern of evaluative morphology. Overall, the study contributes an important comparative case to Bantu evaluative morphology. The findings demonstrate that ChiHwesa has retained a productive noun class-based diminutive system while simultaneously developing language-specific semantic extensions organised within a radial category structure. The study, therefore, not only supports the wider applicability of Jurafsky’s (1996) Radial Category Theory but also contributes to a more nuanced understanding of how diminutive meanings are morphologically encoded and semantically structured in under-described Bantu languages.

7 Conclusion

This study investigated the morphology and semantics of diminutives in ChiHwesa, an under-described Bantu language, with particular attention to their morphological formation and semantic extensions within the noun-class system. The findings established that ChiHwesa forms diminutives primarily through noun-class reassignment into classes 12 and 13, marked by the prefixes /ka-/ and /tu-/, via substitution and pre-prefixation, and also exhibits allomorphic variation in the plural diminutive prefix. The study further established that diminutive nouns fully participate in concordial agreement, thereby confirming their integration into the language's grammatical structure. Semantically, the findings revealed that ChiHwesa diminutives form a radial semantic network organised around the prototype sense 'child', from which meanings such as 'young', 'small', 'affectionate', 'pejorative', and 'individuation' are evoked through cognitive mechanisms including metaphor, inference, generalisation, and lambda abstraction. These findings demonstrate that diminutive meanings in ChiHwesa are systematically interconnected rather than isolated semantic values, thereby supporting cognitive-semantic accounts of evaluative morphology. The study also confirmed the applicability of Jurafsky's (1996) Radial Category Theory to the analysis of diminutive semantics in ChiHwesa, while highlighting language-specific patterns within the framework of Bantu evaluative morphology. Furthermore, the findings contribute to Bantu linguistics by documenting a productive prefixal diminutive system in an under-described language and by illustrating how noun-class morphology functions as a resource for encoding both grammatical and evaluative meaning.

8 Declaration of conflict of interest

The authors declare no conflict of interest.

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