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Re-evaluating Affixes and Clitics in Munda Multi-verb Constructions

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Abstract: Languages from the same genetic lineage often exhibit differences in certain parameters, but significant variation in their morphological typology is uncommon. Austroasiatic languages present a notable paradox, where Munda languages are categorized as polysynthetic, while Mon-Khmer languages are considered isolating. This contrast within the same linguistic family, with both sub-branches occupying opposite ends of the synthesis continuum, is particularly intriguing. This paper aims to explore whether the morphological disparity between Munda and Mon-Khmer languages can be reconciled by examining specific bound elements in Munda languages that contribute to their synthetic characteristics. The study conducts a detailed analysis of numerous bound elements in Munda languages, comparing these to similar structures in Mon-Khmer languages. The focus is on understanding whether these bound markers are better classified as clitics rather than affixes, especially in the context of multi-verb constructions. The analysis suggests that many bound elements in Munda languages are more likely to be clitics rather than affixes. The study specifically investigates phrase-level affixation involving multi-verbs, concluding that when these markers attach at the phrase level, they should be considered clitics. This study sheds light on the synthetic nature of Munda languages within the Austroasiatic family, arguing for a reclassification of certain bound markers as clitics rather than affixes, particularly in multi-verb constructions. This reclassification could help reconcile the typological differences observed between Munda and Mon-Khmer languages.

Keywords: Phrasal Affixes, Clitics, Multi-Verb, Serial Verb, Compound Verb, Munda, Austroasiatic

1. Introduction

Among the Austroasiatic languages, Munda languages are renowned for their extensive array of inflectional markers, including subject and object agreement markers. Conversely, Khasian (Mon-Khmer) languages are less noted for such features. Recent studies (Dilip and Kumar, 2020; Blench, 2015) have emphasized the complexity of agreement markers in Munda languages like Mundari, Santali, and Kharia, where these markers are often identified as clitics. However, in many other Munda languages, these markers are still frequently treated as affixes (Bhattacharya, 2018; Anderson, 2016). In contrast, in Khasi grammar, these markers are typically analysed as independent words, reflecting an isolating morphological perspective (Nagaraja, 2014; 1993; Simon, 1974).

Given that both Munda and Khasian languages belong to the Austroasiatic family, the characterization of Munda languages as highly polysynthetic and Khasian languages as isolating presents a perplexing paradox. This paradox could potentially be resolved by adopting a clitic analysis of elements traditionally viewed as independent grammatical words in Khasian languages. Recent work by Koshy (2007, 2009, 2019) and Bhattacharya (2018) has made efforts to propose a clitic analysis for various grammatical elements in different Khasian languages, challenging their traditional categorization. Similarly, many of the elements considered "affixes" in the polysynthetic structure of Austroasiatic languages may actually function as clitics (Anderson 2016; 2008). This perspective offers a middle ground where the morphological typologies of Munda and Khasian languages can intersect.

This study focuses on inflectional marking with multi-word verbs in select Munda languages, utilizing the Leipzig glossing convention. For elements not covered by Leipzig glossing rules, detailed explanations are provided within the text. The analysis centres on compound and serial verb constructions across languages such as Mundari,

Gutob, Santali, Sora, Asuri, and Bhumij. These constructions serve as critical sites for exploring whether inflectional markers should be reanalysed as clitics rather than affixes.

The classification of inflectional markers as affixes or clitics is a fundamental question in linguistic analysis, influencing our understanding of morphosyntactic typology across languages. This study delves into Munda languages, a branch of the Austroasiatic family known for its purportedly polysynthetic nature, to re-evaluate the status of these markers. Historically, inflectional affixes have been considered tightly bound to individual words, marking grammatical features such as tense, aspect, and agreement. In contrast, clitics are morphemes that display affix-like behaviour but exhibit some degree of syntactic independence and mobility within sentences (Spencer and Luís, 2012; Anderson, 2005; Zwicky 1985, and others).

The present investigation challenges the traditional view by examining whether certain inflectional markers in Munda languages should be reanalysed as clitics rather than strict affixes. By focusing on compound and serial verb constructions across languages such as Mundari, Gutob, Santali, Sora, Asuri, and Bhumij, this study scrutinizes how these markers behave in contexts where multiple verbs are strung together. In compound verb constructions, where verbs are combined without intervening elements like light verbs, inflectional markers like subject agreement, tense, and definitizers often appear only once. This singular appearance suggests that these markers exert their grammatical influence over the entire construction rather than attaching to each individual verb. Such phrasal attachment patterns are indicative of clitic behaviour, challenging the traditional notion of these markers as strictly bound affixes.

Similarly, in serial verb constructions (Haspelmath, 2016; Aikhenvald and Dixon, 2005; Hagemeijer, 2001; Veenstra 1993) observed in languages such as Gtaʔ and Gutob, the study reveals that markers such as subject agreement maintain cohesive scope over all verbs in the series. This phenomenon supports the argument that these markers function as clitics, facilitating a more flexible and nuanced analysis of their morphosyntactic role. By proposing that these markers be viewed as phrasal affixes or clitics rather than traditional affixes, this study not only contributes to our understanding of Munda languages' morphological complexity but also suggests a morphosyntactic continuum within the Austroasiatic family. This exploration seeks to reconcile the apparent morphological disparity between polysynthetic Munda languages and isolating Khasian/Mon-Khmer languages, shedding light on broader typological patterns in linguistic morphology.

This paper seeks to explore the following research questions:

1. Are the inflectional markers in Munda languages better analysed as clitics rather than affixes, particularly within compound and serial verb constructions?
2. How do these markers behave across different Munda languages, and what does this behaviour suggest about their classification?
3. Can a clitic analysis help reconcile the morphological disparity between polysynthetic Munda languages and isolating Khasian/Mon-Khmer languages?
4. What broader implications does this analysis have for understanding morphosyntactic typology within the Austroasiatic language family?

This exploration seeks to reconcile the apparent morphological disparity between polysynthetic Munda languages and isolating Khasian/Mon-Khmer languages, shedding light on broader typological patterns in linguistic morphology.

2. Clitics and Affixes: Phrasal Affixes as Clitics

The distinction between clitics and affixes has been a subject of extensive debate in linguistic literature. Early work by Zwicky (1977) laid the foundation for understanding clitics as distinct from affixes, proposing that clitics are more syntactically independent yet phonologically dependent elements. Zwicky and Pullum (1983) further refined this by emphasizing the prosodic properties that differentiate clitics from affixes, noting that clitics attach to host phrases rather than specific words.

Anderson's (1992, 1993) theory of clitics builds on these foundations, positing that clitics are essentially phrasal affixes that attach to syntactic phrases and manifest the phonological realizations of morphological rules

that do not apply at the word level. Anderson's framework suggests that clitics are bundles of morphosyntactic features added at the phrase level, contributing to the interpretation of syntactic features rather than their formation. His view, which ties the assignment of inflectional properties such as tense and case to the phrase level, is adopted in this study. Building on Anderson's work, Spencer and Luís (2012) explore the syntactic and phonological duality of clitics, categorizing them as elements that straddle the boundary between syntax and morphology. They argue that clitics, by their nature, challenge the traditional boundary between words and phrases, making their classification particularly complex.

Furthermore, Bonami & Boyé (2005) investigate the interaction between clitics and affixes within the broader typological context, highlighting the variability in their behaviour across languages. They suggest that the distinction between clitics and affixes is not always clear-cut and is often shaped by language-specific morphological and syntactic constraints. Other studies, such as those by Halle & Marantz (1993) in Distributed Morphology, propose that clitics and affixes should be viewed through the lens of post-syntactic operations, where the placement of clitics can be seen as part of a broader morphological derivation process rather than purely a syntactic phenomenon.

In Anderson's (2005) comprehensive analysis, clitics are properly characterized within morphology, occupying a unique position as neither strictly syntactic nor purely phonological entities. Instead, they represent the morphology of phrases, justifying their designation as "phrasal affixes" (Anderson 2005: 83). This concept aligns with the view that phrasal affixes carry inflectional features and attach to phrases rather than individual words, governed by rules of phrase-level morphology.

3. Agreement Marking in Munda Languages: Affixes or Clitics?

3.1 The Munda Languages in this study

This study draws upon data from a range of Munda languages, including Mundari, Gutob, Santali, Sora, Asuri, and Bhumij, all of which belong to the Austroasiatic language family. The Munda languages are spoken across various regions in India, with each language exhibiting its own unique set of linguistic features and dialectal variations. For example, Gutob and Gtaʔ, two lesser-studied languages, are spoken in the eastern regions and have been the subject of extensive research into their verb morphology (Zide, 1997; Anderson, 2008). In contrast, Santali, one of the well-documented Munda languages, has a broader range of dialects and has been studied for its complex system of inflectional markers (Ghosh, 1994; Neukom, 2001).

The selection of these languages was guided by their representative nature within the Munda sub-group, and their varying morphological characteristics, particularly in relation to inflectional marking. Data were collected from published grammatical descriptions (e.g., Anderson, 2007, 2008; Hoffmann, 1903) and supplemented by fieldwork where possible. The analysis was further informed by existing typological frameworks, particularly those focusing on serial verb constructions and morphological typologies (Aikhenvald & Dixon, 2005; Haspelmath, 2016).

3.2 Clitics in Munda Languages

In analysing the inflectional markers in these languages, we employed a rigorous methodology that distinguishes between affixes and clitics based on their phonological, morphological, and syntactic properties. Affixes are traditionally seen as tightly bound morphemes that attach directly to the host word, marking grammatical features like tense, aspect, and agreement (Anderson, 1992; Spencer & Luís, 2012). Clitics, on the other hand, are less tightly bound and exhibit some degree of syntactic independence, often appearing in specific syntactic positions, such as second position in the clause (Anderson, 1993, 2005; Zwicky, 1985).

The study focused on compound and serial verb constructions, which are crucial contexts for observing the behaviour of these markers. In compound verbs, where multiple verbs are combined without intervening elements, inflectional markers like subject agreement often appear only once, potentially indicating cliticization (Bonami & Boyé, 2005). Similarly, in serial verb constructions, which are prevalent in languages like Gtaʔ and Gutob, markers such as subject agreement and tense have been observed to apply to the entire verb sequence, further suggesting a clitic-like behaviour (Veenstra, 1993; Hagemeijer, 2001).

The criteria for categorizing a marker as an affix or clitic were based on a set of well-established linguistic diagnostics. These include phonological independence, positional flexibility, and syntactic scope. For instance, a marker that consistently attaches to a specific host and does not exhibit independent phonological behaviour was categorized as an affix. In contrast, markers that could move within the sentence or exhibit variability in attachment, often influencing multiple elements of a verb phrase, were classified as clitics (Zwicky & Pullum, 1983; Zwicky, 1977).

The findings of this study contribute to the ongoing debate on the morphosyntactic categorization of elements in Austroasiatic languages. By re-evaluating the status of these markers in Munda languages, we challenge traditional views that rigidly separate affixes from clitics and propose a more fluid understanding of morphosyntactic phenomena. This approach aligns with recent perspectives that emphasize the continuum between affixes and clitics, particularly in languages with complex morphological systems (Halle & Marantz, 1993; Anderson, 2016).

In most Munda languages, the marking of subjects occurs within the verbal complex—a term used to describe a composite structure consisting of a verb root and various bound elements, including affixes and clitics. This complex form often encapsulates the meaning of an entire phrase, reflecting the polysynthetic nature of these languages (Anderson, 2007). In North Munda Kherwarian languages, such as Mundari, Santali, and Ho, both subjects and objects are typically indexed within the verbal complex (Ghosh, 1994; Neukom, 2001). However, in languages like Korku, object agreement is more prominent, while subject marking is less consistent. In these cases, the subject may be marked by an affix within the verbal complex, but it is more commonly represented by an enclitic attached to the word immediately preceding the verb, which could belong to various grammatical categories including interrogatives, objects of the verb, and even overt subject pronouns (Anderson & Zide, 2001).

When the subject enclitic attaches to the verbal complex, it typically follows the definitizer suffix, functioning as a phrasal affix and can be analysed as an enclitic to the entire verbal complex (Zide, 1997; Anderson, 2008). In North Munda languages, a single set of enclitics can index both subjects and objects, with their phonological form and position within the sentence determining their grammatical function. For instance, when these enclitics appear within the verbal complex before the definitizer marker, they generally indicate the object; when they occur elsewhere—such as following the definitizer or attaching to the preceding word—they mark the subject.

In certain Kherwarian languages like Karmali, Turi, and Bhumij, the subject enclitic is found only at the end of the verbal complex (Anderson, 2008). Despite their fixed position, these elements are treated as clitics due to their role as phrasal affixes, which influences the entire verbal construction rather than just a single verb within the complex. This flexible yet systematic use of enclitics in Munda languages challenges traditional morphological categorizations and highlights the nuanced morphosyntactic strategies employed across this language family.

3.3 Historical Development of Clitics in Munda Languages

The historical development of clitics in South Munda languages has been a subject of considerable research interest. Similar to many other languages worldwide, personal agreement clitics in most Munda languages derive from corresponding personal pronouns. According to Anderson (2007), Proto-South Munda featured prefixal marking of 1st and 2nd person subjects on the verb stem, while 3rd person plural subjects were suffixally marked. Proto-Gutob-Remo included subject proclitics that were later lost and replaced by enclitics akin to those found in Kharia, possibly influenced by the existence of other enclitic markers in imperative and prohibitive forms. In Proto-Sora-Juray-Gorum, 1st and 2nd person subjects were prefixally marked, a feature preserved in Gorum, while 3rd person plurals were suffixally marked, as seen in Sora and Gorum today. Proto-Gutob-Remo, like Kharia, lost subject proclitics and innovated a set of enclitic subject pronoun markers. Proto-Gtaʔ preserved subject proclitics, a feature retained in modern Gtaʔ. Juang shares this retention of subject proclitics with Gtaʔ. The subject proclitics observed in Gorum today are believed to stem from a shared innovation in Proto-Sora-Gorum, subsequently lost in Sora. Gutob, Remo, and Kharia lack subject prefixes, having replaced them with enclitic pronouns, while other South Munda languages retain subject prefixes (Anderson 2007: 4). Thus, many South Munda languages saw the original agreement system evolve into one featuring agreement enclitics.

The analysis of clitic development in North Munda languages remains somewhat enigmatic. Anderson & Zide (2001) propose three plausible hypotheses:

- Hypothesis 1 suggests that Proto-North Munda (PNM), like Proto-South Munda (PSM), featured subject proclitics that were reanalysed as enclitics on preceding words in Kherwarian languages, later also appearing at the end of the verbal complex under areal influences. When no preceding word exists, they attach directly to the verbal complex itself.
- Hypothesis 2 proposes that Proto-Munda (PM) possessed subject proclitics akin to PSM, which were preserved in PSM but lost in PNM. Object suffixes, phonologically identical to current subject markers, were a subsequent innovation. Following the loss of subject proclitics, object markers were reinterpreted as subject markers, with Korku being the sole language to retain the original object marking function.
- Hypothesis 3 suggests that PM featured only object suffixes. The subject was represented by a resumptive pronoun preceding the verb, later reanalysed as a subject proclitic in PSM and as an enclitic in PNM. This hypothesis, favoured by Anderson (2007), lacks compelling evidence but posits that this development was lost in Korku while preserved in Kherwarian languages.

4. Inflectional Clitics in Compound-Verb Constructions

Compound verb constructions provide a valuable context to examine the status and behaviour of agreement markers and other inflectional forms, potentially revealing their clitic nature. Here, compound-verb constructions refer to constructions involving two or more lexical verbs without the involvement of light verbs. These constructions operate at a higher hierarchical level than individual verbs, where the attachment of a marker only once indicates phrase-level attachment. The hierarchical structure allows an inflectional marker to attach once at a higher level and apply to both verbs. Therefore, when attached to one verb within the compound, the inflectional marker functions akin to a phrasal affix. In the context of clitics, a phrasal affix refers to a type of morpheme that exhibits properties of both an affix and a separate word. Specifically, phrasal affixes attach not just to individual words but to entire phrases or constituents within a sentence. This attachment can be flexible and may extend over multiple words. Unlike typical affixes that are strictly bound to a single word, phrasal affixes show some degree of syntactic independence. They can sometimes be separated from their host word or moved around within a sentence without causing ungrammaticality. Phrasal affixes often have a broader semantic scope, affecting the interpretation or meaning of an entire phrase rather than just a single word.

The examination of inflectional marking within compound verbs in select Munda languages such as Mundari, Gutob, Santali, Sora, Asuri, and Bhumij reveals significant insights.

4.1 Mundari

In Mundari, within compound verb constructions, the agreement marker appears preceding the compound verb and occurs only once. Similarly, the definitizer marker also appears at the end of the compound verb form and only once. TAM (Tense-Aspect-Mood) categories likewise appear singularly. For instance:

1.	ne	gaɽa	poʈpoʈia=te=ko	har-parom=ke=d=a
	this	river	mortorbike=instr=3pl	drive-cross=compl=tr=def
	‘They drove the motorbike and crossed the river’			
Remarks	(Osada 2008: 136)			

This example illustrates how agreement markers and other inflectional elements in Mundari are positioned within compound-verb structures, indicating their role as phrasal affixes or clitics.

Since it's impractical to view "driving a motorcycle and crossing a river" as a single event, we analyse the structure as involving two distinct verbs. Despite this, both verbs are modified by a single set of inflectional markers indicating aspect, transitivity, and finiteness. According to the literature on clitics, this simultaneous marking is feasible only if these bound markers are considered to have scope over both coordinated elements, attached at the phrase level. Therefore, these markers must be interpreted as phrasal affixes, or clitics.

In other multi-verb constructions in Mundari, such as the example below where no words precede the verbs, the first lexical verb bears the subject agreement marker, while the second verb includes the definitizer/finitizer. The tense marker appears on the first verb. Since both finiteness and tense apply semantically and syntactically across both verbs, treating these markers as phrasal affixes, or clitics, is appropriate.

2.	ne-nel=te=ŋ	sen=a	
	rdpl-see=t/a=1	go=def	
	'I will go and see'		
Remarks	(Hoffmann 1903: 183)		

Further support for treating these markers as phrasal affixes or clitics comes from the possibility of certain inflectional elements appearing marked repeatedly. This is evident in reciprocal markings on compound verbs in Mundari, where each main verb in a compound construction may bear reciprocal infixation, as shown in the example:

3.	dondo-rakab
	lift-go.up
	'Lift and go up'
Remarks	(Osada 2008: 137)

4.	do<po>ndo-ra<pa>kab
	lift<recip>-go.up<recip>
	'Lift each other and go up'
Remarks	(Osada 2008: 137)

Here, reciprocal constructions allow for the repetition of reciprocal marking, whereas grammatical markers such as TAM markers, transitivity markers, and definitizers are not repeated on each verb. These markers are integral to the verbal construction as inflectional elements and do not require repetition due to their phrasal affixation. Therefore, as phrasal affixes, they exert scope over both verbs and are appropriately analysed as clitics.

4.2 Gutob

In Gutob, compound or complex verbal predicates exhibit a similar pattern to Mundari, where the subject agreement marker appears only once within the construction. This marker shows flexibility in its placement, sometimes occurring after the tense marker on the first verb and at other times after the tense marker on the second verb. This flexibility in host selection indicates clitic status for these markers. However, their clitic nature is further supported by their attachment at the phrase level in these constructions. This attachment ensures that regardless of which verb hosts the marker phonologically, it governs both verbs' agreement, establishing it as a phrasal affix, or clitic.

5.	ɟom-lai	niŋ	bu-oʔ	pi-loŋ=niŋ
	Jom=acc	I	beat.up-pst:tr	come-fut:itr=1
	'I will beat up Jom and come back'			
Remarks	(Zide 1997: 316)			
6.	ɟom-lai	bu-oʔ=niŋ	pi-loŋ	
	Jom=acc	beat.up-pst:tr=1	come-fut:itr	
	'I will beat up Jom and come back'			
Remarks	(Zide 1997: 316)			

4.3 Santali

In Santali, sequences of two verbs representing consecutive actions lack conjunctive markers. Here, both verbs share agreement markers, tense/aspect markers, and the definitizer, all of which appear only once. This singular appearance across multiple verbs in a construction signifies phrasal attachment. Thus, these markers are appropriately analysed as clitics.

7.	ɲel-ɲam=ked=a=e
	see-find=pst=def=3sg
	'He looked/saw and found'
Remarks	(Ghosh 1994:101)

In sentences involving subject and object incorporation in Santali, we get the following:

8.	bʰəgtɛ=ko	raɽa-led-e	ɲam-led-e
	quickly=3pl.subj	release-plup:a-3sg.obj	find-plup:a-3sg.subj
	uni	tərup-dɔ-e	rɔɽ-gɔt-ked=a
	that	tiger-top-3sg.obj	speak-v2-pst:a=def
	'No sooner had they let him out and found him than the leopard/tiger said'		
Remarks	(Neukom 2001: 176)		

Here, the object agreement marker repeats across all verbs, while the subject agreement marker and definitizer appear only once. This pattern confirms their status as phrasal affixes or clitics.

4.4 Sora

In Sora, examples demonstrate that agreement and TAM markers occur once but apply across all verbs in a construction, indicating phrasal affix (clitic) status.

9.	paŋ-ti-dar=iɲ=te:n
	bring-give-cooked.rice=1=3.pst
	'He brought and gave me cooked rice'
Remarks	(Ramamurti 1931: 43)

10.	anin	iɟai=te=n-gu=am
	he	come=npst=itr-call=2
	'He came and called you'	
Remarks	(Ramamurti 1931: 44)	

However, in another example, we observe agreement markers repeated at the beginning and end of the verbal complex, suggesting a shift from clitic to affixal status.

11.	bagun-ben	ə-il-le-ga-sal-n-e
	both-2pl	1/2pl-go-pst-drink-liquor-itr-1pl
	'Both of you went and drank liquor'	
Remarks	(Anderson and Harrison 2008: 360)	

4.5 Asuri

In Asuri, subject agreement markers appear on all verbs in a series, adhering to local scope relations typical of inflectional affixes. However, definitizers occur only once across all verbs, exhibiting phrasal affix (clitic) behaviour.

12.	sen-e-n=a:
	go-asp-tr=def
	'He went'
Remark	(Grierson 1906: 139)

13.	holate	iŋ	huɽu	ir=iŋ	sen-tehin-en=a=iŋ
	yesterday	I	paddy	cut=1	go-t/a-itr=def=1
	'Yesterday I went and cut rice'				
Remarks	(Grierson 1906: 142)				

4.6 Bhumij

Bhumij exhibits a pattern where subject agreement markers are repeated on all verbs in a compound-verb construction, indicating they are not attached at the phrase level and therefore not phrasal affixes. However, their clitic status is supported by other criteria.

14.	ama=a	hunduɽi=te	seno=me	ar	hende	tayu=me
	2sg=gen	room=all	go=2sg	conj	there	stay=2sg
	'Go to your room and stay there'					
Remarks	(Ramaswami 1992: 83-84)					

In summary, across these Munda languages, the analysis of compound-verb constructions highlights the phrasal affix (clitic) nature of agreement markers and other inflectional elements, providing insights into their syntactic and morphological behaviour.

5. Inflectional Clitics in Serial Verb Constructions

In Munda languages like Gtaʔ and Gutob, serial verb constructions provide a unique context to examine the behaviour of inflectional markers such as subject agreement, tense/aspect markers, and other grammatical elements. Similar to compound verb constructions, the analysis of serial verb constructions focuses on whether these markers behave as affixes or clitics (phrasal affixes).

5.1 Gtaʔ

In Gtaʔ, serial verb constructions exhibit a consistent pattern where subject agreement markers appear only once within the construction, irrespective of how many verbs are serialized. This phenomenon indicates that the subject agreement marker functions as a phrasal affix (clitic), attached at the phrase level rather than to individual verbs. The marker's scope extends across all verbs in the serialization, ensuring agreement coherence throughout the construction.

15.	wiŋhaʔ=har=ke	ho-m-m-	ho-ʈ-m-u	ho-s-m-iʔ+ho-s-m-aʔ-har-
	quarrel=pl=t/a	recip-	recip-	recip-cut/recip/+recip-
	'They beat each other, threw stones at each other, caught and butchered each			
Remarks	(Anderson 2008: 720)			

In Gtaʔ, other inflectional markers such as TAM markers, definitizer markers, and markers indicating same subject (SS) or different subject (DS) also demonstrate phrasal affix behaviour. These markers typically appear once in the construction, influencing the entire series of verbs rather than being attached to each verb individually.

16.	ɖukri	hoʔ-ru=hoʔ-ria=ce	swa	e-rro-raŋ=ce
	old.woman	weep=echo=ss	fire	go-rdpl:carry-
	handa-ndœ-ne	moɽ-ke	cwar=ce	aʔ-nswar-bo=ke
	husband-3.ref-gen	corpse-oblq	dry=ss	caus-dry-
	'The old woman wept a lot and then made a fire, dried up her husband's corpse and preserved it'			
Remarks	Anderson (2008: 750)			

17.	wig=la	hɽiŋ	handɻa-ŋdɻe	pag=liʔ	we=ke
	go=ds	afterwards	husband-rflxv	break=shoots	go=ke.pst
	'She went and afterwards the husband went for bamboo shoots'				
Remarks	Anderson (2008: 753)				

18.	hliʔ	pag=ce	coŋke=la	poga	sgwa	bsœʔ	lœʔ=ke
	shoot	break=ss	taste=ds	tobacco	like	bitter	aux=ke.pst
	'He broke the shoots and tasted them; they were bitter like						
Remarks	Anderson (2008: 754)						

These examples illustrate that markers like SS and DS, which indicate the continuity or change of subject across verbs, are not marked on the final verb but still govern the entire construction, indicative of their clitic nature.

5.2 Gutob

In Gutob, serial verb constructions present a more variable pattern compared to Gtaʔ. Here, subject agreement markers may appear either on all serialized verbs or only on the final verb. The variability suggests a linguistic environment in transition where the language may be evolving in its treatment of these markers.

19.	nom	dapre=nom	moʔɽ-gu=nom	piŋ-gi=nom
	I	afterwards=2	get.up-pst.I=2	come-pst.I=2
	'Then you got up and came back'			
Remarks	(N Zide 1997: 323)			

20.	maɟ-nen	rone-bone	ɖeŋ-gu	buron-gu=nen	aʔso-gu=nen
	3-pl	happy	aux-pst.i	live-pst.ii=3pl	echo-pst.i=3pl
	'They became happy and lived (on that way)'				
Remarks	(N Zide 1997: 310)				

21.	tirgig=nei	ɟuɟu=nei	pi-loŋ-kina
	follow=1pl	rdpl:see=1pl	come-fut.i-or.not
	'Shall we come/follow along and see, come?'		
Remarks	(N Zide 1997: 310)		

22.	an-oʔ-su	moʔɽ-gu	piŋ-gi=niŋ
	pull.out-pst.ii-ss	get.up-pst.i	come.back-pst.i=1
	'I will pull it out, get up and come home'		
Remarks	(N Zide 1997: 316)		

In some instances, Gutob exhibits over-marking where subject agreement markers redundantly appear on both the verb's host and preceding words. Conversely, other sentences show markers only on the final verb, suggesting a phrasal affix (clitic) status with scope over the entire construction.

Across Gtaʔ and Gutob, the analysis of serial verb constructions underscores the phrasal affix (clitic) nature of subject agreement markers and other inflectional elements. These markers demonstrate cohesive scope over serialized verbs, influencing the grammatical agreement and tense/aspect properties of the entire construction. This consistency supports their classification as clitics rather than standalone affixes tied to individual verbs.

6. Key findings and Implications

6.1 Classification of Inflectional Markers as Clitics

The research explored the classification of inflectional markers in various Munda languages, challenging the traditional view of these markers as affixes. Typically, affixes are bound morphemes tightly attached to individual words. However, the study found that in Munda languages, markers such as subject agreement,

tense/aspect markers, and definitizers often behave as clitics. Unlike affixes, clitics can move within a sentence and exert their grammatical influence over multiple verbs in compound and serial verb constructions. This finding suggests a broader syntactic scope for these markers, aligning them more closely with clitics rather than traditional affixes.

6.2 Behaviour of Inflectional Markers in Compound Verb Constructions

The analysis of compound verb constructions across languages like Mundari, Gutob, Santali, Sora, Asuri, and Bhumij provided significant insights:

- **Mundari**: In compound verb constructions, inflectional markers such as agreement markers and definitizers appeared only once within the construction, influencing the entire phrase rather than individual verbs. This phrasal attachment aligns with clitic behaviour, suggesting that these markers function as phrasal affixes.
- **Gutob**: Similar to Mundari, the subject agreement marker in Gutob appears only once within the construction but governs both verbs. The marker's flexibility in placement—sometimes after the tense marker on the first verb and other times on the second—further supports its classification as a clitic.
- **Santali**: In Santali, the shared appearance of agreement markers, tense/aspect markers, and definitizers across verbs in a sequence supports their analysis as clitics. These markers exhibit phrasal attachment, modifying the entire phrase rather than individual verbs.
- **Sora**: Agreement and TAM markers in Sora typically occur once but apply across all verbs in a construction. However, some examples show repetition of markers at the beginning and end of the verbal complex, indicating a potential shift between clitic and affixal status.
- **Asuri**: In Asuri, while subject agreement markers appear on all verbs in a series (suggesting affixal behaviour), definitizers occur only once across the verbs, displaying clitic behaviour.
- **Bhumij**: Bhumij shows subject agreement markers repeated on all verbs, indicating non-phrasal attachment. However, other criteria support the classification of some markers as clitics.

These observations across multiple languages suggest that inflectional markers in compound verb constructions often function as clitics, attaching at the phrase level rather than to individual verbs.

6.3 Inflectional Clitics in Serial Verb Constructions

The study also examined serial verb constructions in Munda languages like Gtaʔ and Gutob:

- **Gtaʔ**: In serial verb constructions, subject agreement markers typically appear only once within the construction, regardless of the number of verbs serialized. This pattern indicates that these markers function as clitics, with their scope extending across all verbs in the construction.
- **Gutob**: Gutob exhibits a more variable pattern, with subject agreement markers appearing on either all serialized verbs or only on the final verb. This variability suggests a linguistic transition, with the language possibly evolving in its treatment of these markers. However, the cohesive scope of these markers over serialized verbs supports their classification as clitics.

6.4 Implications for Linguistic Theory and Typology

The reanalysis of inflectional markers in Munda languages as clitics rather than affixes has significant implications for linguistic theory and typology. It challenges the traditional morphological classification within the Austroasiatic family and suggests a morphosyntactic continuum where languages exhibit varying degrees of synthesis and isolation. By recognizing these markers as phrasal affixes or clitics, the study contributes to bridging the perceived morphological gap between polysynthetic Munda languages and isolating Khasian/Mon-Khmer languages.

7. Limitations and Future Research Directions

7.1 Limitations of the Study

While this study has provided valuable insights into the classification of inflectional markers in Munda languages as clitics, several limitations must be acknowledged. One of the major limitations of this study is the scope of Language Data. The study primarily focused on a subset of Munda languages, including Mundari, Gutob, Santali, Sora, Asuri, and Bhumij. While these languages offer diverse perspectives on the behaviour of inflectional markers, the findings may not be fully representative of the entire Munda language family or other Austroasiatic languages. A more comprehensive analysis across a broader range of languages could provide a more complete understanding of the phenomena discussed. Another limitation is the lack of proper literature on linguistic variability**.** The study observed variability in the behaviour of inflectional markers, particularly in languages like Sora and Gutob, where markers exhibited both clitic and affixal properties. This variability suggests that the cliticization process might be language-specific or even construction-specific. Further research is needed to explore the underlying factors that contribute to this variability and to determine whether these patterns reflect broader typological trends or are unique to specific languages or constructions. Another limitation is the dependence on secondary sources and the need for more field-work. The study relied on existing linguistic descriptions and corpora, which may have inherent limitations in data availability and accuracy. Fieldwork involving native speakers, along with more robust and controlled data collection methods, would strengthen the findings and provide a more nuanced understanding of the morphosyntactic behaviour of these markers. While the study challenges traditional views of morphological typology within the Austroasiatic family, the theoretical implications require further exploration. The study's proposal of a morphosyntactic continuum between synthesis and isolation is intriguing but needs additional empirical support and theoretical refinement.

7.2 Suggestions for Future Research

Building on the findings of this study, several avenues for future research are recommended. Future research should aim to include a wider range of Munda languages and other branches of the Austroasiatic family, such as Khasian and Mon-Khmer languages. This would allow for a more comprehensive comparison of inflectional marker behaviour across different language types and contribute to a deeper understanding of the morphosyntactic diversity within the Austroasiatic family. Another direction for future research is investigating the historical development of cliticization in Munda languages, which could provide insights into how these markers evolved from affixes to clitics. A diachronic approach would help to uncover the processes driving this linguistic change and its implications for understanding the evolution of grammatical structures in these languages. Further research should also explore the syntactic and semantic scope of clitics in greater detail, particularly in complex sentence structures involving multiple clauses or nested constructions. This would help clarify the extent to which these markers influence not only verbal constructions but also other syntactic domains. Conducting fieldwork with native speakers of Munda languages would provide richer data and allow for more accurate analysis of clitic behaviour in natural speech contexts. This would also enable researchers to test the findings of this study against spoken language data, potentially revealing new patterns or confirming existing hypotheses. The study's proposal of a morphosyntactic continuum between synthesis and isolation warrants further theoretical development. Future research could explore how this continuum interacts with other typological parameters, such as word order, agreement systems, and syntactic flexibility, to refine our understanding of language typology.

7.3 Practical Applications

The findings of this study have potential practical applications in language documentation, pedagogy, and computational linguistics. Recognizing the clitic status of inflectional markers in Munda languages can enhance the accuracy of language documentation efforts. This is particularly important for preserving endangered languages within the Munda family and ensuring that their grammatical structures are correctly represented. Insights from this study could also inform the development of teaching materials for Munda languages, particularly for non-native speakers. Understanding the role of clitics could help in creating more effective language learning resources that accurately reflect the grammatical nuances of these languages. The findings could also be applied in computational models for processing Munda languages, particularly in tasks like morphological analysis and

syntactic parsing. Recognizing the clitic nature of certain markers would improve the accuracy of NLP algorithms and enhance the performance of language technology applications for these languages.

8. Conclusion

This study has re-examined the classification of various inflectional markers in Munda languages, proposing that these markers function more as clitics than traditional affixes. By analysing compound and serial verb constructions across languages such as Mundari, Gutob, Santali, Sora, Asuri, and Bhumij, the research has identified consistent patterns where these markers exhibit phrasal attachment rather than being tightly bound to individual verbs. This suggests that subject agreement, tense/aspect markers, and definitizers in Munda languages often operate with broader syntactic scope, influencing entire constructions rather than single words. The findings challenge conventional morphological typologies within the Austroasiatic family, particularly the contrast between the polysynthetic Munda languages and the isolating Khasian/Mon-Khmer languages. By recognizing these inflectional markers as clitics, this study not only contributes to a deeper understanding of the morphosyntactic diversity within Austroasiatic languages but also opens avenues for further research into cliticization and its implications for language typology across this family. The study underscores the need for ongoing comparative analysis to refine our understanding of these complex linguistic phenomena.

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