A Structural Analysis of Reduplicative Words in Eastern Indo-Aryan Languages of Bihar

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Abstract: *Languages are conduits of human culture and heritage which have been a part of our cultural and intellectual diversity. The process of word-formation plays an eminent role in linguistics and 'Reduplication' stands as one of the major phenomena in word-formation. This paper presents the structural analysis of reduplicative words in Eastern Indo-Aryan languages of Bihar. By means of examining the usage of reduplicative words in certain native languages of Bihar, it makes an attempt to revise the beauty of multilingualism. It aims at preserving native languages from becoming extinct and promote linguistic diversity. Exploratory methodology has been used to clarify the range of productivity in reduplication. Data has been collected followed by the survey. The output of the questionnaire has been represented through bar graphs and pie charts.*

The result indicated that the usage of reduplicative words in everyday conversations is highest in Maithili and least in Bajjika. The survey denotes that reduplication of words make speech easier, expressive and convenient in day-to-day life. The findings state that complete reduplication is used more than partial reduplication by the native speakers of Bihar. The study reviews certain phonological, syntactical and morphological process of reduplication on a wide scale. The research is anticipated to preserve sufficient data for future researchers and giving it back to the community.

Keywords: *Reduplication, Morphology, Expressives, Structural, Documentation.*

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Introduction:

Languages are conduits of human culture and heritage. Since times immemorial, languages have been a part of our cultural and intellectual diversity. Reduplication stands as one of the major phenomena in the process of word formation. In words of the Indian linguist, Anvita Abbi, Reduplication refers to "Duplicating a morpheme or a word to coin new words and express various grammatical aspects is a common phenomenon with the languages of South-East and South-Asian families". Reduplication has grasped the attention of linguists because the speakers of Indo-European languages are not aware of this phenomenon but they find it in almost all the languages which do not come in the category of Indo-European languages.

The main objective of this paper is to examine different kinds of reduplicative words that exist in the languages of Bihar. The five major varieties of languages in Bihar which belong to the Eastern Indo-Aryan language family are "Bhojpuri, Maithili, Angika, Maghi and Bajjika". The work proposes to collect various reduplicative words from these many languages, provide a structural analysis of the several reduplicated words found in these varieties, dig out their meaning, compare it with other languages under research and to collect data presenting their productive ratio. This paper explores the unexplored data in the process of research to preserve the major native languages of Bihar and get it documented for future generations.

Literature Review:

Reduplication stands as a productive term in the field of linguistics. It forms a part of our daily speech specifically when it comes to the native languages. Thus, to preserve the diversity of multilingualism and promote the native languages of several regions, researches have occupied a significant space on part of scholars and linguists.

"Reduplication in South-Asian Languages- an Areal, Typological and Historical study" (Abbi, 1992) crystallises reduplicated structures and reduplication in classical languages to its core. "A Cross Linguistic study of Reduplication" (Nadarajan, 2006), "A theory of Internal reduplication" (Broselow and McCarthy, 1983), "A comparative survey of reduplication in Australian languages" (Fabricius, 1998), "Vowel alternation in disyllabic reduplicative: An areal dimension" (Ido, 2011) and "Some semantic functions of reduplication in various languages" (Key, 1965) are some significant works exposing several aspects of reduplication. Some of the productive journals in the field of reduplication include "Reduplication: Doubling in morphology" (Inkelas and Zoll, 2005), "The phonology of reduplication" (Wilbur, 1973), "Echo Formations- Linguistic Traits Across Language Boundaries" (Trivedi, 1990) and "Echo-Word Constructions in Modern Indo-Aryan Languages" (Koul, 1993).

To preserve Indian multilingualism, some scholars centralised their work on reduplication to explore its diversity such as "Types of Reduplication in Salish Dialects" (Haeberlin, 1918), "Metalinguistic, shmetalinguistic: The phonology of shm-reduplication." (Nevins and Vaux, 2003), "Repetitive morphemes in Bengali" (Sen, 1980), "Munda mimetic reduplication" (Phillips and Harrison, 2017) and "Reduplication, Echo Formation and Onomatopoeia in Marathi" (Apte,1968).

To reflect upon the diversity of reduplication, major researches include "What is Reduplication? Typology and Analysis Part ½: The Typology of Reduplication" (Inkelas and Downing, 2015), "Echo-Word Formation in Hindi" (Mohan, 2006), "Non-Prototypical Reduplication" (Urdze, 2018), "Semantic Properties of Reduplication among the World's Languages" (Kajitani, 2005), "Reduplicative constructions in Universal of Human Language" (Edith, 1978) and "A Contrastive Study of the Reduplicated structures in Asamiya, Bangla, and Odia" (Majumdar, 1999).

Research Hypothesis :

Primary Hypothesis : Partial reduplication is the most productive type of reduplication in Eastern Indo-Aryan languages of Bihar.

Ancillary Hypothesis : Complete reduplication is not so productive in Eastern Indo-Aryan languages of Bihar.

Research Methodology :

The overall methodological approach used for the research is exploratory in nature to understand the significance of reduplicative words in the Eastern Indo-Aryan languages of Bihar. The data was collected from two sources, primary source and secondary source. Primary data was obtained through conducting a survey of 30 people from Bihar region. 45-60 age group of people including male and female were provided with a set of questionnaires based on reduplication of words in Eastern Indo-Aryan languages of Bihar. Along with surveying, people from different regions of Bihar were interviewed and were asked to reduplicate some Hindi words in their native languages. Their responses were noted down. Collected data has been transcribed using Doulos SIL font and analyzed further for the research. The process was time-consuming but reliable and gave the proper feedback for the research. To make primary data more specific and clearer, secondary data was

used to facilitate the findings. Secondary data was gathered through previous research papers, journals and articles on the respective topic for substantial results. Data collected from secondary sources was easily available and less time-consuming. Data from both sources were analyzed and results were presented accordingly.

Reduplication in Languages:

The term "Reduplication" stands as one of the processes in word formation in which some part of a base which refers to a segment or a syllable or a morpheme is repeated either to the left, or to the right or occasionally within the middle of the word. In certain cultures, it stands as a form of informal wordplay which conveys humour and playfulness by means of cutesy and tongue- ticking sounds added to words. Reduplication may repeat all or a part of a lexical item which carries a semantic modification with itself. It may refer to the iteration of syllables as well constituted in a single word or a lexeme. Example: ɑ - ɑ which means "flowers" in Kharia. In one of the duplicative forms in linguistics known as the "rhyming reduplication" a maiden might be addressed as "teenie-weenie". In less language centric circles, such words are called ricochet words. Thus, doubling the sounds allows the thoughts to be verbalised and evolve in a colourful pattern. Reduplication enhances the richness and diversity of languages, linguistic culture as put forth by those who apply this form in various ways to describe the physical and abstract parts of the world all around us.

Types of Reduplication:

There are some major categories of reduplication based on several aspects:

Morphological Reduplication: Morphological reduplication constitutes of iterated symbols which are minimally meaningful and indivisible morphemes, segmentally. This kind of reduplication is mostly found in the vocabulary of Austro-Asiatic languages. Onomatopoeia, Sound symbolism, Imitatives and Mimic words are significant examples of morphological reduplication.

Expressives: In order to explore the origin of human speech, there took place many researches and theories. Expressives is one such expression which may or may not consist of 'morpho-syntactic' properties. It consists of repetition of a syllable or a word.

Lexical Reduplication : The kind of reduplication which involves the repetition of any sequence of phonological units that comprises a word is called lexical reduplication. It is divisible as it is formed of two identical or non-identical phonological words. There are two kinds of lexical reduplication: Complete lexical reduplication which consists of two identical words.

Echo Formation : An echo word is a repetition of the base word partially, partial in a sense that either the syllable of the base or an initial phoneme gets replaced by some other syllable or phoneme.

Compounds : Compounds refers to a construction in pairs where the second word does not repeat the first exactly but shares some kind of relationship or similar aspects to the first word either phonologically or semantically. Each word that constitutes a compound holds meaning of its own and is used in a sentence, independently.

Word Reduplication: Word Reduplication refers to the total or partial reduplication in bimodal form which leads to the repetition of the base or stem of the word. Here, words or the lexical items from various word classes are reduplicated so as to bring changes in the semantic interpretations. There are two kinds of word reduplication- complete and partial.Complete word reduplication comprisesof all those structures which are reduplicated consisting of two identical iterated words. They are of two kinds: class maintaining type and class changing type. Those kind of complete word reduplications that stays in their own grammatical class of non-iterated base are said to be class maintaining type. Example: *'acche-acche'* which means 'good good'. Those kinds of reduplications where the structure that is reduplicated enters to a grammatical class which is different from the none reduplicated base in course of formation is called class changing type. Examples: *'baithe-baithe'* which means 'while sitting'.

Partial Word Reduplication is a kind of word reduplication that is made up of duplication of a part of any word. The syllable meant to be duplicated may be a vowel or a vowel consonant or a consonant vowel. As a

single structural category, it might repeat any constituent of a word.

Discontinous Word Reduplication : Abbi (1992:27) defines such a kind of reduplication as "the kind of word reduplications that are disjoined by an interfixation of a syllable". It is always formed with an infix. For example- '*din ke din*' which means 'day by day'.

Functions of Reduplication:

Reduplication holds a vast range of semantic and syntactic functions. In semantic terms, it is iconic as it expresses meanings which are impressionistic in nature in association with its duplicative nature like that of emphasis, repetition and pluralism. The inflectional and derivational aspects of reduplication involve modifications in part of speech. Verb reduplication is found relevant in many Bantu languages. Intensity, Enhancement and Amplification are other aspects of using reduplication. By these, the quality of the idea that is intended by the word is changed. In Swahili, the term '*piga*' denotes 'to strike'' whereas '*pigapiga*' denotes 'to strike repeatedly'.

Difference between Reduplication and Repetition:

Reduplication is one of the word formation processes in which some certain section of a base which might be a morpheme, syllable or a segment is repeated either to the left, right or middle of the word. Because the level of productivity in terms of linguistics varies in reduplication, it is used interchangeably with the term 'repetition' quite often.

Repetition refers to a term which indicates those concepts and sounds that are put on repeat in one form or the other to give emotional emphasis. It has been referred as a 'child language' by(Ghomeshi, 2004). Repetitions are mostly used as a device in poetry with the purpose of making it a unifying device by means of repeating a sound, syllable, word, phrase, line, stanza or metrical pattern.

Morphological aspects of Reduplication :

Morphological Category: Reduplication in its total kind has been often considered as a form of compounding ingeneral what is considered to be stem combination. In case of partial reduplication, several properties of shapes may be derived in reference to its morphological structure depending on the fact if a reduplicative morpheme is an affix, root or stem.

Morphological Structure: In certain languages, a reduplicant holds other morphological material associated which has been termed as 'inflectional final suffix vowel' (Downing, 1999,2006). One of the common examples is that of Bantu pattern as it is accompanied by an affix with it.

Review on Reduplication by Scholars :

Reduplication stands out as an important structural phenomenon of the South-Asian languages. So refined is the perception of Tannen as she states that reduplication has no limitations of resources as it promotes individual inventiveness and maintains the fact that reduplication is also a central linguistic meaning making strategy.

Insights on Reduplication:

Reduplication as a structural phenomenon has sought attention of linguists with the hope to preserve the native languages of one's region. "Reduplicated adverbs in Hindi, Indian linguistics" (Abbi, 1977) and "Anthropological Linguistics" (Key, 1965) explores the semantic features of reduplicative words across several regional languages.

To preserve the diversity of the Eastern Indo-Aryan languages spoken in Bihar, it is must to orient the native speakers with the reduplicated words found in their native languages. This would enable them to increase its productivity and save them from the verge of becoming extinct. Since reduplicative words have been a part of day-to-day usage by the natives of Bihar, sufficient data must be preserved in their native languages to reflect upon the richness and uniqueness in promoting linguistic diversity.

Data Analysis:

The Eastern Indo-Aryan languages are mainly spoken in Eastern parts of the Indian subcontinent. The paper deals with the significance and usage of reduplicative words in native languages of Bihar in Eastern Indo-Aryan language family. The aim of the study was to analyze the productivity of complete and partial reduplicative words used in the major native languages of Bihar. This section reflects light on those

native languages along with some of the common reduplicative words found in them.

ANGIKA : One of the oldest languages, Angika belongs to Eastern Indo-Aryan languages family of the 'Anga' region of Bihar. The language is primarily spoken in the Bihar, Jharkhand and West Bengal states of India. It is also known as 'Anga', 'Aangi', 'Bhagalpuri', 'Angikar' and others.

əpnõ-əpnõ	'our-our'
gʰəre-gʰər	'home-home'
dʰɪre-dʰɪre	'slowly-slowly'
bʰɔ:re-bʰɔ: r	'morning-morning'
dʒəɪte-dʒəɪte	'going-going'

BAJJIKA : Bajjika is the language of *Vajji* clan, which was written in *Kaithi* script but presently is being written in Devnagri. It is spoken in the northern part of Bihar and reportedly is the minority language. According to a census report, the population of the seven districts where Bajjika is spoken as a mother tongue was over 20 million.

kʰat-pɪjət	'eating-drinking'
bʰo:rə-bʰo:rə	'morning-morning'
sʊtət-ʊtʰət	'asleep-awake'
kʰa:t-kʰa:t	'eating-eating'
sʊtəte-sʊtəte	'sleeping-sleeping'

BHOJPURI : Member of Indo-Aryan branch of Indo-European language family, Bhojpuri is a strong Hindi dialect. The other regional languages of Bihar, as in Magahi and Maithili are considered as the closest relative of Bhojpuri. According to an article of Times of India, 150 million people in India speak Bhojpuri.

kʰaɪte-kʰaɪte	'eating-eating'
kʰaɪte-pɪate	'eating-drinking'
ʃa:dɪ-bɪj:ah	'marriage and thing'
kətʰɪ-kətʰɪ	'what-what'
təni:-təni:	'little-little'

MAGAHI : The term "Magahi" also known as "Magadhi" has been derived from "Magadh" since the history of this language is associated with the history of an ancient empire named Magadh. Magahi, written in its earliest form is explored in the literature of Siddhas. There are three forms of Magahi-Standard Magahi, Eastern Magahi and Mixed Magahi.

kʰana:-ʊna:	'food-food'
ki:-ki:	'what-what'
tʰoɽe-tʰoɽe	'something-something'
kenne-kenne	'where-where'
ha:lo-ha:lo	'fast-fast'

MAITHILI : The term "Maithili" has been derived from "Mithila" which stands as the birth place of "Jananknandini Sita" in the Hindu mythology who was the daughter of *Janak*, the king of Mithila. Taking in consideration the Census of India 2001, it was claimed that approximately twelve million of the native population are the speakers of Maithili. Thus, Maithili is still used widely as a native language in several regions of Bihar.

a:t-ja:t	'coming-going'
həmər-tohər	'mine-yours'
rəhe-rəhe	'slowly-slowly'
ghəre-ghər	'home-home'
kenne-kenne	'how-how'

In the proposed research, data was collected from two sources, primary and secondary. To get the better understanding of study, secondary data was gathered from articles, research papers and journals on the respective topic. On the other hand, data from primary source was collected through a survey along with face-to-face and telephonic interviews. The survey questionnaire consisted of 7 questions and people from different regions of Bihar were asked to fill the same. 30 people between 45-60 age group including male and female were surveyed. Other than survey, data was collected through interview. Each respondent was given 4-5 Hindi words and were asked to reduplicate them in their native language. Hence, total 61 such reduplicative words from Eastern Indo-Aryan languages were formed and analyzed further. Data collected from primary source was more authentic and reliable but time-consuming.

From the 30 responses received through survey, data can be analysed in following ways:

Language	Responses	Observation
Angika	7	This language is evenly spoken in Bihar region having 23.3% responses of the total.
Bajjika	3	This is the least spoken language in Bihar region constituting, 10% of the total responses.
Bhojpuri	8	The language is also uniformly spoken in Bihar region constituting 26.7% of the total responses.
Maithili	11	This is the most spoken and predominating language in the regions of Bihar, constituting 36.7% of the total responses.
Magahi	7	This language is also evenly spoken in the regions of Bihar, constituting 23.3% of the total responses.

After data collection it was analysed and interpreted to draw findings and results. The data provided the productivity of each language in Eastern Indo-Aryan language family.

Research Findings and Results:

Reduplication of words make speech expressive and simple as it creates flow of words and thoughts. In the proposed research, results were analysed on the basis of productivity of reduplicative words in Eastern Indo-Aryan languages of Bihar. As stated earlier, primary data collection focused on gathering information about how people reduplicate words in their native languages and how often they use them in day-to-day life. The paper aimed at analysing the responses of people based on their usage on complete and partial reduplicative words in Eastern Indo-Aryan languages of Bihar. However, from secondary data collection and studying specific group of people, it was found that people often use complete reduplicative words rather than partial reduplicative words as it creates an ease in speech.

Results from primary data was obtained through a survey wherein 30 responses were analysed to facilitate the findings of the research. The questions mentioned in the appendix focused on major languages of Eastern Indo-Aryan language family and their reduplication along with their productivity.

In figure 1, responses show that people in Bihar region mostly speak Maithili which constitute 36.7% of the total responses. While Bajjika is least spoken language which constitute 10%of the total responses. The reason behind getting more responses in Maithili language is that it is predominantly spoken whereas, less is known about the demographic details of Bajjika. Other languages like Angika, Bhojpuri, and Magahi is evenly spoken by people.

The figure 2 illustrates that age group of 45-50 years are more responsible towards the survey, constituting 56.7% of the responses. Followed by 51-55 and 56-60 age group showing the similar pattern, constituting 20% and 23.3% respectively of responses. In figure 3, number of female responses is slightly more in number than that of male responses, constituting 53.3% and 46.7% of the total responses.

The figure 4 shows how often people use their native language while speaking. Majority of people agreed with this, where 83.3% of responses said that they see people speaking in their native language. Other people frequently use their native language.

In figure 5, respondents were asked do they reduplicate words in their native language while speaking. Majority of them stated that sometimes they reduplicate words for convenience which constitute of 56.7% of the total responses. While only 13.3% of the respondents admitted they never reduplicate words while speaking.

The figure 6 illustrates why people prefer using reduplicative words while speaking. 30% of the responses were in favour that they use these words

when asking for something as it makes ease in speech. 10% of them use these words to call someone whereas, 36.7% admitted that they use reduplicative words in other situations. While surveying, it was found that some people even don't notice while using these words.

In figure 7, respondents were asked why they reduplicate words in their native language while speaking. 46.7% of the respondents use them for convenience in speech whereas, 13.3% of respondents use when they forget certain words. Other people believed that they use these words to express their feelings and convey them in better way.

Other than surveying, people were interviewed of 45-60 age group as they are more aware of their native language than young people. Each respondent was asked to reduplicate certain Hindi words in their native language. While interviewing it was found that people often use complete reduplicative words rather that partial reduplicative words while speaking.

Conclusion and Implications of the study:

Reduplication has a significant role to play in linguistics. Reduplicative words are not only important but are fascinating and interesting to use in conversations. The most interesting fact is that speakers of Indo-European languages are not familiar with this phenomenon yet the reduplicative words are found in their language.

The paper aimed to examine different kinds of reduplicative words that are spoken in different regions of Bihar and also to provide structural analysis of the reduplicative words found in these languages. The paper shows the information related to reduplicative words, how these words differ from each other from region to region. The reduplicative words are at the point of being displaced as many of the root languages are becoming extinct. Reduplication as a whole has very varieties and types of its own. Throughout the years, reduplication has secured its importance as an important phenomenon in linguistics and several works has been written in order to preserve the native language of one's region.

Research findings indicate that the usage of reduplicative words in everyday conversations is relatively high in Maithili and the least in Bajjika. The paper in the beginning mentioned the types of

reduplication and which type is spoken more often. Earlier it was stated that partial reduplication is spoken more often however after studying a certain group of people this thought was refuted as it was found that complete reduplication is spoken more among people and reveals that complete reduplication is more productive than partial reduplication.

Though there were few limitations to the study as well. Taking in account the present situation, it was a hard task to conduct face to face interview because of the pandemic. It was hard to have access of libraries. In addition to this, the survey conducted was tough for people who didn't have English as their language and also in remote areas conducting survey in form of Google forms was hard as internet access in those areas was not available.

The paper, through survey and with help of previous research and information, has tried to preserve these words and also to preserve and explore the unexplored data for future researchers. There is an old saying "if it is not written, it doesn't exist." The paper throws light on importance of documentation, it suggests that how important and useful documentation can be for future researchers and references. Documentation also helps us to avoid plagiarism. In addition to this documentation also saves time and provide an insight for further references. The study would help us in contributing a bit to save not only languages but the culture and tradition associated with them from becoming endangered. have reached the point of crisis being displaced by dominant languages on a wide scale. The study is anticipated to preserve sufficient data for future researchers and giving it back to the community.
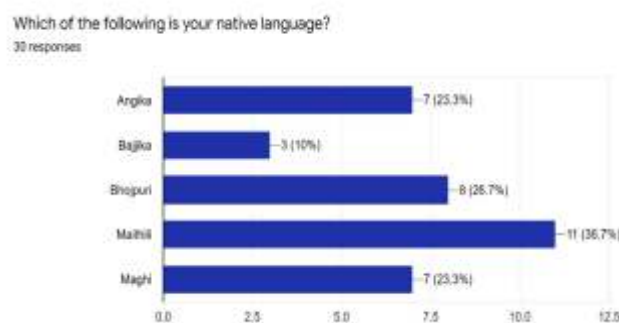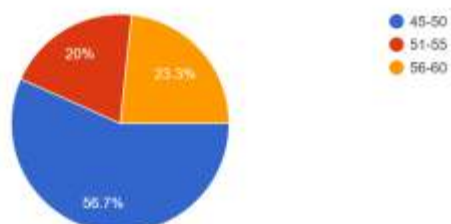
Appendices:

Fig. 1
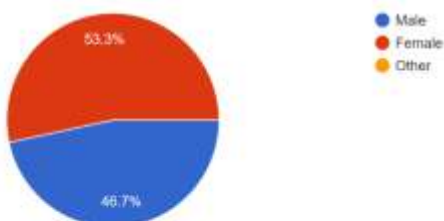
Fig. 2

Fig. 3

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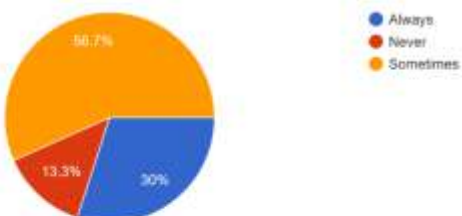
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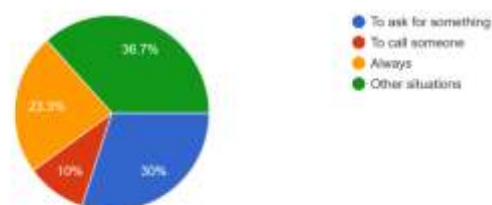
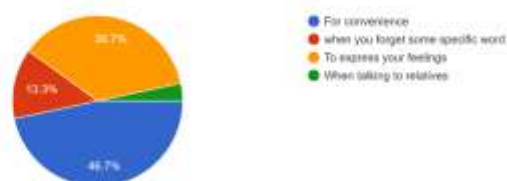**Fig. 6**

Fig. 6

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