Linguistics Diversity and Change in the Endangered Galo Language: A Sociolinguistics Analysis of Tone Features, Dialects, and Social Stratification in Arunachal Pradesh, India

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Abstract

As a result of the country's many different languages and social systems, India has developed a deep and resilient system of social stratification based on language. It's fascinating to observe how social behaviors are reflected in various linguistic usages, a wide range of categorization systems, and the ensuing linguistic combination. One of the languages listed as being in risk of extinction is the Galo language, which is spoken in Arunachal Pradesh. The Galo language features a unique tone system and a variety of dialects. This review article focuses on discussing a sociolinguistic analysis of linguistic diversity observed in Galo Language. The discussion has been employed in a descriptive approach of research and explores how language and society interact, as well as Galo language, linguistic change in Galo language due to social influences, and voice recognition of Galo language using Praat software. It was comprehended that the endangered Galo language possesses linguistic variation based on the geographical level along with the necessity to grow the language usage among the community level.

Keywords: Sociolinguistic, Endangered languages, Language variation, Galo language, Tone languages

1. Introduction

Language is evidently a social phenomenon, and its primary purpose is to facilitate communication between people. Consequently, it is reasonable to anticipate that language will be adaptable to social structure. The fundamental aspect of sociolinguistics is that the variability observed in language is not due to random chance, which means that linguistic diversity has a socially meaningful interpretation. The extent to which the growth of a civilization is reflected in the depth of a society's dominant language is proportional to the rate to which that language has diversified.

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The socio economic status of an identifiable group or an individual can be inferred from the language that they use. This can be done either for an entire community or for an individual(Numonovna, 2021).

Figure 1: Galo women in traditional attire

Arunachal Pradesh is the residence of twenty-six distinct tribal groups, each with their own unique language and rich cultural heritage affirming the value of the rich cultural traditions and religious faith that are components of the magnificent Indian civilization. One of the main tribes in Arunachal Pradesh is the Galo people, who are predominant in the West Siang, Leparada, and Lower Siang districts, with Galo as their native language.The following review focuses on sociolinguistic variations identified in the Galo Language of Arunachal Pradesh. The review paper employs descriptive study and discusses the language and society interactions, Galo language, language variation in the Galo language with social influence, and voice recognition of the Galo language with Praat software in a contextual manner.

1.1 Sociolinguistic

According to Labov et al. (2011), sociolinguistic research is expanding to lesser-known communities. This could give insight into social facts other than those represented thus far in sociolinguistic studies of prevalent societies in the West, which was rarely explored in the later period. Because of this, language and society are intricately interwoven, and the study of the many ways in which the two interact is the primary emphasis of the academic discipline known as sociolinguistics. William Labov (2011) conducted research on the subjective facet of quantitative sociolinguistic variance to learn more about the features of social and linguistic processing. It was suggested that the operation of a sociolinguistic monitor that records, stores, and evaluates data on linguistic diversity ought to be carried out independently of the method that is chosen to tackle the problem at hand.

The languages that have been spoken in South Asia ever since the beginning of history and contact linguistics have been an incredibly significant element. For example, the development of Indo-European studies was significantly facilitated by Sir William

Jones's assessment of the sociolinguistic panorama of Northeast India as being rich and diversified. This was shown by the many languages and dialects that are spoken all over the area (Peterson, 2022). On the other hand, English is widely used throughout the area, especially in more formal and professional settings. In addition, there is a significant level of multilingualism in East India; many people can communicate in more than one language, and the languages they use are usually decided by the context in which they are speaking.

1.2 Galo Language

The Galo people are native speakers of the Tibetan language, which is known colloquially as Gallong. The Galo language is sometimes known simply as Galong. The Galo people may also be found in the southwestern and southeastern sections of the Upper Siang district, as well as in some confined areas of the Itanagar, Lower Dibang valley, and Changlang districts. In addition, they can be found in the Upper Siang district. The language is employed most commonly for communication on a monotonous basis, in addition to its usage in religious and cultural events. It is estimated that there are around 100,000 individuals living in India who use Galo as their primary language. A member of the Tani language family and a descendant of the proto-Tani language, the Galo Language is a dialect of the Tani language. The three most frequent dialects of the Galo language are referred to respectively as Eastern Galo, Central Galo, and Western Galo.
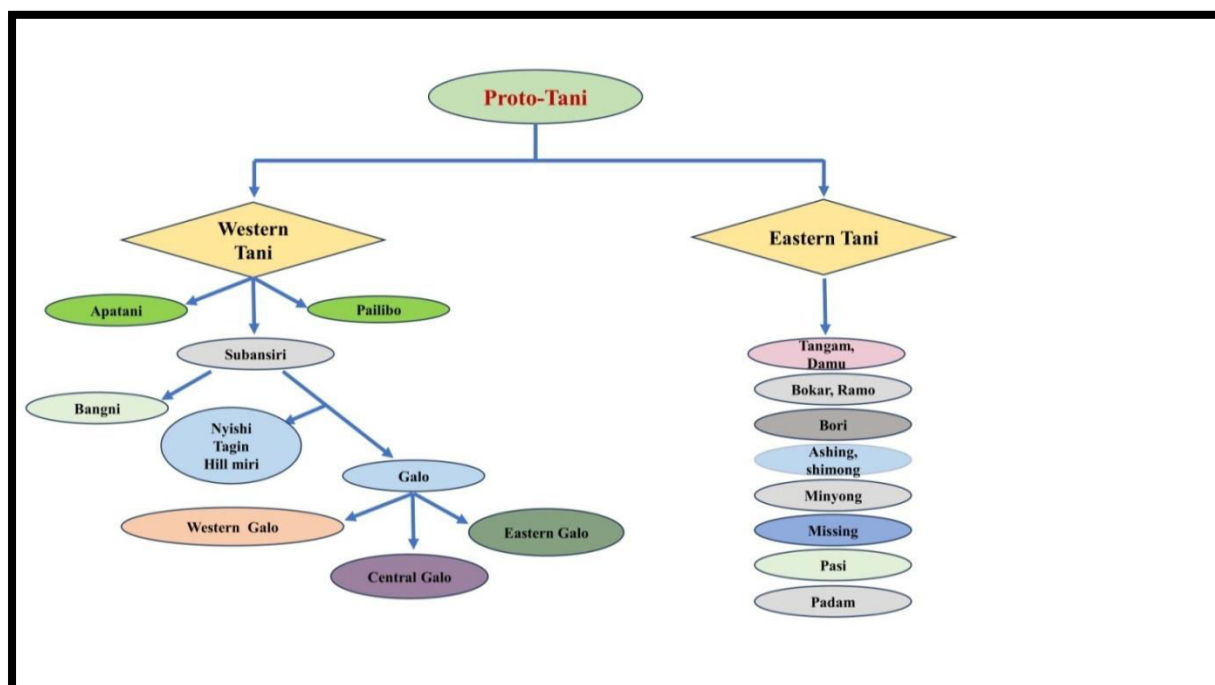

Figure 2: Tani-language relationships

According toSamudravijaya K (2021), in languages used in the northeastern region To indicate tones other than the low tone that is the norm, numerical suffixes are employed. The Dzongkha language uses a high tonality, the Meitei (Manipuri)

language employs a rising tonality, & the Adi language and the Galo language use both tonalities along with lower. The investigation of Tibeto-Burman languages spoken in Northeast India has not resolved the problem of tone. The analysis of these languages can be challenging, despite the fact that lexical tone is present in a significant number of them. It will be beneficial to describe some of the fundamental components of Tani grammar in order to provide some context for "both the description of Galo negation and the morphosyntactic reconstruction that will follow".

According toDas (2020), the linguistic communities of the state are so extensive and comprise such a wide variety of language groups that it is difficult to categorize them using only a few names. When it comes to the documentation of languages, there is a vast amount of scope for investigation. Most of the language-using population does not have their languages listed as scheduled, making administrative work more complex. As a result, those linguistic communities have come to identify themselves with another community that is both politically stable and culturally compatible with them.

In spite of the fact that a huge no. of individuals uses it, the language does not employ a standardized writing system and is mostly transmitted verbally from one generation to the next. In order to make certain that the Galo culture and language do not become extinct, there is a rising movement toward their documentation and preservation.

2. Review of Studies
2.1 Sociolinguistics and Language Variation

Regmi (2017)examined the state of the languages of Nepal and provided an in-depth analysis of the policies and procedures to rehabilitate the country's diminishing assets of spoken languages. The government and non-government organizations were reported to make modest efforts to communicate indigenous knowledge about endangered languages to a larger audience within the dominant culture. These efforts were not identified enough to save the languages, and according to the findings of the study, in order to solve all of these issues, the region has to implement a genuine multilingual language policy that encourages speech communities to bring their native languages into speaking and enhance the areas in which languages could be used.

Eckert & Labov (2017) acknowledged that it had been repeatedly discovered that linguistic diversity has a connotation of social significance related to the standing and perspective of the speakers within the context of interaction. The research emphasized that Labov has studied random samples and small group interaction to indicate that he has explored the larger structure of variation by focusing on language development. Eckert's emphasis, which was founded on extensive ethnographic investigations, was supported by the use of a wide variety of factors in the creative creation of socially positioned personae. The research found that while sound

alteration was just one of several channels of change, it was most closely linked to commonplace interactions and could be readily seen by attentive listeners.

Doye (2020)carried out an investigation on the naming patterns and various kin names used by the Galo tribe, which was found to be indicative of their unique sociocultural identity. The study highlighted that one notable custom among the tribe is the use of distinct kin words while addressing members of the family and other relatives. Even though people have a few sectional diversities as a result of the many regional settlements and dialectal differences, it was found in the study that their naming pattern and kin terms are uniform, despite the fact that they have some of these sectional diversities. According to the findings of the study, one among the reasons for this is that the naming pattern is connected with the standards and rituals of the tribe, and as a result, it has evolved into one of their time-honored traditions.

In the discussion of sociolinguistics, Buhari (2022) outlined the term as the descriptive study of how Language usage and its subsequent effects on society are shaped by social factors such as cultural norms, expectations, and historical context. Sociolinguistics and significance context studies were recognized as having explored the linguistic differences between socially distinct groups, such as those defined by race/ethnicity, religion, socioeconomic position, and educational attainment. The research led to the idea of applied linguistics, which is different from theoretical linguistics in that it focuses on how people actually use language rather than how it should be used.

2.2 Endangered Languages

According to a recent UNESCO assessment, the languages Aka (Hruso), Apatani, Hill Miri, Mishmi (Dong), Momba (Monpa), Nyishi, Sajolang (Miji), Galo, and Takam (Tangam) are on the verge of extinction(Hämäläinen, 2021). In recent days, it is quite difficult to identify monolingual Eastern Himalayan speakers of Indigenous languages, however it is very simple to find Eastern Himalayan ethnic populations whose predominant language is Hindi.

A critical assessment of minority languages and their state of endangerment was given by Singh, (2018) in the context of India's complicated multilingual environment. The study looked at difficulties surrounding minority language revival, raises major concerns about language planning and policy in general in India, and emphasises the coming threat to non-minority languages. According to the report, if bilingualism is not properly developed, so-called major languages or scheduled languages will also become minority languages in the twenty-first century, possibly leading to their extinction. It was mentioned that the Galo community, has adopted IPA symbols after consulting linguists, released the Galo-English Dictionary.

The eastern Himalayan regions, according to Post, (2020)are hotspots for ethno-linguistic diversification. Authors of this study have discovered that it was quite simple to locate monolingual Galo or Minyong Adi speakers over the course of their

research and relatively difficult to locate a Galo or Minyong Adi teenager who could not speak his or her "mother tongue." The study revealed that, in order to maintain endangered languages in particular, it is critical to provide community linguists with employment options.

Suansu is an unrecorded Northern India's indigenous Tibeto-Burman language. The earliest record of comparison buildings in Suansu was supplied by Ivani (2021). Through a descriptive study, the author examines the features of Suansu comparative structures. To do so, we will compare and contrast a range of constructs across 28 Tibeto-Burman languages. Spoken in the region was compiled in a database developed with ad hoc and then explored phonologically. The study's findings indicated the existence of two primary types that cluster geographically in the area, in addition to a significant degree of internal variation with regard to the subtypes.

Choudhury & Barua, (2021)investigated how discourse markers were used differently in various linguistic contexts, particularly emphasizing politeness tactics in two endangered languages, Miju and Digaru. The study also showed how this discursive analytical technique combines elements like linguistic structure with underlying social and cognitive impacts.The study also investigated for any communication strategy variations between the two language varieties, which would support those differences. The study recognised that some of the major ideas and speech that compose society and culture are clearly reflected in the analysis.

2.3 Tone Variations and Dialects in Galo:

Galo's nominalization and nominalization-based constructions were discussed by M. Post, (2011). It was pointed to general knowledge that the majority of clausal nominalizations can be predicated on inflected or uninflected nominalized predicates, and that their subjects are nominative rather than genitive. The research confirmed that unlike several other Tibeto-Burman languages, in Galo there is no distinction between the, no nominal-nominal subordination or genitive-marking (at the phrase level) appear to have any synchronic or diachronic relationship to any nominalization-based structures.

M. W. Post expands Asian negation categorization (2015). In the article, Galo's negation had two unusual features: a post-head predicate negator, which is rare in Sino-Tibetan; and "a negator with both derivation-like and inflection-like properties, which applies between derivations and phrasings with stem-level scope rather than over the entire predicate word." Using a recovered Proto-Tani predicate syntax, a serial verb construction with a clause-final existential/auxiliary and a pre-head negator was reanalyzed as a single grammatical word with the negator scope sliding leftward over the predicate stem.

Mazaudon, (2014)research focused on the specific kinds of challenges that arose during the investigation of an emergent tone system. In this type of system, pitch, phonation, and various other laryngeal characteristics all contribute to the defining of

a tone. The findings of the study had provided an explanation of a strategy that was applied to the investigation of a complicated prosodic system in which the difficulties began with the fundamental transcribing of the data. The special challenge that the Galo and Tamang languages confront originates from their typological characteristics as languages that realise their phonological tones by employing a number of phonetic signals in a compensatory connection to realise those tones, with pitch and phonation being the primary cues.

A noteworthy observation made by researchers was the recognition of the presence of tones in the target language, followed by the decision to give them a subordinate position in the grammar. Until a relatively late stage in their investigations, the researcher, Post, (2015) have detailed that they were not aware of examining a tone language until a certain phase in the investigation. One of the Galo dialects, Pugo, featured tone, which necessitates comprehension of the Lare Galo tone system, as well as transcribing the complete lexicon and text database with this newly discovered attention to the various tones that were recognised by the researchers.

The pronunciation, vocabulary, and syntax of each of these varieties can be rather distinct from one another, and they are not always understandable to one another. Hyman &Leben, (2017)investigated this phenomenon and reported that, in many tone languages, the absence of tone is the most accurate representation of one of the contrastive tone heights. In addition, the asymmetrical behaviour of the various tones is accentuated even further in languages such as Galo that have more than one tone height. The Galo people are able to comprehend one another and keep their cultural and linguistic identity intact, despite the fact that their dialects are distinct from one another.

According to Post & Burling, (2017)research, phonemic tone can be discovered in the majority of somewhat well-described Tani languages, such as Apatani (all dialects), Galo, and others (all dialects). However, it would appear that both tone languages and non-tone languages may be found in the regions. Tone languages are more robust and have a higher functional load in WT languages than in ET languages. It was highlighted that when analysing tone in Tani languages, it is necessary to make reference to both the phonological surface of the word as well as the morpheme elements that exist behind it.

2.4 Praat Software and Speech Analysis

The language research and speech analysis techniques with Praat Software were discussed by Styler, (2013) in the study. The research investigated the entirety of Praat features and described several aspects providing a more comprehensive explanation of Praat functioning as a speech analysis tool. The extensive guide to the most recent software version and voice threshold features for a variety of speech recognitions was provided by the full descriptions incorporated in the study. According to the findings

of the research, it was stated that even though there are other packages and tools that may offer some improvements in certain specific domains, there is no other programme that can do even half of what Praat can do without having to resort to scripting.

Nyodu & Vijaya, (2020)addressed that there are many societal advantages to be gained from the establishment were discussed in detail. In the course of the research, the voice recognition system was built with the help of Kaldi, a software toolkit in the public domain. According to the findings of the study, an automatic speech recognition system detected Galo phrases spoken in a continuous fashion by new speakers with an accuracy of approximately 80%.

The Tibeto-Burman tonal language known as Ao is used mostly in the Indian state of Nagaland, which is located in the country's northeastern region. The preliminary findings of the research conducted by Gogoi et al., (2020)have demonstrated that the lexical tone of Ao may be classified into three categories: high, middle, and low. Additionally, the tonal features, one of which uses praat derived values, are utilised. According to the findings of the study, additional research needs to be conducted in order to achieve more reliable recognition accuracy using new acoustic elements.

Using the Praat software, Morey, (2020) was able to determine the tones of the Tai language. During the course of the research, the pitch values generated by Praat were inputted into an Excel spread sheet, where a semitone value was afterwards calculated. In order to determine whether there has been any shift in the manner in which these tones are realised over the course of multiple generations, an investigation that includes speakers whose ages range widely may be of use. Preliminary findings on the connection between vowel length and tone length were understood in the study, findings that, in the future, which can serve as the basis for additional in-depth phonetic research.

A Low Resource Language (LRL) corpus made up of sixteen rarely studied Eastern and Northeastern (E&NE) Indian languages was created in accordance with an illustration by Basu et al., (2021), who also displayed the data variability using various statistics. The Praat software was used to perform the speech analysis for the study. The results obtained with Praat software on Northeastern languages showed that the reason may be that some languages (such as Ao, Angami, Lotha, and Sumi) in the LRL corpus have overlapping linguistic characteristics that lead to ambiguity in distinguishing between them. These results were obtained by analysing Northeastern languages.

3. Conclusion

India has always integrated its diverse linguistic heritage into its multicommodity social systems; hence multilingualism has never been a challenge for

the country. The languages are one among the signs of the fundamental principles that underpin Indian society and culture, and one can see this mirrored in the country's multifaceted social hierarchies as well as its richly diversified linguistic patterns. The sociolinguistic diversity that exists among the Galo people in Arunachal Pradesh was the primary focus of this review. Due to their diverse regional settlements and dialectal variances, the tribe does have certain regional diversities, which is one of the noteworthy observations. The contextual analysis makes it abundantly clear that social attitudes are a significant factor to the linguistic enrichment that has taken place in the Tibeto-Burman region. The grammar and phonology information have been effectively discussed by Mark W Post throughout the decade which highlights the efforts to prevent the extinction of the language. Despite several speech analysis software, PRAAT has been highly recommended due to its advanced features in tone and frequency analysis. The studies reviewed render it is abundantly evident that the language might be resurrected with the help of efforts made by the government as well as other members of the community.

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Reference:

- Buhari, S.P., 2022. Introduction to sociolinguistics. Nas Media Pustaka.
- Basu, J., Khan, S., Roy, R., Basu, T.K. and Majumder, S., 2021. Multilingual speech corpus in low-resource eastern and northeastern Indian languages for speaker and language identification. Circuits, Systems, and Signal Processing, 40, pp.4986-5013.
- Choudhury, D. and Barua, S., 2021. Politeness and Collective Identity: A Case Study of Two Endangered Languages of Arunachal Pradesh. International Linguistics Research, 4(1), pp.p43-p43.
- Das, B., Arunachal Pradesh: A Paradise for a Linguist.
- Doye, E., 2020. UNDERSTANDING NAMING PATTERNS AND KIN TERMS OF THE GALO TRIBE OF ARUNACHAL PRADESH, INDIA. ENSEMBLE, 2(1), 102–110.
- Eckert, P. and Labov, W., 2017. Phonetics, phonology and social meaning. Journal of sociolinguistics, 21(4), pp.467-496.
- Gogoi, P., Tzudir, M., Sarmah, P. and Prasanna, S.R.M., 2020. Automatic tone recognition of Ao language. In Proc. 10th International Conference on Speech Prosody 2020 (pp. 1005-1008).
- Hämäläinen, M., 2021. Endangered Languages are not Low-Resourced!. arXiv preprint arXiv:2103.09567.

- Hyman, L.M. and Leben, W.R., 2017. Word prosody II: Tone systems. UC Berkeley PhonLab Annual Report, 13(1).
- Ivani, J., 2021. Comparative constructions in Suansu and the languages of northeastern India [Not quotable]. Linguistic Typology at the Crossroads, 1(1), pp.94-123.
- Labov, W., Ash, S., Ravindranath, M., Weldon, T., Baranowski, M. and Nagy, N., 2011. Properties of the sociolinguistic monitor 1. Journal of Sociolinguistics, 15(4), pp.431-463.
- Mazaudon, M., 2014. Studying emergent tone-systems in Nepal: Pitch, phonation and word-tone in Tamang.
- Morey, S., 2020. Syllable duration in Tai Phake: The interaction between vowel length and tone length. Himalayan Linguistics, 19(2).
- Numonovna, N.R., 2021. Ideas that led to the emergence of sociolinguistics and interpretation of the study. ACADEMICIA: An International Multidisciplinary Research Journal, 11(3), pp.1440-1442.
- Nyodu, K., & Vijaya, S., 2020. Automatic Speech Recognition of Galo. Electronic Systems and Intelligent Computing, Lecture Notes in Electrical Engineering, 686. www.springer.com.
- Peterson, J., 2022. A sociolinguistic-typological approach to the linguistic prehistory of South Asia: Two case studies. Language Dynamics and Change, 12(2), pp.224-273.
- Post, M.W., 2011. Nominalization and nominalization-based constructions in Galo. Nominalization in Asian languages: Diachronic and typological perspectives, pp.255-287.
- Post, M.W., 2015a. Sino-Tibetan negation and the case of Galo: Explaining a distributional oddity in diachronic terms. Language and Linguistics, 16(3), pp.431-464.
- Post, M.W., 2015b. Tones in Northeast Indian languages, with a focus on Tani: A fieldworker's guide. Language and culture in Northeast India and beyond: In honour of Robbins Burling, pp.182-210.
- Post, M.W., 2020. The distribution, reconstruction and varied fates of topographical deixis in Trans-Himalayan (Sino-Tibetan) Implications for the reconstruction of an early Trans-Himalayan environment. Diachronica, 37(3), pp.368-409.
- Burling, R., 2003. The Tibeto-Burman languages of Northeastern India. The Sino-Tibetan Languages, 3, pp.169-191.
- Regmi, D.R., 2017. Convalescing the endangered languages in Nepal: Policy, practice and challenges. Gipan, 3(1), pp.139-149.
- Samudravijaya, K., 2021. Indian language speech label (ILSL): A de facto national standard. In Advances in Speech and Music Technology: Proceedings of FRSM 2020 (pp. 449-460). Springer Singapore.
- Singh, P., 2018. Revitalization of minority languages: Implications for language policy and planning. Indian Languages and Cultures: A Debate'Eds. Kailash Pattanaik and Arimardan Kumar Tripathi.
- Styler, W. , 2013. Using Praat for Linguistic Research. Savevowels, 1–70. savethevowels.org.