Review –Marathi Dialects Used in Criminal Investigation

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Abstract- A dialect is a variety of a language spoken by a particular community. In the investigation of various crimes related to linguistic evidence, dialect plays an important role. The identification of a dialect can be determined by various linguistic characteristics, such as pronunciation and grammar. When the person speaks, it gives a paragraph that provides. particular information about the speaker. By analyzing various utterances of the speaker and the background of the person in the investigation of crime cases, the dialect is one of the tools that can be used to solve crime cases related to linguistic variations and the speaker's voice analysis. The speaker's gender, age, intentions, and emotions can be identified in the investigation of the crime cases. In the legal context, the identity of the individual can be identified by linguistic variations in the forensic aspect.

Keywords: Marathi dialects, linguistic, forensic linguistic, linguistic variation, linguistic characteristic, dialect, speaker.

I. INTRODUCTION

The humans are communicating with each other by using language. We are also able to exchange their knowledge, beliefs, opinions, commands, and feelings. In Maharashtra, the majority of native peoples speak Marathi. Marathi is one of the 23 acknowledged languages by the Constitution of India. In India, Marathi has the fourth-highest number of native speakers. The Marathi language is spoken in Maharashtra in different ways in different regions, such as in Pune, where speakers speak standard Marathi. The variations seen in regions are known as dialects. Dialect can be defined as the language characteristics of a specific individual community.

Such dialects can be recognized by a speaker's phonemes, pronunciation, and traits such as loudness, nasality, tonality, etc. (Hankare, 2021). Language Diversity in Maharashtra-

Maharashtra is a linguistically varied state with Marathi being the different language. However, there are most of other languages and dialects spoken across different regions, including Konkani, Marwari, Gujarati, and various tribal languages. This diversity creates a rich linguistic tapestry that can be both a challenge and an asset in criminal investigations. Dialects can vary significantly based on region, culture, and language. Some common types of dialects include: Regional dialect- Regional dialects are distinct dialects originating from

specific geographical areas, such as Southern, New England, and Midwestern dialects in the United States. Social dialect- Social dialects are distinct languages spoken by different social groups or classes, often influenced by factors such as education, socio-economic status, or ethnicity. Ethnolects- Ethnolects are different dialects of specific regional or cultural groups, encompassing vocabulary, pronunciation, and grammatical trait that are unique to that group.

Standard Dialects: Standard dialects are the "proper" forms of a language, commonly used in formal contexts, education, and the media.
Rural dialects- Rural dialects may be influenced by a more isolated or homogenous community, unlike urban dialects. Urban dialects- Urban areas often possess distinctive dialects, shaped by the diverse populations and urban culture.

Voiceprint- "Each individual is unique and is endowed with a unique voiceprint". A dialect is a style of language pronunciation that a group of native speakers in a residential area employ. A particular community of native speakers' vocabulary or pronunciation style is referred to as their dialect. A speaker's dialect is a crucial aspect of their voice signature and can reveal details about their background, gender, age, and health (A. Etman, 2015).

Linguistic- The linguistic is the field of study that focuses on human languages. It also covers the study of grammar and sound. The primary function of language in society is communication. Forensic linguistics is one of several language-related fields of study. Forensic linguistic- Forensic linguistic is branch of linguistic which deals the combination of language & law.

One area of forensic linguistics research is discourse analysis. The phrase is employed as a means of inquiry to resolve the crime cases. The forensic linguistic is the study of language to investigation of crime cases. Forensic linguists analyze the language utterances so they can be easily determining the background or state of person (ADITYA A. LONDHE V. K., 2023).
Dialect Identification in Criminal Investigations-
a. Importance of Dialect Identification-
Dialect identification is essential in criminal investigation, as it can also the help law enforcement agencies to overcome the geographical origin of

suspects. Linguistic exhibits in statements, recordings, or written documents can help investigators in profiling suspects and recognized their possible connections to specific area.
b. Challenges in Dialect Identification-
Investigating dialects exactly can be a difficult task, especially when tackle with languages and dialects that are less documented or spoken by smaller communities. Exact transcription and translation of dialectal speech are important but must require linguistic knowledge.

II. RESEARCH METHODS
To ascertain a person's identity, emotional condition, or health, voice analysis uses a variety of approaches. Pitch analysis, spectrogram analysis, formant analysis, prosody analysis, acoustic analysis, speaker identification, speech recognition, and speech pathology evaluation are some of these methods. These techniques are used in forensic investigations are crucial for identifying speech patterns, detecting emotional variations, and distinguishing linguistic features specific to different dialects.
Objectives:
1. To identify individuals based on their spoken language, particularly focusing on Marathi dialects.
2. To support criminal investigations by analyzing linguistic evidence and speech patterns.
3. To examine the language and dialects used in forensic profiling of suspects, victims, or witnesses, considering sociolinguistic and phonetic variations.
4. To analyze linguistic evidence found at crime scenes, aiding in criminal case resolution through voice-based forensic techniques.

III. RESULTS AND DISCUSSION
Forensic linguistics is an emerging field that uses linguistic concepts to investigate recorded and spoken evidence in criminal cases, involving disciplines like linguistics, psychology, sociology,

anthropology, and computer science. Its focus is on investigating authorship, genuineness, and explanations of texts for legal use. The field concentrates on investigating the authorship, genuineness, and explanations of texts for use as evidence in courts of law. It involves the application of linguistic knowledge to legal issues, such as investigating recorded and spoken evidence in criminal and civil cases. Forensic linguistics is an associative field that uses linguistic methods and theories to help in the legal process, focusing on identifying speakers and investigating legal documents, thereby enhancing our understanding of language usage in legal matters. The scientific study of language in similarity to the law, involves the investigating of linguistic evidence in criminal and civil proceedings, is also an important aspect of forensic linguistics. The paper tells us significance of forensic linguistics in the criminal justice system and highlights the potential for further research in this area (Dr. Dushyant Nimavat, 2023).

Sr.	Types of variation	Variations of dialects
1	Lexical variation	Lexical variation is also known as vocabulary. It plays crucial real in social dialectology. Lexical variation ranges from age groups etc.
2	Phonological variation	Phonological variation means the changes in pronunciation. It depends on the Regions of individual.
3	Regional variation	Regional variation means the variation of dialects based on various regions. It forms due to barriers like rivers, mountains who keeps two populations separate.
4	Social and Stylistic Variation	It based on the class of people in society, gender and ethnicity.

1. Social and Stylistic Variation

It based on the class of people in society, gender and ethnicity. The paper covers the analysis of forensic linguistics, a relatively emerging field within the field of forensics. Language can recognize culture and ethnicity, and dialects are crucial for speaker identification. The paper also discusses the relationship between dialect and language, focus the importance of understanding language and its individuality (ADITYA A. LONDHE M. S., 2023).

Many languages worldwide, including Indian languages, are on the verge of extinction.

UNESCO has added 29 more languages and dialects to the endangered list. In India, 22 languages have constitutional status, but nearly 1600 are dying. Marathi dialects need to be preserved due to English and Hindi invasions in rural areas. Research is being conducted to preserve languages and their dialects, such as the People's Linguistic Survey of India (PLSI) (SAWANT, 2020). Uncertainty surrounding applied linguistics as an academic inquiry, focusing on its emergence, pedagogy, theoretical framework, and changes during the Chomskyan linguistics period and the concept of communicative competence. It also discusses the persistence of linguistic parameters in defining applied linguistics (Harris). Forensic speaker identification (FSI) is a legal process that seeks expert opinion to determine if multiple recordings of speech are from the same speaker.

This method can be effective in determining the conviction and elimination of suspects. However, there is a lack of understanding among law enforcement agencies, legal practitioners, and phoneticians and linguists about its nature, appropriate methodology, potential outcomes, and limitations. Forensic speaker identification has been around for a long time, with Germany's Bundeskriminalamt being one of the first institutions to implement it in 1980. The first conference on forensic applications of phonics was held in the UK in 1989. The problems of inferring identity from speech under less-than-ideal conditions typical in forensics, making it clearer for relevant professionals to understand the process and its limitations (Rose, 2002). The scientific demands of forensic evidence were introduced, along with proposed quantitative analysis methods and processes. These methods are easily examined methods that match the admission criteria of scientific evidence. Data-driven calculation methods of evidence strength based on statistical analysis, such as voice evidence, are also provided, which can be applied to other forensic fields. The introduction of these methods aims to meet the scientific demands of forensic evidence and provide a more accurate and efficient method for assessing evidence strength (W, 2017).

Variations of language spoken in various locales or social groups are known as dialects, and they are frequently the result of social, historical,

and geographic influences. They serve to preserve and record the distinctive qualities that have been developed throughout time in a community or area. Gaining knowledge of linguistic diversity helps one understand how languages differ across geographical areas, social classes, and historical periods. Linguists are better able to comprehend the variables that affect linguistic diversity and change, including social stratification, migration, and interaction with other languages.

Cultural identity is directly linked to language, which is frequently employed to convey social cohesion and togetherness. Understanding linguistic variations requires God communication skills, and language study can have social and economic repercussions, particularly in multiethnic cultures.

Analyzing and researching the dialects of various regions is the goal of this study. The normal study of language utilized in forensic science and criminal investigations is called linguistics. It includes phonological traits, phonetics, and regulations, among other facets of language. Dialects are impacted by geography and education, and language structure changes with time (a phenomenon known as synchronic-dialectic variation). Linguistic forensics is an interdisciplinary field that supports criminal and civil investigations by using language analysis and patterns. Since its inception in the mid-1900s, it has been applied to real-life events such as the university bombing case, Ted Kaczynski's writings, and anonymous letters. Understanding linguistic forensics helps us better understand how language is used as evidence (PRATIK N. GARAD, 2024).

In 70 BC, Roman magistrate Gaius Verres was tried for abuse of power, leading to his voluntary exile. Prosecutor Marcus Tullius Cicero abandoned the traditional long opening speech and presented evidence succinctly, leading to Verres' voluntary exile. In 1170, King Henry II assassinated Archbishop Thomas Beckett, who had excommunicated priests. In 1998, US President William Jefferson Clinton admitted inappropriate intimate contact with Monica Lewinski but did not consider it part of a sexual relationship. These examples carry professional interest to forensic linguists, who can help answer questions about usage of language in forensic and legal settings. Jan

Svartvik is credited with coining the term "forensic linguistics," which emphasizes the use of language description to address and manage pertinent aspects of reality. Nearly two decades before it was published, Philbrick used the phrase for the first time in Language and the Law: The Semantics of Forensic English. These days, the word "forensic linguistics" refers to research and practice that focuses on the function, structure, and evidentiary value of language in legal and forensic contexts, where legal and linguistic interests meet (htt).

Maharashtra's Marathi linguistic diversity, emphasizing dialectical subtleties, historical influences, and regional interpretations. It looks at how Marathi has changed and adapted to various communities and areas in the state, helping to create the diverse cultural character of Maharashtra. The Indo-Aryan language of Marathi is mostly spoken in Maharashtra, a state in western India, and its surrounding areas. Saint Dnyaneshwar's writings and other works from the 13th century is part of its rich literary heritage. Devanagari, the alphabet used for Sanskrit and a number of other Indian languages, is comparable to Marathi script, which is written from left to right. There are many different dialects of Marathi, and the mainstream version is derived from the Pune dialect. It has made major contributions to Indian entertainment and the arts and has a rich literary legacy that includes poetry, prose, and theater.

Cities like Pune and Mumbai are the birthplaces of the literary standard, or standard variation, of Deshi Marathi. While Varhadi Marathi, which is spoken in Vidarbha, has its own unique vocabulary and accent, Konkani Marathi, which is spoken around the Konkan coast, carries the coastal influences of Konkani. Khandeshi Marathi, spoken in the Khandesi region, has Ahirani and Gujarati influences, whereas Marathwada Marathi, spoken in the central Marathwada region, has Konkani linguistic features.

The mainstream version of Marathi, known as Deshi Marathi, is spoken in cities like as Pune and Mumbai. It is utilized in official communication, media, education, administration, and literature and acts as the language's literary and media standard. Deshi Marathi has a sizable amount of Marathi literature, such as poetry, prose, and theater, and is written in the Devanagari script. Konkani Marathi is

primarily found around the shore of the Konkan region, and because of its physical location, it has been impacted by the Konkani language. Some vocabulary from the Konkani language are included into the dialect, along with terms and expressions pertaining to fishing, seafood, and maritime culture. Originating in the eastern Maharashtra region of Vidarbha, Varhadi Marathi stands apart from other Marathi dialects due to its distinctive vocabulary and accent.

Spoken in the Khandesh region of northern Maharashtra, Khandeshi Marathi is influenced by Gujarati and Ahirani. Because of its closeness to Gujarat, this dialect includes words and phrases that are influenced by Gujarati and the Ahirani language. Disparities in pronunciation and emphasis are among the phonetic distinctions that distinguish Khandeshi Marathi from standard Marathi.

The Ahirani region, which encompasses portions of northern Maharashtra and some sections of Gujarat, is where the majority of Ahirani Marathi speakers reside. The dialect's unique vocabulary and idioms are a result of its effect on the language, culture, and customs of the Ahir population. Ahirani Marathi plays a significant role in regional arts, music, and folklore and is an essential component of the Ahir community's and the Ahirani region's cultural identity. (TARFE, 2024).

III. CONCLUSIONS

Forensic linguistics is a growing field in forensic science that involves analyzing words, phrases, and sentences. While some dialects remain unchanged, their phonological characteristics change due to language influence. Languages also change due to factors such as literate and illiterate people, societies, cultures, and environmental factors. Bilingual individuals can significantly influence languages, such as Nagpuri Marathi, which is greatly influenced by the Hindi language. Discourse analysis plays a crucial role in criminal identification, and the culture and caste of an individual can influence dialects.

REFERENCES

A. Etman, A. A. (2015). Language And Dialect Identification: A Survey. Conference Paper, 13.

Aditya A. Londhe, M. S. (2023). A Review - Forensic Linguistics - The Study Of Dialects In Various Regions Of India. Iconic Research And Engineering Journals , 4.

Aditya A. Londhe, V. K. (2023). Forensic Linguistics: Need For Criminal Identification. Iconic Research And Engineering Journals, 4.

Dr. Dushyant Nimavat, P. A. (2023). Exploring The Power Of Language In Criminal Investigation: A Study Of Forensic Linguistics Techniques . Journal Of New Zealand Studies, 11.

Hankare, A. S. (2021). Comprehensive Study Of Marathi Dialects Insatara Region. International Journal Of Forensic Linguistics, 4.

Harris, T. (N.D.). Lingustic In Applied Lingustic : An Historical Overview. Journal Of English Studies, 16.

Pratik N. Garad, ,. V. (2024). Comprehensive Study Of Old Dialectical Words Used In Parbhani Region. Iconic Research And Engineering Journals, 7, 5.

Rose, P. (2002). Forensic Speaker Identification. 29 West 35th Street, New York, Ny 10001: Taylor & Francis.

Sawant, D. D. (2020). Preservation Of Living Dialectical Words Of Marathi (Spoken In Marathwada). International Journal Of English And Literature (Ijel), 8.

Tarfe, O. S. (2024). Linguistic Diversity Of Marathi In Maharashtra: Review Artical. Iconic Research And Engineering Journals, 6.

W, H. (2017). Quantitative Comparison Method Of Forensic Voice Evidence. International Journal Of Forensic Sciences, 5.