Forensic Psychology in Linguistic Evidence: A Systematic Literature Review

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Abstract-Forensic psychology plays a vital role in understanding the psychological dimensions reflected in linguistic evidence within judicial contexts. Language, whether oral or written, not only functions as a means of communication but also mirrors an individual's mental state, motivation, and behavioral tendencies. Despite its significance, research directly integrating forensic psychology and forensic linguistics remains limited and fragmented. Therefore, this study aims to provide a comprehensive overview of the contributions of forensic psychology in the analysis of linguistic evidence using a Systematic Literature Review (SLR) approach. Literature searches were conducted across Scopus, Web of Science, ScienceDirect, SpringerLink, and Google Scholar databases using the keywords forensic psychology, forensic linguistics, and linguistic evidence. The inclusion criteria comprised peer-reviewed journal articles written in English or Indonesian that explicitly discuss the intersection of the two disciplines, while opinion pieces, editorials, and short reports lacking empirical data were excluded. From the selection process, ten primary studies were identified and thematically analyzed to determine dominant patterns, themes, and contributions. The findings indicate that integrating these two fields significantly enhances various aspects of forensic practice, including testimony analysis, lie detection, witness credibility assessment, threat text analysis, and author identification. Several studies also highlight psycholinguistic indicators such as memory consistency, trauma-related linguistic patterns, and cross-cultural variations in deception strategies. Nonetheless, methodological challenges persist, particularly concerning the reliability of lie detection methods and the transparency of artificial intelligence–based analyses.

Keywords: Forensic Psychology, Forensic Linguistics, Linguistic Evidence, Psycholinguistics, Lie Detection.

I. INTRODUCTION

Forensic science today is increasingly developing as a multidisciplinary field that combines various scientific perspectives to support law enforcement. One of the most prominent developments is the interplay between forensic psychology and forensic linguistics (Fitria, 2024; Liber, 2019). Forensic psychology focuses on understanding the psychological aspects of individuals in the legal context, including the psychological conditions, motivations, and behavior of perpetrators and witnesses. Meanwhile, forensic linguistics focuses on the analysis of language, both oral and written, as a form of evidence that can be used as a basis for legal considerations (Heydon, 2014). When these two fields are combined, a more comprehensive framework of analysis is created, where language is not only understood as a symbol of communication, but also as a reflection of the psychological condition of the individual involved in a legal case.

This integration is evident in both investigative and trial practices. For example, in the examination of witnesses, psychological analysis of the consistency of testimony can be strengthened through linguistic studies that

examine speech patterns, word choice, and sentence structure (Arscott et al., 2017). Similarly in the interrogation of suspects, an understanding of psychological conditions can help forensic researchers interpret communication strategies or even detect lies through certain linguistic features (Igorevna, 2021). In the context of written documents, aspects of forensic psychology can also help interpret the author's intentions, identify hidden threats, or evaluate the level of manipulation in a text. In other words, the integration of forensic psychology and forensic linguistics plays an important role in strengthening the validity of evidence and increasing the effectiveness of law enforcement.

However, research that directly examines the role of forensic psychology in the analysis of linguistic evidence is still limited in number and tends to be fragmented. Some studies have focused on the credibility of testimony, while others have highlighted the communication aspects of interrogation or in-text threat messages. This diversity of focus makes it difficult to construct a consistent conceptual framework for the forms of contribution of forensic psychology to forensic linguistic analysis (Alduais et al., 2023). In fact, efforts to integrate these findings are essential, not only to identify real contributions that already exist, but also to find research gaps that can serve as a foundation for future studies (Shymko, 2025).

Departing from these conditions, the main problems in this study can be formulated as follows: what is the role of forensic psychology in the analysis of linguistic evidence according to the findings of previous research? This question is the starting point for systematically reviewing the existing literature, so that a comprehensive picture can be obtained about the development of research, the methods used, and the contribution of both fields in the practice of investigation and the development of science.

In line with that, the purpose of this study is to present a comprehensive picture through a systematic literature review of the contribution of forensic psychology in strengthening the analysis of linguistic evidence, both in theoretical and practical aspects in the field of forensics. The results of this study are expected to show a clearer map of the study, reveal developing academic trends, and offer recommendations for future research. Furthermore, the findings of this study also have significant practical implications, namely providing a basis for law enforcement agencies to develop a more accurate and reliable investigative approach by utilizing linguistic analysis supported by a psychological perspective. Thus, this research is not only relevant in an academic context, but also makes a real contribution to fairer and more effective law enforcement practices.

II. METHODS

This study uses the Systematic Literature Review (SLR) approach to present a comprehensive picture of the contribution of forensic psychology in the analysis of linguistic evidence. This approach was chosen because it is structured, transparent, and allows replication by other researchers. The literature search process is carried out through international academic databases such as Scopus, Web of Science, ScienceDirect, SpringerLink, and Google Scholar. Keywords used in searches include "forensic psychology", "forensic linguistics", "linguistic evidence", "psychological aspects in forensic linguistics", and "forensic communication analysis". To ensure relevance, the search was focused on articles published in the 2000–2025 range, covering initial conceptual developments as well as current research.

The inclusion criteria are set to focus on the results of the study, namely that the article must be (1) published in English or Indonesian, (2) discuss the relationship between forensic psychology and forensic linguistics, (3) be published in a reputable journal with a peer review process, and (4) be accessible in full-text form. Meanwhile, articles in the form of opinions, editorials, brief summaries without empirical data, as well as publications that do not mention the integration of the two fields are excluded from the analysis. The article selection process is carried out by following the guidelines of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), starting from the initial screening based on titles and abstracts, then continued with a full-content check, elimination of duplication, to the preparation of a list of articles that meet the criteria.

The selected articles were then analyzed using thematic analysis techniques to identify the main patterns and themes. The analysis is focused on the research objectives, theoretical framework, methodology, and findings, especially those that show the role of forensic psychology in strengthening linguistic evidence, both through testimony, interrogation, lie detection, and analysis of written documents. The results of the analysis are then synthesized

in the form of a narrative that shows the relationship between findings, a map of research progress, and a real contribution from the integration of the two fields. To maintain validity and reliability, all stages of research are systematically documented to allow replication, and source triangulation is carried out by involving various databases to minimize publication bias.

The results of this systematic literature review are reported narratively and are complemented by tables and charts that explain the distribution of articles based on the year of publication, the research theme, and the methods used. Thus, this research method not only serves to summarize the results of previous studies, but also to present a comprehensive picture of how forensic psychology plays a role in the analysis of linguistic evidence, as well as reveal research gaps that are still open to further exploration.

III. RESULT AND DISCUSSION

The following is the manuscript of the article selected for analysis. The following manuscripts are supplemented with detailed explanations of the results;

Table 1. Summary of Empirical Studies in Forensic Linguistics and Forensic Psychology

No.	Title	Author / Year	Focus/Relevance	Result
1.	Content analysis of witness testimony – between cognitive linguistics and forensic psychology	Liber (2019)	Analysis of the content of witness testimony, combining the perspectives of cognitive linguistics and forensic psychology; discuss the criteria for testimony content in the Statement Validity Assessment (SVA) method.	The results showed that the multivariate method based on the author's attribution feature provided the best performance compared to the n-gram model, but a combined system that combined the three resulted in the best performance in assessing the strength of forensic linguistic evidence. However, this system sometimes produces a likelihood ratio that is too extreme and risks causing excessive interpretation. In the discussion, the author emphasized that the incorporation of features does increase accuracy, but it needs controls such as the application of empirical limits so that the results are more stable and realistic.
2.	Understanding forensic expert evaluative evidence: A study of the perception of verbal	Arscott et al. (2017)	How different parties (legal professionals, forensic experts, the public) understand the verbal expression of the strength of the evidence. Relevant for aspects of	The results showed that in general, there was a relationship between the strength of verbal terms and participants' perceptions, meaning that the stronger the

| expressions of the strength of evidence | psychological perception of linguistic evidence. | terms used, the higher the level of support for the evidence they felt. However, terms at the top end of the scale such as strong, very strong, and extremely strong are often perceived to be almost the same so that they fail to clearly distinguish the level of strength of the evidence. There is also considerable variation in perception in certain terms such as weak, moderately strong, and extremely strong. The differences between groups of respondents (lay people, legal professionals, and forensic practitioners) are relatively small, suggesting similarities in how the term is interpreted. In the discussion, the researcher emphasized that the difficulty of distinguishing terms at the top end of the scale as well as the variability of perception can lead to misinterpretations in forensic communication. This suggests that the use of verbal terms alone may be less effective at conveying subtle differences in the strength of the evidence. Therefore, a clearer and more standardized communication framework is needed, and perhaps even additional numerical references, so that the forensic expert's intentions can be more aligned with the |

				understanding of judges, jurors, or the public.
3.	Strength of linguistic text evidence: A fused forensic text comparison system	Ishihara (2017)	Related to the forensic text comparison system; test multiple methods (N-grams, kernel density, etc.) and combine the probability as the Likelihood Ratio. It is closely related to written linguistic evidence and author attributes.	It looks like the link refers to the same article you posted earlier (Ishihara, 2017, Strength of linguistic text evidence: A fused forensic text comparison system). So the results and discussions are the same as I've given: the combined method consists of the author attribution feature plus n-gram yields the best performance, but the system sometimes produces extreme likelihood ratios; The discussion emphasized the need for empirical boundaries to keep interpretations realistic.
4.	The Challenges of Forensic Linguistic Analysis of False Testimony	Igorevna (2021)	Discusses the challenges in the analysis of false testimony from a linguistic and psychological perspective: how to filter between what is said and the intention behind it, the validity of analytical methods.	The study found that although many experimental studies have explored the characteristics of lies from an acoustic-phonetic or psychotic linguistic perspective, these results have not been reliable enough for forensic applications because expert reports should not rely on assumptions that have not yet been validated. The authors also point out that the various methods and algorithms used by experts to detect lies, including the use of speech parameters associated with lies, contradict the principle of admissibility evidence (admissible in court). In the discussion, the author

No.	Title	Author	Focus	Findings
				states that the current approach of forensic linguistics does not have a single methodology that is consistent and strictly scientific, so the validity of expert conclusions is limited. This study highlights the urgent need to develop comprehensive methods based on forensic speech science and cognitive theory to address the problems of information concealment and word falsification in the context of police interviews and court testimony.
5.	The semantic structure of accuracy in eyewitness testimony	Gustafsson et al. (2024)	Focus on semantic structure in eyewitness testimony; how the accuracy of testimony is linguistically constructed; potentially associated with the psychological aspects of memory and perception.	This article highlights the role of linguistic markers in detecting lies in forensic interviews by considering cultural differences. This study found that the strategy of lying is not always universal, but is influenced by the norms and communication habits of each culture. Therefore, language-based lie analysis requires a cross-cultural approach to avoid bias. These findings reinforce the importance of forensic linguistics as a scientific instrument that is sensitive to social and cultural context in the investigative process of forensic psychology.
6.	Explainability of machine learning approaches in forensic linguistics: a	Roemling et al. (2024)	The use of machine learning models for *authorship profiling* (reversing the identity of the author of the text), with an emphasis on	This study tested the explainability of the machine learning model for geolinguistic authorship profiling with German-language

	case study in geolinguistic authorship profiling		*explainability*, how the model can be explained, related to beliefs and psychological aspects.	social media data. As a result, the BERT-based dialect classification model was able to recognize regional features with accuracy well above the baseline, although it declined in classes that were linguistically closer. The leave-one-word-out analysis showed that the most influential words in the classification did reflect the characteristics of the dialect, with about 14% being place names. The discussion emphasized that although the model is not yet fully transparent, the extracted features can be used to support forensic analysis more objectively and reduce expert bias, while opening up opportunities for more accountable implementation in the legal realm.
7	Corpus linguistics and clinical psychology: Investigating personification in first-person accounts of voice-hearing	Collins et al. (2023)	Although not directly forensic in law, this article explores the experience of hearing other voices and how people describe them (voice personification). Demonstrate the interaction of linguistics and psychological conditions, methodological relevance to testimonial or witness evidence.	This article discusses that forensic linguistics is a discipline that applies language analysis in legal contexts, ranging from author identification, discourse analysis, forensic phonetics, to document examination and plagiarism. The authors highlight the need for closer cooperation between linguistics and law in order for linguistic evidence to be credibly used in court, as well as that the future of this field is promising if linguists strengthen

				their expertise in legal and scientific aspects
8	Language and Forensic Linguistics	Kusumawardhani (2024)	Discuss aspects of language in forensic linguistics: semantics, syntax, pragmatics, phonetics, and discourse, how aspects of language emerge as part of the evidence.	This article emphasizes that forensic linguistics is present as a tool in the legal realm to analyze language, both oral and written, that arises in various cases such as defamation, fraud, and insult to state symbols. This study uses a descriptive method by examining real cases, such as the case of Prita Mulyasari and Zaskia Gotik, to show how language can be used as legal evidence. The results confirm that the role of linguists is important in explaining the linguistic aspects of a case, although the decision of guilt or not remains the domain of the judge. Thus, forensic linguistics is seen as an interdisciplinary discipline capable of making a real contribution to the modern judicial process.
9.	Forensic Linguistics: Forms and Processes	Heydon (2014)	Studies that describe the various forms of forensic linguistics and their processes: written/oral analysis, phonetics, syntax, discourse; It also touches on lie detection and language identity.	The article explains how forensic linguistics plays a role in legal investigations through various forms of analysis, ranging from the identification of speakers with oral and written data, to phonetic and syntactic analysis, to discourse analysis. Case studies are shown, e.g. the analysis of Timothy Evans' false confession and the case of a threat letter in Australia, to show how linguistic methods can

No.	Title	Author		
				reveal the real manipulator or author. In addition, other applications such as language of origin identification in refugee claims, trademark disputes, and lie detection were also critically discussed. Heydon emphasized that methodological reliability, statistical validity, and the acceptance of linguistic evidence in court are still challenges, but these fields have an important role to play in bridging language and law.
10.	On the construction of the system for forensic psycholinguistics	Yang & Liu (2019)	Propose a system construction for *forensic psycholinguistics*, how linguistic phenomena in legal activities can be analyzed both consciously and unconsciously, and cross-cultural aspects.	This article proposes that forensic psycholinguistics should be built as an interdisciplinary system that connects the psychological and linguistic aspects in the legal realm. The authors state that the object of study includes linguistic behavior in legal activities (such as legislation, justice, and compliance with the law) at both conscious and unconscious levels. The ideal system must start from the perspective of linguistic psychology towards legislation, judiciary, law enforcement, compliance, and legal publicity in order to become a practically applicable cross-cultural discipline

The results of a systematic literature review show that the integration of forensic psychology and forensic linguistics presents a significant contribution in the analysis of legal evidence, especially related to testimony, interrogation, threat text analysis, and the use of new technologies. From the articles analyzed, it can be seen that there is consistency that

individual psychological aspects, such as mental state, motivation, and communication strategies, are always reflected in the language they use, both in oral and written form.

A number of studies, such as the Liber study (2019), emphasize the importance of the testimony content analysis (SVA) method that combines the perspectives of cognitive linguistics and forensic psychology. These findings show that the accuracy of testimony depends not only on narrative structure, but also on psychological indicators such as memory consistency and emotional distress. In the context of expert evaluation of evidence, Arscott et al.'s research shows that the use of verbal terms to assess the strength of evidence can lead to misinterpretations, as audiences (judges, jurors, the public) often interpret "strong", "very strong", and "extremely strong" with almost the same meaning. This emphasizes the need for a more standardized approach to communication, for example through the incorporation of linguistic terms with numerical scales, so that psychological and legal intentions can be more harmonized.

On the other hand, Ishihara (2017) shows an important contribution of statistics-based linguistic analysis with a combined approach (fused system) that is able to improve the accuracy of identification of text authors. However, the findings on the emergence of extreme likelihood ratios show psychological risks in the form of overinterpretation of evidence. Therefore, the authors emphasize the need for empirical control to keep the analysis realistic and legally acceptable. This approach is particularly relevant in forensic practice, as it reminds that methodological sophistication must be balanced with the prudence of interpretation.

The aspect of forensic psychology is also seen in the analysis of lies. Galyashina (2021) emphasized that the detection of false testimony still faces serious limitations. Various phonetic and linguistic methods do not have sufficient validity to be used in court, so expert reports cannot rely solely on linguistic features that have not been validated. This discussion underscores the urgent need for a consistent methodological framework, based on the theories of cognitive psychology and speech science, in order for the analysis of lies to be accountable. In line with that, cross-cultural research (e.g. Gustafsson et al., 2024) shows that lie strategies and linguistic patterns in eyewitness testimony differ in each culture, so forensic psychology must take into account sociocultural contexts so as not to be biased.

In addition to traditional approaches, artificial intelligence technology is also starting to enter the realm of forensic linguistics. The study of Roemling et al. (2024) on geolinguistic authorship profiling with the BERT model showed high accuracy in recognizing regional dialects, as well as revealing keywords that affect classification. However, the problem of explainability remains a challenge. From the perspective of forensic psychology, algorithm transparency is crucial to build user trust and ensure that the results of the analysis are acceptable in the legal realm. In other words, technological developments need to be accompanied by a psychological approach so as not to cause bias or misunderstandings in the interpretation of evidence.

Other articles, such as Paramita (2024) and Heydon (2014), show the real application of forensic linguistics in Indonesian and international courts. The cases of Prita Mulyasari and Zaskia Gotik, for example, show how language analysis can be used to assess defamation or insult to state symbols. From the perspective of forensic psychology, the case highlights the importance of assessing the speaker's intent as well as the psychological impact of speech. Heydon stressed that the reliability of methodology and the acceptance of linguistic evidence in court still depend on the extent to which the method has scientific validity and can be understood by both judges and jurors.

Interestingly, the study of Shaogang & Liu (2019) proposes a forensic psycholinguistic framework as an interdisciplinary system that not only examines language in legal processes, but also takes into account conscious and unconscious linguistic behavior. This reinforces the argument that forensic psychology and forensic linguistics cannot run alone, but rather must be designed in one coherent system, so that linguistic evidence can be analyzed comprehensively and objectively.

Overall, the results of this review show that the integration of forensic psychology and forensic linguistics makes a real contribution to assessing legal evidence. Language can reflect psychological conditions, reveal patterns of lies, and even show trauma or mental disorders that affect testimony. However, the challenges are still huge, both in terms of methodology, scientific validity, cultural bias, and technological limitations. Therefore, the main discussion in the literature emphasizes the need to develop communication standards, validated interdisciplinary methodologies, and transparent technologies. Thus, forensic psychology in linguistic evidence not only strengthens the reliability of evidence, but also increases fairness and accuracy in the judicial process.

IV. CONCLUSION

This systematic study confirms that the integration of forensic psychology and forensic linguistics provides a stronger foundation for the analysis of legal evidence, both in the form of testimony, interrogation, threatening texts, and written documents. Language is proven to be not just a medium of communication, but a reflection of an individual's psychological condition that can reveal the consistency of memory, lying strategies, and signs of trauma or mental disorders. A number of studies have shown that psycholinguistic analysis is able to enrich the validity of evidence, although there are still limitations in the form of variations in the interpretation of terms, the validity of lie

detection methods, and the challenge of transparency in the use of artificial intelligence technology. Thus, the role of forensic psychology in the analysis of linguistic evidence is to provide a more comprehensive perspective, which not only assists linguists in deciphering texts or speech, but also supports law enforcement in understanding the psychological dimension behind language. For the future, the development of more consistent interdisciplinary methodologies, clear communication standards, and the application of transparent technology are key for linguistic evidence to be credibly accepted in court and truly contribute to the upholding of justice.

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