

STUDY ON INTENSITY EXPRESSION MEASUREMENT AND QUALITY

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Abstract: In the realm of linguistics, the concept of intensity holds great importance as it profoundly influences the perception, significance, and effectiveness of communication. The expression of intensity in speech is frequently conveyed through various means such as stress, emphasis, intonation, and the semantic and pragmatic strength of words and phrases. This scholarly article thoroughly investigates the measurement and evaluation of intensity expression, shedding light on its significance in the domains of linguistic research, speech analysis, and language quality assessment.

Keywords: acoustic intensity, falling intonation, emphasis, pragmatic intensity, lexical, grammatical, intensity, phraseology, morphology.

Introduction. The measurement of speech intensity involves the examination of various acoustic, phonetic, and prosodic characteristics that contribute to the perception of stress, emphasis, and intonation. Acoustic analysis is one of the most commonly used methods for measuring speech intensity, which entails the study of sound waves, pitch, intensity, and duration of speech sounds. Acoustic intensity also referred to as sound pressure level, denotes the strength or force of a sound wave, and it plays a crucial role in perceiving stress and emphasis in speech. Specialized equipment like microphones and sound level meters are utilized to measure acoustic intensity, capturing and analyzing the amplitude and frequency of speech signals. By scrutinizing the acoustic properties of speech, researchers can identify patterns of intensity and stress in linguistic utterances. Another approach to measuring speech intensity involves analyzing phonetic and prosodic features, including pitch, duration, and volume. Pitch, which represents the perceived frequency of a sound, is essential for comprehending intonation patterns and the expression of attitudes and emotions in speech. Variations in pitch can indicate rising or falling intonation, emphasis, and pragmatic intensity, significantly influencing the meaning and interpretation of spoken language. Duration, which refers to the length of speech sounds and pauses, also contributes to the perception of intensity, as prolonged or shortened sounds can convey stress, emphasis, or emotional expression. Volume, which represents the perceived loudness of speech, is a crucial factor in expressing pragmatic intensity, as it can convey the speaker's assertiveness, urgency, or emotional state. The effective communication of speech relies heavily on the quality of intensity expression. This encompasses the clarity, precision, and emotional impact of linguistic utterances. To assess the quality of intensity expression, various factors come into play, including linguistic, acoustic, and perceptual elements. These factors collectively influence the overall comprehensibility and impact of speech.

Literature review. Linguistic quality plays a central role in intensity expression as it involves the selection and usage of words, stress patterns, and intonation in speech. The appropriateness, accuracy, and naturalness of stress and emphasis patterns, as well as the semantic and pragmatic strength of linguistic elements, can significantly impact the quality of intensity



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expression. Evaluating linguistic quality entails assessing stress and emphasis patterns, intonation contours, and the semantic and pragmatic strength of spoken language. This evaluation aims to identify areas for improvement to enhance effective communication. Acoustic quality is another crucial factor in intensity expression, focusing on the clarity, precision, and consistency of acoustic features that contribute to the perception of intensity in speech. Evaluating the quality of acoustic intensity involves examining the clarity and accuracy of speech signals, the consistency of pitch and volume variations, and the overall intelligibility of linguistic utterances. The purpose of acoustic quality assessment is to identify any potential disturbances, distortions, or inconsistencies in speech signals that may hinder the perception and understanding of intensity expression. Perceptual quality is a critical aspect of intensity expression as it pertains to how listeners perceive, interpret, and comprehend stress, emphasis, and intonation in speech. Assessing the perceptual quality of intensity expression involves listener-based evaluations, such as perceptual ratings, preference tests, and comprehension tests. These assessments aim to gain insight into how listeners perceive and interpret different patterns of stress. In conclusion, the quality of intensity expression in speech is a multifaceted concept that encompasses linguistic, acoustic, and perceptual factors. Evaluating and improving these aspects can greatly enhance the effectiveness of communication.

Research methodology. The study of measuring and evaluating the expression and quality of intensity holds great significance in linguistic research, speech analysis, and language quality assessment. Gaining an understanding of the patterns and factors that contribute to the perception and quality of intensity in speech can provide valuable insights into the nature of language, communication, and speech processing. In the realm of linguistic research, the measurement and analysis of intensity expression can contribute to our understanding of stress and emphasis patterns, intonation contours, and the dynamics of linguistic expression. By examining the acoustic, phonetic, and prosodic features of intensity, researchers can uncover the underlying principles and patterns that govern the use of intensity in different languages and dialects, as well as how these patterns influence the perception and interpretation of speech.

In the field of speech analysis, assessing the measurement and quality of intensity expression can support the diagnosis and treatment of speech disorders, prosodic disturbances, and communication challenges. Speech pathologists and clinicians can utilize acoustic and perceptual measures of intensity to evaluate the strength, accuracy, and consistency of intensity expression in speech. This information can then be used to develop targeted interventions aimed at enhancing communication effectiveness and quality. Furthermore, in the domain of language quality assessment, evaluating intensity expression can inform the development of speech recognition systems, language learning tools, and communication technologies. By assessing the clarity, precision, and naturalness of intensity expression in speech, language quality assessors can contribute to improving the performance and usability of speech-based applications, ultimately enhancing the overall quality of spoken language in various communicative contexts.

Moreover, the study of intensity expression measurement and quality also has practical applications in fields such as language teaching, speech therapy, and communication technologies. Language instructors can utilize acoustic and perceptual measures of intensity to enhance their teaching methods, while speech therapists can employ these measures to aid in



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the treatment of speech disorders. Additionally, the findings from intensity expression research can be applied to the development of communication technologies, further advancing the field. The semantic category of expressivity, as defined by E.N.Sergeeva, is characterized by the expression of additional semantic nuances that are layered on top of the main meaning, whether it is lexical or grammatical. Sergeeva suggests distinguishing between qualitative and quantitative expression. According to her, the concept of quantitative expression is essentially the same as the concept of intensity. The essence of the intensity category lies in the amplification or expression of an additional quantitative characteristic, which can be observed in vocabulary, phraseology, morphology, and syntax. The relationship between expressiveness and intensity is determined by the concepts of "amplification" and "intensification". However, Sergeeva's proposed differentiation between expressiveness and intensity is not entirely clear, and further clarification, decoding, and detailing are required. It is important to note that "amplification" is a factual result of speech activity, while "intensification" is a potential property of a linguistic unit. Expressiveness is a qualitative characteristic that is inherent in the text and always correlates with a neutral form of presentation. The expression cannot exist outside of this correlation. On the other hand, enhanced expressiveness implies an act or process of amplification or intensification. Intensification serves as an indicator of the degree of amplification and is a quantitative characteristic of the qualitative (expressive) aspects of speech. The quantitative reflection of how expressive rises above the substantive and logical content of the utterance is what defines the sides of speech. Recognizing that expressivity reveals the qualitative side of an utterance and serves as a reflection of its essence, it is advisable to interpret intensity as a sign of a sign, representing a quantitative characteristic of expressivity.

Before delving into a more comprehensive justification of the differentiation between expressivity and intensity, it is necessary to examine the perspectives of other authors regarding the relationship between these concepts. Furthermore, it is important to comment on the reasons behind the unwarranted equation of expressivity and intensity. After formulating a satisfactory definition of the intensity category, as discussed in the previous chapter, which is attributed to S. Bally, O.F. Shevchenko proceeds to categorize the aforementioned forms, methods, and means of intensifying utterances. Notably, the researcher emphasizes the significance of "peculiar syntactic constructions" and provides a detailed description of their "expressive properties"^[1]. Despite the meticulous linguistic analysis, O.F. Shevchenko amalgamates the expressive and intensifying processes in their referenced work. Additionally, the researcher tends to establish a direct correlation between the categories of modality, intensity, and expressiveness. For instance, it is stated that "Different types of intensification of meaning and subjective expression come into contact with the category of modality and even partially intertwine" [1]. It is important to clarify that these categories cannot be juxtaposed without consideration, as each of them conveys the relationship between the content of the utterance and reality, thereby revealing the individual linguistic identity of the speaker. Consequently, not only is "expression" subjective, but the categories of modality and intensity also have the potential to reflect the subjective viewpoint of the speaker regarding a specific aspect of objective reality. Thus, it becomes evident that in numerous works, expressivity, and intensity are interpreted as closely related and interconnected concepts, which is a valid conclusion to some extent. Therefore, it is understandable why researchers often employ expressions such as "a special system of lexical expressive means" and "syntactic constructions and their expressive



properties" when describing the means of expressing intensity. This serves as another indication of the close association between expressivity and intensity.

The concept of intensity within the realm of expressivity is closely linked to the idea that something expressive, being stylistically superior to neutrality, inherently involves reinforcement. This can be seen in the conclusions drawn by E.M.Galkina-Fedoruk, who states that "expression is an increase in expressiveness, figurativeness, an increase in the influencing force of what is said"^[2], as well as in I.V. Arnold's definition: "By expressiveness, we understand such a property of a text or part of a text that conveys meaning with increased intensity" (both quotes are highlighted by me.-if.D.). However, the challenge in distinguishing between the concepts of "intensity" and "expressiveness" lies in the fact that many researchers perceive these concepts as either synonymous or inclusive. Most works on this topic tend to include intensity as a component of expressivity within their analysis. Nevertheless, this conclusion appears to be debatable. An alternative perspective is presented in the work of E.I.Sheigal, who argues that "there are not inclusive, but causal relationships between intensity and expressivity: intensity is one of the many means of increasing the influencing power of a linguistic unit"^[3]. The nature of the relationship between intensity and expressiveness will be further explored later. For now, let us focus on clarifying the concluding part of the aforementioned quotes. If we acknowledge the status of intensity as a language category (as emphasized in E.I. Sheigal's study), it would be questionable to define it merely as "one of the many means". Intensity, as a semantic category in language, encompasses a range of representation methods, including phonetic, lexical, and grammatical means. These means, collectively and in rotation, constitute a category within language and speech. Therefore, the synonymization of "intensity" and "expressivity" (as well as the reduction of intensity to a mere means) is not entirely justified.

Analysis and results. The study of measuring and evaluating the expression and quality of intensity holds great significance in linguistic research, speech analysis, and language quality assessment. Gaining an understanding of the patterns and factors that contribute to the perception and quality of intensity in speech can provide valuable insights into the nature of language, communication, and speech processing. In the realm of linguistic research, the measurement and analysis of intensity expression can contribute to our understanding of stress and emphasis patterns, intonation contours, and the dynamics of linguistic expression. By examining the acoustic, phonetic, and prosodic features of intensity, researchers can uncover the underlying principles and patterns that govern the use of intensity in different languages and dialects, as well as how these patterns influence the perception and interpretation of speech.

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Conclusion. To comprehend the perception and effects of stress, emphasis, and intonation in speech, it is crucial to study the measurement and evaluation of intensity expression. This examination aids in our comprehension of the linguistic, acoustic, and perceptual elements that impact the quality of spoken language. Moreover, it holds significant implications for linguistic research, speech analysis, and language quality assessment. By analyzing the patterns and factors that contribute to the perception and quality of intensity in speech, valuable insights into the nature of language, communication, and speech processing can be obtained by researchers, clinicians, and technology developers. Consequently, this can lead to advancements in language science and technology.

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