

The Role of Speech Prosody in Comprehending Speaker's Communicative Content

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Abstract

Speech prosody remains a neglected linguistic phenomenon that is yet to gain deserving scholastic attention. This study attempts to rouse deserving attention to prosody. It is aimed at describing the critical role of speech prosody in understanding the communicative content of the speaker in speech acts. The study draws insights from John Austin's Speech Act Theory (SAT). SAT explains how the speaker's intentions imbedded in communicative content exert effects on the listener. The study takes up the qualitative approach and employs content analysis to analyse the data gathered from twenty (20) focus group discussants, observation and internet and library print materials. The analysis proves speech prosody to be an essential cognitive ingredient of phonology that is deeply involved in the generative construction and analysis of speeches and meanings and their effects. It also conveys the speaker's intentions in various regards. The analysis shows that the speaker's intentions are conveyed as the communicative content of speech acts, which exert some effects on the listener. The paper concludes that prosody situates in all levels of language analysis and plays a significant role in speech acts and meaning comprehension. It recommends that learners should be consistently taught how to understand and interpret the speaker's encoded message(s) through speech prosody.

Keywords: Speech Prosody, Comprehension, Communicative Content, Speaker Intention, Speech Act Theory, Cognitive Phonology.

Introduction

As Madella (2023) agrees, it is quite regrettable that both native and non-native learners of English Language are seldom exposed to the critical role played by prosody in comprehending the communicative content of the speaker. Well, that is basically because so much attention is paid to segmental analysis of phonemes, while the prosodic or supra-segmental aspects of speech are continuously neglected (Osuchukwu, 2010; Maltese et al., 2012; Paul, et al., 2005; Cohen & Nooteboom, 1975). Prosody is described as "the supra-segmental properties of speech signal, which modulate and enhance its meaning" (Paul, et al., 2005, p. 206). It is also regarded as prosodic features. That is, speech prosody and prosodic features are used interchangeably to mean the same thing.

Basically, prosody concerns differences in pitch, intensity, duration, and the timing of segments and words in sentences. This study seeks to show that despite being a neglected aspect of cognitive phonology, prosody serves as a tool for comprehending the speaker's communicative content, which reveals their intentions. The stance that prosody aids comprehension of the speaker's intention and encoded messages is given credence by Gao et al. (2024), Tomasello et al. (2022), and Goupil et al. (2021).

Problem Statement

Currently, prosody is a neglected theme. The current paucity of literatures on prosody is a testament to the thinking that prosody is neglected among contemporary scholars in the field. Also, only a few out of the available literatures on prosody dwell on prosody as a tool for understanding the speaker's intentions and for meaning conveyance. This study attempts to explore the neglected role of prosody in the generation of meanings and the understanding of the speaker's intentions. It adds to the scanty volume of literature on prosody in contemporary times. It thereby helps to enlarge the growing volume of literatures on prosody. The study unveils what would have remained unknown to its audience if the exposition had not been made. The significance of doing so cannot be over-emphasised. This includes drawing attention to prosodic features that are neglected supra-segmental features of cognitive phonology.

Purpose of Study

The purpose of this study is to explain how speech prosody aids the comprehension of the speaker's communicative content (i.e. message). This aim includes describing the role played by prosody in aiding the comprehension of communicative content. A concise description of the features of this linguistic phenomenon is also part of the aim— another objective. And, in making an exposition of the place of prosody in comprehending the communicative content of the speaker, the study also has the objective of explaining what transpires between the speaker and the listener through the lens of the adopted theory.

Novelty

Given the noted aim and objectives, the significance of the study cannot be overemphasised. It draws attention to speech prosody, a neglected aspect of cognitive phonology. It reiterates the largely undermined importance of prosody, emphasising prosody determines the intelligibility of segmental features of phonology. Its significance also lies in proving that prosody determines the speaker's message. By so doing, it exposes the place of cognitive phonology in communication or speech act, and meaning construction and understanding. The study is also novel for exposing the audience to the importance of prosodic features to segmental features, grammar and pragmatics in constructing and understanding utterances of different kinds.

Theoretical Framework

This study anchored on John L. Austin's (1962) Speech Act Theory (SAT). SAT explains how words and utterances are used to achieve effects or intentions of the speaker. It emphasises the influence of the speaker's communicative content on the listener. The theory is of the view that speakers' intentions are communicated strategically and technically in speech acts. Every speaker engages in and exhibit *locutionary* speech act. The *locutionary* speech act, according to Austin (1962), involves producing meaningful and intelligible utterances to the audience. Utterances convey the intentions of the speaker. As Austin (1962) notes, there is an intention for every communication. This makes it clear that every communication or speech act has purposes (i.e. intentions) or at least one purpose (intention).

As Austin (1962) has explained, the speaker exercises some influence on the listener in the course of communicating their intentions, because the listener reacts in/directly to the communicative content conveying the intentions of the speaker. Austin (1962) goes on to theorise that *perlocutionary* speech act comes up from the effects of the meaningful utterances made by the speaker. The resultant actions constitute what he calls *perlocutionary* speech act. That is to say the evoked intentions form the effects exercised by the speaker on the listener. Thus, it is quite obvious that SAT aptly explains what happens between speakers and listeners. SAT looks beyond syntactic properties and semantic level of meaning construction to pragmatic constructions. It is within this phase that prosodic features are better understood and made manifest.

Nonetheless, the theory fails to take cognisance of prosodic, segmental and other phonological and phonetic features in speech act processes. It does not explain what happens at the deep structure phase of speech production. Yet, it merely reflects on the effects of the speaker's intentions on the cognition of the listener. Regardless of its pitfalls, it is quite interesting that SAT indirectly captures the place of prosody in communicative content from the speaker to the listener. This is because there is no way the conveyance of the speaker's intentions and feelings, which embody the communicative content of a speech act, can be take place without prosodic features (Mauchand et al., 2021). Thus, SAT implicitly rather than explicitly reflects the concern of this study.

Related Studies

As Pattnaik and Dash (2012) note, prosody simply refers to rhythm, stress and intonation of speech along with the measurement of rhythmical variations, the location of intonation events, and the analysis of prosodic (supra-segmental) features of phonemes. The analysis of supra-segmental features includes the segmentation of their constituent minimal pair units. The foregoing definition, though annotated by these authors, is encompassing. They go on to note that prosody also mirrors various features of the speaker or the utterance(s) made by the speaker (Pattnaik & Dash, 2012). These include the emotional state of the speaker, the form of the utterance (statement, question or command), the presence of irony or sarcasm, emphasis, contrast, and focus, and other elements of language that may

not be encoded by grammar or choice of vocabulary (Pattnaik & Dash, 2012). Prosody is the combination of voice's pitch, duration and energy variation during speech. It is important to note that prosodic features are also regarded as supra-segmental features.

Pattnaik and Dash (2012), like Rathina and Mehata (2012) and Hirst (1992), agree that the supra-segmental features of intonation, stress, syllable, rhythm, and speech rate make up a speech family having variations that are germane to expressing the function of the different prosodic units. In illustrating prosodic features, the prominent syllable in the word is marked by stress; a falling intonation contour, which marks the conclusion of a sentence; a faster speech rate and lower intonation characterised by a parenthetical phrase (Pattnaik & Dash, 2012; Rathina & Mehata, 2012; Hirst, 1992). These cited scholars also agree that such prosodic features are physically realised in the speech chain in terms of variations of a set of acoustic parameters. Acoustic-phonetic analyses identify: fundamental frequency/pitch, length changes in segmental duration, pauses, loudness, voice quality. These are together regarded as "phonetic correlates of prosody".

Trott et al. (2023), Lucarini et al. (2020), and Kurematsu et al. (2008) are of the opinion that prosody has long been studied as an important source of knowledge for understanding speech and also considered as the most significant factor of emotional expressions in speech. It should be noted that speech is the primary form of language, knowledge and communication, while prosody is an integral part of speech. The foregoing assertion is tied to the thinking that since prosody is an aspect of speech, it must have been studied accordingly along with speech in its macrocosm. Be it as it may, it is quite interesting that the scholarly efforts and the need to raise awareness about prosodic features have been made by Audacity Team (2020), and Liu (2017).

Liu and Betten (2020) work on using technology and pronunciation reformulation techniques to develop English prosody. In it, the authors observe that international students of non-English background usually face difficulty in pronunciation. Their study focuses on improving English learners' understanding of pronunciation through raising awareness of underlying prosodic nuances of English. Thus, their study stresses the importance of prosody and the dire need to expose learners, especially second language (L2) learners, to prosodic features along with their uses and functions. The analysis of their study reveals a significant place of intonation in speech production, cognition processes and decoding the meaning of what is said by the speaker. The study also shows that speakers' speed and flow of speech are regulated by the process of breaking thoughts at natural 'phrasal breaks'. Slight pausing and intonation break thoughts at natural 'phrasal breaks'. Clearly, different prosodic features play crucial role in speech production. Technology and pronunciation reformulation techniques rouse positive reactions from learners. Where they are used, the classroom teacher gets encouraged to use the techniques further in subsequent classes.

Similar to Liu and Betten (2020), Liu (2017), Ceke-Murcia et al. (2010), Robert (2008) and Mbah and Mbah (2000) demonstrate that speech production at syntactic, semantic and pragmatic levels is possible only with what takes place at the phonological and phonetic

level. That is, prosodic features are some of the linguistic elements that make it possible for meaningful and intelligible utterances to be made in speech (communicative) act. This shared viewpoint aligns with that of Pessoa and Pereira (2015), which holds that speech features are essential tools for understanding what is communicated. This means that prosody and perception share a common relationship phonologically, phonetically, psychologically, socially and pragmatically. It follows that perception is a factor that militates against prosody. The relationship varies in several regards. The present study observes that vocal quality and dynamics, among other prosodic properties, prove the correlation between segmental and supra-segmental features.

The study by Aguert et al. (2013) reveals that although contextual information has no emotional valence, children rely on it along with some prosodic features to infer a speaker's emotional state of mind. Its analysis proves that prosody is difficult for children, since it is until at adolescence that inferring other persons' emotions from what they say is possible. In other words, children find it difficult using emotional prosody, which makes it possible to infer a speaker's emotions in their speech act. At age 5, children cannot infer the speaker's emotions from prosodic features. Even at age 13, children still show no mastery of prosody in inferring the speaker's emotions (Aguert et al., 2013). The relevance of the foregoing findings is that they directly and indirectly prove the position of this current study that prosody plays an important role in comprehending the speaker's message or intentions.

The work of Wang et al. (2021) contributes to this discourse. Their study shows that in the processes of generative phonology, the speaker's intentions are generated or encoded in the communicative content passed on to the listener. The processes involve cognitive processes and devices. The comprehension of a communicative content may be hampered by issues of timing and rhythm. Gibbon (n.d.) shows that rhythms, melodies, frequency and timing patterns of speech prosody vary according to contexts. Besides, Gibbon (n.d.) and Wang et al. (2021) identify the following types of prosody: acoustic phonetic topics in phonemic tone, accent prosody, word prosody, phrasal prosody and discourse prosody. For the present study, the noted classifications are quite different from what some other studies classify prosody to be, particularly in terms of its function. Such other classifications put prosody under three major categories: grammatical, pragmatic and affective prosody (Pessoa & Pereira, 2015; Busa, 2010).

The other classifications are within the confine of linguistics (i.e. linguistic classification of prosody). Nevertheless, when taken beyond the confine of linguistics, the categorisation is undoubtedly bound to be at macro-linguistic phase rather than micro-linguistic phase. Discourse prosody is that which basically relates to and obtains in other fields that fall within the concern of macro-linguistics, precisely applied linguistics and sociolinguistics. The other categories above basically fall within micro-linguistics, with phonetics and phonology having them as a primary multifaceted thrust. Emotional prosody is the category of prosody that falls within both macro-linguistics and micro-linguistics. Emotional prosody is the expression of feelings using prosodic elements of speech. Linguistically relevant prosodic events concur to express sentence structure. That is, they highlight linguistic units by

marking their boundaries and suggesting their function. More so, several types of prosodic units, which differ basically in their scope, are noted to include paragraphs, sentences, intonation groups, intermediate groups, stress groups, syllables etc. (Wang et al., 2021; Pessoa & Pereira, 2015; Busa, 2010).

In another development, Tsurutan (n.d.) investigates the relative impact of verbal expression and tone of voice, when native speakers of English form an impression of non-native speech. The study reveals that appropriate expressions are more important than voice tone. The study further shows that although a friendly tone can enhance listeners' impression on speakers, particularly when the expression is plain, the impact of voice tone is less evident when appropriate expressions are used. Clearly, tone is a prosodic feature of speech. Following its finding, the study lends credence to this one. The fact that a friendly tone enhances a listener's impression highlights the reality that prosody is a tool for understanding the speaker's intended message(s). The impression does not manifest without the listener's comprehension of the message conveyed by the speech of the speaker.

Ultimately, comprehensibility can be "achieved through prosody— an aspect of pronunciation that focuses on stress, rhythm and intonation" (Busa, 2010, p. 59). Also, some of the above reviewed studies confirm that prosody gives naturalness and message intelligibility to speech, and volume, pitch, and intonation have important pragmatic effects on how the speaker's message received by the listener because non-native use of speech pauses (Wang et al., 2021; Liu & Betten, 2020; Pessoa & Pereira, 2015; Busa, 2010). In all, the reviewed literatures provide scholarly evidence for the stance of the present study that prosody plays a crucial role in the understanding the speaker's intentions. The intentions constitute the communicative content passed on to the listener by the speaker.

The review shows the paucity of literatures on prosody as a determinant of communicative content or a mechanism for understanding both hidden (implicit) and clearly stated (explicit) messages conveyed by the speaker to the listener in speech acts. This limitation is a call for research studies into the role of prosody in the generation, comprehension and interpretation of meanings as well as its role in other areas of linguistics. Its contribution to the growing literature makes it is novel. The centrality of the present study is its focus and emphasis on the essential role of prosody in meaning comprehension. This is the base of its novelty.

Methodology

Following the nature of this research, the descriptive survey design is adopted for it. This design is chosen because it is considered suitable for the study. It aptly aligns with the nature and the preoccupation of the study. The tools of survey design usually facilitate the collation of reliable data. The design allows for focusing on the quality of data. It also enables a researcher to undertake an in-depth analysis (Ubah et al. 2012). It is in view of the foregoing that the study adopts descriptive survey design and qualitative method.

The primary data sources used are observation and focus group discussion. The focus group discussion involved getting data from selected twenty (20) persons, who are conversant with the subject matter. The discussants are ten (10) linguists and ten (10) English language professionals. These groups of persons are chosen because they are considered to be very conversant with the subject matter. The desire for quality via reliable data informed the choice of these respondents. In addition, the secondary data used for the study are drawn from published and unpublished library and internet print materials. These include journals, theses and textbooks. Both primary and secondary data gathered are subjected to observation, and critical discourse, content and thematic analyses. The employed techniques for analysis include interpretive devices and descriptive analytics.

Data Presentation and Analysis

Here, the primary data collated from the focus group discussants are presented and analysed descriptively. Accordingly, the discussants unanimously point at the role played by prosody in aiding the comprehension of the speaker's communicative content (speaker's intentions) as one of the major roles of speech prosody. They stated that speech prosody plays various functions, which together make possible for the listener to comprehend the communicative content encoded by the speaker. Their points on the role of prosody show that the aforementioned functions situate in three levels of language analysis: phonetics and phonology, syntax/grammar and pragmatics. While it makes or allows for making reflections on semantics, its significant place in morphology is buried deep within word production, right from the beginning stage of generative phonology at the deep structure to just when surface structure begins.

Thus, speech prosody performs phonological, syntactic, affective or emotional and pragmatic functions. Through these four broad functions, prosody serves as a viable mechanism for comprehending the speaker's expressed communicative content. Next, the twenty (20) discussants shared a common viewpoint on what speech prosody means and its core features. They note that speech prosody is all about supra-segmental features of phonetics and phonology, which exert effects on phonemes leading to variations, functional differences, and so on. The commonly identified features by the discussants are tone, intonation, stress, syllable, pitch, rhythm, and other speech-based variation and emotional markers. Thus, the definitions and the features of speech prosody gathered from the discussants tally extensively with those in the extant literatures reviewed above.

What transpires between the speaker and the listener in speech act or communication is highlighted by the discussants. They agree that the speaker usually has a purpose of communication, which constitutes their intentions (intended messages or communicative content). Every communication or speech act involves the use of sounds. These sounds or phonemes are accompanied by supra-segmental features. Supra-segmental features account for what transpires between the speaker and the listener, as phonemes along with other segmental features get emitted and transferred from the speaker to the listener. In the process of conveying a communicative content, the intentions of the speaker are

encoded. These intensions have influence on the listener. The influence is why a listener either does what a speaker says or adjusts by resisting what is said

Finally, the discussants confirm that by playing significant functions in speech production, transmission, reception and digestion for feedback, prosody proves itself to be a viable mechanism for comprehending what the speaker says. The implication of the foregoing is that the speaker's communicative content (message) is made clearer by prosodic features. It aids comprehension by acting upon the segmental features and syntactic and pragmatic aspects of a communicative content. As the discussants affirmed, what would have remained unknown about a speech act gets revealed by prosodic features.

Discussion of Findings

Despite being neglected or given poor scholastic attention, there is no doubt that prosody plays different essential roles in speech acts. There are more past than recent literatures on prosody and its role. This study contributes to the scanty volume of recent literatures on prosody and its role. It shows evidence from both primary and secondary data. The role of prosody is evident in different levels of language analysis. It is to that end that prosody is affirmed to play three main functions: grammatical, pragmatic and affective or emotional functions (Crystal, 1986; Kent & Read, 1992; Merewether & Alpert, 1990; Warren, 1996; Panagos & Prelock, 1997; McCann & Peppe, 2003). Accordingly, sounds are used in encoding and decoding communication content. In other words, sounds (phonemes) are some of the linguistic elements used for conveying the meanings of different kinds of orally and written communicative contents from the speaker to the listener.

As such, prosodic features make it possible to establish the extent to which semantic and syntactic constituents influence the durations of phonetic segments and words, and whether or not listeners can use this sort of information to understand what is said by a speaker using spoken language. Prosody provides an additional sense to the words, which is extraordinarily important in natural speech (Pattnaik & Dash, 2012). For example, interrogative and declarative sentences have distinct prosody, especially intonation. Prosody also shows the interaction between phonology and grammar or syntax (Pattnaik & Dash, 2012). It is the combination of speech sounds that generate meanings and linguistics constructs of all kinds. Besides, the prosody of a sentence is one of the factors that make a speaker seem happy, sad, angry or frightened. Grammatically, prosodic (supra-segmental) cues are used to signal syntactic information within sentences (Warren, 1996).

Stress, pitch, tone and intonation are grammatical elements made possible and functional by prosody. These elements convey the speaker's message, as they exercise different linguistic effects. With these, prosody takes part in the structural transformation from deep structure to surface structure (Gerken & McGregor, 1998; Fujisaki et al., 2005). Prosody links words, phonetic segments, and speech features to grammatical processes at higher levels of analysis. By so doing, prosody also conveys useful information about lexical, syntactic and semantic embodiments of the speaker's message (Maltese et al., 2012; Klatt & Cooper, 1975; Huggins, 1972 & 1978). More so, prosody plays pragmatic role in terms of its usage for

conveying or revealing the social information conveyed by syntactic elements in constructed speeches. It is with this role that the meanings of syntactic structures are conveyed, expressed, understood and interpreted beyond the semantic impulses.

Besides enabling speakers to construct speeches through expressive language, prosody enables listeners to understand speakers' intentions for which the speech act is undertaken. It helps to clarify situational context and reference and the ambiguity of the messages (Maltese et al., 2012; Levorato & Cacciari, 2002). Winner (1988) and van Lancker et al. (1981) have emphasised the role of prosody in conveying the speaker's information or intentions. Paul et al. (2005) demonstrate that the supra-segmental features are what make segmental features meaningful. Lundgren (2006) states that measuring a segment of the vowel to be long or short, strong or weak is only made possible by prosody. It is with prosody that we know the ways in which speech flow is arranged into a set of finite phonological units (Pattnaik & Dash, 2012; Sandler et al., 2011).

As Levorato and Cacciari (2002) demonstrate, with prosody, the use of stress, tone, pitch, rhythm, intonation, mood, and exclamations in sentences shows the pragmatic conveyance as well as expression of the speaker's intentions. Emphasis and repetition are also used to convey or express the speaker's intentions (Gao et al., 2024; Goupil et al., 2021; Mauchand et al., 2021; Haviland & Clark, 1974; Bates & McWhinney, 1979). These are prosodic features. Prosody also plays affective functions. In this regard, prosody shows differences in social functions, the ways and differences in which different people talk, write, speak and relate with others in various contexts or situations. Affective prosody is also involves conveying a speaker's general feeling and state of the mind (Bolinger, 1989; Hargrove, 1997).

As the speaker speaks, the listener gets the communicated intentions through sound emission and the functional dispositions of various prosodic features. For example, My FATHER loves me so much that he could die for me. This means that the speaker's father, not his/her mother, aunt, grandfather or no any other person, loves him/her as such. A speaker consciously or unconsciously makes use of prosodic features, among others, to rouse the attention, response and compliance or otherwise of the listener to what is communicated. These are used to highlight or heighten the message conveyed by the speaker in an utterance or speech. More so, prosody is also an important literary element, which helps in explaining figurative expressions in both literary and literal contexts. For example, idiomatic expressions, which are figurative, are distinct syntactic constructions that are grammatically constructed and accepted (Paul et al., 2005). Speeches and meanings are constructed with prosody being in place.

Furthermore, prosody plays a crucial role in achieving an acceptable speech naturalness (Pattnaik & Dash, 2012). It helps in differentiating sentences of different types. With prosody, there is no sound monotony. That is, no sound is monotonous with the presence of prosody. Prosody can help a listener to determine whether the speaker is an energetic or a lazy person. When singing, intonation and timing characterise melody. Clearly, prosody plays a critical role in that context or activity. Beyond playing a significant role in natural speech, prosody also plays a significant role in synthetic speech (Anum et al., 2024;

Rosenberg, 2018). That is, it synthesises speeches. In the same vein, prosody is affirmed to be essential for audiovisual feedback (Audacity Team, 2020; Liu & Betten, 2020; Liu, 2017). Finally, prosodic features are used to structure the speech flow, which are also perceived as stress or accentuation, or as other modifications of intonation, rhythm and loudness (Wang et al., 2021; Pattnaik & Dash, 2012).

Conclusion

On the whole, this study has examined the role of speech prosody in understanding what the speaker communicates to the listener. The imperative of prosody is demonstrated reasonably by the study, as it implicitly highlights the dire need to pay attention to as well as carry out more studies on speech prosody and its role in various areas of linguistics and communication science. The study fulfils its aim and objectives. It shows that prosody cuts across all levels of linguistic analysis in the speech act between the speaker and the listener. It is quite evident from the analysis that prosody combines various linguistic elements to reveal the intentions of the speaker to the listener.

The study concludes that the combination of various linguistic elements by prosody is the peak of its relevance and capacity of making the listener to comprehend the speaker's encoded communicative content. The study calls on researchers to carry out more studies on prosody and its role. It also charges language teachers to consistently expose learners to prosody and all that concerns it. Doing so would enable learners to achieve high level of the mastery of prosody, the understanding of the speaker's intentions, and the interpretation of meanings through the application of prosodic features.

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