A Multidimensional Analysis of Linguistics Variation in Pakistani English Newspaper Editorials

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Abstract

The current study employs a corpus-based approach to investigate linguistic variation in Pakistani English newspaper editorials. The study aligns with the analytical framework proposed by Biber (1988) in Dimension 4, which focuses on the Overt Expression of Persuasion. The Multidimensional Analysis Tagger (MAT) is utilized to facilitate this exploration. This research primarily aims to unravel the diverse variations within the newspaper editorial genre and discern the extent to which different newspapers express persuasiveness and argumentation through the co-occurrence of linguistic features in their editorial writing. The corpus for this study comprises 1000 editorials sourced from four reputable newspapers: Dawn News (DN), The Frontier (TF), The Express Tribune (TET), and The News (TN). Each newspaper contributes 250 editorials, all retrieved from online sources. Multidimensional (MD) analysis, a methodological approach, is employed to quantitatively analyze the data extracted from these newspaper editorials. The study's key findings reveal that Dawn newspaper editorials exhibit a higher degree of persuasive and argumentative linguistic features when compared to other categories of newspaper editorials. Furthermore, when compared to Biber's (1988) register classification, the language used in newspaper editorials closely resembles that of general fiction. This highlights the unique linguistic characteristics and persuasive elements found in this specific genre, emphasizing the need to recognize its distinctive place within the realm of written discourse.

Keywords: *Linguistics Variation, Dimension 4, Pakistani English, MD, Co-occurrence of Linguistics Features, Newspaper Editorials*

Introduction

1.1 Background of the Study

Analyzing linguistic patterns across various registers is of paramount importance in understanding language variety within both native and non-native contexts. Pakistani English (PE), like other registers in Pakistan, remains an area that warrants further attention from researchers and linguists. According to the Kachru Model of World Englishes (1992), Pakistani English is classified as a distinctive non-native variety. Over the past two decades, numerous studies have provided valuable insights into the unique linguistic features found in various aspects of the language. Past research has explored the diversity of Pakistani English in different contexts (Anwar, 2009; Mansoor, 1993; Mahboob, 2003, 2009; Mehmood, 2009; Rahman, 2020). These studies have contributed to our understanding of English as a legitimate variety within Pakistani cultural environments (Ali, 2013; Janeen, 2011; Kachru, 1992; Siddique, 2018; Sadia, 2019; Savant, 2019).

The concept of language variation is equally significant when analyzing linguistic patterns across registers. Newspaper writing, among other registers, is an area that still requires the attention of researchers and linguists in Pakistan. For language learners, newspaper writing represents a vital register, enhancing vocabulary, improving reading skills, and expanding current knowledge about the world.

The notion of investigating variation in any register study without considering the co-occurrence of linguistic features is invalid and unscientific. To address this, Biber (1988) introduced a practical operationalization of co-occurring features through multidimensional analysis (MDA) across registers. These linguistic features form clusters, each associated with a specific register. As explained by Biber (1995) and Conrad & Biber (2001), the term "register" describes any language variety in terms of the relationship between the speaker and the listener, the subject matter, the speaker's communication objectives, the medium (spoken or written), and the production circumstances. Register analysis provides functional interpretations by comparing various language varieties.

MDA employs a methodological approach to identify systematic co-occurrence patterns among these linguistic features. These features share communicative functions across dimensions through statistical factor analysis, providing an explanation for sets of co-occurring linguistic features. Textual dimensions defined through multidimensional analysis are quantitatively determined via factor analysis and are linked to linguistic content. MDA offers textual dimensions for scrutinizing the statistical distribution of linguistic features across various types of text in large computer-based corpora. As a result, a single text may exhibit similarity in one dimension while displaying differences in another. The frequent co-occurrence of each linguistic feature is then assigned a dimension or factor, elucidating the text's communicative function through linguistic features.

This study utilizes Dimension 4 of Douglas Biber's (1988) model of MDA to investigate the co-occurrence of linguistic features in Pakistani English Newspaper Editorials. Biber's model includes five dimensions aimed at exploring text diversity resulting from the co-occurrence of specific linguistic features, with a specific focus on Dimension 4, which concerns the 'Overt Expression of Persuasion.' This analysis is applied within the domain of editorial writing in Pakistani English newspapers.

The main emphasis of this study is to examine linguistic variations within PENE. For this purpose, a manually curated corpus of 1000 editorials have been collected from online sources. The corpus consists of 250 editorials from each of the following newspapers: DN, TET, TF, and TN. These editorials are subject to linguistic variation analysis in the context of PENE. Subsequently, based on similarities and differences, the frequencies of editorial features are compared across these four distinct newspapers using MDA. This analysis plays a pivotal role in revealing the linguistic variations within the editorials of Pakistani English newspapers.

The significance of this research within the Pakistani framework is underscored by the absence of prior studies on this specific dimension. This study employs a corpus-based approach, focusing on Dimension 4 ('Overt Expression of Persuasion/Argumentative'), to explore the co-occurrence of linguistic features in editorial writing across newspapers. By examining both quantitative and qualitative aspects, this study aims to address the following research questions:

1. To what extent do Pakistani English Newspapers exhibit linguistic variations in the writing of Editorials along Dimension 4 of MD analysis by Biber (1988)?

2. Literature Review

In this section, the study briefly provides an overview of research studies. It explores how MD analysis interprets the major dimension in detail to identify noticeable linguistic variation. The significant and major contributions of previous works are cited with examples. The primary aim

of this study is to demonstrate where linguistic variation has been examined and where the researcher's work fits in.

2.1 Prior Studies of Newspaper Editorials

Numerous studies have extensively analyzed the nature of editorials in Pakistani English newspapers by researchers. Most of these studies (Ali & Sheeraz, 2018; Ali et al., 2021; Ahmad & Mahmood, 2015; Kuhi & Mojood, 2014; Siddique et al., 2018a, 2018b, 2020; Shahid et al., 2020; Sadia & Ghani, 2018a, 2018b; Ahmad et al., 2019a, 2020a; Ghani et al., 2022) have focused on the linguistic features in newspaper editorials. However, prior research gave little attention to the investigation of linguistic features in newspaper editorials. These studies also shed light on some of the social, cultural, and political aspects of editorial writing in this context.

2.2 Prior Studies of Diachronic Analysis in Newspaper Editorials

From a diachronic perspective, Burt & Bauer (1996) conducted a study on the diachronic analysis of media language in newspaper editorials from 1900 to 1985 using data from The Times. They explored the usage of adjectives, relative clauses, verb agreement with collective nouns, and superlative marking. Similarly, Westin and Geisler (2002) analyzed diachronic research across 20th-century newspapers in three distinct phases. These studies employed Biber's 88 MDA as a method for assessing variance. They revealed that British editorials evolved to become more argumentative and less narrative over time. Likewise, Ali and Sheeraz (2018) investigated diachronic variations in Pakistani English newspapers using a multidimensional analysis approach.

2.3 Comparative Analysis of Newspaper Editorials in Past Studies

Many research studies have employed the MD approach on newspaper registers, often comparing Pakistani Newspaper Editorials with other varieties of English, such as Indian English and British or American English. Register variation has been a prominent theme in comparative analyses.

A comparative study conducted by Ali and Sheraze (2021) analyzed the lexico-grammatical patterns and linguistic variations in newspaper editorials across Pakistani, Indian, Bengali, and British writings. Findings revealed distinctions in the writing styles, with Pakistani editorials being the most informational and abstract, Indian editorials being the most non-narrative and least abstract, Bengali editorials being the most explicitly argumentative and least informational, and British editorials demonstrating their unique discourse style. This study has implications for researchers of South Asian Englishes, journalism students, media studies, curriculum designers, and those interested in newspaper editorials using a corpus-based approach.

2.4 Supporting Studies to the Multidimensional Analysis Model

Subsequently, Biber (1988) introduced MDA, which has been widely used to examine linguistic variation in English. MDA has been employed to scrutinize linguistic variations in both native and non-native varieties of English, both diachronically and synchronically, as well as comparatively. Several studies, such as those by Burt & Bauer (1996), Westin and Geisler (2002), and Ali and Sheeraz (2018), have successfully applied MDA to various linguistic contexts.

A Multidimensional Analysis of Pakistani English Newspaper Editorials was examined by Alvi et al. (2016). This study aimed to investigate the linguistic variation in Pakistani editorials by collecting data from five major newspapers: The Dawn, The Daily Times, The Nation, The News International, and The Frontier Post. The results revealed that the Frontier Post is most similar to

British periodicals, while Dawn is the least distinguishing in terms of Biber's textual aspects (1988). These findings suggest that linguistic variety emerges in Pakistani English editorial articles at both the national and international levels.

The current study aims to address gaps identified in previous investigations. It aims to improve upon prior research by providing a detailed corpus, larger data size, procedural analysis, and an advanced approach to define PENE frequencies. Furthermore, the current study criticizes the work of Ali et al. (2021) for lacking corpus details.

The present study is based on the exploration of linguistic variation in Pakistani English Newspaper Editorials along with the textual dimension of Overt Expression of Persuasion and Argumentation, as identified by Biber (1988). This dimension, known as Dimension 4, is labeled as 'Overt Expression of Persuasion/Argumentation.' It plays a pivotal role in conveying the persuasive and argumentative discourse. The linguistic features associated with this dimension include infinitive verbs, prediction modals, suasive verbs, conditional subordination, necessity modals, split auxiliaries, and possibility modals. These features are vital in identifying the function and mood of the interlocutor in persuasive discourse designed to persuade the addressee.

By following these moves, your literature review provides a more structured and comprehensive overview of prior research in the field of linguistic analysis of Pakistani English newspaper editorials, while also introducing the focus and contributions of the current study.

3. Methodology

3.1 Data Collection and Corpus Compilation

The initial step in creating a representative corpus of PENE was to select disciplines that could encompass a wide range of research areas. To achieve this, the corpus was sourced from five prominent newspaper editorials: DN, TN, TF, and TET. These newspapers collectively represent major cities across Pakistan, including Karachi, Islamabad, Lahore, and Peshawar. The editorial data was obtained from the respective websites of these newspapers, with 250 editorials collected from each source. This process resulted in the compilation of a corpus of PENE consisting of 1,000 text files categorized according to sub-genres of newspaper editorials.

Table 1. Sub-categories of Pakistani English Newspaper Editorials

No.	Sub-categories of Pakistani English Newspaper Editorials	Codes
1	Dawn News	DN
2	The Frontier	TF
3	The Express Tribune	TET
4	The News	TN

The table above demonstrates the division of PENE into five major categories. To facilitate this categorization, a dedicated corpus was developed to investigate linguistic variations within editorial writing.

These categories demanded both quantitative and qualitative analyses to facilitate comparisons of frequencies within PENE. In terms of occurrence, the quantitative results revealed the similarities and differences in linguistic features across textual dimensions in PENE.

This section is further subdivided into three parts: the first part focuses on data collection from various sources, the second part outlines the research design of the present study, and the third part delves into the Multidimensional analysis employed in the current study.

3.1 Nature of the Study

The current study adopts a primarily quantitative and empirical approach. It aims to systematically identify linguistic variations within Pakistani English Newspaper Editorials (PENE). This approach aligns with the principles of quantitative research as outlined by Creswell (2002).

3.1.1 Data Collection

Creswell (2002) defines quantitative research as the comprehensive process of data collection, interpretation, and analysis. For the present study, data was sourced from various online platforms. A diverse range of data was selected for the compilation of the corpus. Four distinct newspapers from the year 2016 (DN, TN, TF, and TET) were categorized for the corpus-based research.

These editorials represent various regions of Pakistan, including Karachi, Islamabad, Lahore, and Peshawar. Different authors contribute articles on various topics within the editorials. A total of 1,000 editorials were collected to develop the corpus within the Pakistani context, with each newspaper contributing 250 files.

The data creation process involved four key steps:
- Downloading all editorials from different newspaper websites.
- Converting the downloaded contents into Word files, followed by the conversion of Word files into Notepad files.
- Removing any extraneous information, including headers, footers, and irrelevant content, from the corpus.
- Generating an Excel sheet for each category of newspaper genre.

3.1.2 Research Design

This section focuses on the comprehensive research design. As per Sekaran (2003), research design encompasses the overall strategy for data collection, interpretation, and analysis. In the context of this study, the research design pertains to PENE.

The research design can be categorized into different components, each playing a critical role in the research process.

Table 2. Time Frame of Newspaper Editorials

No.	Newspapers	Time Frame
1	Dawn	
2	The Express Tribune	
3	The Frontier	2016
4	The News	

The table above indicates that the newspaper editorials used in this study are from the year 2016. The data for the four newspaper editorials was collected from various web links of DN, TN, TF, and TET. Additionally, the data table provides a comprehensive overview of the different categories within the newspaper genre.

Table 3. Summary of all newspaper

Name of Newspaper	Total No of Newspaper	Total No of Words
Dawn	250	105384
The News	250	105230
The Frontier	250	174503
The Express Tribune	250	94415

In terms of the overall scores for the newspaper editorials, the table above displays the total number of texts and the total number of words. The corpus consists of 1000 editorials, each containing 250 editorials, with an average editorial length ranging from 400 to 600 words. On average, the editorials are approximately 800 to 1250 words in length.

3.1.3 Research Instrument

MAT is the chosen software for analyzing quantitative data in this study. MAT automatically tags all the data and plays a significant role in identifying the co-occurrence patterns of linguistic features in different situational contexts, as proposed by Douglas Biber (1988). MDA provides comprehensive information and statistical analysis about the dimensions.

3.1.4 Data Analysis

The data analysis for this study encompassed four key steps. First, we obtained the content of all editorials and converted it into Word files, then further transformed them into Notepad files. We excluded irrelevant information like headers, footers, and other extraneous content from the corpus. Second, we employed the MAT tagger to automatically tag and analyze the corpus. The tagger provided mean dimensional scores by identifying the co-occurrence of 67 linguistic features across five textual dimensions. The primary focus of this study is Dimension 4: Overt Expression of Argumentation/Persuasion. To facilitate comparison, we compared the writing of Pakistani editorials (Pak.Ed) to British editorials using mean dimensional scores. Similar scores for British editorials (Brit. Ed.) were obtained from MD Analysis.

3.1.5 Tagging of the Corpus

The corpus of PENE for the study was categorized and tagged using Biber's tagger. This study adopted the 88 Multidimensional analytical approaches proposed by Biber (1988) to examine linguistic features through data tagging. The detailed information on these features is found in the Longman Grammar of Spoken and Written English (Biber et al., 1999).

3.1.6 Converting Raw Counts into Normalized Frequencies for Linguistic Features

In order to facilitate meaningful comparisons, the researchers transformed the raw frequency counts of various linguistic features into normalized frequencies using Biber's Tag count program. A total of 1000 texts were employed to generate raw frequency data for these linguistic features, and the normalization process entailed calculating frequencies per 1000 words. This normalization is of paramount importance as it allows for a fair comparison of text variations across different text lengths and ensures the accuracy of the results. Biber's assertion in 1988 highlights the potential error in evaluating the frequency distribution of texts when comparing non-normalized counts with texts, as detailed on page 75 of his study. The calculation is also provided below for reference:

$$\text{Normalization} = \frac{\text{Frequency of specific linguistics feature}}{\text{Total length of text}} \times 100$$

3.1.7 Calculation of Dimension Scores

The dimension scores were computed by aggregating standardized scores from each text within Pakistani newspaper editorial writing. These dimensions are constructed around sets of language elements that co-occur with shared communicative purposes. They serve as tools to identify statistically significant disparities in Pakistani newspaper editorial writing. Each dimension is linked to a specific communicative function, and this connection is instrumental in interpreting the results. The following dimensions were considered:

1. Involved versus Informational Production
2. Narrative versus Non-Narrative Concern
3. Explicit versus Situation-Dependent Expression
4. Overt Expression of Persuasion
5. Abstract versus Non-Abstract Information
6. Online Informational Elaboration

The fourth dimension, "Overt Expression of Persuasion/Argumentative," was exclusively derived from the cumulative positive scores of linguistic features. This dimension was employed for analyzing the newspaper writing in Pakistani editorials and subsequently comparing it with registers examined by Biber (1988).

5. Results and Discussion

In this section, the research findings are presented and discussed. The quantitative approach is employed to present numerical results in the form of frequencies, utilizing Biber's Model of Linguistic Variation in Dimensional mean scores. This approach serves a dual purpose: firstly, it facilitates the comparison of frequencies of linguistic features, highlighting their similarities and differences. Secondly, the qualitative technique is utilized to functionally interpret these numerical results. Within the quantitative method, we conduct a comparison between Pakistani Editorials (Pak. Ed) and British Editorials (Bri. Ed) using Dimensional Scores as analyzed through Multidimensional Analysis (1988).

5.1 Overall Comparison of Pakistani English Newspaper Editorials

This section focuses on the overall comparisons with respect to dimensions. The mean scores reveal that all texts hold equal significance in their respective natures. Furthermore, all linguistic features fall into both positive and negative categories. The co-occurrence of linguistic features aids in determining the nature of the text and its alignment within the spectrum.

The provided figure affirms that all editorials exhibit a persuasive nature. This assertion is substantiated by the high positive scores observed in Dimension 4 in the Pakistani English Newspaper editorials.

Figure 1. Comparison of PENE with respect to Dimension
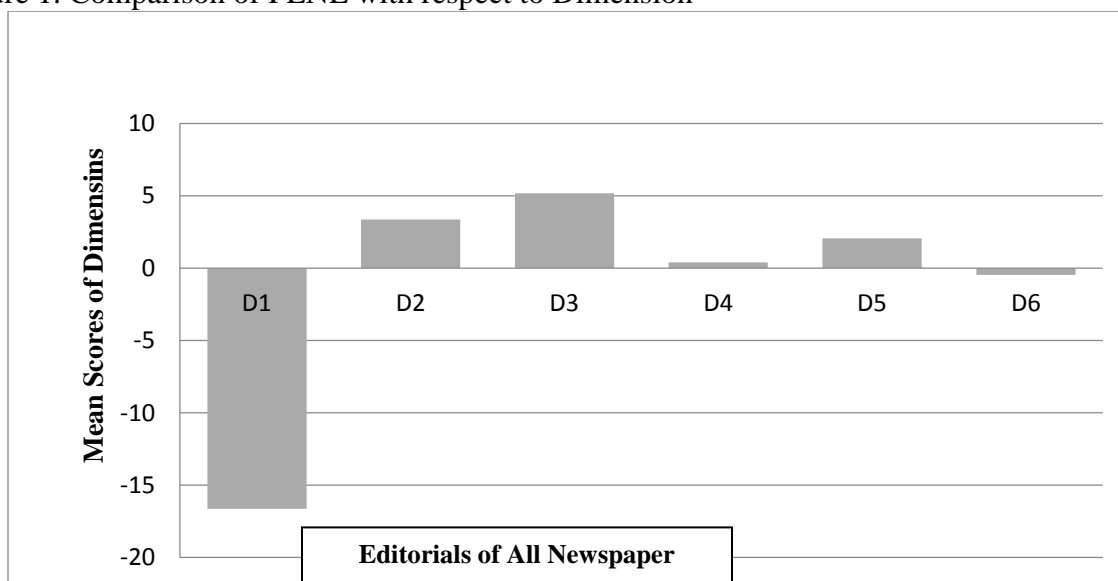
The figure highlights that all dimensions of the editorials exhibit a spectrum of positive and negative mean scores. It is evident from the figure that Dimension 4 is notably more persuasive compared to other dimensions. Conversely, the data suggests that editorials falling under other dimensions tend to have more negative scores, rendering them less persuasive. In summary, it is apparent that all editorials are more persuasive, thanks to the positive scores on Dimension 4 as compared to the rest of the dimensions.

5.2 Comparison of Pakistani English Newspaper Editorials on Dimension 4

Biber (1988) posits that texts differ from one another based on the functions they serve, ranging from argumentative to non-argumentative in nature. Dimension 4 of the multidimensional analysis centers on the 'Overt Expression of Persuasion/Argumentation.' Therefore, Figure 1 illustrates the nature of Pakistani English Newspaper Editorials in this context. The presented data also sheds light on the comparative characteristics and functions of editorials in selected newspapers. The presence of positive scores within these dimensions underscores the persuasive and argumentative nature of the texts. In conclusion, the figure confirms that all editorials exhibit a persuasive nature, as they all carry positive scores.

Figure 2. Comparison of PENE on Dimension 4
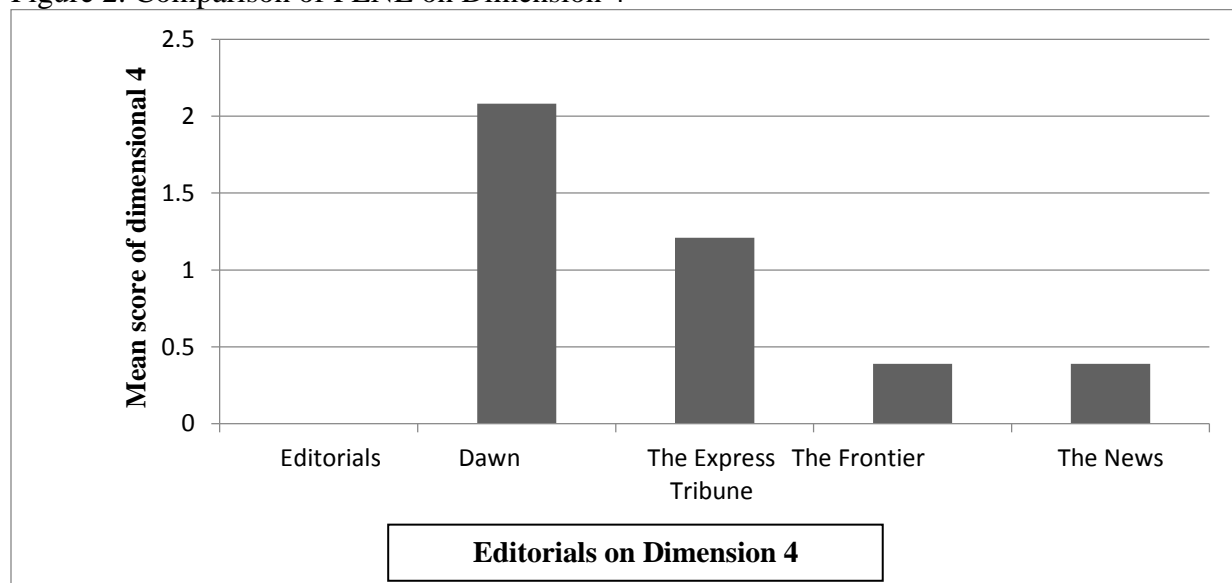
The figure illustrates that editorials within the four categories exhibit positive mean scores, indicating that they possess a persuasive and argumentative nature as denoted by these positive scores, specifically 2.08, 1.21, 0.39, and 0.39. The co-occurrence of linguistic features plays a significant role in elucidating the similarities and differences in this context. Biber (1988) has argued that "Dimensions are bundles of linguistic features that co-occur in the text and become the cause of some underlying change" (p. 55).

In the following example, extracted from an editorial in the Pakistani newspaper Dawn, the bold words serve as prime examples of linguistic features that serve as primary markers for generating persuasive and argumentative discourse in a text.

> **The** portents **are not good**. **If** this is the level of **trust** among the world's **major** Muslim powers, **then possibilities** of further sectarian fragmentation **are** considerable. It **would** be interesting to hear **what**, **if** any, Pakistan's input **was** on this **strongly** worded statement. In the **recent** past, Pakistan has **tried to** act as a bridge **between** Saudi Arabia

and Iran. **While** it **should continue to** maintain cordial links **with** both sides, under no circumstances **should** Pakistan be drawn **into** the partisan politics of the Muslim world.

In the example provided above, we can observe that the modal of necessity ("should continue," "should Pakistan") and the subordinating conjunction-conditional ("If this is the level and if any, Pakistan's input") are prime instances of linguistic features that contribute to the overt expression of argumentation and persuasion in a discourse.
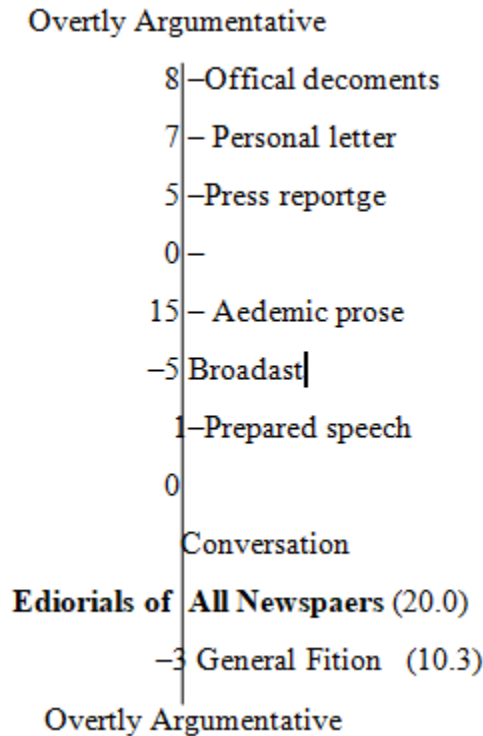
5.3 Interpretation of Dimension 4

To comprehensively interpret and understand Dimension 4, it is crucial to delve into the details of this dimension and how positive scores impact and influence the results. Dimension 4, "Overt Expression of Persuasion/Argumentation," comprises seven positive linguistic features. Notably, all sets of features within this dimension carry a positive weight. These positive features include the infinitive, model of predication, suasive verb, subordinate conjunction, conditional, model of necessity, and split auxiliary. When these features appear in a significant number, they contribute to labeling the text as highly argumentative. As Biber (1988) has argued, the co-occurrence of these linguistic features can sway the text towards a positive or negative tone. When a text contains a substantial number of positive features, it tends to have a lower ratio, and vice versa. High scores of positive features indicate that the text conveys a point of view, assessment, likelihood, and the speaker's expression (p. 133). Therefore, in the interpretation of dimensions, it is the co-occurrence of linguistic features that distinguishes the text type, determining whether it is positive or negative, persuasive or informational.

5.4 Comparison with Biber's (1988) Registers along Dimension 4 Topic

After an in-depth analysis of the entire research on Pakistani English Newspaper Editorials, it is imperative to compare the findings with Biber's work (1988). The idea for the current research is derived from Biber's work on all dimensions of Multidimensional Analysis. Biber selected 23 different genres from various fields of life, including 17 genres from written aspects and 6 from spoken genres.

The hypothesis is supported by the finding that the nature of Pakistani English Newspaper Editorials resembles that of general fiction. Biber (1988) emphasizes the significant variations and dialogue differences across texts in general fiction. General fiction stands out due to its informational elaboration and reliance on situational references, and it typically carries unmarked scores in persuasive discourse (p. 185). In conclusion, it is evident that editorials provide precise and densely persuasive content about Pakistani English newspapers, similar to the characteristics of general fiction.

Figure 3. Mean scores of Dimension 4 for PENE and six other genres studied by Biber (1988)

Overtly Argumentative

8 –Offical decoments

7 – Personal letter

5 –Press reportge

0 –

15 – Aedemic prose

–5 Broadast

1 –Prepared speech

0

Conversation

Ediorials of All Newspaers (20.0)

–3 General Fition   (10.3)

Overtly Argumentative

5.5 Dimension 4: Overt Expression of Persuasion/ Argumentation Adapted from Biber (1988)

The figure above illustrates that the various newspaper editorials scored highest on this dimension, indicating a pronounced inclination toward overtly argumentative content. Argumentative text is crafted to persuade and convince readers, typically supported by multiple pieces of evidence. Moreover, argumentative discourse often presents both sides of an issue, leading to a final conclusion. The primary aim of editorial writing is to provide a logically structured argument on a specific subject. Editorials tend to offer argumentative insights into topics such as government, education, economic issues, and child abduction. The diversity of editorials emerges as a persuasive and argumentative genre, residing firmly on the positive end of the spectrum in Dimension 4. The prevalence of positive linguistic features, akin to those characterizing general fiction, is notably apparent within editorials across Dimension 4.

6. Conclusion

In light of the results presented in this study, it becomes evident that the language used in editorials across Pakistani English newspapers serves a persuasive function. The examination of editorials from four distinct English newspapers within the context of Dimension 4, denoting the "Overt Expression of Persuasion/Argumentation" within the multidimensional approach pioneered by Biber (1988), offers valuable insights.

Notably, DN and TF emerge as exceptionally persuasive and argumentative in their writing, evolving as distinctive, non-native varieties within English-speaking countries. The average score for Dimension 4 unequivocally indicates that Pakistani editorials exhibit a highly argumentative and persuasive nature when compared to British editorials analyzed in Biber's work of 1988, as well as other promotional registers.

This persuasive quality is attributed to the co-occurrence of specific linguistic features, including the infinitive, model of predication, suasive verb, subordinate conjunction, and conditional constructions. These elements collectively contribute to the persuasive nature of the text.

The findings of this study have far-reaching implications, not only in shedding light on the linguistic characteristics of PENE but also in guiding future research endeavors. Subsequent analyses of editorials, incorporating various textual dimensions, offer the potential for insightful comparisons with British editorials. This research provides valuable insights for linguists studying non-native English writers, particularly within the sub-register of Pakistani newspaper writing, which is characterized by its unique linguistic features.

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