

# Multidimensional Analysis of Two Sub-Genres in Newspaper Language

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## Abstract

The present study aims at multidimensional analysis of two sub-genres i.e. newspaper editorials and letters to the editor from newspapers' language to determine their functional relations. The study assumes that editorials and letters to the editors have same communicative function. This is because of the fact that an editorial is a voice of newspaper and a letter to the editor is of reader but which features have kept them in different sub-genres? For the sake of investigation, the corpus has been collected from both sub-genres individually i.e. corpus of newspaper editorials with 15530 number of tokens and corpus of letters to the editors with 15601 number of tokens. After the application of multidimensional analysis, it is appeared that both the genres are falling in one dimension i.e. General Narrative Exposition however, at the same time there comes a difference regarding positive and negative loadings upon dimensions with more negative loadings upon letters to the editors than editorials showing that the letters are less communicative than editorials. Further the analysis is being done for z-scores of both sub-genres, the interesting variables of editorials are T<sub>SUB</sub>, [S<sub>ERE</sub>] and [S<sub>PIN</sub>] while for letters are RB & PHC. These scores represent that letters have simple linguistic structures as they have more variations on word-level and phrase-level features while editorials are complex textual structures with more variations upon sentence or clause-level features.

**Keywords:** multidimensional approach, newspaper discourse, comparative genre analysis

## 1. Introduction

The analytical approach for multi-dimensional analysis was initially developed to describe the linguistic characteristics of a register as a whole, in this way compare two or more registers. This technique of corpus linguistics is actually based on computational analysis of spoken and written language in the form of texts for the statistical identification of fore-grounded patterns in the text due to linguistic co-occurrences called the Dimensions (Biber et al., 2002). All these dimensions have specific linguistic features and these features are responsible for the distinct function performed by each dimension separately. Different registers and genres can be compared and studied through this technology because it describes the overall picture of the genres or registers.

Due to this uniqueness of MD, the current research is designed to study the two sub-genres of a major linguistic genre i.e. newspaper's language. Newspaper language, in itself has many sub-genres like editorials, news reports, news stories, columns, blogs, articles and letters to the editors etc. but this study focuses on just two sub-genres for comparative study. The above given sub-genres are influentially different due to the variations in their writing mode. Two focused sub-genres for the present study are editorials and letters to the editors. The purpose of selecting these two for the sake of study is that editorials are newspaper's voice on the other side letters to the editors are public's voice. We are not concerning here with the critical discourse perspective except that we are more concerned with the nature of structure and expression through written mode of both the genres additionally, the role of different linguistic features in performing specific function by both genres.

The problem arises with the assumption that editorials are newspapers' communication with its audience and letter to the editors are communication of public with the newspaper, then the mode and structure of communication should be same but on the contrary both the genres are depicting opposite pictures. Point to ponder is whether editorials are performing communicative function in a better way or the letters to the editors. For this solution, we have to do an overall multi-dimensional analysis of both genres to clarify their relationships and opposites. Therefore, the present study aims to investigate the functional relationship of newspaper editorials and letters to the editors so that one can determine the nature of communicative function being performed by both genres separately.

Research questions for the concerned problem are devised on the basis of our assumptions regarding the relationship between both sub-genres.

- Which linguistics features of editorials and letters to the editor are playing influential role in making that sub-genre unique for conveying its message to its addressee?
- What is the frequency of positive and negative loadings upon six dimensions?
- How z-scores and MAT statistics can help in determining the function performing by specific genre or sub-genres?

The considered study tries to justify the relationship between newspaper editorials and letters to the editors, assuming the fact that newspaper editorials perform the function of conveying the ideology to its readers and to

communicate with its readers through their specific ideas, further that the letters to the editors perform the function of public's communication with its newspaper or its editor. Keeping in mind this relationship, the study justifies that both the genres performs communication but their mode and structure is different which makes their expression distinct from each other.

## **2. Literature Review**

Multidimensional approach in corpus-based researches is being a popular methodology now-a-days. This type of research is apparently more suitable for register or genre researches by taking different genres from written and spoken corpora (Biber et al., 2002). In Multidimensional approach, different linguistic variations in texts are examined overall through the register. Hence, this corpus-based approach drives through computational analysis of texts which are collected from spoken and written registers for the purpose of identification of crucial linguistic co-occurrences called "dimensions" which are statistically evaluated from factor analysis (Biber, 2002).

### **2.1 Analysis of Linguistics Features through Multidimensional Analysis:**

In Multidimensional Analysis, the co-occurrence of features in each set is titled as a dimension through which one can mark different genres with the help of different mean score. Different researchers have investigated various linguistic features through multidimensional analysis for instance; Reppen (2001) studied linguistic variations in a corpus of elementary students writing keeping intact the age factor of the students. Furthermore, Conrad (1996) explored patterns across the writing styles of research and summary in two different academic disciplines on comparative grounds i.e. the comparison of professional writing and university student's writing. Another, evidence for multidimensional analysis is found in Crossley (2007) to determine register classification by using nine spoken and two written corpora and emerged four dimensions of discourses through factor analysis using bigram frequencies i.e. scripted & unscripted, deliberate & unplanned, spatial & non-spatial lastly, directional & non-directional. In Biber's work, the corpus was comprised of seventeen written and six spoken registers. His focus was on word-level information and concluding with 67 linguistic features. Moreover, he put factor analysis depending upon normalized frequencies out of which six factors emerged to place various registers on them. Biber has defined relationships among texts as follows:

- (1) Involved versus Informational Production;
- (2) Narrative versus Non-Narrative Concerns;
- (3) Explicit versus Situation Dependent Reference;
- (4) Overt Expression of Persuasion;
- (5) Abstract versus Non-Abstract Information;
- (6) Online Informational Elaboration

In Biber's (1988) work all dimensions have plotted registers into positive and negative loadings that were distributed throughout the texts in corresponding patterns.

### **2.2. Applications of Multidimensional Analysis upon Language Corpora**

Corpus linguistics has various tools and approaches to be used in the studies of different linguistic issues. There are different approaches like investigating different characteristics involved in use of language features, to investigate different relations among genres, sub-genres and registers by using multidimensional analysis, also the investigation of certain functions unique to a language and lastly the frequency of occurrences of a feature in corpora. A series of initiatives was focused to design learner corpora in the field of language learning for pedagogical and methodological developments. The use of statistical techniques of multidimensional analysis to study genre variation in corpora related to language was carried out by Biber (1988) as he based his work upon his past research about spoken/written differences to identify linguistic features regarding their grammatical class. Further, Biber (2004) has done multidimensional analysis separately on the register of conversation to study conversation types in functional terms hence, closely related to the aim of present which to find out the functional differences between two type of texts falling within same dimension. Knowing that, multidimensional analysis is a healthy tool for analysis of learner language which elaborates register and variation in the pedagogical setting. Multidimensional analysis has given the methodology to analyze the range and availability of variation through registers and genres in a particular language domain.

### **2.3 Applications of Multidimensional Analysis for Academic Discourse Analysis**

Past works for discourse has been limited because the discourse analysts were interested in individual registers or linguistic features not for the overall patterns of register variation. Additionally, those much comprehensive investigations were not feasible before MAT introduction in the field of language studies. The automated language processing of representative text corpora enables such comprehensive investigations (Biber, 1998). Such kind of corpus-based research has certain specifications like the naturally occurring discourse should be adequately represented, for this purpose different text samples can be collected as representative corpora for academic registers as the discourse analysis is based on long passages. Further there is automatic linguistic processing of texts using computational tools.

After having an overall view for the implementation of multidimensional analysis in language studies we came

to know that the usefulness of multidimensional analysis is limited up till now just with the academic discourse. The newspaper language has already been undergone the critical discourse analysis but the combination of multidimensional approach can yield an interested output. Hence, multidimensional analysis has been used in this study as a methodology and as a methodological tool also to demonstrate the variations in the two sub-genres of newspaper's language.

### 3. Methodology

#### 3.1. Sampling

Sample corpora have been collected individually from both sub-genres, i.e. Editorials and Letters to the editor. 50% of the data has been collected from DAWN and 50% from THE NEWS. Our focus is the genres not the newspaper ideologies hence we took the data just as linguistic entity. The purpose of taking data from two newspaper ideologies is to add more diversity for variation patterns in the data. Data of editorials from both newspapers is kept in one corpus which is named corpus for editorials while corpus of letters from both newspapers is kept in one corpus named corpus of letters to the editors. The amount of data is:

Corpus name	No. of Tokens
Corpus of editorials	15530
Corpus of letters to the editor	15601

#### 3.2 Instrumentation:

Major instrument of the present study is Multidimensional Analysis Tagger (MAT) which is downloadable from the official site of MAT. Other than MAT, the study involved the contribution of NOTEPAD software for keeping files in windows because MAT software only receives NOTEPAD files for analysis process. Hence, all the data is first saved over NOTEPAD and then uploaded on MAT.

### 4. Analysis & Interpretations

After the data being processed by Multidimensional Analysis Tagger (MAT), there appear different files with tagged data.

Corpus of editorials					
Editorials [the text]	Results_Corpus of editorials.txt				
	MAT_corpus of editorials			ST_corpus of editorials	Corpus of editorials.txt
	Statistics			Corpus of editorials_MAT	
	Visuals of six dimensions in PNG format	Dimensions_editorials [text file]	Statistics editorials	Z-scores_editorials	

**Table the order of folders after MAT processing of the corpus.**

Similar distribution is for both genres. The two genres are similar in the sense that editorials are editor's voice and letters are public's voice but both the genres lie most closely in "general narrative exposition". Despite of being fallen closely in the same dimension, there are certain marked differences which give different featured variation in the two genres. The pictorial display of difference on dimensional level is given in appendix 1.

As you can see in the figure, there is a marked decrease from normal horizontal line. It means that, the dimension for 'Informational versus Involved Production' and 'Online Informational Elaboration' have negative values. On the other hand, the editorials are depicting a different side in appendix 2. Editorials lie only once in the area of negative poles. It refers that editorials have negative loading over just one dimension 'Informational versus Involved Production' its more positive loadings making it more interactive genre than letters to the editor. So far it is evident that the public, writing letters to the editors of a newspaper have more tendencies to create officially formal document while editors via editorials try to get more interactive towards their audience. Moreover, the values of dimension have shown that letters to the editors are much similar towards press reportage unlike of the fact that letters are believed to have an interpretive point of view because they are falling towards place of press reportage in all the dimensions.

According to z-scores statistics, the interesting variables are different for both the texts even though falling within the same dimension i.e. general narrative exposition. Hence, to view fore-grounded variables as follows:

Z-scores 'interesting variables'	Editorials	Letters to the editors
1	TSUB (3.88)	PHC (0.17)
2	[SERE] (3.50)	RB (-0.61)
3	[SPIN] (4000.00)	[SPIN] (-0.63)

Table 'interesting variables' in both corpora in z-score statistics

These three varied features out of all the 67 features of both corpora are placed in the category of 'interesting variables' by MAT. This difference yields technically varied results making factor relations unique. As you can see that in table2 the values of certain interesting variables are in majority for editorials on the other side, they

are very low (in negative) for letters to the editors. The characteristics and features of each of them are combining the whole genre distinct from the other. For instance, the influencing z-scores of editorials are TSUB, [SERE] and [SPIN]; TSUB is 'that' relative clauses on subject position, [SERE] is a sentence relative which is counted and tagged every time a punctuation mark is followed by the word which (Nini, 2014) and [SPIN] is split infinitive that is identified every time an infinitive marker 'to' is followed by one or two adverbs and a verb base form. These features are reflecting towards complex clauses or sentences because they provide more scope for using varied structures within a sentence and vocabulary. On the contrary, the z-scores of letters are showing simpler text type as they have prominent features on word level like RB (adverbs) and phrase level like PHC (phrasal co-ordination) rather sentence level.

Up till now, the results have shown that editorials function more interactively while letters to the editors are seemed to be consciously written as official document having more negative loadings upon Dimension 1 and Dimension 6. Interestingly, editorials have given high z-scores for TSUB, [SERE], [SPIN]; the features recommended for complex texts but letters to the editor have influential z-scores for word level and phrase level features. Thus, these values support letters to the editors in this matter that their simple language plays a role for making their voice communicative to the editors but it is consciously written as official document. Hence, editorials play a communicative role through their interactive linguistic structure (four dominant Dimensions with positive loadings) while letters of the public communicate through their simple structure but they design their letters in more formal way which shows that common people are more conscious about their writing which is going to be published in a newspaper.

## 5. Discussion

The current study aims to investigate the relationship between two sub-genres of newspapers' language by using the analytical approach for multi-dimensional analysis that was designed for the identification of linguistic characteristics of a register or a genre. This method analyses any text on computational grounds and assign certain specific features to a text that determines its 'Dimension'. Making newspaper discourse and multidimensional approach in combination, the target of this paper is to investigate the relationship of newspaper editorials and letters to the editors regarding their function which they perform or which they aim for, so that one can determine what the nature of communicative function is, that performing by both genres independently but having certain functional properties intact with each other. The gap arises when we assume that editorials are newspapers' communicative tool to interact with its audience and similarly, letters to the editors are communication tool that is used by public to communicate with the newspaper, and then this assumption requires that the mode and structure of communication of both sub-genres are equally designed but the situation is totally opposite.

In Corpus linguistics, different tools and methods are used to study different problems from language studies. Different methodologies have been proposed like to investigate different characteristics for language features, determining relationships among genres and registers by using multidimensional analytical approach and lastly the identification of certain functions unique to a language and lastly the frequency of occurrences of a feature in corpora. Biber (1988, 2002) has taken a series of initiatives focusing upon the design learner corpora in the field of language learning for pedagogical and methodological developments. Similarly, use of statistical techniques in multidimensional analysis to study genre or register variation related to language was carried out by Biber (1988). More of his works is based upon his past research about spoken/written differences to identify linguistic features regarding their grammatical class. The use of multidimensional analysis of learner language is done in university EFL learners is studied to increase their awareness of linguistic concepts (Pe'rez-Paredes, 2012).

Therefore, the proposed research questions for the target study show certain combinations regarding linguistic distinction in multidimensional analysis and newspaper sub-genres. As the first question has posed the query that what those essential linguistic features of editorials and letters to the editors are that have performed a clearly mark-able role to distinguish the way of conveying message towards the addressee. The statistics have shown that features which are extracted from z-scores are responsible for the huge difference between the two sub-genres. The editorials have interesting variables of TSUB, [SERE] and [SPIN] with heavy positive loading but on the contrary; letters to the editors have interesting variables of PHC, RB and [SPIN] with very low loadings. The features of editorials all have sentence level construction design while letters to the editor show word level range or phrasal level variation. Furthermore, both the genres are lying in the same closest dimension "General Narrative Exposition" but they have extremely different z-scores values.

The issue of positive and negative loadings is also very prominent in this study as the editorials are showing negative loading only upon "Dimension 1" while letters to the editors are showing negative values on two dimensions i.e. Dimension 1 and Dimension 6. It refer that editorials perform rather a bit more interaction than letter to the editor. After justifying this through dimensions we justify through z-score the consciousness factor for the public writing letters to the editor. Lastly, the interpretation of letters and editorials from z-scores have shown that common people more consciously write letters as they are cognizant that their letter is going to be published that's why they try to write them with high formality and in official document style on the other hand,

the editor is not conscious of such kind of things.

Nesi (2008) has studied the variation of BAWE corpus on the basis of the five dimensions. Interestingly, the dimensions have dominant negative loading values and just two dimensions are with positive loadings which show that the corpus is more formal and informational rather than interactive. Nesi (2008) has used one combined corpus while the present study has a comparative analysis of the two sub-genres from newspaper language. Nesi (2008) is a general description and interpretation of data across the five influential dimensions but the current study has tackled with interesting variables defined by z-scores statistics of MAT software.

This study is influential in the way that it makes sub-genres a major category after a super linguistic category of genre. It clarifies the hidden relationship of editorials and letters to the editors because before this study, the relationship of these two sub-genres is overlooked. Secondly, it determines the usefulness of z-scores in the analysis of any linguistic entity. Thirdly, on educational grounds, it makes aware about the influential classification of sub-genres in genres through discussing newspaper genres and its sub-genres i.e. editorials and letters to the editors.

### Conclusion

The present study aims to investigate the functional relationship between two sub-genres of newspaper language i.e. newspaper editorials and letters to the editors for the purpose of determining the nature of communicative function being performed by both genres separately.

These two sub-genres have been chosen because the editorials are the representation of newspaper's voice and letters to the editors are of public. As it is assumed in the very beginning that both have same functional perspective, the output of the dimensional chart is according to the assumptions that both genres are falling within same dimension i.e. General Narrative Exposition. For the target, the analysis has been done according to positive and negative loadings upon dimensions and z-scores statistics. There is more negative loadings upon letters to the editors and just one negative loading in editorials which shows that editorials communicate well than letters to the editors. Similarly z-scores are dominantly affecting the two sub-genres because the dominant z-scores of editorials are for sentence level constructions and features are those which are helpful in complex structure formation like TSUB, [SERE] and [SPIN], on the other hand, the letters are giving influential values for word level or phrase level formation leading towards simple text construction like RB and PHC.

The results have shown that the letters to the editors are yielding more professional and official writing than editorials. The reason is evident from features in z-scores that common people are conscious about their writing in an official print media source while the editor of the newspaper while writing editorials tries to be communicative with his/her audience so that to convey the ideology of the newspaper in a right direction. But the letters are also capable for communicating their message because of their simple language structure construction.

The further studies can be stemmed from this one in the field of spoken genre of news broadcast by holding a comparative study of sub-genres of news bulletin and political talk shows. This will yield the differences between spoken and written linguistic different between the both as news bulletin is just the spoken output of a written document while political talk shows reflect more natural kind of spoken genre.

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**Appendices:**  
 Appendix1.

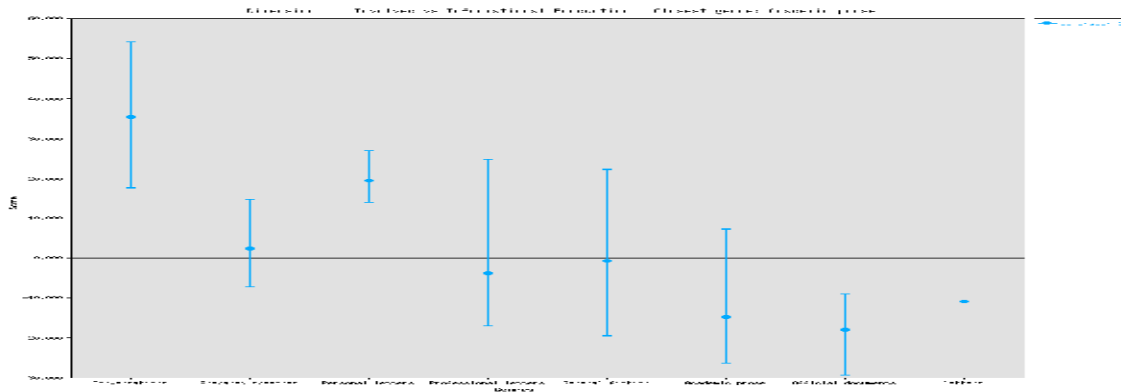


figure1: the dimension of letters to editor.

Appendix2

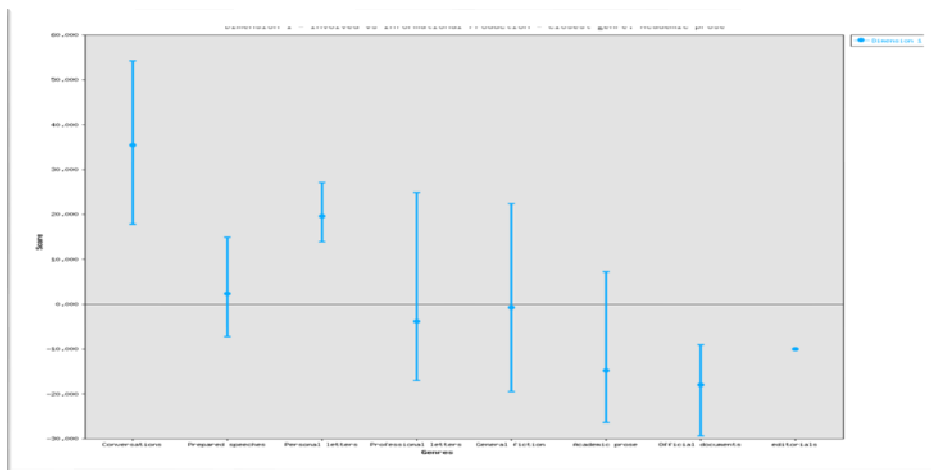


Figure2.Dimensions for letters to the editor