INVESTIGATING THE DESIGN OF THE SOCIAL NETWORK IN SHAKESPEARE'S *HAMLET* AND SUMAROKOV'S *GAMLET*: A QUANTITATIVE STUDY

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Abstract

The present paper offers new insights into the internal structural organisation of the two plays—Shakespeare's *Hamlet* (1685) and Sumarokov's *Gamlet* (1787). The primary aim is to compare the structures of the plays through the identification of the dimensions of structural differences linked to the inter-textual representation of the complexity of the relationships among Hamlet, Claudius and Polonius. A particular emphasis is on how these characters interact with each other as well as with Gertrude, Ophelia and secondary characters. The analysis is based on computational quantitative techniques and systematic qualitative exploration of the empirical data. The key findings show considerable deviations between the structures of the plays per distinct acts associated with their organisation of the social network of the main male characters.

Key words: Computational, quantitative, qualitative, structure, interact.

Resumen

El presente artículo ofrece una nueva perspectiva sobre el estudio de la estructura interna de dos obras: *Hamlet* (1685) de Shakespeare y *Gamlet* (1787) de Sumarokov. El objetivo principal es comparar las estructuras de estas obras a través de la identificación de las dimensiones de las diferencias estructurales en lo referido a la representación inter-textual de la complejidad de las relaciones entre Hamlet, Claudio y Polonio. Se pone un énfasis especial en las interacciones entre estos personajes, tanto entre sí como con Gertrudis, Ofelia y los personajes secundarios. A tal fin, hemos usado tanto métodos computacionales y quantitativos como un análisis sistemático cualitativo de los datos empíricos. Los resultados manifiestan las divergencias significativas entre las estructuras de las dos obras en distintos actos y en relación con la organización de la red social de los principales personajes masculinos.

Palabras clave: computacional, cuantitativo, cualitativo, estructura, interacción.

1. INTRODUCTION

The effective significance of corpora and corpus resources and techniques for literary, textual and translation studies have been in a continuous increase over the recent years. With regard to literary texts, the multi-disciplinary nature of Corpus Linguistics is understood in its broadest sense as the interface between language, computer science, and the literature. This relatively young field seeks to address the links between theory, method, and quantitative data, without neglecting the need for bridging the gap between corpus linguistics and literary studies to deepen our understanding of literature, literary processes, and literary applications.

Such scholars as Stubbs ("Conrad"), Wynne ("Stylistics"), Mahlberg ("Corpus," "Clusters"), Fischer-Starcke ("Corpus"), Biber ("Corpus") or Johnson ("Use") shed light on the fact that it is amazingly becoming possible to explore empirically assertions about the language of literature, to look for and provide proof from texts, to display and establish the range and variety of literary and non-literary style, and to have detailed analysis of the texts' structures and meanings.

The main area of research of this investigation is the study of text by means of corpus-based technique—in other words, by means of applying computational and quantification tools to literary and textual analysis.

This paper contains a wide range of empirical data and in-depth quantitative and qualitative analyses of the internal structural organisation of the two plays, that is, the *Fourth Folio Edition* of *The Tragedy of Hamlet Prince of Denmark* (1685) by Shakespeare and *Gamlet* (1787) by the Russian playwright Sumarokov, rendered into English by Richard Fortune in 1970.

TABLE 1. TEXTS USED IN THE ANALYSIS		
AUTHOR	TITLE	ABBREVIATION
Shakespeare	*The Tragedy of Hamlet Prince of Denmark* (1685), the *Fourth Folio Edition*	SH
Sumarokov	*Gamlet* (1787), in Russian (for reference)	SG-R
	Hamlet (1970), rendered into English by Richard Fortune	SG

The present work is based on the electronic collection of these texts that are shown in table 1. For the purposes of this research, Shakespeare's text is referred to as *Hamlet* or SH; the Russian text is referred to as SG-R, whereas its English translation is referred to as *Gamlet* or SG. However, one should be aware of the fact that in this investigation SG-R and SG are interchangeable, although the general parameters of structural differences are analysed not between SH and SG-R but between SH and SG.

Shakespeare's *Hamlet* and Sumarokov's *Gamlet* have been extensively discussed in literary critical studies by such authors as Trediakovsky ("Friend"), Bradley ("Shakespearean"), Charlton ("Shakespearian"), Simmons ("Early"), Tillyard ("Elizabethan"), Billington ("Icon"), Toomre ("Sumarokov's"), Hattaway ("Hamlet"), Levitt ("Sumarokov's"), Gukovsky ("Russian"), to name just a few. Nevertheless,

using corpus-based techniques in their analysis opens up new vistas for the study of the texts' structures and meanings, as this method does not derive from the various standpoints of criticism that have existed to date.

Bearing in mind distinct perspectives to both plays such as historical, philosophical, or language-based, the conclusion is drawn that Shakespeare's *Hamlet* and Sumarokov's *Gamlet* can be analysed and compared not through the author's description or mere (re) interpretation of the plays' structures and meanings, but through those aspects of the plays that could be easily located, extracted, quantified and computerised.

Therefore, an exclusive interest is not in the description and interpretation of all kinds of normative patterns and structural combinations of Shakespeare and Sumarokov's specific poetic languages as other scholars, namely Calderwood ("Be"), Gukovsky ("Sumarokov's"), Tynianov ("Ode"), Lang ("Sumarokov's"), Fizer ("Introduction") and Kermode ("Shakespeare's") have done previously.

In effect, the main aim is to compare the structures of both plays through the identification of the dimensions of structural divergences linked to the inter-textual representation of the complexity of the relationships among Hamlet, Claudius and Polonius. A major attention is paid to how the above-mentioned main characters interact with each other as well as with Gertrude, Ophelia and secondary characters.

This paper is divided into four sections. This section 1 gives some general information about the texts employed for the analysis, the area of research and the aims set up. Section 2 centres on the method applied to the analysis. Section 3 concentrates on the interpretation of the results and, finally, section 4 summarises the key findings and draws conclusions.

2. METHOD

The first task of the analysis here is to identify the sets of co-occurring structural patterns in the texts and to interpret them in quantitative terms. To this end, the total number of interaction variables is selected and quantified manually. After, the extracted data are computerised, tabulated (intra-play), cross-tabulated (inter-plays) and presented in tables. Finally, these variables are compared in quantitative and qualitative terms per different acts inter-plays. The tools utilised for the computational quantification are SPSS V.15 and Excel (Office 2007).

Before starting the analysis, some clarification should be provided on the abbreviations used in the tables that appear throughout this investigation. It should be noted that "M" and "O" stand for "Main Characters" and "Other Characters", correspondingly, whilst "H", "C" and "P" stand for "Hamlet," "Claudius," and "Polonius," respectively. Furthermore, secondary characters are addressed to as "other characters" because they are completely divergent inter-plays.

3. RESULTS AND DISCUSSION

The stages of the current work focus on the distribution patterns of the interactions of the main characters Hamlet, Claudius and Polonius per acts where they are present inter-plays. With respect to tables 2-9, it should be remarked that greater attention is paid to the data shown as a percentage as such data are considered more reliable for this kind of analysis.

3.1. HAMLET

The first stage of this research explores the distribution patterns of the interaction variables of the first main character, Hamlet, per acts I, III and V inter-plays.

The data in table 2 demonstrate that the link between the distribution patterns of the interactions of Hamlet with each main character is asymmetrical per act I inter-plays. The interaction pattern is specifically distinct between Hamlet and Gertrude and vice versa as it equals -48.59 % and -57.55 %, respectively. In fact, this kind of asymmetry, resultant in negative figures, may indicate that in act I:

1. The linkage between Hamlet and Gertrude is much closer in SG than in SH.
2. Gertrude has more initiative in her relationship with Hamlet in SG than in SH.

TABLE 2. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF HAMLET PER ACT I						
HAMLET WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (H vs. M)	EACH MAIN & OTHER CHARACTER WITH HAMLET	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. H)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Claudius	2	-	-	Claudius	2	-	-
Gertrude	3	9	-6	Gertrude	3	13	-10
Marcellus	1			Marcellus	8		
Horatio	26			Horatio	41		
Ghost	11			Ghost	9		
Bar-Mar-Hor	6			Both (Bar-Mar)	3		
Horatio-Marcellus	13			Both (Hor-Mar)	2		
Bar-Mar	2			All (Bar-Mar-Hor)	1		
Bar-M-Hor-Ham	1			Armans		8	
Hor-Mar-Ghost	4						
Armans		6					
Gertrude-Armans		2					

Total	69	17	-6	Total	69	21	-10
%				%			
Gertrude	4.35	52.94	-48.59	Gertrude	4.35	61.90	-57.55
Total	4.35	52.94	-48.59	Total	4.35	61.90	-57.55

Furthermore, the dissimilarity is also possibly evident in the distribution patterns of the interactions of Hamlet with each other character as, in comparison to Shakespeare's Hamlet, the link between Sumarokov's Hamlet and the other characters is seemingly constrained by limitations. The latter finding may point to the fact that in act I Sumarokov is more interested in the relationship between Hamlet and the main characters, represented by his mother (Gertrude), than with the other characters. Thus, the linkage between the mother and the son, where the former has more initiative than the latter, is probably of greater appeal for Sumarokov. By contrast, Shakespeare seems to ascribe much more relevance to Hamlet's socialisation with the other characters that belong to a lower social rank.

TABLE 3. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF HAMLET PER ACT II							
HAMLET WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (H vs. M)	EACH MAIN & OTHER CHARACTER WITH HAMLET	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. H)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Claudius	2	-	-	Claudius	4	-	-
Polonius	5	0	5	Polonius	8	0	8
Gertrude	27	-	-	Gertrude	24	-	-
Ophelia	30	8	22	Ophelia	27	9	18
Rosincros	4			Rosincros	6		
Guildenstare	13			Guildenstare	13		
Players	2			Players	2		
Horatio	8			Horatio	7		
Ghost	2			Both (Rosin-Guild)	1		
Rosin-Guild	2			Ghost	1		
Claudius-Ophelia	1	-		Armans		1	
Players-Polonius	1						
Claudius-Polonius	1	-					
Polonius-Rosincros	1						
Rosin-Rec-Guild	1						
Rosin-Guild-Ham	1						
Gertrude-Ghost	1						

Armans		2					
Armans-Ophelia		1					
Total	102	11	27	Total	93	10	26
%				%			
Polonius	4.90	0.00	4.90	Polonius	8.60	0.00	8.60
Ophelia	29.41	72.73	-43.32	Ophelia	29.03	90.00	-60.97
Total	34.31	72.73	-38.41	Total	37.63	90.00	-52.37

The data in table 3 reveal that the connection between the distribution patterns of the interactions of Hamlet with each main character is not necessarily parallel per act III inter-plays. It is slightly divergent with regard to the interactions of Hamlet with Polonius as the difference equals 4.90 %, with a little preference to Shakespeare's Hamlet. It is quite dissimilar with respect to the interactions of Polonius with Hamlet as it equals 8.60 %, with preference to Shakespeare's Polonius. However, Sumarokov's Hamlet does not socialise with Polonius, which may indicate that this relationship is of no importance to Sumarokov. It is rather asymmetrical in relation with the interactions of Hamlet with Ophelia and vice versa as the difference is negative and equals -43.32 % and -60.97 %, correspondingly. This finding possibly means that Sumarokov's Hamlet and Ophelia socialise more with each other than Shakespeare's characters.

At the same time, Shakespeare and Sumarokov's standpoints appear to coincide (to some extent) with regard to the link between Hamlet and the other characters as it is possibly of little interest in SH and almost of no relevance in SG. The latter point may provide evidence to the fact that in act III both Shakespeare and Sumarokov, specifically Sumarokov, pay more attention to the relationship of Hamlet with the main characters—in other words, with the people who occupy a high social position, than with the other characters who belong to a lower social status.

The data in table 4 unveil that the link between the distribution patterns of the interactions of Hamlet with each main character is not necessarily symmetrical per act V inter-plays. It is not parallel in relation to the interactions of Hamlet with Polonius and vice versa as the difference equals 4.60 % and 3.85 %, respectively. Although the distinction does not seem to be significant, it should be noted that Hamlet and Claudius socialise in SH but they do not interact in SG.

Indeed, this kind of asymmetry, resultant in positive figures, may lead to the proposition that in act V Shakespeare, in contrast to Sumarokov, pays more attention to the connection between Hamlet and Claudius. In other words, the political relationships between the king and the prince and family relationships between the stepfather and the stepson are probably of major interest to Shakespeare.

TABLE 4. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF HAMLET PER ACT V					
HAMLET WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (H vs. M)	EACH MAIN & EACH OTHER CHARACTER WITH HAMLET	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. H)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Claudius	4	0	4	Claudius	3	0	3
Polonius	-	1	-	Polonius	-	1	-
Gertrude	2	-	-	Gertrude	3	-	-
Ophelia	-	9	-	Ophelia	-	10	-
Clown	17			Clown	18		
Horatio	33			Horatio	27		
Alertes	15			Laertes	12		
Osrick	12			Osrick	14		
All	1			Gentlemen (Lords)	1		
Horatio-Clown	1			Soldier		2	
Gert-Gent	1						
Osrick-Horatio	1						
Soldier		1					
Oph-Pol-Guard		1					
Total	87	12	4	Total	78	13	3
%				%			
Claudius	4.60	0.00	4.60	Claudius	3.85	0.00	3.85
Total	4.60	0.00	4.60	Total	3.85	0.00	3.85

Furthermore, the structural dissimilarities in the distribution patterns of the interactions of Hamlet with each other character also seem to convey that Shakespeare, unlike Sumarokov, gives priority to the link between Hamlet and the other characters. Compared to Shakespeare, Sumarokov appears to concentrate more on the relationship between Hamlet and the main characters, represented by Polonius and Ophelia who are absent in SH.

3.2. CLAUDIUS

The next stage of this study considers the distribution patterns of the interaction variables of the second main character, Claudius, with each main and other character per acts II, IV and V inter-plays.

The data in table 5 demonstrate that the connection between the distribution patterns of the interactions of Claudius with each main character is not necessarily parallel per act II inter-plays. It is very asymmetrical, specifically in the relationship

of Claudius with Polonius, as it equals -24.17 %. This kind of asymmetry seems to show that Sumarokov's Claudius has more initiative than Shakespeare's Claudius. The link between Claudius and Gertrude is slightly distinct as it equals -6.60 %, with preference to Sumarokov's Claudius. As a result, the total difference equals -30.77 %.

At the same time, the distribution patterns of the interactions between Polonius and Claudius appear not to be symmetrical either as the difference equals -16.66 %, with preference to Sumarokov's Claudius. Shakespeare's Gertrude seemingly socialises more with Claudius as the difference equals 5.55 %. As a result, the total difference equals -11.11 %. Thus, the linkage between Claudius and Polonius is probably much closer in SG than in SH whereas the relationship between Claudius and Gertrude is also possibly closer in SG than in SH.

TABLE 5. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF CLAUDIUS PER ACT II						
Claudius with Each Main & Other Character	Frequency of Interactions		Differences (C vs. M)	Each Main & Other Character with Claudius	Frequency of Interactions		Differences (M vs. C)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Polonius	8	6	2	Polonius	6	5	1
Gertrude	1	1	0	Gertrude	2	1	1
Rosin-Guild	1			Voltimand	1		
Gertrude-Polonius	1						
Voltimand-Cornelius	2						
Total	13	7	2	Total	9	6	2
%				%			
Polonius	61.54	85.71	-24.17	Polonius	66.67	83.33	-16.66
Gertrude	7.69	14.29	-6.60	Gertrude	22.22	16.67	5.55
Total	69.23	100.00	-30.77	Total	88.89	100.00	-11.11

The distinction related to the distribution patterns of the interactions of Claudius with the other characters is also considerable as Sumarokov's Claudius, in contrast to Shakespeare's Claudius, is completely isolated from the other characters and does not socialise with them at all. The latter point apparently shows that Claudius lacks political importance in SG compared to SH where greater attention is paid to the political prominence of the king Claudius.

The data in table 6 indicate that the link between the distribution patterns of the interactions of Claudius with each main character is seemingly asymmetrical per act IV inter-plays. It is particularly dissimilar regarding the interactions between Claudius and Ophelia and vice versa as the difference equals -27.08 % and -18.18 %, correspondingly. In fact, this kind of asymmetry, resultant in negative figures, possibly means that in act IV the relationship between Claudius and Ophelia is closer in SG than it is in SH.

Furthermore, the deviation related to the distribution patterns of the inter-actions of Claudius with each other character is notably significant as, in contrast to Shakespeare's Claudius who socialises more with the other characters than with the main ones, Sumarokov's Claudius does not interact with the other characters at all. The former point possibly provides evidence to the fact that Shakespeare's Claudius is a strong and powerful sovereign who socialises with a lot of the main and other characters and, as a result, somehow influences the development of the plot in act IV. Compared to Shakespeare's Claudius, Sumarokov's Claudius is not a relevant main character in this act.

TABLE 6. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF CLAUDIUS PER ACT IV						
CLAUDIUS WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (C vs. M)	EACH MAIN & OTHER CHARACTER WITH CLAUDIUS	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. C)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Hamlet	8	-	-	Hamlet	9	-	-
Polonius	-	2	-	Polonius	-	3	-
Gertrude	8	-	-	Gertrude	6	-	-
Ophelia	3	1	2	Ophelia	3	1	2
Rosincros	2			Rosincros	3		
Alertes	20			Laertes	20		
Messenger	1			Messenger	3		
Gert-Rosin-Guild	1						
Claudius-Rosincros	1						
Rosin-Guild	1						
Gertrude-Messenger	1						
Laertes-Messenger	2						
Total	48	3	2	Total	44	4	2
%				%			
Ophelia	6.25	33.33	-27.08	Ophelia	6.82	25.00	-18.18
Total	6.25	33.33	-27.08	Total	6.82	25.00	-18.18

The data in table 7 convey that the connection between the distribution patterns of the interactions of Claudius with each main character does not seem to be parallel per act V inter-plays. It is rather distinct in relation with the interactions of Claudius with Hamlet and vice versa as the difference is positive and equals 20 % and 50 %, respectively. Indeed, this kind of asymmetry, resultant in positive figures, may lead to the suggestion that in this act Shakespeare is more interested in showing the link between Claudius and Hamlet than Sumarokov is as Claudius and Hamlet do not socialise in SG.

TABLE 7. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF CLAUDIUS PER ACT V						
Claudius with Each Main & Other Character	Frequency of Interactions		Differences (C vs. M)	Each Main & Other Character with Claudius	Frequency of Interactions		Differences (M vs. C)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Hamlet	3	0	3	Hamlet	4	0	4
Polonius	-	1	-	Polonius	-	3	-
Gertrude	2	-	-	Gertrude	1	-	-
Alertes	3			Laertes	2		
Osrick	1			Osrick	1		
All	1			Soldier		1	
Gentlemen	1						
Horatio-Gertrude	1						
Osrick-Hamlet	2						
Osr-Ham-Laer-Gert-All	1						
Clau-Pol-Soldier		1					
Total	15	1	3	Total	8	4	4
%				%			
Hamlet	20.00	0.00	20.00	Hamlet	50.00	0.00	50.00
Total	20.00	0.00	20.00	Total	50.00	0.00	50.00

The difference associated with the distribution patterns of the interactions of Claudius with each other character is also notably considerable as Shakespeare's Claudius socialises more with the other characters than with the main ones. At the same time, the linkage between Sumarokov's Claudius and the other characters is rather limited. Thus, the aforementioned data seemingly provide evidence to the fact that Shakespeare's Claudius is an influential figure who socialises with both the main and other characters whilst Sumarokov's Claudius is an irrelevant character who is almost completely disconnected from the other characters in act V.

3.3. Polonius

The final stage of the present research examines the distribution patterns of the interaction variables of the third main character, Polonius, per acts II and III inter-plays.

The data in table 8 reveal that the link between the distribution patterns of the interactions of Polonius with each main character is not necessarily symmetrical per act II inter-plays. The interaction pattern is particularly distinct between Polonius and Claudius and vice versa as the difference is negative and equals -72.99 % and

-83.67 %, correspondingly. This kind of deviation seems to highlight that Polonius and Claudius socialise much more in SG than in SH. It is also divergent between Polonius and Gertrude and vice versa as the difference equals -16.67 % and 6.12 %, respectively. This kind of connection suggests that Sumarokov pays more attention to Polonius' interaction with Gertrude as opposed to Shakespeare who is especially interested in Gertrude's interaction with Polonius.

Shakespeare's Polonius also interacts with Claudius and Gertrude simultaneously whilst this does not take place in SG. Therefore, the difference is 10.34 %. The total difference between the interactions of Polonius with the main characters equals -79.31 %. The total difference between the interactions of the main characters with Polonius equals -77.55 %. This kind of deviation, resultant in negative figures, appears to show that Polonius has a closer linkage with Claudius and Gertrude in SG than in SH.

TABLE 8. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF POLONIUS PER ACT II							
POLONIUS WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (P vs. M)	EACH MAIN & OTHER CHARACTER WITH POLONIUS	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. P)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Hamlet	19	-	-	Hamlet	20	-	-
Claudius	6	5	1	Claudius	8	6	2
Gertrude	0	1	-1	Gertrude	3	0	3
Ophelia	5	-	-	Ophelia	5	-	-
Reynoldo	13			Reynoldo	13		
Players	3						
Reynoldo-Ophelia	1						
Rosin-Guild	1						
Claudius-Gertrude	6	0	6				
Clau-Gert-Ham	1	-	-				
Polonius-Hamlet	1	-	-				
Ham-Rosin-Guild	1						
Hamlet-Players	1						
Total	58	6	6	Total	49	6	5
%				%			
Claudius	10.34	83.33	-72.99	Claudius	16.33	100.00	-83.67
Gertrude	0.00	16.67	-16.67	Gertrude	6.12	0.00	6.12
Claudius-Gertrude	10.34	0.00	10.34				
Total	22.69	100.00	-79.31	Total	22.45	100.00	-77.55

However, the diversion associated with the distribution patterns of the interactions of Polonius with each other character is more prominent in SH as Sumarokov's Polonius does not socialise with the other characters at all. The latter point possibly emphasises that the interaction between Polonius and the other characters is of no relevance to Sumarokov whilst it is rather important for Shakespeare.

The data in table 9 probably show that the connection between the distribution patterns of the interactions of Polonius with each main character is not parallel per act III inter-plays. This link is positive in relation to the interactions of Polonius with Hamlet and vice versa as it equals 44.44 % and 50 %, respectively. It is specifically distinct with regard to the interactions of Polonius with Ophelia and vice versa as it equals -100 % in both cases, correspondingly. The total difference between the interactions of Polonius with the main characters equals -55.56 %. The total difference between the interactions of the main characters with Polonius equals -50 %.

TABLE 9. DISTRIBUTION PATTERNS OF THE INTERACTIONS OF POLONIUS PER ACT III						
POLONIUS WITH EACH MAIN & OTHER CHARACTER	FREQUENCY OF INTERACTIONS		DIFFERENCES (P vs. M)	EACH MAIN & OTHER CHARACTER WITH POLONIUS	FREQUENCY OF INTERACTIONS		DIFFERENCES (M vs. P)
SH vs. SG	SH	SG	(SH-SG)	SH vs. SG	SH	SG	(SH-SG)
Hamlet	8	0	8	Hamlet	5	0	5
Claudius	3	-	-	Claudius	4	-	-
Gertrude	3	-	-	Gertrude	1	-	-
Ophelia	0	13	-13	Ophelia	0	12	-12
Players	1						
Gertrude-Claudius	1						
Claudius-Ophelia	1						
Gertrude-Hamlet	1						
Total	18	13	-5	Total	10	12	-7
%				%			
Hamlet	44.44	0.00	44.44	Hamlet	50.00	0.00	50.00
Ophelia	0.00	100.00	-100.00	Ophelia	0.00	100.00	-100.00
Total	44.44	100.00	-55.56	Total	50.00	100.00	-50.00

In fact, this kind of asymmetry, resultant in positive and negative figures, seems to indicate that in act III:

1. Shakespeare's Polonius socialises more with Hamlet and has more initiative in this relationship whilst Sumarokov's Polonius does not interact with Hamlet at all.

2. Compared to Shakespeare's Polonius who does not socialise with Ophelia at all, Sumarokov's Polonius and Ophelia communicate with each other very frequently.

Consequently, the data examined and interpreted before possibly provide evidence of notably significant structural diversions based on the distribution patterns of the interactions of Polonius with Hamlet and Ophelia per act III inter-plays. In line with the aforementioned findings, Shakespeare appears to be more interested in the interaction between Polonius and Hamlet than Sumarokov who possibly focuses more on the link between Polonius and Ophelia. Thus, the political relationships between the statesman and the prince play an all-important role for Shakespeare whereas the family relationships between the father and the daughter are a crucial factor for Sumarokov.

4. CONCLUSIONS

In this paper, I have aimed to make a methodological contribution to the studies of Shakespeare's *Hamlet* and Sumarokov's *Gamlet* by making accurate quantitative counts of interactions and their percentages in the plays, and I have carefully tracked and compared their development over distinct acts inter-plays.

From the results obtained in the current study, it is clear that the dimensions of structural differences founded on the frequency of distribution patterns of interactions of Hamlet, Claudius and Polonius with each other as well as with Gertrude, Ophelia and secondary characters point to remarkable deviations in the two playwrights' views on the complexity of their relationships.

In terms of topics, Shakespeare mostly links his main male characters to the socio-political aspect of life—in other words, he specifically focuses on their interactions with both main and secondary characters to solve political problems. Sumarokov as well deals with socio-political relationships of these characters within society, although to a lesser degree. What is distinctive about Sumarokov's treatment of these characters is that he pays considerable attention to their interactions with the main characters. In their different ways, both Shakespeare and Sumarokov tackle family and personal contacts among humans, though with preference to Sumarokov. However, unlike Shakespeare, Sumarokov mostly opts for the connections among the people of a high social ranking.

The above-mentioned results conform to the findings in the earlier research that is linked to the inter-textual representation of the topics of politics and society as well as family relationships in SH and SG (Keshabyan, "Shakespeare's"). The results of this investigation—based on corpus-based lexical analysis of the texts—prove that the topic of politics and society is the most prominent in SH, particularly in acts II and III, although in the latter one it is dealt with on a more or less the same level inter-plays. Though the topic of family relationships is not the most prevailing one in both plays, Sumarokov is drawn to it to a greater degree than Shakespeare is.

With this in mind, the key consideration is that Sumarokov's conceptions of the main and secondary characters as well as of their actual role in socio-political, family and personal relationships have led Sumarokov to introduce outstanding changes into the structural organisation of social connections in his work as opposed to Shakespeare's original play *Hamlet*.

Many avenues for further research can be suggested, the most obvious being to include the original Russian play in the analysis. In terms of topics, it would be interesting to compare the topics dealt with in the plays as well as the topics tackled by individual characters inter-plays. This kind of comparison, across languages, texts, topics and individual characters, could potentially provide significant results regarding the nature of Sumarokov's *Gamlet* that is considered an adaptation by such scholars as Trediakovsky ("Friend"), Simmons ("Early"), and Levitt ("Sumarokov's"); "the best independent treatment" of Shakespeare's *Hamlet* by Lang (72) and a completely new play by Bulgakov. In this relation, it should be noted that in spite of the fact that the title of the play implied a connection with Shakespeare, Sumarokov himself rejected the idea of imitation (Levitt 320).

The limitations of quantitative analysis should always be born in mind. Nevertheless, I believe that I have demonstrated that a quantitative approach to studying literary texts can bring out specific structures and meanings of these texts and lead to new perspectives, thus heightening the value of corpus-based techniques in literary analysis.

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