Comparative Translational Semiotic Analysis of 'The River of Fire' through Systemic Functional Linguistic Approach

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Abstract

This study aimed to: find out semiotic devices in literary texts in the light of Halliday's transitivity process; and classify De Saussure's two-part model of sign and thereby know that what logical connections lie between transitivity processes and semiotic devices. Data comprised of the text of a novel 'The River of Fire' by Qurratulain Hyder and analyzed through qualitative and quantitative methods. UAM software was used for the analysis of SFL transitivity processes and De Saussure's model of sign was employed to analyze the language as a system of the sign. This process was applied to both versions (i.e., English and Urdu) of the same novel to compare the results. In this way, comparative technique was also utilized. As a result, all process types were observed in English and Urdu texts. Material and relational were the most characteristic processes in English and Urdu texts respectively. Through the analyses of English and Urdu texts of the novel, the processes of transitivity were observed involving the semiotic model of the sign. In addition, the signifier and signified were observed through the processes of systemic functional linguistics which meant that there existed a logical connection between semiotic devices and transitivity process.

Keywords: process; semiotics; signified; signifier; systemic functional grammar; transitivity

1. Introduction

1.1 Systemic Functional Linguistics

Transitivity is a global property of a clause that transfers the action from an agent (initiator of the action) to a patient (upon whom action is carried out) (Hopper & Thompson, 1980). Transitivity is also considered as a verb property that relates to two questions i.e. (1) whether a verb can accept the direct object, and (2) how many direct objects a verb can take (Carnie, 2012). If a verb does not accept any object(s), it is known as intransitive. In contrast, if a verb accepts the direct object(s), it is known as transitive (Hopper & Thompson, 1980). A transitive verb is classified as: monotransitive (if accepts one object); ditransitive (if accepts two objects i.e., a direct and an indirect) (Kempen & Harbusch, 2004); and tritransitive (if accepts three objects i.e., a direct, an indirect and a prepositional phrase) (Kittilä, 2007).

Halliday (1994) holds a different view, i.e., it is not that very important to see whether a verb accepts an object or not. He sees transitivity as a process that involves three components i.e., process (process itself), participant (in the process), and circumstance (associated with the process). Process is the main part of the situation and is realized by a verb, participant is realized with the help of a nominal group, and circumstance is realized through adverbials or prepositional phrases (see Ezzina, 2016; Kaur, 2019; Rindu, 2014). Halliday (1994) enumerates six types of process i.e., material, mental, relational, behavioural, verbal, and existential.

Material process is related with the process of 'doing' that involves an actor and often a goal. The actor means the one which does the deed and the goal indicates the directed act (also see Butt, Fahey, Feez & Spinks, 2012; Ezzina, 2016; Gerot & Wignell, 1944; Kaur, 2019; Rindu, 2014). Mental process is related with sensing which contains two potential participants i.e., sensor, and phenomenon. Sensor is the conscious that consists of seeing and thinking (Neale, 2002). The phenomenon comprises of what is sensed, thought and seen. Mental process has three main categories i.e., perception, affection, and cognition (for further details see Derewianka, 2011; Ezzina, 2016; Eggins, 1994; Emilia, 2014; Kaur, 2019; Rindu, 2014). Relational processes belong to the processes of being. These are found into two types i.e., being, and having (see also Ezzina, 2016; Eggins, 1994; Emilia, 2014; Kaur, 2019; Rindu, 2014). Behavioral processes belong to physiological and psychological behavior (e.g., breath, dream, smile, laugh, cry, and cough) that usually have one participant i.e., the behavior (see Ezzina, 2016; Eggins, 1994; Emilia, 2014; Kaur, 2019; Rindu, 2014). Verbal processes are related to the process of saying which is consisted of three participants i.e., sayer, receiver, and verbiage. The addresser is sayer, the receiver is the addressee, and content of the message is the verbiage (see Ezzina, 2016; Eggins, 1994; Emilia, 2014; Kaur, 2019; Martin, Matthiesiessen, & Painter, 1997; Rindu, 2014). Existential process denotes that something exists or happens. Most commonly it is realized by there-construction (see Ezzina, 2016; Eggins, 1994; Emilia, 2014; Qiong, 2010; Kaur, 2019; Rindu, 2014). These processes form the system of transitivity which, according to Bartley (2018), serves as a means to analyze both in text and isolated clauses.

1.2 The Sign and Meaning in General Semiotic Theory

Semiotics is the study of signs and semioticians (e.g., Ceasar, 2013; Chandler, 2007; Danesi, 1994, 2007; Deely, 2003; Petrilli, 2009; Short, 2007) are particularly concerned with the theme of representation. The study of semiotics may assist us to become more conscious of the refereeing role of signs and of the roles played by ourselves and others in constructing social reality. It makes us less expected to take reality as something that is absolutely independent of human interpretation. Through semiotic perspectives, we can come to understand that information or meaning is not 'contained' in computers or audio-visual media, in the world or in books. Instead, meaning generates according to the complex interaction of codes or conventions which we are normally unaware of. Therefore, meaning is not transmitted to us. Growing knowledge of such codes is both inherently fascinating and intellectually empowering. We constantly increase our understanding of certain experience and experimentation, of the visual world and how we are influenced by it (Tomar, 2015).

1.3 De Saussure's Semiotic Tradition

In the study of semiotics, according to De Saussure (2006), the sign is a central semiotic notion which is recognized as a two-fold entity having the signified and signifier. The signifier is described as the material vehicle, or the "physical area of the sign the actual substance of which it is composed (e.g., sound waves, alphabet characters etc.)" (Danesi, 1994, p. 24). The signified is, however, described as the meaning or mental concept which the signifier refers to.

The model of the sign (see Fig. 1 and 2) was explained by De Saussure (2006: 65-70) in two parts i.e.:

- Signifier -- spoken word, the written word, etc. -- something that represents in physical existence.
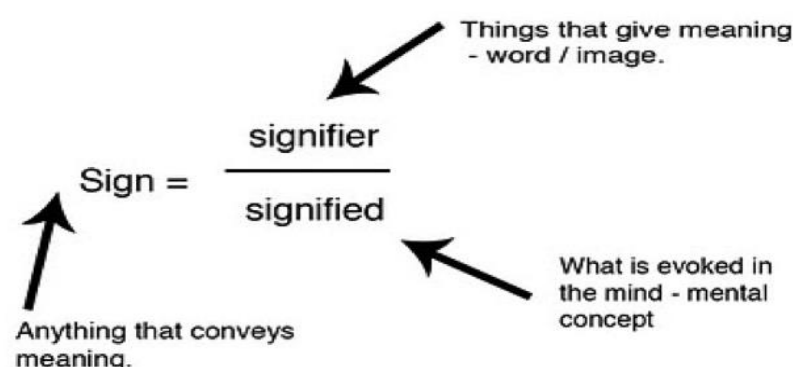- Signified -- the concept it represents in mental concept.

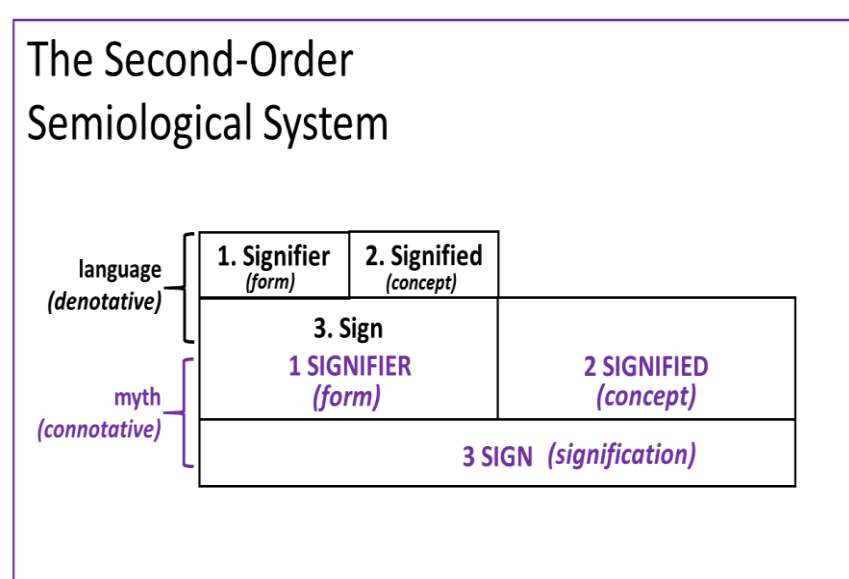Figure 1: Two-Part Model of the Sign

Figure 2: The Second-Order Semiological System

Study on semiotic analysis is not a new trend. In the past, many researchers conducted their research on semiotic analysis. The verbal text does this at the denotative level by answering "to the question i.e., what is it. The text really helps identify purely and simply the components of the scene and the scene itself; it is just a matter of a denoted description of the image" (Barthes, 1977, p. 39). This study aims to conduct the semiotic analysis with respect to transitivity processes on the literary text of a novel 'The River of Fire' by Qurratulain Hyder. In this regard, following questions are focused:

1) Which semiotic devices are used in the text of 'The River of Fire' in the perspectives of Halliday's transitivity process?

2) How logical connections are developed between semiotic devices and transitivity processes in English and Urdu texts of 'The River of Fire'?

2. Materials and Methods

This research is a comparative translational semiotic analysis of 'The River of Fire', a novel by Qurratulain Hyder, through systemic functional linguistics' (SFL) approach that deems the languages as a social semiotic system (see Halliday, 2004, 2015). This research is also qualitative and quantitative in nature and it employs SFL approach to: explore Halliday's (1994) transitivity processes i.e., material, mental, verbal, relational, behavioral, and existential; and apply the same procedure on the Urdu text of the same novel to investigate transitivity processes in both languages i.e., English and Urdu applying De Saussure's (2006) two-part models of the sign. Analytic structure, employed in the study, is shown in Fig. 3.
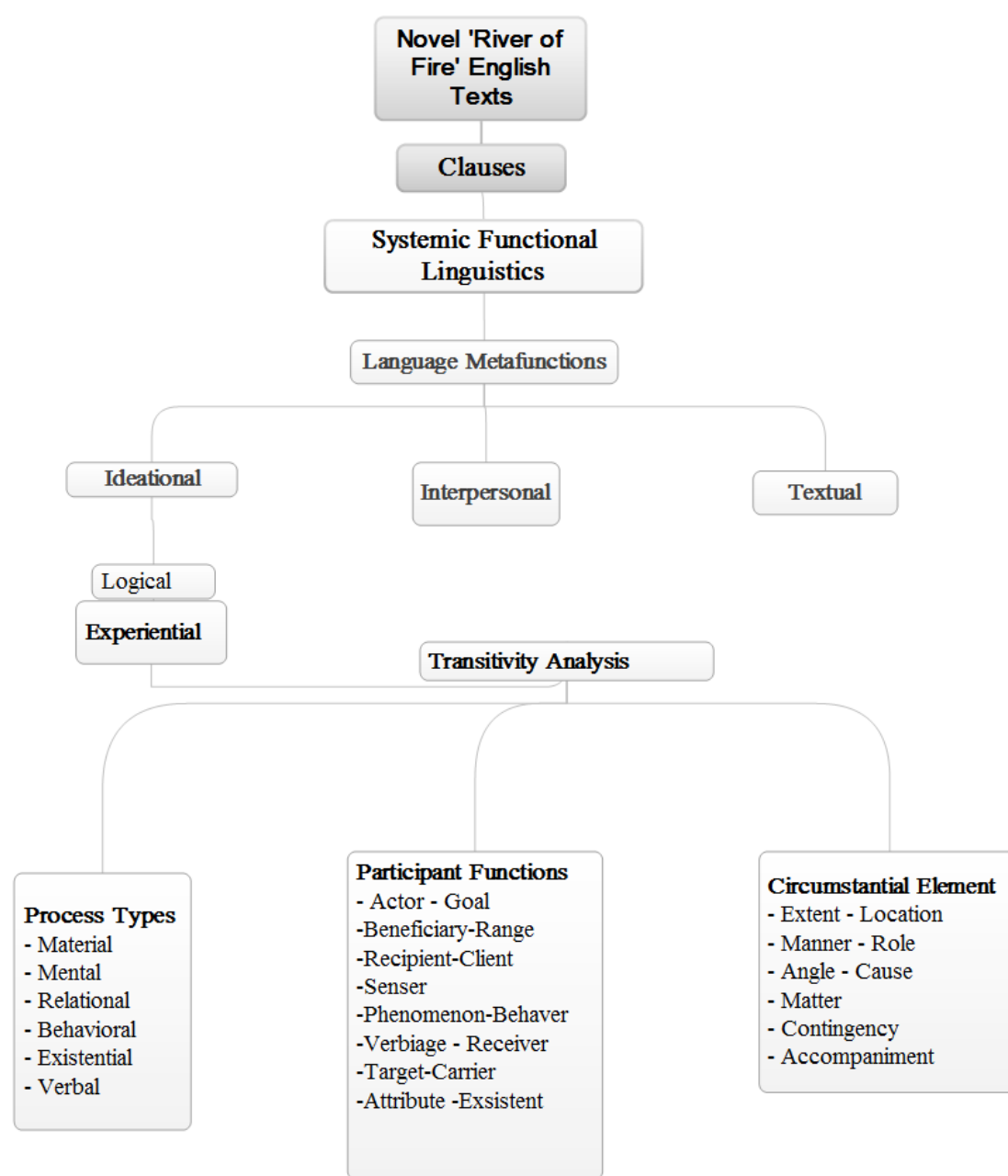
Figure. 3: Analytical Structure of the Study

UAM software was used to analyze the SFL transitivity system proposed by Halliday (1994). UAM Corpus Tool 3.3 is annotating software that can automatically annotate the grammatical structures and Halliday's (1994) transitivity processes in a text. In addition, it allows the manual annotation of linguistic features created on various schemes. For this study, first of all, a novel (The River of Fire) was selected and converted into the text form. After that text files were uploaded in UAM software. Data consisted of three files. Each file had 60 pages. The research was conducted on both English and Urdu versions of the same novel i.e. 'The River of Fire'. In this regard, 180 pages (i.e., 90 English and 90 Urdu) were considered which helped conduct a comparative analysis.

3. Results

Table 1: Percentage of Process Types of Transitivity Analysis

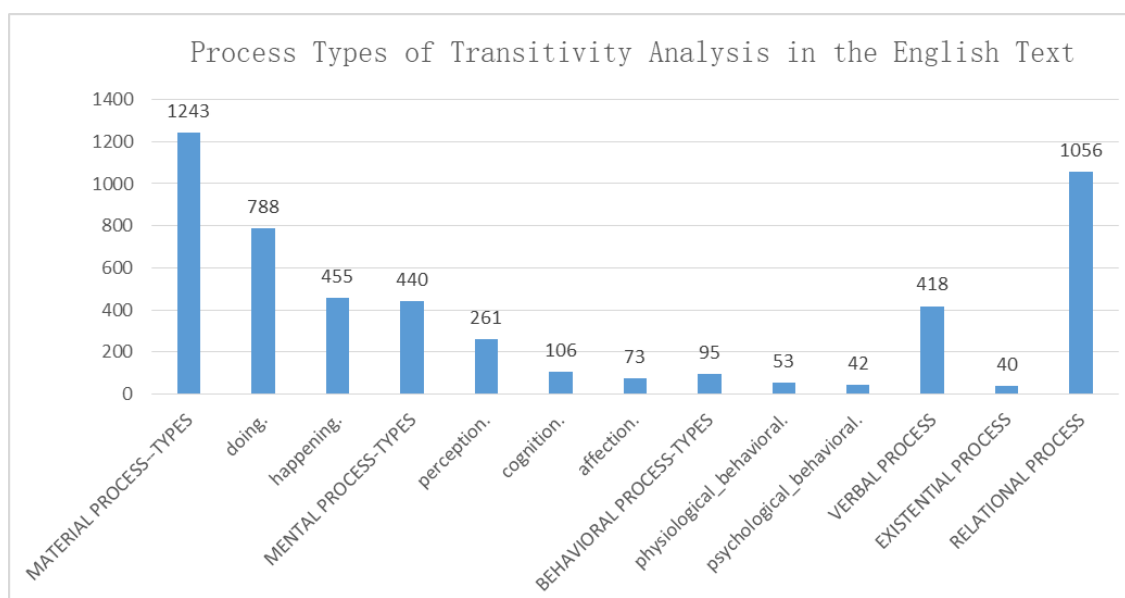| Process	Frequency	Percentage (%)
Material	1243	37.74
Mental	440	13.36
Behavioral	95	2.88
Verbal	418	12.69
Existential	40	1.21
Relational	1056	32.06
Total	**3293**	**100**

Figure 4: Process Types of Transitivity Analysis in English Text

3.1 Transitivity Processes

3.1.1 Material Process

As shown in the table 1 and fig. 4, material process is presented in the highest frequency. It shows that the majority of the process in the text is concerned with 'doing', 'happening' or 'action'. Examples of the material processes found in the novel are given below:

Example 1:

He	Looked up	at the sky	collected
Actor	Process(material) doing	circumstances	Process (material) doing

Example 2:

His staff and cloth bag and	Resumed	his journey
goal	process(material) doing	goal

Gautam	made	A boat	Out of a barged leaf
Actor	Process (material) doing	Goal	Circumstance

Example 3:

They	formed	A mender
Actor	Process material(happening)	Goal

In example 1, the first clause indicates the material process. It has three material processes that can be classified as transitive i.e., 'looked up', 'collected', and 'resumed in it'. 'He' functions as an actor in this clause. The phrasal verb 'looked up' refers to the activity don by the subject 'he' that is usually called as an actor in material process, 'his staff' and 'cloth bag' and, 'his journey' are the goals and 'at the sky' is the circumstance. In example 2, made is a material process. It informs about the doing of an actor. 'A boat' is a goal. Goal is a thing that suffers or undergoes the process. In example 3, 'they' is an actor and 'formed' is a material process. It is intransitive that represents a happening. 'A mender' is a goal which undergoes the process.

3.1.2 Relational Process

Relational Process is the second highest process found in this novel. Examples of the relational processes found in the novel are given below:

Example 4:

Hi	My name	is	Professor Bannerjee
	Carrier	Relational	Attribute

Example 5:

Champa	has	a red sarhi
Carrier	Relational	Attribute (circumstance)

'My name' in example 4 and 'Champa' in example 5 are carriers that represnt relational process. 'Professor Bannerjee', in example 4, and 'red sarhi', in example 5, function as attributive participants as well as circumstance. Relational process involves states of being and having which establish an identity. In this way, it is called identifying process and the process that assigns a quality and plays as an attributive, is called attributing processes.

3.1.3 Mental Process

The proportion of mental process occurs as the third highest in frequency (see table 1 and fig. 4) found in this novel. It refers to the process of perception, cognition and affection (e.g., thinking, knowing, liking, wanting, and perceiving). It has senser and phenomenon as the participants. Some of the observations of the mental processes are given below:

Example 6:

He	noticed	another red beerbahuti	on the lush green grass
Senser	Process(mental)	Phenomenon	Circumstance

Example 7:

Gautam	does not remember	about Taxila
Senser	Cognition	Phenomenon

Example 8:

I	can't hear	you
Senser	Perception	Phenomenon

Example 9:

I	like	to buy some perfumes
Senser	Affection	Phenomenon

Examples 6, 7, 8 and 9 show that mental process, in the flow of events, is taking place in our own consciousness. In clause structure, a 'mental' clause usually has (and always can have) both senser and phenomenon that are present in these examples. The participant who plays the role of a senser is 'Gautam', and 'I' what is being sensed here is about 'Taxila', 'you', and 'to buy some perfumes' are called phenomenon. The word 'know' refers to cognition of the mental process while 'does not remember' refers to perception of the mental process. The word 'can't hear' also refers to perception and last the word 'like' refers to affection of the mental process.

3.1.4 Verbal Process

Verbal process is related to process of 'saying'. It usually has a 'sayer' as the main participant. But many clauses contain implicit sayers. The presence of verbal process has low frequency as compared to material, relational, and mental processes. Verbal process, in fact, is a process of construing something said by its participants. Examples of the verbal process found in the novel are:

Example 10:

He	repeated	the formal benediction
Sayer	Process(verbal)	Verbiage

Example 11:

The doe-eyed one	noted	the bitterness in her companion's voice
Sayer	Process(verbal)	Verbiage

Example 12:

My father	says	there is political trouble brewing in Pataliputra
Sayer	Process(verbal)	Verbiage

In all of the three examples (i.e., 10, 11 and 12), the words 'repeated', 'noted' and 'says' are verbal processes. Verbal process, actually, is the activity of talking that usually happens during the process of saying. 'He', 'the doe-eyed one' and 'my father' are the participants that function as sayers. The remaining part of clauses, in examples 10, 11 and 12, are verbiage that are 'the formal benediction', 'the bitterness in her companion's voice', 'there is political trouble brewing in Pataliputra'. Verbiage represents what the sayer has said but instead of representing it as a quotation of what the actual words has been used (Quoted) or the proposition has been expressed in those words (Reported), and related to what is said by classifying that in terms of its character as an expression.

3.1.5 Existential Process

Existential Process is a process of 'existing'. The proportion of existential process (as shown in table 1 and fig 4), has been observed in fourth highest frequency. This process shows that actions as enclosed as they are taking place within the settings which are stated simply as existing. Examples are given below:

Example 13:

There	Was	a little house
	Existential	Existent

Example 14:

There	had been	some Hinduism motive
	Existential	Existent

The clauses of sentences (see examples 13 and 14) are considered as existential process. Halliday and Matthiessen (2004: 257) argue that the word 'there' in such clauses is neither participant nor a circumstance (because it does not have any representative occupation in the transitivity structure of a clause), but it helps indicate the feature of existence. However, it is not interpersonally needed to be a subject. This type of a subject is not a real subject. Rather, it is a subject that we call 'dummy subject'. The real subject in existential process performs semantic function of the existent.

3.1.6 Behavioural Process

Behavioral process is a process of physiological and psychological behavior. It has a 'behaver' and a 'behavioral' as participants. The behavioral process occurs four times in the novel but it has only one behaver as the participant. The less frequent process is behavioural process i.e., it has the lowest frequency of all the process types (see table 1 and fig 4).

Example 15:

A peacock	danced	under a flaming dhak
Behaver	Behavioral (physiological)	Circumstance

Example 16:

The bride	was crying	in the room
Behaver	Behavioral (psychological	Circumstance

Example 17:

They	Laugh	together
Behaver	Behavioral (physiological)	Circumstance

Examples 15, 16 and 17 show that, the clauses of the behaviuoral process are related with the intransitive verb that does not take an object. Thus, there is only a single participant containing the process called 'behaver'. As we know, behavioural process is in part about the action but it this action has to be experienced by a conscious being. However, in selected clauses (see examples 15, 16 and 17) there is no such clear participant as revealed as a 'behaver'. But we indirectly assume that the conscious being 'me' is invited by 'she' to dance.

3.2 Semiotics Analysis

Figure 5: Signifier and Signified Processes in English Text

Semiotics is frequently used in the analyses of texts, while it is dependent on the mode of textual analysis. Here it would be noted that a 'text' can occur in any medium and may be verbal, non-verbal, or both. A text is a collection of signs e.g., words, images, sounds or gestures understood with reference to the conventions related with a genre and in a specific medium of communication. The signifier and signified at the same time as casually simple, form an essential element of semiotics. As shown in the table 1, material processes are frequently used as a signifier. A signifier, without signified, takes no meaning, and the signified changes with context and person. A signifier, a part of language, is a material demonstration of a linguistic sign. In psychoanalysis, it is a phonemic order of the discourse that intervenes in the conscious and unconscious processes to define the subject involved in the discourse. A signified is the notion or concept related with a signifier, which together establish the linguistic sign. In this analysis a text is the collection of signs through words. This work explores the application of Halliday's (1994) theory of transitivity through semiotic analysis. In this analysis the signifier is frequently used rather than signified. It shows that actions and physical activities are involved in this novel. Examples are given below:

Example 18:

he	looked up	at the sky	collected	his staff and cloth bag and	resumed	his journey
Actor	Process (material) Signifier	circumstances	Process (material) Signifier	Goal	Process (material) Signifier	Goal

The words 'looked up' 'collected' and 'resumed', in example 18, refer to the signifier of the sign. These processes clarify that sign is not only a sound image but also a concept. The signifier is interpreted as the material form such as something that can be seen, touched, heard, smelled, and tested.

Example 19:

The young woman	was	scared
Goal	Relational process	Process (Mental) Signified

Example 20:

I	think	She will	Protect	you	I	know her.
Senser	Process (Mental) Signified	Goal	Process (material) Signified	Goal	Senser	Process (mental) Signified

The words 'scared', 'think', and 'know her', in examples 19 and 20, are related to the mental process. The section of mental processes in the text indicates that cognition is concerned more than the other kind of mental process. The signified acts as the mental concept. The thing signified is created in the perceiver and is inside them. The meaning of a sign needs both the signifier and the signified as formed by an interpreter. A signifier without a signified is 'sound'. A signified without a signifier is nothing. The signifier imitates the signified i.e., the signifier generates the signified in terms of the meaning it initiates for us. See example 21.

Example 21:

At night	he	went to the river bank to	sleep	on the cool sand
Circumstance	Actor	Goal	Process(behavioral) Signifier	Circumstance

In this example (21) the 'sleep' refers to the behavioral process. Behavioral process is related to the part of the action but it is the action that has to be qualified by a conscious being. Sleep is a physical action and physical action is also related to the signifier. This is important, because signs are understood and encoded in the context. The word 'sleep' shows the relationship between signifier and signified is made meaningful in the context. This part starts through looking at the signs in separation, but as you become more assured with semiotics, you will start to look at signs as the part of a sign system.

3.3 Process Types of Urdu Text

The distribution of the process types of transitivity analysis (i.e., relational, material, verbal, mental, existential, and behavioural) as characterized in Urdu text of the novel can be seen in the Table 2 and Fig. 6.

Table 2: Percentage of Process Types of Transitivity Analysis in Urdu Text

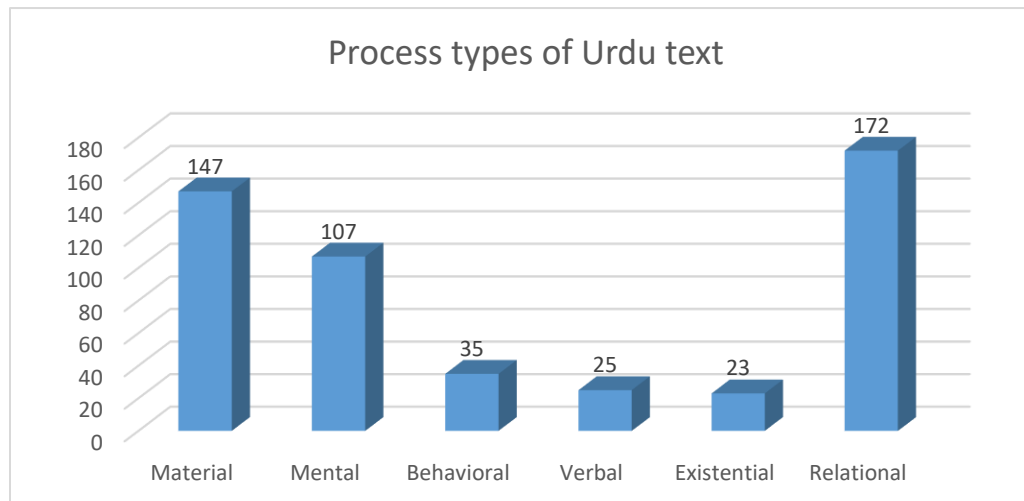| Process	Frequency	Percentage (%)
Material	147	28.88
Mental	107	21.02
Behavioral	35	6.87
Verbal	25	4.91
Existential	23	4.51
Relational	172	33.79
Total	**509**	**100%**

Figure 6: Process Types of Transitivity Analysis in Urdu Text

This analysis shows that, in Urdu text, the relational process has highest frequency (see Table 2 and Fig. 6) as found in the Urdu text of the novel. See examples below:

Example 22:

اس کا باپ بہت دولت مندآدمی تھا ۔

تھا	بہت دولت مندآدمی	اس کا باپ
Process: relational	attribute	Carrier

Relational processes (see example 22) involve states of being and having. They can be classified according to whether they are being used to identify something or to assign a quality to something. Process, which establishes an identity, is called identifying process and the process which assigns a quality and functions as an attributive is called attributing process. The second highest frequency is of material process (see table 2 and fig. 6). This observation shows that the majority of the processes in the text are processes of doing, happening or action. Examples of the material process as found in Urdu text are given below:

Example 23:

گربست کی بیوی سانؤلی دبلی سی لڑکی جس نے اسے آنالا کر دیا تھا ۔

لا کر دیا تھا	آنا	جس نے اسے	سانؤلی دبلی سی لڑکی	گربست کی بیوی
Process: material	Goal	Recipient	Circumstance: role	Actor

Example 23 reflects the material process. In this example گربست کی بیوی is an actor which is a material process. It appears to be intransitive for representing happening, i.e., آنا is a goal which undergoes the process. The proportion of mental processes happens to be the third highest process as found in Urdu of the novel (see table 2 and fig. 6). It refers to the process of perception, cognition and affection (e.g., thinking, knowing, liking, wanting, and perceiving). It has senser and phenomenon as the participants. Some examples of the mental processes are below:

Example 24:

گوتم نے آنکھیں کھول کراسے دیکھا ۔

اسے دیکھا	آنکھیں کھول کر	گوتم نے
Process: mental	Phenomenon	Senser

Example 24 shows the mental process that construes a quantum of change in the flow of events taking place in our own consciousness. In clause structure, a 'mental' clause typically has (and always can have) both senser and phenomenon as shown in example 24. The participant who has a role of the senser is Gautam. The behavioural process is a process of physiological and psychological behavior. It has behaver and behavioural as participants. The behavioural process occurs four times in the text but it only has one behaver as the participant. The less frequent process is the behavioural process and it has the lowest frequency of occurrence of all the process types (see table 2 and fig. 2).

Example 25:

اس کی تیوری پر بل آگے ۔

بل آگے	اس کی تیوری پر
Process: behavioral	Behaver

Verbal process occurs 25 times which refers to the process of construing something (i.e., relationships of description) said by its participant. The presence of verbal process has low frequency as compared to material, relational, mental, and behavioural processes (see table 2 and fig. 6).

Example 26:

<div dir="rtl">جہانگیر پارک میں نئے وزیراعظم کا ملت سے خطاب ہے</div>

Process: Verbal	Verbiage	Sayer	Circumstance
خطاب ہے	ملت سے	نئے وزیراعظم کا	جہانگیر پارک میں

The example 26 shows that ملت سے is a verbiage and نئے وزیراعظم کا is a sayer. Verbal process is the activity of talking usually happens during the process of saying. The existential process is a process of existing. The proportion of existential process is very low in frequency (i.e., 23) as shown in the table 2 and fig. 2. This process indicates that actions as are framed as they are taking place within such settings as are asserted simply as existing.

Example 27:

<div dir="rtl">برآمدے کے باہر گھپ اندھیرا تھا۔</div>

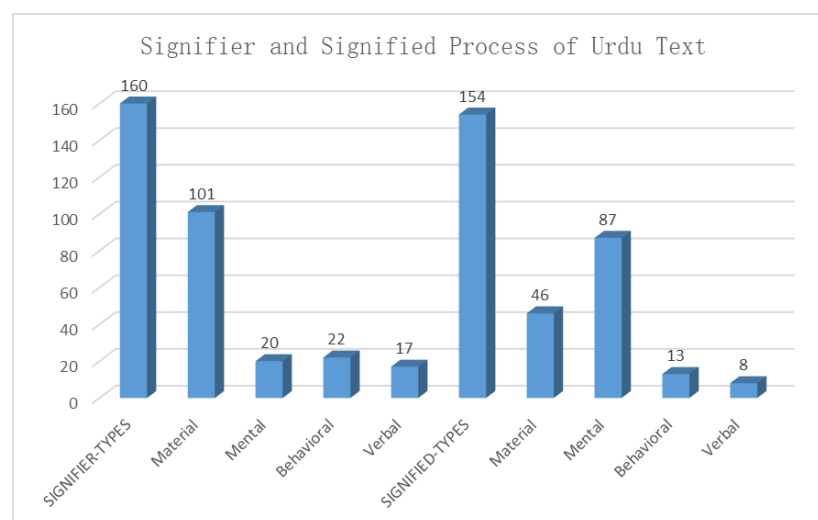| Process: existential	Existent	Circumstance
تھا	گھپ اندھیرا	برآمدے کے باہر

Figure 7: Signifier and Signified Processes in Urdu Text

In this study, the text served as a collection of signs through words and helped explore the application of Halliday's (1994) theory of transitivity through semiotic analysis. The analysis showed that there was no big difference between English and Urdu texts as the verbs, in both English and Urdu versions, created the sense of signifier and signified. The results of the study (see tables 1 and 2) have proved that transitivity system can analyze the semiotics devices which depend on verbs. Urdu text analysis shows that signifier has as highest frequency as does the English text have. Moreover, actions and physical activities are observed in high frequency in the novel.

Example 28:

<div dir="rtl">دروازے کی چوکھٹ پر پہاڑی مینا کا پنجرہ لٹک رہا تھا۔</div>

Process: material	Actor	Circumstance
لٹک رہا تھا	پہاڑی مینا کا پنجرہ	دروازے کی چوکھٹ پر

The word, لٹک رہا تھا (see example 28) refers to the signifier of the sign. This process clarifies that sign is not only a sound image but also a concept. The signifier is construed as the material form such as something that can be seen, touched, heard, smelled and tested.

Example 29:

<div dir="rtl">گوتم نے اپنے نئے ساتھی کو غور سے دیکھا۔</div>

Process: mental	Phenomenon	Senser
غور سے دیکھا	اپنے نئے ساتھی کو	گوتم نے

The word غور سے دیکھا (in example 29) is a mental process but semiotically it is a physically action done by Gautam. The section of mental processes in the text indicates that cognition is concerned more than the other kinds of mental process.

Example 30:

<div dir="rtl">اس کا ذہین اور خوبصورت چہرہ گوتم کو مانوس سا کرگیا۔</div>

Process: mental	Senser	Phenomenon
مانوس سا کرگیا	گوتم کو	اس کا ذہین اور خوبصورت چہرہ

The word, مانوس سا کرگیا, (see example 30) is related to the mental process. It refers to the conception of the mind. The section of mental processes in the text indicates that cognition is concerned more than the other kinds of mental process. The signified functions as the mental concept. The thing signified is created in the perceiver and is inside to them. The meaning of a sign needs both the signifier and the signified as formed by an interpreter.

Example 31:

<div dir="rtl">اس کی تیوری پر بل آگے۔</div>

بل آگے	اس کی تیوری پر
Process: behavioral	Behaver

The word بل آگے (in example 31) refers to the behavioural process. Behavioural process is in part about the action. The signifier is construed as the material form such as something that can be done through seen, touched, heard, smelled, and tested.

4. Conclusion

This study depends on the structure of sentences that is represented through the transitivity processes (i.e., types of verbs). The results reveal that all process types are present in English and Urdu texts of the novel 'The River of Fire'. The most characterized process type in the English text is material. Whereas, the most categorized process type in the Urdu text is relational process. In this way, material and relational processes are the most frequent process in English and Urdu texts respectively. So far as the classification of De Saussure's "dyadic" two-part model of sign, signifier, and signified is concerned, the results show the concept symbolizes through the transitivity processes. Through the analyses of English and Urdu texts of the novel, the processes of transitivity are observed involving the semiotic model of the sign. In addition, the signifier and signified have been observed through the processes of systemic functional linguistics which means that there exists a logical connection between semiotic devices and transitivity process. Moreover, the signifier is observed to be most frequent than the signified in English and Urdu texts.

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