A Corpus Based Transitivity Analysis of Newspaper Articles on Floods

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ABSTRACT--*aim of the current research is to explore distributions and functions of six processes of transitivity analysis in flood related Newspaper articles. No matter a country is developed, developing or under developed, floods bring drastic results in the whole world without discrimination. They are one of major causes of social unrest. Since, newspapers can be considered as a good and authentic source of information, so a small corpus of twenty (20) English newspaper articles addressing the issue of floods in Pakistan has been collected for the above purpose. Data was analyzed by transitivity analysis proposed by Halliday and Matthiessen (2014). It has six functions which have been further subdivided into many functions to explore any text. This analysis helps out in finding writing patterns which are followed in writing newspaper articles on the topic of floods. This study explores which procedure they use to follow in order to convey such pieces of news and do they suggest possible strategies too to overcome them. The study reflects that material and mental processes remained more dominant in the data and with the help of them, usually media partners try to sensationalize the writings and blame government officials as responsible of this undesirable situation. Verbal, behavioral and existential processes have been used very little.*
Keywords-- *Floods, Newspaper articles, transitivity analysis*

I.   INTRODUCTION

Water is a blessing but it can be a curse as well. As discussed in a famous quotation "excess of everything is bad", excess of water in the form of floods can prove to be very dangerous. This powerful force is strong enough to wipe entire cities off the map. Floods result in loss of wealth, health, assets, food (fields are destroyed), can disrupt entire ecosystems, send advanced societies back to the stone age in an instant and most importantly loss of precious lives. Floods offer a number of exasperating ways of death such as people may be drowned, by fatalities caused by the aftermath of the flood, temporary starvation at that specific area due to which only those inhabitants die or in severe conditions famine in surrounding areas or in whole country as well and diseases due to water contamination etc. It is very difficult to provide health facilities in those areas so these people are destined to die eventually.

World's history is full of such deadliest floods that brought havoc and chaos. In 1931 Yangtze-Huai River floods were a series of devastating floods that had befallen in China. They were some of the deadliest floods in history, and together formed one of the most lethal natural disasters of the 20th century (Yin, & Li, 2001;Yu, Chen, Ren, & Yang, 2009). It was not the only flood that bothered China rather China has pitiable fate in this regard. Yellow river in China which has been named according to its characteristics as "China's sorrow", experienced

flood in September 1887 and engulfed around 9 lakh lives within twinkling of an eye. It's after effects in form of famine and diseases also taken lives almost same in number (Chen, Syvitski, Gao, Overeem, & Kettner, 2012; Pietz, 2015; Yang, Wan, Deng, & Zhang, 2007).

India has faced a worst flood in June 2013 as a result of multiday cloud burst. Around nine districts were affected in North Indian state Uttarakhand. Thousands of people were affected. Tourists and native people in lakhs were trapped in those areas due to destruction of bridges and roads (Joseph, et al., 2015). Floods didn't forgive America as well and in 2005, Hurricane Katrina hit the United States. An estimated 1,833 people lost their lives in the hurricane and millions of others were left homeless along the Gulf Coast and in New Orleans (Brinkley, & Brewer, 2006).

Turkey has become victim of a series of floods in 2009 after heavy rainfall. Along with some other cities, Istanbul was badly affected. It played with the lives of 31 people. Emergency workers rescued around 1,300 people from the flash floods and guaranteed billions of Turkish liras for disaster relief in Istanbul and Tekirdag provinces (Saf, 2009). If we talk specifically about Pakistan, unfortunately we also remained on the hit list of this natural disaster a number of times. In 2003, Sindh observed monsoon rainfalls which turned into floods. Urban flooding hit Karachi where 284.5 millimetres (11.20 in) of rainfall caused havoc in the city. There were flash floods in Thatta as well. At least 484 people died and estimated 4,476 villages in the province were affected (Mustafa, 2003).

Heavy monsoon in all provinces of Pakistan in August 2010 resulted in floods which affected approximately one-fifth of total land of Pakistan. There was massive destruction because of that. UN General Secretary initially promised to give relief of around 420 million but only 20% of the promised amount was sanctioned. (Martius, 2013). Unfortunately in spite of being part of so called technologically advanced era, we are still in danger of having floods. Natural disasters and especially floods is a crucial topic to be discussed keeping in view the existing situation. In order to conduct linguistic research on floods, data in the form of text on this topic is required. Newspaper articles have some special importance in both cases i.e. if it has to be according to the opinions of public or it has to reshape their views about something (Woodward, 1934). Even today significance of Newspaper articles can't be denied. According to some researchers (Andersson, Bjärås, Tillgren, & Östenson, 2007; Brownson, Mack, Nileeni, Pratt, Brownson, Dean,& Luke, 1996; Stryker, Moriarty, & Jensen, 2008; Caburnay, Kreuter, Luke, Logan, Jacobsen, Reddy, & Zayed, 2003; Granner, Sharpe, Burroughs, Fields, & Hallenbeck, 2009) content analysis of newspapers may be an appreciated method for the assessment of community opinions, advocacy and change. So it seems to be a good source of data collection and analysis.

For the sake of analysis of any text, there are a number of methods developed by different linguists for different situations. Halliday introduced transitivity analysis in SFL theory which views language as "a meaning-making system with an emphasis on choice." (Neale, 2002). According to Bloor and Bloor (2013), study of style and meaning are same because style or in other words syntactic structures help a lot in creating meaning or semantic function. By studying how language functions in any text, we can understand what is meant by a text, why this text is having some kind of importance, how its language is related to that specific context where it has been written and its reality. Transitivity being a semantic concept plays its significant role in the analysis of representation of reality, transitivity empowers us to analyze and represent the same event and situation in different ways (Ezzina, 2016). Halliday (1985) elaborates it in following words:

A fundamental property of language is that it enables human beings to build a mental picture of reality, to make sense of their experience of what goes on around them and inside them...our most powerful conception of reality is that it consists of "goings-on": of doing, happening, feeling, being. These goings-on are sorted out in the semantic system of language, and expressed through the grammar of the clause... this... is the system of TRANSITIVITY".(p. 101)

If we rely on transitivity analysis in current research, it may help in uncovering the meanings which newspaper articles on floods are concealing. Thus, Halliday's transitivity framework is utilized in this study,as it may explain syntactic structures and their hidden meanings. To contribute towards establishment of transitivity analysis as a tool for exploring style of this field is another objective of the study.

Following two research questions have been devised to fulfill the objectives of the study;

RQ 1: What are the distributions and functions of six processes in flood related Newspaper articles?

RQ 2: To what extent are ideologies constituted through media texts?

II.   BACKGROUND OF THE STUDY

This section covers some past researches relevant to this research. Basically it has roots in three fields i.e. in floods. Was there any research in linguistics addressing the issues of natural disasters or we are just focused on language and teaching only? So the first sub-section 2.1 covers those past studies which are relevant to floods and linguistics.

Second sub-section 2.2 tries to discuss researches on newspaper articles. There were a number of researches seem to be conducted on newspaper articles. But was there any research in which newspaper articles (NAs) exclusively on the topic of floods have been conducted is the matter of consideration now.

Third, sub-section 2.3 focuses on transitivity analysis. Basic purpose of this research is to explore embedded meanings in NAs related to floods. What are governments' and people's opinions about this issue, their causes, and effects on environment, solutions and policies behind such statements? This section will try to check whether there is any existing research has already addressed these issues or current research can make its place in the realm of intellect. Following figure tries to portray a clear picture of the study that which pattern is going to be followed and how. There is a kind of overlap found in two dimensions i.e. in researches on NAs and in researches on TA because some research were conducted in past on NAs which analyzed them with the help of TA but the problem is those researches were not on floods or even on natural disasters so it collectively made a gap and eventually made a place for current research.
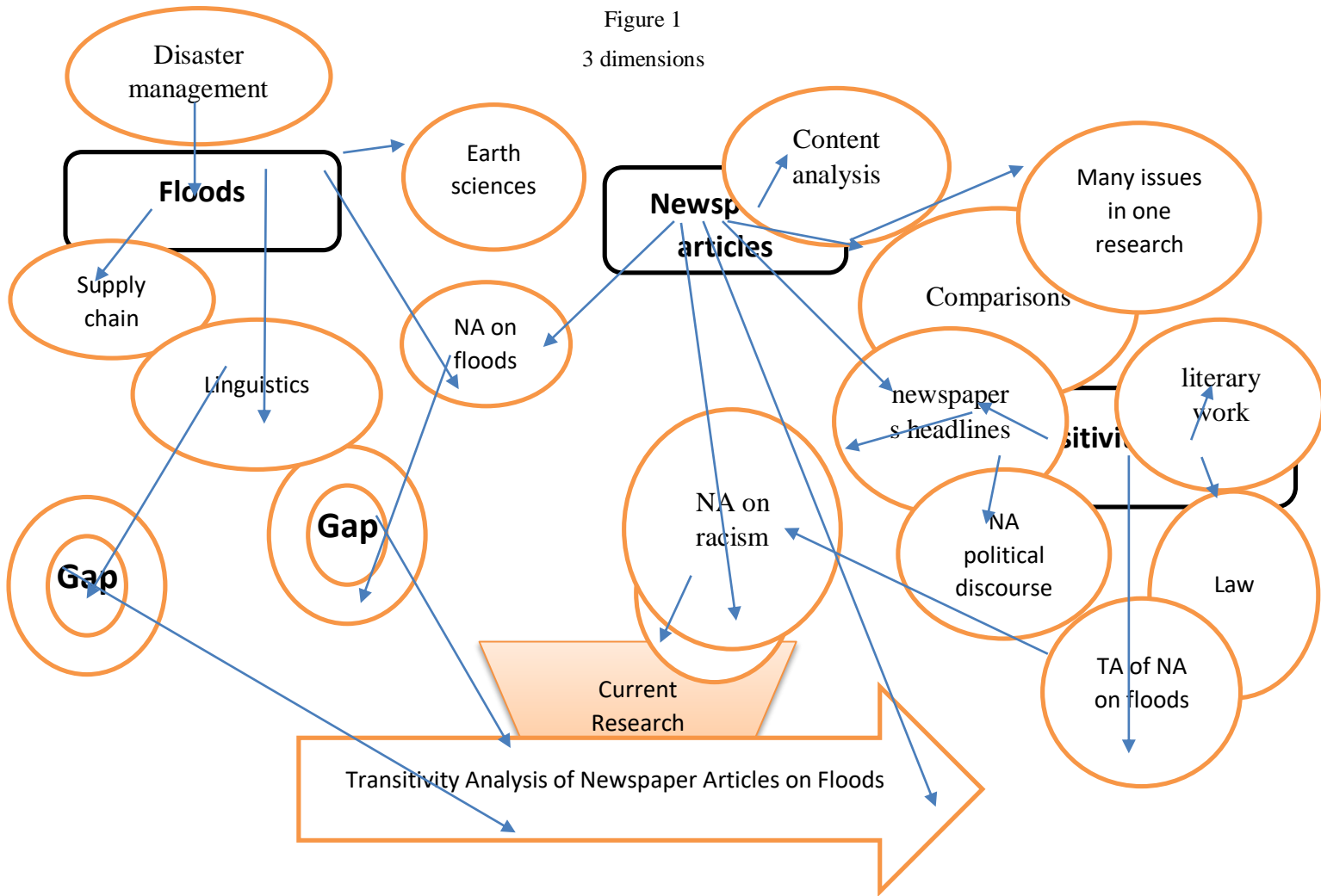
Figure 1: is based on the researches available to researcher and it is assumed that it is near to reality

2.1 Past Researches on Floods

Haraguchi and Lall's (2013) paper examined the effect of surges on the worldwide economy through supply chains, and to propose what parts ought to be considered to gauge supply chain chance. This investigation will look at, specifically, Thailand's 2011 surge since it is the most eminent case of the effect of surges both on businesses and the entire economy. Since the delayed surges influenced the essential modern segments in Thailand, i.e, the car furthermore, gadgets ventures, the effect all in all economy was destroying. This research was conducted in the field of supply chain.

Another research was conducted by Merz (2014) which was again not in the field of Linguistics. Surge estimation and surge administration have generally been the space of hydrologists, water assets architects and analysts, and disciplinary methodologies flourish. Predominant perspectives have been molded; one precedent is the catchment point of view: surges are shaped and affected by the association of neighborhood, catchment-

particular qualities, for example, meteorology, geography and topography. These customary perspectives have been helpful; however they have a limited surrounding.

In this paper we balance customary perspectives with more extensive viewpoints that are rising up out of an enhanced comprehension of the climatic setting of surges. We arrive at the accompanying resolutions: (1) expanding the customary framework limits (neighborhood catchment, ongoing decades, hydrological/water driven procedures) opens up energizing conceivable outcomes for better understanding and enhanced instruments for surge chance appraisal and administration. (2) Statistical methodologies in surge estimation should be supplemented by the scan for the causal components and prevailing procedures in the air, catchment and stream framework that leave their fingerprints on surge qualities. (3) Natural atmosphere changeability prompts time-differing surge attributes, and this variety might be halfway quantifiable and unsurprising, with the viewpoint of dynamic, atmosphere educated surge hazard administration. (4) Efforts are expected to completely represent factors that add to changes in each of the three hazard parts (risk, presentation, powerlessness) and to more readily comprehend the communications among society and surges. (5) Given the worldwide scale and societal significance, we require the association of a universal multidisciplinary cooperation and information sharing activity to additionally comprehend the connections among atmosphere and flooding and to propel surge inquire about.

Research of Lv, Hu, Guan, and Shi (2014) on floods was in earth sciences. According to it responsible for both the surge control of its region and the decrease of surges in downstream of Yellow River, Luhun supply is in a totally essential position. In this manner, the exploration worried about the surge control booking plan and technique in Luhun catchment is vitally basic. In light of the surge information of Luhun supply in the year 1980-1998, the investigation set up a free dispersed hydrological demonstrate, which can reflect overabundance stockpiling spillover and abundance penetration overflow all the while, to conjecture the surge in the area. The other capacity of the model can adequately acquire spatial conveyance of hidden surface from the inquired about catchment and additionally consolidate climate information helpfully. Consequently, joining with the DEM information, the catchment was partitioned into 13 sub-bowls based on qualities of the watershed geography, arrive utilize, soil and vegetation dispersion. After the data of the sub-streams is obtained, the spatial dissemination of the spillover and the surge will be investigated. Further, it reaches an inference that the model utilized is reasonable for Luhun catchment, and specialized help for surge control can be given in the area. Then, pointed surge control methodologies are displayed in Luhun repository.

Rahman (2014) worked on doctoral thesis on the topic of floods but again unfortunately it was not in the field of linguistics but in disaster management. The destinations of the investigation are to survey the circumstance, the history, the causes, irritating components, degree and impacts of the surge, to archive the peril and powerlessness, and different capacities of the network; to consider the neighborhood information, practices and convictions in the network; to define network based plans for surge alleviation and surge debacle hazard decrease. Discoveries of this period of study are pointed to be utilized as contribution to second stage when a more extensive structure of network impacts examination led. The investigation discovered that there are a few reasons for surge perils. They are: development of foundation, for example, streets. Without surveying the rainstorm surge, tight drainage limit of the erratic channel removal for water system because of the nonattendance of legitimate water system trench framework, furthermore, poor seepage due to thick settlements.

Tripathi (2015) explored flood related information in India. Surge has been considered as a standout amongst the most repeating and regular debacle on the planet. Because of repetitive pervasiveness, the financial misfortune and life harm caused by the surge has put a greater number of weights on economy than some other catastrophic event. India likewise has persistently endured by many surge occasions which asserted enormous death toll and economy. It has been discovered that the frequencies of the surge are expanding quickly. Causes can be environmental change, cloud blasting, torrent or poor waterway administration, silting and so on yet obliteration is expanding both as far as lives and economies. Calamity administration in India has extremely composed and structures projects and approaches yet organization and usage of these projects request more effectiveness. In a decade ago, surge harms a bigger number of lives and economy than some other calamities. This paper is an examination of the pattern and readiness of surge in India. Information from CRED has been utilized to break down the pattern of surge and different fiascos in most recent ten years and harmed caused by these occasions.

This article of Garde-Hansen, McEwen, Holmes and Jones (2017) proposes the idea of manageable surge memory as a basic and agentic type of social and social recalling of figuring out how to live with surges. Drawing upon research discoveries that utilization the 2007 surges in the South West of England as a contextual analysis, we investigate and examine the media portrayals of flooding, the job of network and informative memory of past surges for encouraging flexibility, and guide enthusiastic and emotional reactions to surges. To approach flooding along these lines is basic to seeing how networks take part in memory works on (recalling and deliberately overlooking) with the end goal to adapt to ecological changes. In addition, the article grasps an exploration structure and procedure in which 'memory studies' is carried into a discussion not just with geology (mental maps), sociologies and surge chance administration approach yet in addition with partners and networks who gather, document and recollect surge accounts in their individual areas.

Aslam (2018) selected another area to conduct research on floods which is engineering. According to his research flooding is all inclusive a noteworthy regular danger. Surges result in property and life misfortune and poor monetary advancement. In spite of the fact that it isn't conceivable to keep the event of surges, however their negative effects could be limited significantly through appropriate arranging and viable arrangement. The defenselessness to surges could be diminished by precise and convenient expectation (Forecasting and Warning) and by impactreducing measures. Pakistan faces flooding issue pretty much consistently in the ongoing past. For the period 1947-2015, a monetary loss of US$ 38.165 billion has been assessed because of 23 noteworthy surge occasions in Pakistan. Roughly, in excess of 12,000 people were dead and 616,598 km2 arrive zone was influenced because of these surges. Environmental change has been anticipated to prompt an expansion in the recurrence and size of surges in future in Pakistan because of high chilly dissolving and deicing of mountain tops and high storm precipitation. The circumstance requests for successful and practical surge administration to decrease surge harms. This paper surveys surge administration current state, features difficulties of surge administration and distinguishes prospects for powerful and practical surge administration in Pakistan. The paper additionally looks to make certain suggestions toward successful and economical surge administration in Pakistan.

2.2 Newspaper Analysis

Yousaf, Adnan and Ali (2018) opted content analysis to observe Pak-America and India-America relations in newspapers of Pakistan, America and India. Corpus based on newspapers was collected from the whole year of

2016. Major themes which were focused in this regard were terrorism, nuclear,Kashmir issues with trade in these countries and most importantly ties of democratic and diplomatic among them. Content analysis method was employed for analysis.Analysis revealed that all newspapers have given almost neutral coverage to terrorism issue and so on. This research catered multiple issues in it while current research focuses only on one topic which is floods in Pakistan and it has not been discussed in above research. Secondly newspapers have been taken from different countries and there was a kind of comparative analysis and current research took newspapers of only Pakistan and without comparison.

Carpenter (2010) said that the nearness of an assorted variety of data offers residents access to a scope of thoughts, skill and themes. In this examination, a proportion of substance assorted variety was made to decide if online native news coverage and online daily paper distributions were serving this capacity in the USA. In view of the discoveries from a quantitative substance examination (n = 962), online national news coverage articles will probably include a more noteworthy assorted variety of points, data from outside sources and sight and sound and intuitive highlights. The discoveries recommend online national news-casting content adds to the assorted variety of data accessible in the commercial center. Lin, Yang and Chen (2007) said that we contemplate the characterization of news articles into feelings they conjure in their perusers. Our work contrasts from past investigations, which concentrated on the characterization of records into their creators' feelings rather than the perusers'. We utilize different blends of capabilities to locate the best mix for distinguishing the passionate impacts of news articles on perusers.

Research of Mahfouz (2013) investigated linguistic structure of different stories about police which have been published in two Egyptian newspapers before January 25 Revolution. One newspaper out of these two seemed to be independent while the other one appeared to be controlled by the government. Critical Discourse Analysis(CDA)perspective was used to analyze political ideologies behind the writings to help readers in their understanding in the way the writer wants them to be. Investigation of Izadi and Saghaye-Biria (2007) utilized Said's idea of Orientalism and van Dijk's idea of the ideological square to break down three tip top American daily papers' article inclusion of Iran's atomic program. A basic talk investigation of The New York Times, The Washington Post, and The Wall Street Journal publications from 1984 to 2004 recognized six Orientalist topics. The investigation finds that The Wall Street Journal and The Washington Post more dominatingly drew on Orientalist contentions than did The New York Times.

Baker and Levon (2015) talk in their research about a method for contrasting subjective and quantitative methodologies with basic talk investigation (CDA), two experts autonomously inspected comparative datasets of paper articles with the end goal to address the exploration question 'How are diverse sorts of men spoken to in the British press?'. One investigator utilized a 41.5 million word corpus of articles, while the other concentrated on a down-inspected set of 51 articles from a similar corpus. The two resulting research reports were then basically contrasted all together with inspire shared and one of a kind discoveries and to feature qualities and shortcomings between the two methodologies. This article reasons that a successful type of CDA would be one where distinctive types of specialist mastery are done as isolated segments of a bigger undertaking, at that point consolidated as a method for triangulation.

Reports of flooding are ending up more continuous in the UK media, and proof from the UK Environment Agency demonstrates that 'living with flooding' will wind up ordinary as opposed to uncommon. This examination

is the first to embrace a basic talk investigation way to deal with think about UK daily paper revealing of surges in the created and creating world. We present our investigation of real surge occurrences in Northern England and Chennai, India, in 2015. Our discoveries recognize that UK daily papers not just give more noteworthy noticeable quality to flooding occasions that are nearby yet in addition outline diversely those influenced. Reports of surges in Northern England strengthened likenesses and shared qualities among unfortunate casualties and accepted perusers by illustration upon individual stories, feelings and enduring. By complexity, reports about surges in Chennai depicted exploited people as unknown 'far off Others', accentuating the dramatization of the occurrence instead of the predicament of people. We contend that the daily papers' way to deal with covering flooding uncovers how the Western-overwhelmed worldwide media keep on underscoring distinction instead of likeness between individuals in the created and creating world, showing flooding in the United Kingdom as uncommon and flooding in India as standardized. We trust these discoveries have essential ramifications with regards to globalization and expanding relocation (Solman, & Henderson, 2018).

2.3 Transitivity System

As discussed in introduction, transitivity system is very important in extracting meanings hidden in clauses. Sometimes we use to go for surface level meanings of what is said but actually 'what is meant' may be totally opposite. If actual meanings are not understood then conversation may be fruitless.

It is not mandatory for transitivity analysis to be applied on linguistic texts only rather it may consider texts and discourse from any field as Mortensen (1992) has analyzed discourse of an individual who was suffering from dementia of the Alzheimer's type. Impaired experiential resources for the creation of meanings of words and content in his discourse were validated that involved participant roles and circumstances. A weakened lexicon seemed to contribute to the features of repetition and incompleteness. Current research also has selected the topic of floods which is non-linguistic. Bartley (2018) has provided another example of applying transitivity analysis in the field of law. In courtrooms usually language is manipulated due to which victims proved as innocents and innocent have to ripe what they haven't sowed. This research also talks about such a case where an innocent man was held guilty in a rape case of a minor just because of linguistic issues. Here that case has been examined with the help of transitivity analysis. This research is a combination of critical discourse analysis and corpus linguistics.

Previously Bartley and Hidalgo-Tenorio (2015) have conducted similar kind of research utilizing same method i.e. transitivity analysis. They talked about sexual orientation in Irish newspaper articles. This research explored society's prejudice against minorities. Racism became a major problem in their society. Certain groups used to be attacked frequently. Women, Travellers, Africans or homosexuals endure verbal and physical mistreatment. Isti'anah (2014) took four opinions of people who were very much interested in politics about famous governor election of Jakarta and analyzed those opinions with transitivity analysis. Majority of the opinions used material processes to explain what Jakarta people expect from the governor, reflected by Actor-Goal, Affected, and Goal-Recipient participants. Paper is different from current research because it has considered political and spoken discourse. Zhao and Zhang (2017) have also worked on political discourse and analyzed American president Donald J. Trump's inaugural address which was in 2017by using transitivity process. They used mixed method approach to dig out the meanings from the inaugural address of Trump. Their findings reveal that material processes (68.6%) were most frequently used in the speech. Then relational processes, existential processes, behavioral processes and mental processes respectively. Verbal processes were traced less in the speech. He used material processes so often to describe new actions the government is going to opt.

Some researchers have conducted transitivity analysis on literary pieces such as poems and short stories. Song (2013) has urged that these six processes are very useful in exploring theme so he adopted transitivity theory for the analysis of a short story titled 'A Rose for Emily' written by William Faulkner. He applied all of the six processes of TS on this short story and concluded that mental and verbal processes have been used frequently in it and helped in exploring meanings of the short story. Emily, the personification of old traditions in everyone's views.She tried to breakthe restraint and pursues for her own contentment. She eagerly use to love Homer and didn't want any kind of interference from society so she killed Homer so that she can live with him for her whole life.Such kinds of behaviors appear to be abnormal but it can be understood as her helpless struggle. Strong disapproval from the side of society and her family were responsible of her tragedy. Author gave a rose to Emily as a tribute for her all struggles. These meanings and themes have been constructed with the help of transitivity analysis.

Another literary writing was analyzed by Ezzina (2016). Researcher focused on analyzing verbs with transitivity process types in the experiential metafunction. This research particularly tried to discuss power relations with the analysis of roles of participants involved in these processes. Mainly this analysis reveals imbalance in agency between characters which reflects the estrangement of the character of Oedipa and her disinterest in real world. Nguyen's (2012) paper tried to construct personality with the help of application of theory of transitivity. Main purpose is to focus on the building of personality of main character with language of essay "Heroic Mother" written by Hoa Pham. For the sake of analysis, essay was divided in six chunks. First one defines roles of language and language studies in social life. The second one focused on past studies in the area of transitivity. Third section is methodology which provides direction of this particular study. Next part talks about the writer and essay. Fourth part introduces Hoa Pham, author of "Heroic Mother". The analysis of transitivity in "Heroic Mother" is provided in second last part. Final sectionconcludes interpretation of "Heroic Mother". The whole discussion critically analyzes main character, known as a "heroic mother" and helps in understanding it.

Transitivity analysis is not restricted to literary pieces only. A number of researches have been traced related to application of SFL theory on newspapers' texts such as research conducted by Ong'onda (2016). His research was different in a sense because he has taken newspaper headlines for analysis and the headlines which were about terrorism only. It focuses specifically on the incident of Al-Shabaab attacks at Westgate Mall in Nairobi, Kenya. Research investigated on 'Al-Shabaab' that how he was presented and by using which kind of language he was portrayed in newspaper headlines. What type of ideology was in the minds of reporters of Kenya. The study revealed that ideational meanings have been used. According to Ong'onda (2016) newspaper discourse is narrative based and largely applicable to transitivity. He found material and relational processes to be dominant in headlines which indicates that the whole process of terrorism revolves around events and actions. His negative image was constructed in minds of readers that may affect readers' opinions.

Research of Beji (2016) is also about transitivity analysis of newspaper headlines. He focused on transitivity-context connection in Tunis Afrique Press (TAP) releases' headlines. Time period he selected was from January to March 2013. It's about what focal elements and instruments TAP, as a main media in Tunisia selected to report and how did it conveyed the news about these regions.This analysis held Tunisian government responsible for the violence in country. Transitivity analysis unveiled their strategies from their own discourse. This paper of Emilia, Moecharam, and Syifa (2017) is concerned about the theme of sexual orientation in EFL classroom, especially in Indonesian setting. The paper centers around the talk of sexual orientation in classroom materials, i.e. English course readings. Chosen perusing sections were broke down inside the structure of Transitivity

arrangement of utilitarian punctuation. The Processes in the writings (e.g. travel, walk, and climb) uncover that guys were interminably built as 'courageous', 'daring individual', 'dynamic', 'free', and 'fit'. In the interim, the Processes likewise demonstrate that the females were formed as more 'inactive', 'expressive', 'supporting', and 'unassertive' than their male partners. The discoveries propose that the sex jobs were displayed in an uneven way. The paper gives proposal regarding how the two educators and understudies can create sexual orientation mindfulness in the classroom rehearses using the reading material.

Emilia (2016) covers a little piece of the aftereffects of an examination in endeavoring to recognize understudies' capacity and troubles in composing an English undergrad theory in a state college in Indonesia. The paper bases on the understudies' capacity and challenges in composing an information introduction and discourse part, which are identified with basic limit took a gander at in this examination. The paper starts with a short presentation, which introduces the foundation and the hypotheses supporting the examination. This will be trailed by a record of the technique, in which it is contended that the examination utilized a contextual investigation strategy, especially message investigation and included nine theories chose haphazardly and broke down dependent on the components of a traditional research report and the Transitivity arrangement of fundamental utilitarian punctuation, created by Halliday. The paper at that point portrays the outcomes, demonstrating that notwithstanding their great control in the talk semantic dimension, understudies when all is said in done in any case require a considerable measure of direction and help with composing an information introduction and discourse part. Suggestion for further research will close the paper.

The expansion in diseases impervious to the current antimicrobial drugs has turned into a theme of worry for wellbeing experts, strategy producers and publics over the globe; be that as it may, among people in general there is a feeling this is an issue outside their ability to control. Research has demonstrated that the news media can have a critical task to carry out in general society's comprehension of science and drug. In this article, we react to a call by research committees in the United Kingdom to consider anti-microbial or antimicrobial obstruction as a social wonder by giving a phonetic investigation of providing details regarding this issue in the UK press. We join transitivity examination with a social portrayals system to figure out who and what the social performing artists are in exchanges of antimicrobial obstruction in the UK press (2010– 2015), and also which of those social on-screen characters are described as having office in the procedures around antimicrobial opposition. Discoveries demonstrate that anti-infection agents and the contaminations they are intended to treat are imparted with office, that there is a strain between allotting duty to either specialists as-prescribers or patients-as-clients and collectivisation of the overall population as an unspecified 'we': minimizing domesticated animals cultivating and pharmaceutical industry duties (Collins, Jaspal, & Nerlich, 2017).

Above mentioned researches have discussed different issues which were analyzed with the help of transitivity system, hence they provide a contextualized framework for the current study. These issues were from different fields. Some researches were on newspapers as well but considered newspaper headlines for analysis. Ben Cheikh (2017) conducted transitivity analysis on newspaper articles as current research also has taken but he considered political issues in his research.

III.   DATA COLLECTION

Keeping in view the importance of newspaper articles in data analysis, a small corpus of twenty (20) newspaper articles were collected for current research. All of these articles were from English newspapers

published in Pakistan since 2008 to 2018. Then corpus collected was turned into plain text so that it can be analyzed by using 'UAMCorpusToolInstaller33m' software. Although there are a number of softwares available in market for corpus analysis but this software is specifically designed for the analysis of SFL transitivity. So in spite of its shortcomings like it is not updated still it seems to be a better option. The study follows following theoretical framework;

3.1 Theoretical Framework

Descriptive research method has been employed to study the research problem because the study aims to describe types of processes in transitivity systems that are involved in flood related NAs.

3.1.1 Transitivity System

Unlike previous concepts presented by traditional grammar, transitivity concept in SFL theory of Halliday talks about whole clause. According to Flowerdew (2013), clause is considered to be a fundamental unit in SFL. Transitivity System covers both experiences i.e. internal and external at level of clause (Halliday, 1994).

3.1.2 Transitivity Elements

Basically a clause is divided into three components to analyze transitivity patterns namely participant, process and circumstance. The entities which are involved in the process are called participants and are nominal groups. Process is verbal group of the clause. The adverbial group that focuses on how, when, why and where, is the circumstance.Thompson (2014) mentions that:"We can express what we have said about the 'content' of clauses in terms of processes involving participants in certain circumstances" (p.29).

3.1.3 Types of Processes

Halliday and Matthiessen (2014) has divided transitivity system into six types of process. Three of them are major which include relational process, material process and mental process. Remaining three are minor processes which consist of behavioural process, verbal process and existential process.These processes are explained in terms of participants and circumstances. Clause division representing six processes has been given below in form of table 3.

Table 3 : Transitivity System for Analysis

Clause Division		
Process	Participant	Circumstance
Relational process	Carrier and attributive Value and Token	+/-
Material process	Actor and Goal	
Mental process	Senser and Phenomenon	
Behavioural process	Behaver and Behavior	
Verbal process	Sayer and Target	
Existential process	Existent	

These types have been further explained in detail below;

3.1.3.1 Material Process

Material process is concerned mainly about what is going on in external world. It discusses about when someone has done something probably a physical action. This type of process involves two types of participants which are 'actor' and 'goal'. Participant is matter of concentration of action. Lock (1996) mentions that both doer and receiver of the action are participants and action is type of process. Answer of how can be found in circumstance.

Material process is further subdivided into two types of creative and material transformative material processes. Creative process brings goal into existence. While transformative differentiates in between intentional and involuntary processes. Actor is an explicit factor in direct clause in all material processes. Actor may not be explicit in passive clauses and can be omitted as well.

3.1.3.2 Mental Process

Mental processes are about the things which are going on inside our minds. Halliday and Matthiessen (2014) distinguish material and mental processes. There are two participants in mental process. First one is 'senser' that is related to what's going on in mind. Second one is 'phenomenon' which resembles with goal of material process. It is an entity that is being sensed by senser. However, phenomenon is again of different kinds. It may be a thing which is expressed by nouns. It can be a thought realized by finite clause or fact which is conveyed with a finite 'that'. Mental processes have been subdivided in four kinds. Perception includes sensory processes like hearing, smelling and seeing etc. Affection/emotive process for example hating, loving liking etc. thinking, remembering, knowing and other cognitive processes are part of cognition. Fourth one is volition which is also cognitive but in this process someone can decide on and commit to a particular thing such as hoping, desiring and wanting and like.

3.1.3.3 Relational Processes

Process of "being" is relational process. Such kinds of processes points towards relationship in between two participants. Such clauses use to identify and characterize. Like other processes, relational process is also subdivided into parts. Two participants are involved in attributive relational process. Most of the time verb is after carrier. Attribute which can be adjective or nominal group is carried by participant. The other attributes represent circumstance that are expressed by prepositional phrase. They carry information about time and place. In relational process, one entity is identified in terms of another (Thompson, 2014). This process of identification includes two participants i.e. identifier which is value and identified is token. These processes are conveyed by linking verbs such as be, become and seem. 'Be' is perception-type linking verb. It deals with perception of attribute. 'Become' is regarding change and is changing-type linking verb. 'Seem' is circumstantial-type linking verb, it expresses circumstantial meaning.

3.1.3.4 Verbal Processes

Processes of communicating and exchanging meaning are verbal processes. Two participants are involved in it. One is 'sayer' who use to address the message. To whom this message is directed is receiver. If it is directed at, then its target.

3.1.3.5 Behavioural Processes

Psychological and physiological behaviors are the processes of Behavioural processes. This type of process expresses actions which are experienced consciously (Halliday & Matthiessen, 2004). In behavioural processes, conscious being is considered as 'behaver' and the behavior.

3.1.3.6 Existential Process

The processes of happening and existing are existential. They involve existence of anything. Such clauses are recognized by 'there'. There is present at subject position but it doesn't have any experiential meaning. It just functions to indicate the existence of a participant which is not explicitly mentioned. 'Existent' is the only participant involved in this process in two either in the form of event or situation. It is expressed by a noun group (Thompson, 2014).

IV. RESULTS AND DISCUSSIONS

Section 4.2 is dedicated to the analysis of transitivity patterns used in the selected newspaper articles which explores embedded ideologies of the media. Results of the analysis revealed that all six processes of transitivity system have not been equally used in NAs. Some processes have been used very frequently while on the other hand it is very hard to find examples of some processes. Results in the form of percentages of six processes have clearly been shown in figure 2 below;
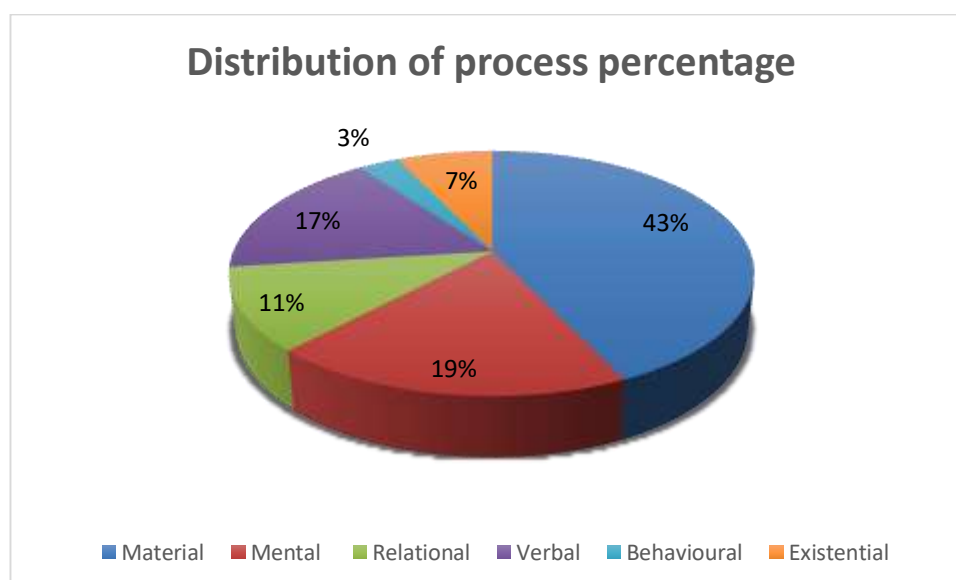

Figure 2 : Distribution of Process Percentage

The process that was followed in order to reach at the stage of providing results which are presented in figure 2 has been discussed here. First of all whole data which was collected from Pakistani English newspapers have been pasted on a word document as it was. No changes have been made in the data. If there were any syntactic or semantic errors in those texts, those were kept in their original form in order to confirm originality of the data.

Later on the data was converted to plain text on notepad because corpus analysis software are unable to read data from Microsoft Word documents.

Software named 'UAMCorpusToolInstaller33m' has been used to analyze the data as mentioned in section 3.2. It is considered that this software provides better results than other softwares as it is specifically designed to analyze SFG transitivity. Although it has a number of issues regarding its functionality (which will be discussed later) still researcher has to compromise because of its better results as it used to tag every process appears in given text.

After collecting results provided by the software, newspaper article (NA) data which was pasted on Microsoft Word document was tagged accordingly in the following way;

"Pre-monsoon rains [actor] often [circumstance] cause [material] damage [goal] in rural Pakistan [circumstance] and officials [sayer] said [verbal] locals had been warned to leave their villages for safer places. [verbiage]."

Then all the clauses present in the whole data were counted. There were 267 clauses in total. It leads towards counting them again separately for each process i.e. how many clauses have used material process and in how many clauses mental process is used. After it percentages were calculated which we have already observed in figure 2. Table 2 shares number of clauses and processes related to them individually.

Process	Clause
Material	114
Mental	51
Relational	30
Verbal	47
Behavioural	7
Existential	18
Total	267

Table 2: Clause Distribution

How these processes are used in the data and what do they reveal, will be discussed in sub-sections below;

4.1 Material Process

As discussed in section 3.1.3.1 in detail about material process and its sub division so here it would be desired not to repeat those details. These processes would be discussed here again only with reference to current research. As revealed by analysis, material process remained more dominant process in this data. How floods come and affect people and environment was the major theme of these NAs. Distribution of actor and goal is shown in figure 3.
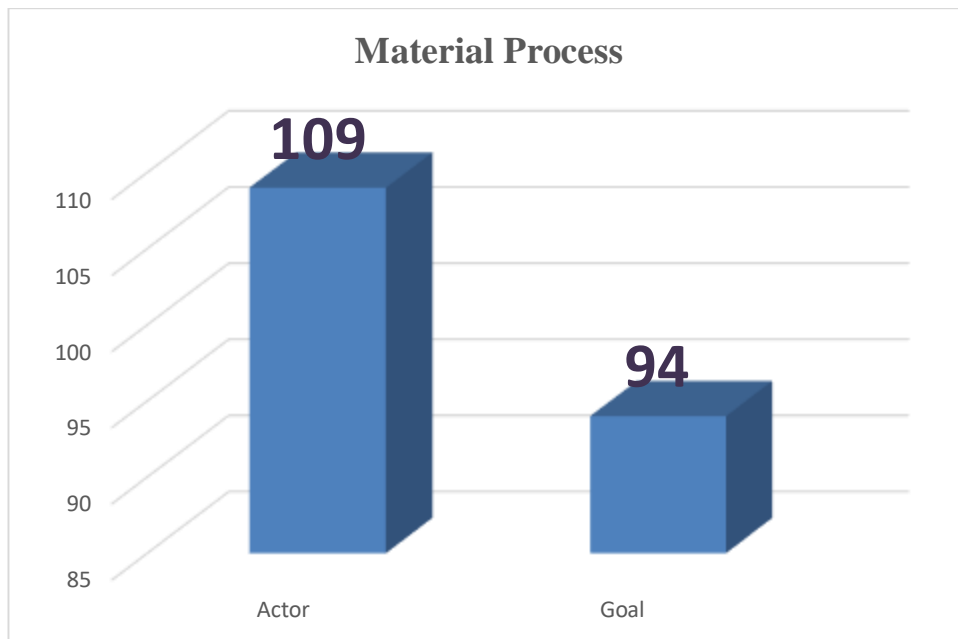
Figure 3 : Distribution of Actor and Goal

Figure 3 shows that there is not a major difference in between usage of actor and goal in clauses. However in some clauses goal was found to be missing. For example,

"Flood situation in Pakistan will depend upon outflow from Indian reservoirs"

In this example actor is present but goal seem to be missing and there are some other examples of this kind. In most of the clauses the word 'floods' and 'rains' are present at actor's position using different words such as the rains, pre-monsoon rains, summer rains, weekend rains, flash floods etc.

With the help of using material processes, usually media partners try to blame government officials as responsible of this undesirable situation. Moreover they want to stress on the point that authorities are not paying any head towards solution of this problem. Following examples try to unveil this ideology;

- MET department stubbornly remain wedded to its hopelessly outdated forecasting system
- Nothing of the sort ever happened
- Nobody from government is coming to help
- Pictures show devastation everywhere
- Monsoon rains caused severe damage to homes in rural areas

However, some newspaper articles suggest some precautionary measures too with material process to avoid floods for example,

"Such technologies exist that can facilitate…"

"Kalabagh dam can resolve all issues but…"

Their ideology is to blame authorities in the eyes of common masses perhaps to spread anarchy or for the sake of improvement. Their suggestions should be taken seriously whether these are actually helpful or just to throw dust in the eyes of readers.

4.2 Mental Process

Mental process has also been used to great extent but to sensationalize the writings. It seems that controlling emotions of society is more important task for authors of these writings than sharing facts. Some examples have been shared here;

- High to very high flood situation is expected

- Pakistan is expected to see the worst

- We want to see streamlined systems

- Warmer temperatures and more rainfalls the future will see

Sometimes with the help of these words they would like to create harassment or instigate violation. Another ideology may be to earn better or because almost all newspapers are in competition with each other so they try to add spices to sustain in a better position in society. Figure 4 shows distribution of senser and phenomenon
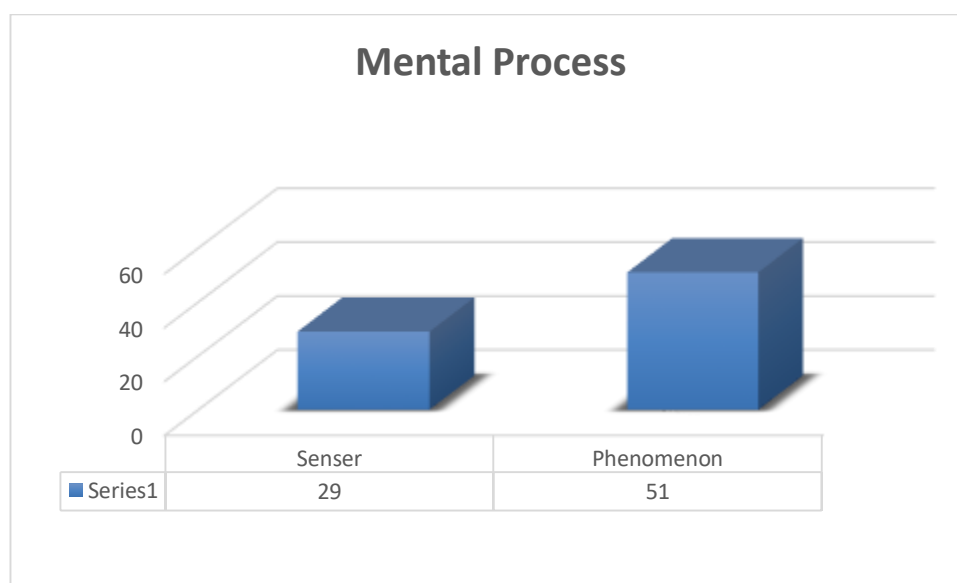

Figure 4 : Distribution of Senser and Phenomenon

4.3 Relational Process

Next observed process is relational process. In these newspaper articles, floods have been related to one situation or another. Sometimes they are related to causes of floods and sometimes with effects of floods and sometimes to sensationalize as discussed in section 4.2.2. By relating one situation with another, they also use to suggest possible measures for future implications. Another somehow weird ideology behind it is related to this natural disaster with political scenario. Some examples are as under;

- Floods of misery are ruining our future

- Global warming is major cause of floods

- Irrigation demand is likely to increase

- These are very preliminary assessments

It was found that carrier and attribute were in the same ratio in clauses as shown in figure 5.
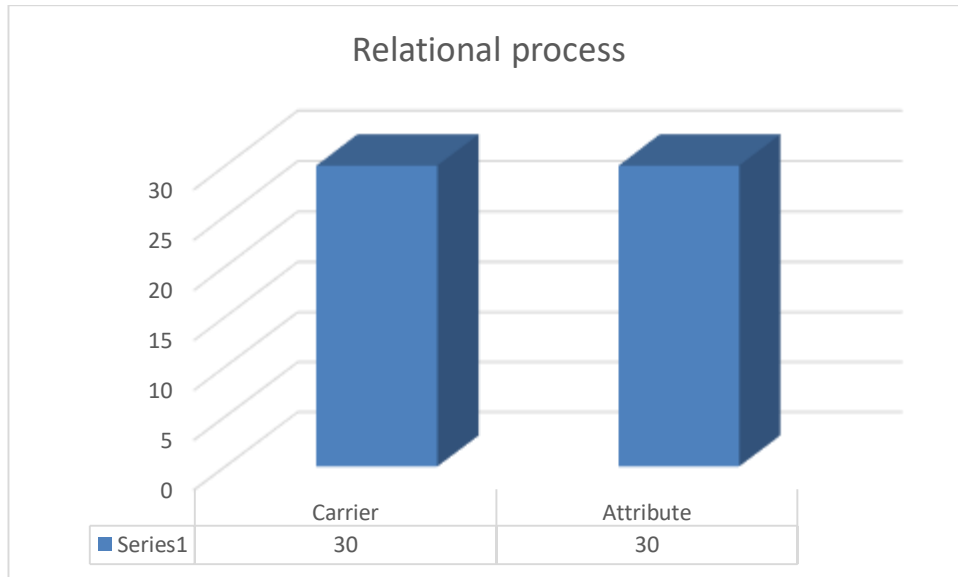
Figure 5: Distribution of Carrier and Attribute

4.4 Verbal Process

As discussed previously that verbal process is about expression and indication. Following same ideology of intoxicating minds, controlling thoughts of readers, to blame authorities and to suggest something for better future, verbal process is utilized. Though different processes have been used and pieces of information have been conveyed using different ways but the ideologies are same almost same. In verbal process, all sentences had sayer and verbiage but only very few instances of receiver have been traced in the data set (figure 6). It shows that focus is on conveying and embedding thoughts is objective and indirect such as;

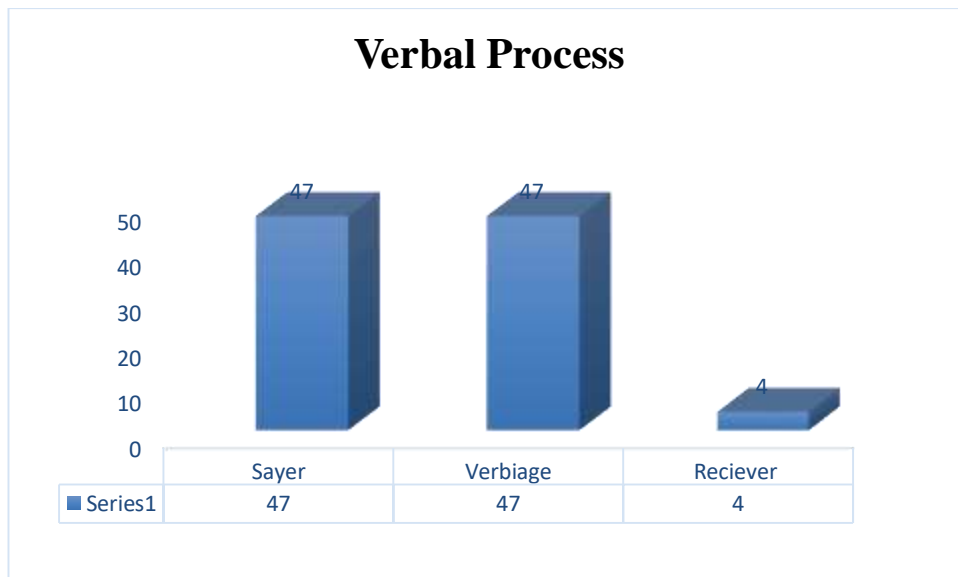*"The government insists on repeating the mistake"*

Figure 6: Distribution of Sayer, Verbiage and Receiver

4.5 Behavioural and Existential Process

Very few instances have been traced in the data where behavioural existential processes have been used. For example, this bitter reality still exists. It seems like depicting reality is not the purpose rather depicting wrong picture of reality is the goal.

V.   CONCLUSION

5.1 Methodological Conceptions

The study investigated commonly emerging linguistic patterns in NAs and the distributions and functions of six processes in flood related Newspaper articles. Another research question which has been addressed in this research was about the extent at which ideologies constituted through media texts.

For this purpose two research questions were designed. The first research question was 'What are the distributions and functions of six processes in flood related Newspaper articles?' And second research question was 'To what extent are ideologies constituted through media texts?'

To answer these above mentioned research questions, a corpus of twenty (20) newspaper articles were collected for current research. All of these articles were from English newspapers published in Pakistan since 2008 to 2018. But all these articles were not analyzed as software became stuck for hours as we attached data file with it. So, finally five newspaper articles were selected ou0t of those twenty. Then corpus collected was turned into plain text so that it can be analyzed by using 'UAMCorpusToolInstaller33m' software. Although there are a number of softwares available in market for corpus analysis but this software is specifically designed for the analysis of SFL transitivity. So inspite of its shortcomings like it is not updated etc. still it seems to be a better option.

To attempt these research questions collectively, transitivity concept in SFL theory of Halliday was selected which talks about whole clause. According to Flowerdew (2013), clause is considered to be a fundamental unit in SFL. Transitivity System covers both experiences i.e. internal and external at level of clause (Halliday, 1994). So it seemed to be a better strategy to explore the texts of newspaper articles related to floods.

In transitivity analysis, basically a clause is divided into three components to analyze transitivity patterns namely participant, process and circumstance. The entities which are involved in the process are called participants and are nominal groups. Process is verbal group of the clause. The adverbial group that focuses on how, when, why and where, is the circumstance. Halliday and Matthiessen (2014) have divided transitivity system into six types of process. Three of them are major which include relational process, material process and mental process. Remaining three are minor processes which consist of behavioural process, verbal process and existential process. These processes are explained in terms of participants and circumstances.

5.2 Key Findings

The study revealed some commonly emerging linguistic patterns in clauses of NAs by using transitivity analysis. As revealed by analysis, material process remained more dominant process in this data. How floods come and affect people and environment was the major theme of these NAs. With the help of using material processes, usually media partners try to blame government officials as responsible of this undesirable situation. Moreover they want to stress on the point that authorities are not paying any head towards solution of this problem.

Mental process has also been used to great extent but to sensationalize the writings. It seems that controlling emotions of society is more important task for authors of these writings than sharing facts. Relational process also appeared very frequently. In these newspaper articles, floods have been related to one situation or another. Sometimes they are related to causes of floods and sometimes with effects of floods and sometimes to sensationalize as discussed in section 4.2.2. By relating one situation with another, they also use to suggest possible measures for future implications. Another somehow weird ideology behind it is relate this natural disaster with political scenario.

Verbal process is about expression and indication. Following same ideology of intoxicating minds, controlling thoughts of readers, to blame authorities and to suggest something for better future, verbal process is utilized. Though different processes have been used and pieces of information have been conveyed using different ways but the ideologies are same almost same. In verbal process, all sentences had sayer and verbiage but only very few instances of receiver have been traced in the data set. Behavioural and existential processes have been used very little as their presence is equal to absence. It shows that depicting reality is not the purpose rather depicting wrong picture of reality is the goal.

5.3 Contributions and Limitations of the Study

It is hoped that results of current research may be generalized related to other natural disasters. It may have its application in linguistics especially where it may help in understanding underlying assumptions and ideologies of the media.

Along with the contributions, every study has some limitations so the current research also has some. I have tried to analyze my study very carefully and objectively and found that this study might have been improved by adopting following ways.

- Data has been collected from newspapers only. There is no comparison of this data with any other data for example with research articles, books etc. to verify results of this study.

- UAM software is not very latest software so it has some limitations in analyzing data such as it is unable to analyze behavioral process, it is dangerous for the health of laptop and may corrupt windows, works only in windows 10, suddenly it may stop working, for its functionality it requires other softwares to be installed too, coding may take much time, it's not updated since long etc.

- Transitivity process has been observed in English newspapers only, Urdu newspapers are not considered for this study

- Data was collected from different newspapers and not all articles were from the same newspaper.

- Results of this research cannot be generalized to great extent as data set is very small.

5.4 Directions for Future Research

As far as the researcher knows, not any research has been detected in the field of linguistics in Pakistani context pertaining to transitivity analysis of flood related newspaper articles. So this study can usher towards new avenues to the future researchers.

After conducting current research, it was felt that some more researches should be conducted relevant to this field to explore the facts in a better way such as;

- Same research should be conducted on Urdu newspapers and there results can be compared.

- There can be another source of information other than newspaper articles like Research papers on floods in Pakistan.

- There can be comparison of newspaper articles on floods and newspaper articles on any other topic for example earthquakes or other natural disasters. Is there any difference in these six processes in between both issues?

- Other discourse analysis strategies can be applied on the same data on the same topic

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