

A Discourse Analysis of China Daily Reports of Flooding in Northern China Based on the Transitivity Theory

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Abstract

News coverage of disasters has always been a central topic in journalism and the reporting of recent extreme floods in northern China is worth assessing. This research uses the transitivity system of the Systemic-Functional Linguistics to study 10 news articles published by China Daily to investigate what kind of picture has been portrayed for the flood-stricken area by news reports. This research contends that through the choices of process types and participants occupying the position of themes, news reports from China Daily has successfully presented scenes of unified battles led by Chinese government against the monster flood. This research is informative to both discourse analysts and journalism practitioners.

Keywords

Discourse analysis; China Daily; flood: news reports; transitivity.

1. Introduction

News constitutes the major, if not the only, source of knowledge of events that has recently happened around us, and thanks to the internet connection, we develop different opinions about the world and take actions, to a large extent, based on what we have learned from various newspapers. Just as former U.S. President Roosevelt stated “The man who writes...furnishes the material which is to shape the thoughts of our people, is essentially the man who more than any other determines the character of people and the kind of government this people shall possess”, news is undoubtedly worth close attention^[1]. And it is more so in news reporting of disasters since the public would need the news coverage more than ever during periods of crisis, and whether the world of journalism has handled reporting of disasters properly would have an enormous impact on societies^[2].

China Daily, the official English-language publication of China, garners millions of views both at home and abroad and is taken by many international readers and researchers as a channel to hear China’s voices^[3]. News coverage by such state-affiliated presses has played a vital role in the dialogues between Chinese government and its citizens and beyond, and it is particularly the case during times of crisis in China, viz., the COVID-19 pandemic since 2019 and the flood in Northern China in 2023. Therefore, how news articles from mainstream media like *China Daily* have covered such periods of traumatic experiences becomes a critical problem to be answered by referring to professional linguistic knowledge.

2. Theoretical Foundation

Among modern descriptive linguistic theories, the Systemic-Functional Grammar/Linguistics (SFG/SFL) founded by M. A. K. Halliday starts out to describe language or discourse in use. Halliday investigated what linguistic choices speakers make in real context to perform specific social functions among a set of social functions available to language users. Such investigations

have led to the establishment of the Systemic-Functional Linguistics (SFL) which states that languages are used to perform three metafunctions, namely ideational, interpersonal and textual metafunctions, with corresponding components of grammar resources to realize them into discourse.

Furthermore, Professor Huang has proved through his years of discourse analysis practice guided by the SFL that this grammar outperforms many other theories used to analyze discourse^[4]. Therefore, we could employ the SFL to analyze how particular grammatical wordings in news discourse serve to perform certain functions in society and their motivations from broader social context.

Language performs three metafunctions simultaneously^[5] as while language users are using clauses as representations of experiences, they are at the same time negotiating interpersonal relationships and organizing words, phrases and information units. However, three metafunctions do not share the same weight in every type of text. When it comes to news, the ideational metafunction would be the most important one because news texts usually aims to report to readers “what has happened” or “who has done what”^[6]. Hu Zhuanglin (1994) claimed that Halliday’s analysis shows that people’s knowledge of external world is realized through transitivity in ideational function^[7]. It is thus reasonable to look for a grammatical system that is designed to fulfill ideational metafunction.

The ideational function comprises two modes of construing experiences or two sub-functions: experiential and logical functions. While the logical function concerns relationships between clauses, the experiential function is realized by such a grammatical structure involving participants, circumstances and processes which constitute the three components that are “organized in configurations that provide the models or schemata for construing our experience of what goes on”^[8].

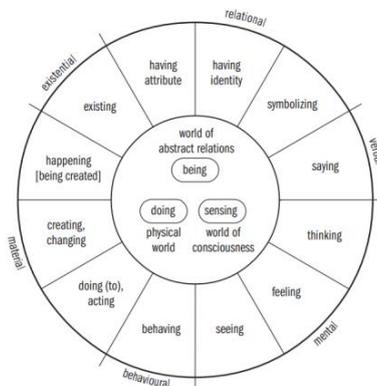


Fig. 1: Types of Process in English (Halliday&Matthiessen, 2014, p216)

<p>material: Actor + Process ± Goal [intransitive/transitive], confined to 'material' clauses, so leading to a range of other configurations as well:</p> <p>behavioural: Behaver + Process</p> <p>mental: Senser + Process + Phenomenon</p> <p>verbal: Sayer + Process (± Receiver)</p> <p>relational: Carrier + Process + Attribute; Token + Process + Value</p> <p>existential: Existent + Process</p>

Fig. 2: Transitive Model for Each Process Type (Halliday&Matthiessen, 2014, p219)

Since this research is targeted at discovering the propositional meaning of news articles on disasters and the way that *China Daily* has used to combine different types of events or goings-on together to create a particular picture of disaster-stricken areas for readers rather than any

other pursuits, the transitivity system would then be a good match as the theoretical framework for this piece of discourse analysis.

3. Literature Review

The transitivity theory has informed divergent lines of inquiry, covering a wide range of research topics, and many scholars used this theory to guide their analysis of new discourse. For example, Sun and Chen (2023) used three grammatical structures: the transitivity system, modality system and theme and rheme progression to examine 263 headlines of reports on the Belt and Road Initiative (BRI) from Japan's think tanks and found that the process types of the transitivity system successfully revealed the stances of authors as certain process types are much more frequent and the participants in clauses are often countries other than Japan which signals their suspicion^[9]. Jamie Williams and David Wright (2022) used as linguistic data all 92 daily televised COVID-19 briefings by the UK government and found that the UK government exploited the inherent ambiguity of the pronoun "we" as participants to mitigate their own responsibility for containing the spread of the virus, and meanwhile increasing the responsibility to the general public^[10]. Shi and Jin (2021) made use of the transitivity system to uncover the attitude of Malaysia towards the Belt and Road Initiative (BRI) by analyzing 21 news reports published by the local mainstream newspaper New Strait Times and concluded that the dominant process type--the material type are used to describe the facts that the cooperation between China and Malaysia has been bringing momentum to Malaysia's economy, yet verbal processes, relational processes and mental process in the corpus are employed to show positive attitudes of Malaysian government and to increase the reliability of reports^[11]. Ma and Cui (2020) identified the process types used in 10483 pieces of newspaper about China from The Guardian and illustrated what the dominant three process types: material, verbal and relational processes had contributed to the construction of China's image^[12].

Overall, these studies all manifest the application of the transitivity framework which can be reflective of the means and strategies of how authors construe the reality differently. It is out of this observation that this research draws on the framework of transitivity to explore and reveal how *China Daily* deploys different transitivity components to build a reality made up of words.

4. Research Questions

1. What messages six process types have represented in *China Daily* news texts on flooding respectively in 10 headlines and 10 news texts?
2. What kind of picture or image of flood-stricken area in Northern China has been created by combining six process types together in news texts from *China Daily*?

5. Data and Methodology

This research chose *China Daily* special coverage: Northern China battles record flooding (https://www.chinadaily.com.cn/china/special_coverage/64cc703aa31035260b81a516/page_1.html), as the source of linguistic data and selected 10 pieces of news articles starting from the news report named "Flood detention reservoirs manage flooding in Hebei" which is the first piece of news in the special coverage series and was uploaded on August 3rd and ended the text selection process with the news article titled "Rainfall declared 'historically extreme'" that was published online on August 4th at 9 in the morning.

All the photo collections and captions were excluded from linguistic data collection.

As far as methodology is concerned, this research combines both quantitative and qualitative approaches. Through the qualitative approach, this research would complete the manual

identification of process types of transitivity system which is carried out by establishing a coding scheme involving all 6 process types and their sub-categories in the transitivity system aided by a corpus annotation software called UAMCorpusTool3.3x (The software can be accessed through the following link <http://www.corpustool.com/>),

Next the analysis would interpret their contribution to different messages embodied in the transitivity structure of participants, processes and circumstances, and the way they and all process types cooperate with each other to form a coherent picture.

Then, by the quantitative method, this research means to count the number of different process types in the news report data and to work out the percentages they each take up in the total number of process types identified with the help of UAMCorpusTool3.3x which provides the graphical representation of some of the statistics.

Since news headlines summarize the themes of news texts and probably receive much more attention from audiences, it is argued that news headlines could best represent stances or attitudes of news reports^[13]. This research therefore, would analyze news headlines separately before including them into the news data in unraveling the picture that has been portrayed for this disaster as a whole.

In addition, this analysis would pay special attention to participants that occupy the position of theme, another label used by the SFL to signal the point of departure of messages in clauses while trying to decode participants of process for the implied meanings encoded by minute linguistic features, because the choice of themes determines what information would come before the rest, thus reflecting authors' ideologies^[14].

6. Results and Discussion

6.1. Process Types in Headlines

6.1.1. Process Types

Table 1 Process Types in 10 Headlines

CLAUSE-TYPE	N (number)	Percent
Material	7	63.6%
Verbal	2	18.2%
Mental	1	9.1%
Relational	1	9.1%

Altogether 11 processes are identified in 10 headlines. The material process is the most used clause type since it appeared 8 times, taking up 63.6% of the total number of processes, the number of the verbal process is 2, and another 2 types of processes, viz. mental, and relational processes also occurred, with each of the 2 showing up once.

6.1.2. Material Process

The material process is the process of doing and happening, it typically includes the process by which some change occurs due to the material action of the participants. It could be used to tell readers what has happened, what is happening or what is likely to happen, and is, therefore, often used in newspaper for description or narration purposes^[6].

The 7 material processes are exemplified by the following verbs: manage, take, allocate, aid, upgrade, show and limit. Through these verbs, the news report headlines have portrayed a vivid scene in which people actively take various measures to fight against disasters and the order of these verbs also tells us how the battle against disaster is proceeding, as actions like manage, take and limit would usually be followed by or be done to things unfavorable while allocate and

aid by or to people in need. Therefore, in the scene created by verbs in material processes, the measures of managing floods and rescuing victims are happening at the same time.

The participants in material process could be categorized into two kinds: Actor, the entity that performs the action of doing or is the “source of energy”^[8], and the Goal, the entity that is impacted by actions.

The Actors in material processes could be classified into 2 kinds according to the institutions they belong to: authorities and the public. Among 6 Actors, there are 5 from the authorities, and one is the public. In this way we could see that the government is definitely responsive and actively taking concrete measures to cope with the flood and help victims:

Ex. 1 China's Red Cross allocates millions to aid flood victims

Ex. 2 Northeast China province upgrades emergency response for flood

The other Actor is from the public: netizens. This coverage helps to describe the public as a resilient, kind and helpful action-takers instead of just as victims or standers-by, and gets Chinese people from different places united as one to tough through hard times.

In terms of Goals, the most frequent ones are those related to responses: additional safety measures, millions, emergency response and support. Moreover, the “additional safety measures” has occupied the theme position in one news headline, thus becoming more prominent.

Ex. 3 Additional safety measures taken around flood detention reservoir

These Goals informed us the Chinese society is now utilizing every possible resource like money, emergency responses and support from citizens.

6.1.3. Verbal Process

The verbal process are clauses of saying. And saying something is a physical action that reflects mental operations^[5]. Therefore this process type is could be used to show opinions and judgments of certain parties, especially in news reporting. In the verbal process, there is always one participant: the Sayer who sends some messages which is labeled Verbiage, and there may also be a Receiver to whom the Verbiage is addressed.

In the two relational clauses, the Sayers are “once-trapped train riders” and “express delivery companies in northern China” who said thanks and reported damages respectively. News coverage of such voices from the public demonstrated that *China Daily* is keen to know how people’s lives are affected by the flood and this constitute a sign of Chinese philosophy of people first. Also, the contrast between the merciless flood havoc and the helpfulness and gratitude of Chinese people further impelled us to chase away the monster of flood so as to restore a harmonious society:

Ex. 4 Once-trapped train riders express thanks

Ex. 5 Express delivery companies in northern China report damaged parcels due to flooding

6.1.4. Relational Process

The relational process is the process of being and having. In the relational process, a certain relationship is established between two entities. There are two major sorts of relational processes: the attributive and the identifying relational clauses. “In the ‘attributive’ mode, an entity has some class ascribed or attributed to it.” Then we label the entity as Carrier while the class as Attribute. In an identifying clause, two participants referring to same thing are related together with the more general participant labeled as Value while the more specific element labeled Token.

This relational clause belongs to the attributive kind, ascribing the feature of “historically extreme” to the rainfall in the flood-stricken northern China. Such an attribution which characterizes the rainfall in northern China to be induced by extreme weather and to be

historical serves as a explanation of the cause and severity of this flood, thus justifying ensuing coverage and enormous resources put into disaster alleviation:

Ex. 6 Rainfall declared 'historically extreme'.

6.1.5. Mental Process

The mental process is contrasted with the material process as it encodes our experiences not of the outer, physical world, but our inner consciousness. This process type talks about human emotions, desires, cognition and perception. In the mental process, there is one participant who take the role of Senser who “feels, thinks, wants or perceives”^[8] and another which could be a thing, an act or a fact and is called Phenomenon.

The mental clause begins with a marked theme which denotes Phenomenon in the mental clause and the Senser is omitted. In this way, the Phenomenon “eerie flood” is highlighted thus contributing to the wickedness and destructiveness of the flood and further depicted the neediness and bravery of rescuers and citizens who face the horrible disaster:

Ex. 7 Reporter's log: Eerie flooding seen up close.

6.1.6. The Overall Transitivity Process

To recap, clauses 10 news headlines are predominantly material which depict scenes of forces, mainly from the government and from the public uniting together to fight against the flood and to help those in need; the relational and mental processes are illustrations of images of overwhelming flood; and the verbal process presents two contrasting pictures: the damage that flood had done to us and the victory and gratitude that unity has brought to us.

As different scenes depicted with the help of different process types merge into one, it could be concluded that through these 10 headlines *China Daily* has drawn a picture of Chinese people, led by the government persevere and fight as one against the powerful and cruel flood.

6.2. Process Types in 10 Texts

6.2.1. Process Types

Table 2: Process Types in 10 Texts (including headlines)

CLAUSE-TYPE	N	Percent
material	723	50.0%
relational	340	23.5%
verbal	269	18.6%
mental	96	6.6%
behavioral	11	0.8%
existential	8	0.6%

Taken all the clause types identified in 10 news texts, including those of the 10 headlines, there are 1447 clauses in total. The material process, unsurprisingly, takes the first place, and accounts for 50% of all processes in the data-set of this analysis, followed by the relational process taking up 23.5%. The verbal process is the third-highest occurred clause type constituting with a percentage amounting to 18.6%. The remaining three process types, namely mental, behavioral and existential processes are rather less used in these 10 news texts, with existential being the least used.

The use of process types of 10 texts shares similar features with that of 10 headlines. The behavioral and existential process types are used less than material, relational, verbal and mental and material process takes the first position. Unlike the pattern in 10 headlines, however, the behavioral and existential are used in news bodies and the relational process turns into the second most used process type and the third most frequent is the process of saying.

6.2.2. Material Process

The use of material processes is mainly devoted to the account of measures and actions from governments and the general public just as news headlines have shown for us. However, many are also used to describe how the flood and rainfall was changing in news bodies. This would again reinforce the contrast those actions between human and flood, and since human actions take up the majority part and are well designed for different situations, the victory of this battle seems to be secured by humans.

Ex. 8 ...North China's Hebei province has detained about 1.8 billion cubic meters of floodwater...

Ex. 9 ...the rain stopped on Wednesday.

Ex. 10 I was following a rescue team that was to evacuate trapped residents...

The participants on thematic positions are government departments, rescuers, residents and the flood or rainfall. The most often seen Actors at the beginning of clauses are official institutions that relocate residents, upgrade emergency responses and compensate and so forth. Residents are portrayed not just into victims who receive assistance helplessly, but also are taking actions to help others, and the flood or other words that represent the disaster often leads a clause in which it either causes damage or wanes:

Ex. 11 Hebei province has made use of seven detention areas...

Ex. 12 Residents did whatever they could to help.

Ex. 13 The rains have caused widespread flooding in the region...

6.2.3. Relational Process

Relational processes are overwhelmingly employed to characterize the extremity and seriousness of this year's flood or rainfall and the damage it caused. Some are also used to describe how rescuers reached out to help victims despite dangers, and to comment on measures of governments, and residents' help:

Ex. 14 ... the province's average rainfall reached 146.2 millimeters, amounting to about 27.5 billion cubic meters of water...

Ex. 15 The only difference was that theirs had been wet.

Ex. 16 The flood detention reservoirs that we used turned out to be effective.

Ex. 17 They are great people full of kindness.

Verbal Process

In verbal clauses, the Verbiage usually comes first before Sayer and the verb as disaster information are urgent. In citing others' speeches, while more messages are shown to us in reports, quotes are also widely used. The quotes are typically more reliable and vivid since they reject any rewording.

Ex. 18 "If not for the two areas alleviating floodwaters, the pressure on downstream flood control in Xiong'an and Tianjin would be very heavy," she said...

Ex. 19 "It's all right baby. Your mommy is coming," the rescuer said gently.

Most Sayers are government officials who has been keeping an eye on meteorological information and explaining how the flood was developing and ways that measures would be implemented. Voices from delivery companies and bookstores which are hard hit by extreme weather and floods, common citizens and rescuers come next, second to official sources. Such a pattern would definitely ensure the trustworthiness and compensate such a quality with humaneness.

Ex. 18 The National Meteorological Center has declared the recent heavy rainfall in the Beijing-Tianjin-Hebei region from Saturday to Tuesday "a historically extreme event".

Ex. 19 YTO Express, another major parcel delivery company, said some of its sites and vehicles have been flooded.

Ex. 20 Another user wrote, "Those who survive big disasters are blessed with good fortune afterward."

Mental Process

The 10 news texts do not use mental process so much and most mental processes belong to the perception type which denotes experiences of seeing, hearing and so on. And Sensor role is played by a journalist in most cases and there are also a few cases in which places are metaphorically used to be Sensors. Phenomenon being perceived are basically either related to disaster relief or to the disaster.

Interestingly, what the journalist perceived are primarily about assistance while the places perceive the disasters that is battering them. In this way, news reports successfully avoided resorting to emotions which might elicit more panic and fear and used the lens of the journalist and human-like places to have our attention focus on what they perceive around them--brave rescuers and brutal floods.

Ex. 21 I looked back and saw three new rescuers already on the boat and preparing to start off again.

Ex. 22 I could see the whole picture — people huddling together, staring at each other in silence, and I heard the whistle and saw the flashlight, all in heavy fog

Ex. 23 The province witnessed 144 hours of heavy rainfall over the week...

6.2.4. Behavioral Process

Behavioral processes lie between the material and mental processes since "these are processes of (typically human) physiological and psychological behaviour, like breathing, coughing, smiling, dreaming and staring" [8]. There is typically only one participant in behavioral process: Behaver, the person who "is behaving" [8].

Since behavioral process is rather personal, it is no surprise that it is rarely used in newspaper. In these 10 texts about extreme flood, Behavers are flood victims and their behaviors say that they suffered and they would brave through the flood.

Ex. 24 They shouted out and waved their hands.

Ex. 25 As each one passed, rescuers on our boat would shout out to them: "Hey, take care, the fog is heavier along your way."

Ex. 26 This time the girl didn't cry.

6.2.5. Existential Process

Existential clauses "represent that something exists or happens" [8] and is usually realized through the structure of "there be". There is only one participant in these clauses: the Existent. The existential clauses are used to show what rescuers have found and most Existents are residents who suffered from the flood. Through the existential clauses, readers could see why unity and help hand from all quarters matter so much and what the flood havoc had brought to common citizens just like many readers themselves.

Ex. 27 ...and there wasn't a minute without stunning scenes.

Ex. 28 ...there was a toddler, huddled in her mother's arms.

Ex. 29 "There are fewer than 400 permanent residents in the community, mostly elderly.

6.2.6. The Overall Transitivity Process

To conclude, the 10 news texts we extracted from China Daily special coverage of the battle against flood in northern China have presented us with a picture of flood-stricken northern China in which the flood is, obviously portrayed as a mighty enemy that tried to prey on people in northern China.

And the most prominent figure would be government departments who take initiative in implementing measures against floods and heavy rainfall, relocating and compensating for

residents, while at the same time keeping analyzing how the flood would change and reporting meteorological information. People who were hit by severe flood endured hard times and received help from many sides, but they also offered help to others, thanked every favor and showed courage. The third most conspicuous character in the news narrative would be rescuer from across the country who despite dangers and extreme weather, set out to help victims and encouraged and moved each other and the general public. Thus, a government-led battle which united people from across the country against the flood havoc would become the impression or understanding of northern China flood for readers of these 10 news reports.

7. Conclusion

This paper has analyzed 10 news reports of floods in northern China based on the transitivity system of the SFL to disclose the picture that has been portrayed for flood-hit northern China. This has been completed with detailed examinations of process verbs and participants, especially the participants in the position of themes of all process types in 10 news headlines and 10 news articles. It has been found that based on the transitivity system, the research has successfully found out that *China Daily* has portray the image of a government-led battle with helping forces from all sides and across China against the historically extreme floods for flood-stricken areas in Northern China. This research is worth reading for readers, journalists and beyond for it reminds us to be critical in news reading and it proved the usefulness of the transitivity system of SFL in digging out the underlying meanings or functions of language choices in news texts. Future studies on the same topic could be further improved by collecting more news texts from *China Daily* special coverage: Northern China battles record flooding.

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