

An Analytical and Comparative Study of English Reading in Chinese Examinations from the Perspective of Transitivity Theory

Yanping Li

School of Chongqing Normal University, Chongqing 401331, China

Abstract

The paper discusses new problem-solving paths from the perspective of the transitivity theory of systemic functional linguistics. Analyzing six typical processes in language guides the narrative reading questions in Chinese English tests. In this paper, we use the transitivity theory to find the answer to the reading questions of the Chinese College Entrance Examination and the Secondary School Examination, respectively. And find that it is feasible to finish narrative questions using the transitivity theory. It means that the test taker can analyze the six material processes of the passage and match them to the corresponding reading question to complete the reading task. In addition, the transitivity theory was used to compare the process types of target content in Chinese English tests. The study found that reading questions of the Chinese College Entrance Examination were set in favor of mental and relational processes. In contrast, the reading questions in the Secondary School Examination preferred verbal and material processes. In conclusion, proposers can adjust the degree of difficulty in reading questions by relying on Processes.

Keywords

Transitivity theory, English reading for Chinese College Entrance Examination, English reading for Secondary School Examination.

1. Transitivity Theory

Systemic functional linguistics proposes three parameters of the context of situation: ideational function, interpersonal function, and discourse function, while ideational function includes two parts, experiential and logical meanings (Halliday, 2000). The experiential meaning is mainly expressed through transitivity (Halliday, 2004). The experiential meaning refers to the expression of language in relation to people's experiences in the real world (including the inner world); in other words, language reflects what happens in the objective and subjective worlds, the people or objects involved, and the environmental factors associated with them. In conclusion, our language builds up pictures of reality - in terms of things, events, and circumstances. These three general categories of human experience (things, events and circumstances) typically occur together in CLAUSES, with the pivotal element of the clause being the expression of event, or PROCESS. Transitivity is the main system that reflects the experiential meaning (Huang, G.W., 2010). Halliday (2004) has developed a process-centered framework for understanding the transitivity of experiential meaning, which consists of three parts: (1) PROCESS; (2) PARTICIPANT; (3) CIRCUMSTANCE.

Halliday provides a detailed account of the transitivity theory based on the basic framework. In terms of processes, Halliday (2004) argues that the human experience can be divided into six different processes: material process, mental process, relational process, behavioral process, verbal process, and existential process.

2. Clauses as Process

To have a clearer understanding of the six processes in clauses, Butt (2012, p.69-71). gives a clear explanation in the book. He begins the division into three groups by recognizing that some verbs are indeed doing words and describe actions and happenings in the outside, material world. A second group can be thought of as projecting processes and might be described as thinking, feeling, or saying words. The third group of verbs can be described simply as being words when designing project teaching (Hu, Z. L et al., 2005).

Doing verbs: Material process and Behavioral process

Material process: processes like ate, retreated, and caught encode experiences in the external material world. These are to do with doing and happening and are known as MATERIAL processes.

Behavioral process: processes like laughed, slept, and cried encode physiological or psychological behavior (often the equivalent of a mental or verbal process). They lie somewhere between material and mental or verbal processes and are known as BEHAVIOURAL processes

The projecting verbs: Mental process and Verbal process

Mental process: processes like known, wondered, and thought that encode experiences in the inner world of consciousness. These are to do with thinking, wanting, perceiving, and emoting are known as MENTAL processes.

Verbal process: processes like asked, said, and praised encode the experiences of bringing the inner world outside by speaking. These are to do with saying and asking are known as VERBAL processes. Like mental processes, they have the potential to project the words of the speaker in direct or indirect speech, or they may use an appropriate nominal group, to sum up what has been said.

The being verbs: Existential process and Relational process

Existential process: Processes like are, was, were, the function of which is to set up the existence of a sole Participant. These processes are almost always preceded by there. They are known as EXISTENTIAL processes.

Relational process: process like are, was, seemed, have, became, felt, belongs to, the function of which is to encode relationships of being and having between two Participants. This group, known as RELATIONAL processes, has to do with the attributes of class membership or with specific identity.

Halliday distinguishes the roles of the elements in the six process categories. The main actors in material processes are Actor and Goal; the main actors in mental processes are Senser and Phenomenon; the main actors in relational processes are Carrier and Attribute, or Identifier and Identified; the main actors in behavioral processes are Behavior; and the main actors in verbal processes are Sayer, Verbiage, Receiver and Target; the main participants in the existential process are Existent. The basic semantic configuration of the six typical process types is as follows:

- (1) behavioral process = behavior + process + behavior
- (2) existential process = there + process + existent
- (3) material process = actor + process + goal
- (4) relational process = carrier + process + attribute
- (5) mental process = senser + process + phenomenon
- (6) verbal process = sayer + process + verbiage + receiver

3. Research Questions

Narrative texts are found in English reading in China, both in junior high school and senior high school. This paper will rely on transitivity to analyze the reading questions of the Chinese College Entrance Examination and the Secondary School Examination respectively, to verify the usefulness of the transitivity theory. It is done by using the question set in the paper to locate the appropriate text, analyze the process of the target text, and use this to infer the answer. At the same time, according to the curriculum standards, there is a huge difference between the Chinese College Entrance Examination and the Secondary School Examination. Therefore, we need to rely on transitivity theory to answer the following three questions:

1. Can we rely on the transitivity theory to effectively solve reading questions in Chinese papers effectively?
2. Which aspects of the process are the focus of the reading questions in the Chinese College Entrance Examination and the Secondary School Examination respectively?
3. Whether the transitivity theory can be relied upon to improve the English reading questions on the Advanced Level exams.

4. An Analytical Study of English Reading in Chinese Examinations from the Perspective of Transitivity Theory

This part has chosen two passages from the Chinese College Entrance Examination and the Secondary School Examination to address the above three questions.

A. 2021 Chinese College Entrance Examination Reading Comprehension

Take the example of the 2021 Chinese College Entrance Examination (National Paper A) Reading Comprehension C. The narrative reading has set four questions. (Questions 8-11) and we will analyze questions 8 to 11 one by one here..

8. What can we learn about the author soon after he moved to London?

- A. He felt disappointed. B. He gave up his hobby.
 C. He liked the weather there. D. He had disagreements with his family.

Then: we make the process analysis based on the target paragraph of the article.

When I was 9, we packed up our home in Los Angeles and arrived at Heathrow, London on a gray January morning. Everyone in the family settled quickly into the city except me. Without my beloved beaches and endless blue-sky days, I felt at a loss and out of place. Until I made a discovery.

When I was 9				
1	Actor	Process: material	Goal	
We packed up our home in Los Angeles				
2	Actor	Process: material	Goal	
and arrived at Heathrow				
3		Process: material	Goal	
Everyone in the family settled quickly into the city except me				
4	Actor	Process: material	Goal	
I felt at a loss				

5	Senser	Process: mental	Phenomenon	
and		out of place		
6		Process: mental	Phenomenon	
Until		I	made	a discovery.
7	Actor	Process: material	Goal	

The paragraph we have analyzed above is the whole process from before the author moves to after the move. According to the above process analysis, we can learn that this passage gives information about three main aspects: the author's introduction of his age at the time of the move - the relational process; the author's preparation before the move - the material process; the contrast between his mood and that of others after the move - the mental process. Then we look at the question set for question 8, which asks us to focus on the author's situation after the move, so the text mentions the author's mental process. Cause5-I felt at a loss and out of place. this shows the author's state of mind after moving to London, and his mood is very depressed, not joyful. His mood contrasts with the description of other people's state after moving to London in the fourth clause, Clause 4-Everyone in the family settled quickly into the city except me. We can therefore rely on the mental processes of the transitivity theory in the passage to select the answer. The answer to this question is A.

9. What do the underlined words “Safe! Safe! Safe!” probably mean?

- A. Be careful! B. Well done! C. No way! D. Don't worry!

Then: we make the process analysis based on the target paragraph of the article.

Southbank, at an eastern bend in the Thames, is the center of British skateboarding, where the continuous crashing of skateboards left your head ringing. I loved it. I soon made friends with the local skaters. We spoke our own language. And my favorite: Safe. Safe meant cool. It meant hello. It meant don't worry about it. Once, when trying a certain trick on the beam (横杆), I fell onto the stones, damaging a nerve in my hand, and Toby came over, helping me up: Safe, man. Safe. A few minutes later, when I landed the trick, my friends beat their boards loud, shouting: “Safe! Safe! Safe!” And that's what mattered — landing tricks, being a good skater.

Southbank		is	the center of British skateboarding	
1	Carrier	Process: relational	Attribute	
where the continuous crashing of skateboards left		your head	ringing	
2	Actor	Process: material	Goal	
I		loved	it	
3	Senser	Process: mental	Phenomenon	
I		soon made friends	with the local skaters	
4	Actor	Process: material	Goal	
We		spoke	our own language	
5	Sayer	Process: verbal	Target	
Safe		meant	cool	
6	Carrier	Process: relational	Attribute	

	It		meant		hello
7	Carrier		Process: relational		Attribute
	It		meant		don't worry about it
8	Carrier		Process: relational		Attribute
	I		fell onto		the stones
9	Actor		Process: material		Goal
		damaging	a nerve		in my hand
10	Actor		Process: material		Goal
		and	Toby		came over
11	Actor		Process: material		Goal
		helping me up			Safe, man. Safe.
12	Actor		Process: material		Goal
	When	I	landed		the trick
13	Actor		Process: material		Goal
		my friends	beat		their boards loud
14	Actor		Process: material		Goal
		Shouting			Safe! Safe! Safe
15	Sayer		Process: verbal		Projected clause
	That		is		what mattered
16	Carrier		Process: relational		Attribute
		landing			tricks
17	Actor		Process: material		Goal
		being			a good skater.
18	Carrier		Process: relational		Attribute

To analyze the passage, we need to contextualize the question. The question asks for the meaning of the underlined word 'Safe! Safe' in clause 15. "Safe meant cool. It meant hello. It meant don't worry about it." So, from these relational process clauses, we can learn that "cool, hello, don't worry about it" are all explanations of the meaning of safe, which is the key to solving the problem. It is clear that "cool, hello, don't worry about it" is not the conventional meaning of "be safe." "meant" is used as a relational process in three clauses and explains the meaning of "safe." The next clause is about a skateboarding experience in which a friend said to him, "Safe, man. Safe" This logical reasoning is in line with the Chinese reasoning: when you fail at a sport, a friend comes over to help you and says to you to be safe. So many students fail to

understand its underlying meaning. The words from your friends can be "keep your safety," and "encouragement." "Safe meant cool. It meant hello. It meant don't worry about it." The first time "safe" is used. If you understand the relationship clause in which "safe" appears for the first time, you will do it right. Then, when we switch to the underlined part, "Safe!" In clause 15, the transitive process is the verbal process and 'Shouting' is the verbal process indicator. Here, we can imagine a friend shouting at you after you have completed a sport. What would he be shouting at you? It would not mean "Be safe," nor would it mean Don't worry. So, his words would be words of encouragement. There is no problem in bringing the meaning of encouragement into the relational clause. The key to solving this question is to clearly understand the relational and verbal clauses of "Safe" in the passage. Therefore, this question is chosen as B.

10. Why did the author like to spend time in Southbank when he returned to London?

- A. To join the skateboarding.
- B. To make new friends.
- C. To learn more tricks.
- D. To relive his childhood days.

Then: we make the process analysis based on the target paragraph of the article.

When I returned to London in 2004, I found myself wandering down to Southbank, spending hours there. I've traveled back several times since, most recently this past spring. The day was cold but clear; tourists and Londoners stopped to watch the skaters. Weaving (穿梭) among the kids who rushed by on their boards, I found my way to the beam. Then a rail-thin teenager, in a baggy white T-shirt, skidded (滑) up to the beam. He sat next to me. He seemed not to notice the man next to him. But soon I caught a few of his glances. "I was a local here 20 years ago," I told him. Then, slowly, he began to nod his head. "Safe, man. Safe."

When I returned to London in 2004				
1	Actor	Process: material	Goal	
I found myself				
2	Senser	Process: mental	Phenomenon	
wandering down to Southbank				
3	Senser	Process: mental	Phenomenon	
spending hours there				
4	Actor	Process: material	Goal	
I have traveled back several times				
5	Actor	Process: material	Goal	
The day was cold but clear				
6	Carrier	Process: relational	Attribute	
tourists and Londoners stopped to watch the skaters				
7	Actor	Process: material	Goal	
Weaving among the kids				
8	Behavior	Process: behavioral	Range	

9	who	rushed by	on their boards	
	Actor	Process: material	Goal	
10	I	found	my way to the beam	
	Sensor	Process: mental	phenomenon	
11	Then	a rail-thin teenager	skidded up to	the beam
	Actor	Process: material	Goal	
12	He	sat	next to me.	
	Actor	Process: material	Goal	
13	He	seemed not to notice	the man next to him	
	Carrier	Process: relational	Attribute	
14	But soon	I	caught	a few of his glances
	Actor	Process: material	Goal	
15	I	told	him "I was a local here 20 years ago"	
	Sayer	Process: verbal	Receiver	Projected clause
16	Then, slowly	he	began to nod	his head.
	Behaver	Process: behavioral	Behavior	

First of all, the second sentence, "I found myself wandering down to Southbank," directly indicates the author's mood at that time. "wandering" is a mental process, which means "pacing." Here, it is clear that the author is in a state of despair. The tenth clause, "I found my way to the beam," also demonstrates the author's mental process, "the author gradually walked towards the beam," which describes his nostalgia for the joyful days of his childhood. Finally, in the 15th clause, "I was a local here 20 years ago" is the content of the speech process: the Projected clause. It is not only an introduction to one's identity but also a nostalgia for one's childhood life. To solve this question, the test taker needs to focus on the mental processes in the second and third clauses, which describe the author's mental state. The latter process is finished in the first person, expressing the author's deep nostalgia for his childhood. Therefore, this question is chosen as D.

11. What message does the author seem to convey in the text?

- A. Children should learn a second language.
- B. Sport is necessary for children's health.
- C. Children need a sense of belonging.
- D. Seeing the world is a must for children.

Then: we make the process analysis based on the target paragraph of the article.

When I was 15, my family moved to Washington. I tried skateboarding there, but the locals were far less welcoming. Within a couple of years, I'd given it up.

	When	I	was	15	
1	Carrier	Process: relational	Attribute		
	my family	moved to	Washington		
2	Actor	Process: material	Goal		
	I	tried	skateboarding	there	
3	Actor	Process: material	Goal		
	but	the locals	were	far less welcoming.	
4	Carrier	Process: relational	Attribute		
	Within a couple of years	I	had given it up.		
5	Senser	Process: mental	Phenomenon		

The final question is a summary of the main idea of the text. Then, we need to contextualize the question to solve it. From the summary of the whole text, we had learned in the first paragraph that the author was not happy at the time after moving house when she was nine years old, in contrast to the state of her relatives around her. (The first question has been solved). Later, the author managed to find his passion in London: skateboarding and making new friends. At the age of 15, he moved again to Washington. The fourth clause, "the locals were far less welcoming." is a relational clause, indirectly showing that the author's life in the locality was less pleasant than in London. In the fifth clause, there is the mental process "I had given it up." We can then analyze the text, which shows that the author has moved several times, expressing his feelings of reluctance and regret. Thus, when he returned to London in 2004 - the most enjoyable time of skateboarding as a child - he felt disappointed. Therefore, based on the several stages of time mentioned by the author, we can conclude that what he lacks is a sense of belonging. In adolescence, children are different from adults, and what they need is to belong.

B. 2021 the Secondary School Examination Reading Comprehension

Take the example of the 2021 Secondary School Examination Reading Comprehension B. The narrative reading has set four questions. (Questions 59-62) and we will analyze questions 59 to 62 one by one here.

59. When did Mike start to learn computer programming?

- A. At age 5
- B. At age 7.
- C At age 10.
- D. At age 12.

Then: we make the process analysis based on the target paragraph of the article.

Mike showed great learning ability and interest in the "how" and "why" behind things at a very young age. He began to study computer programming at age 5. He taught himself on the Internet and put his learning into practice. He has learned 10 languages.

	Mike	showed	great learning ability		
1	Carrier	Process: relational	Attribute		
	and	interest in the "how" and "why" behind things			
2	Senser	Process: mental	Phenomenon		
		at a very young age			
3	Senser	Process: mental	Phenomenon		

He began to study computer programming at age 5				
4	Actor	Process: material	Goal	
He taught himself on the Internet				
5	Actor	Process: material	Goal	
and put his learning into practice				
6	Actor	Process: material	Goal	
He has learned 10 languages.				
7	Actor	Process: material	Goal	

According to the question in question 59, what the question asks is when Mike learned computer programming. "He began to study computer programming at age 5". It is a material process. The answer to this question is A.

60. Why is Mike improving the skill of written communication?

- A. To learn another language.
- B. To make new inventions.
- C. To better express his ideas.
- D. To teach himself online.

Then: we make the process analysis based on the target paragraph of the article.

Also he is improving another skill: written communication.				
1	Actor	Process: material	Goal	
My idea is no use to anyone				
2	Carrier	Process: relational	Attribute	
if I can't express it he explained				
3	Projected clause	Sayer	Process: verbal	

The third clause in the passage above gives us a direct reason. Mike needs to improve another writing communication skill: He explained that my idea is no use to anyone if I can't express it. Mike needs to 'express' his idea before it can be of value to anyone else. The key to solving the problem is to focus on the projected clause in the verbal process of clause here.

61. What can we learn about Mike's parents?

- A. They are proud of their son Mike.
- B. They help Mike with all subjects.
- C. They care more about Mike's grades.
- D. They work in the same company.

Then: we make the process analysis based on the target paragraph of the article.

"Mike does well in all subjects," his mother said				
1	Projected clause	Sayer	Process: verbal	
"When he has difficulties, he will try to find a way out."				

2	Projected clause		
His father was satisfied with Mike's non-academic achievements			
3	Senser	Process: mental	Phenomenon
"They mean much more," his father said			
4	Projected clause	Sayer	Process: verbal

The content of the above passage includes the attitudes of Mike's mother and father, which are mainly verbal process clauses that use parental speech to express their views. Therefore, the question is also easy to answer. First, let's focus on the first clause, the mother's verbal process clause, "does well" and "try to find," illustrates the mother's recognition of Mike's learning ability and her appreciation of his ability to rise to the occasion when dealing with problems. In the third and fourth clauses, the father's attitude, "was satisfied with," directly explains the father's opinion. Therefore, we can conclude from these sentences that both parents are proud of Mike. Therefore, we can choose A for this question.

62. What is Mike's bigger dream?

- A. To be a health care worker. B. To make things easier for people
C. To leaner computer knowledge. D. To start two technology companies.

Then: we make the process analysis based on the target paragraph of the article.

Mike	has started	two technology companies	
1	Actor	Process: material	Goal
And he has a bigger dream for the future.			
2	Senser	Process: mental	Phenomenon
"I really want to make things easier for people, especially the old," Mike explained.			
3	Projected clause		Sayer Process: verbal
"The next, maybe a health care robot."			
4	Projected clause		

According to the above passage, we are directed to the third clause, where Mike's bigger dream is explained. The third clause is a verbal process clause. "I really want to make things easier for people, especially the old," Mike states his bigger dream in this projected clause. Therefore, this question is also of low difficulty, choice B.

5. A Comparative Study of English Reading in Chinese Examinations from the Perspective of Transitivity Theory

From the above analysis of the transitivity theory, reading questions in the Chinese College Entrance Examination and the Secondary School Examination have different emphasis. In high school, test takers usually need to focus on the mental and relational processes in the sentences. For example, the first question in the high school reading test requires the test taker to focus on "felt at a loss and out of place," and the third question requires the test taker to focus on "I found myself wandering down to Southbank" and "I found my way to the beam." The emphasis here is on the mental process, which requires the test taker to try to understand, or empathize with, what the writer is feeling in the moment. The second question requires attention to the

relational clause in the sub-clause and theoretical reasoning concerning the text. The test taker had to understand the meaning of "safe" well to complete the question. Also, the inference is made through what is added by the verbal process "Shout" in the latter. Thus, we can see that high school English reading questions do not usually focus on simple storylines that rely on separate material processes, behavioral processes, and verbal processes to get the answer. It usually requires the test taker to transform relationships, reason and predict, put himself in the author's shoes, and figure out the IDEA he is trying to convey through context and setting. So, he needs the test taker to be more subtle in reading the text.

Analyzing the reading questions in the Secondary School Examination shows that the questions are biased toward the material and verbal processes. Three questions in this article were solved directly through the Projected clause in the verbal process. One question is based on the storyline of the article, which means that it is solved directly by finding the material process. Therefore, it is not difficult to understand the content of the speech and to find the storyline, which directly expresses the speaker's attitude and opinion. The storyline directly presents the relevant facts of the issue. Therefore, the questions ask us to find factual content and do not require us to make conversions, making it less difficult. The reading questions in the Chinese College Entrance Examination, on the other hand, focus on mental and relational processes. And the content presented in their process clauses is not objective but rather subjective, requiring the test taker to second-guess and transpose to understand the author's intentions, which makes it much more difficult.

6. Conclusion

Here, we can answer the three research questions posed at the beginning of this paper.

Firstly, we have used the transitivity theory for reading problem solving through the above textual analysis. Therefore, it is a good exploration of reading problem-solving. We found that the reading questions in the secondary school examination focused more on verbal and material processes through textual analysis. In contrast, reading questions in high school focus on relational and mental processes. If the questions are easy, then the test taker can start with material processes, behavioral processes, or simply verbal processes, requiring the test taker to grasp the chapter's storyline, its climax, and the cause of the problem. Suppose you want to increase the difficulty of the essay. In that case, you can focus on the mental and relational processes of the transitivity theory, which requires a higher level of thinking, logical reasoning, and prediction.

References

- [1] Butt, D. G., et al. Using functional grammar: an explorer's guide. National Centre for English Language Teaching & Research Macquarie (2012):69-71.
- [2] Halliday, M.A.K. (2000). An Introduction to Functional Grammar (2nd edition). London: Arnold /Beijing: Foreign Language Teaching and Research Press.
- [3] Halliday, M.A.K. (2004). An Introduction to Functional Grammar (3rd edition). London: Hodder Arnold.
- [4] Huang, G.W. (2010). Systematic functional linguistics research methodology. Foreign Languages Research. 5:1-5. .
- [5] Hu, Z. L., Zhu, Y. S., & Zhang, D. L. (2005). Introduction to Systematic Functional Grammar (revised Edition). Beijing: Foreign Language Teaching and Research Press.