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The cognitive-functional properties of English WH-dialogic constructions in discourse

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Abstract: Within the theoretical frameworks of cognitive linguistics and cognitive construction grammar, this paper takes the pair of a WH-question and one of its answers in contemporary spoken English as the research object and regards such pairs as WH-dialogic constructions. In this study we construct an Event-based Schema-Instance Cognitive Model (ESI model) to analyze the cognitive-functional properties of this category of dialogic constructions. The discoursal expansion and textual cohesion in discourse achieved through the application of such dialogic constructions indicate that the usage of WH-dialogic constructions is one of the basic cognitive strategies for human beings to construe the objective world.

Keywords: WH-dialogic constructions; event; schema-instance principle; cognitive model

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1. Introduction

A discourse comprises a series of usage events (Langacker, 2008: 457). The online usage of a pair of English WH-question and one of its answers (short for WH-QA pair)[1] in conversation signifies a kind of usage events in discourse. Cognitively speaking, the focal information of a WH-QA pair as indicated by WH-words at the initial position of a WH-question is prototypically associated with the focal parts of other type of constructions in linguistic communication, thus the usage of WH-QA pairs and those of other constructions in discourse form networks of usage events. In the theoretical framework of cognitive linguistics and the construction grammar in particular, an English WH-QA pair, working as a communicative unit in discourse, is virtually a dialogue construction with the pairing of form and function, according to the definition of a construction by Goldberg (2006: 3). Grounded on the cognitive view of event and the schema-instance cognitive principle, this paper proposes the event-based schema-instance cognitive model (short for ESI model) to demonstrate the event schema and event instance relation between a WH-question and one of its answers, with

1. In this paper, WH-dialogues are selected from Corpus of Contemporary American English.

an effort to reveal that the online usage of a WH-QA pair is the driving force of discourse expansion and the basis of achieving textual cohesion in conversation. The ESI based cognitive-functional properties of WH-QA pairs in discourse indicate that the usage of WH-dialogic construction is a basic way for human beings to understand the objective world.

2. Previous studies on WH-QA pairs

The existing studies on English WH-QA pairs include the researching findings from the perspectives of historical linguistics, structural linguistics, formal linguistics, functional linguistics and cognitive linguistics. In general, the research objects of these existent researches are WH-words[2] initiating WH-questions, or WH-questions[3], or a WH-question and one of its answers as a whole.

In specific, the chief concern of historical Linguists (e.g. Baugh, 1978) is the recording and description of the diachronic changes of WH-words heading English WH-questions, while structural linguists (e.g. Thomson and Martinet, 1986) focus on the syntagmatic and paradigmatic aspects of linguistic structures, emphasizing more the compositional meanings sourced from all the parts in a WH-question. For linguists interested in Transformational and Generative Grammar, they, claiming the view of syntactic autonomy, have made significant contributions to the study of the phenomena of WH-movement and its constraints on the structuring process of sentences (e.g. Chomsky, 1957, 1965, 2013). With regard to practitioners in the studies on Montague Grammar (e.g. Hamblin, 1973; Karttunen, 1977) and Head-Driven Phrase Structural Grammar (HPSG) (e.g. Ginzburg and Sag, 2000), they have investigated the strategies employed to formalize the semantic representations of a WH-question or the pair consisting of a WH-question and one of its answers, with the help of rule-based logic reasoning. What is more, the school of computational linguistics aims at designing efficient question-and-answer systems for the application of artificial intelligence (e.g. Lehnert, 1977), expecting to offer ideal computer programs to perfectly simulate human being's questioning-and-answering process in real, so as to ultimately achieve the goal of Turing Test. As for linguists assuming the functional approach to natural languages, they stress the relationship between theme and rheme in WH-questions, and discuss in detail the communicative function of WH-words in discourse (e.g. Halliday, 1994: 45–46.) In terms of the studies from the perspective of cognitive linguistics, the major findings are those contributed by Langacker (1991: 505–506; 2009: 235), who conducted an analysis of the core structure of WH-words and WH-questions within the framework of cognitive grammar, and those by Goldberg (2006: 177), who examined the restrictions on questioning by employing WH-question constructions.

To summarize the existing studies related to WH-QA pairs, most of these studies place more emphasis on the construction of theories with a lack of large corpus-based or empirical evidences. Most strikingly, the existing analyses of English WH-interrogative sentences are mainly grounded on the examples of Yes-No Questions, while cognitive approaches to a WH-QA pair as a whole are rarely seen, especially at the discourse level.

3. WH-QA talking pairs as dialogic constructions

2. In this paper, a WH-word is the question word at the head position of a WH-interrogative sentence.

3. A WH-questions is the one structured by a simple sentence with the syntactic pattern: WH-word + auxiliary+ remainder + ?. Cases that wh-questions are embedded in other sentences are excluded from this study.

The dialogic process of questioning-answering is an indispensable component of the human linguistic communication system. Traditionally, the questioning-answering dialogues cover four basic categories, namely, dialogues consisting of WH-questions with their answers, dialogues indicated by YES-NO type of questioning-answering, dialogues structured by alternative questions with their answers, and dialogues formed of tag questions with their answers. For the research presented here, dialogues composed of WH-questions with their answers are the core concern, and they can be instantiated by example (1) of questioning-answering (short for QA 1).

QA1:

Mr-FALLON: …**What**'s your favorite color?

JENNY: **Purple**.

As is assumed by Cognitive Construction Grammar, a construction is the form-meaning pair (Goldberg, 1995: 4) or grammatical constructions are conventionalized pairings of form and function (Goldberg, 2006: 3). Constructions are fundamentally symbolic units, and the form of a construction is featured by phonological, morphological as well as syntactic properties, whereas the (conventional) meaning of a construction entails the semantic, pragmatic and discourse-functional properties (Croft, 2004: 257–258). As far as a WH-QA pair is concerned, it basically consists of a WH-question and an answer in form. Prototypically, such a pair functions as a strategy employed by human beings to explore the unknown information or verify the known information concerning the objective world in linguistic communication. Accordingly, a WH-QA pair in contemporary spoken English is characteristic of the pairing of form and function, indicating that a WH-dialogue consisting of a WH-question with an answer is a dialogic construction[4], which is structured as the following:

a WH-QA pair —
- **WH-question: WH-word + auxiliary + remainder ?**
- **Answer: [X]**

In this dialogic pattern, the WH-word initiating the WH-question stands for the focal information of the question or the initial focus of the dialogue, while the rest of the pattern of the question suggests an event frame to construe the focal information, whereas the prototypical function of the answer is to offer the specific content [X] of the focal part (WH-word) of the WH-question.

4. ESI model for WH-dialogic constructions in discourse

To explore the cognitive-functional properties of WH-dialogic constructions in discourse, this paper proposes the Event-based schema-instance model (ESI), which is the theoretical integration of the cognitive view of event and the schema-instance cognitive principle.

4.1. The cognitive view of event

From the perspective of cognitive linguistics, events are the units based on which human beings

4. For this research, the questioner and the answerer in a WH-dialogue are not the same person, as shown by QA1where the questioner is Mr-FALLON, while the answerer is JENNY.

understand the objective world (Zeng, 2015). The interpretation on an event is constructed on three dimensions, namely, the dimension of objective scene, the dimension of conceptualization, and the dimension of linguistic encoding (ibid). Fundamentally, the objective scene perceived by the speaker is an integral part of the objective reality, and serves as the basis of human being's understanding of abstract concepts as well as the relationship between objects in the real or fictive world. In line with the perspective of cognitive linguistic studies, the outcome of the speaker's conceptualization of the objective scene is essentially the event structure of the scene at the mental level. Different cognitive subjects (viz., speakers) have various ways to construe the same objective scene in accordance with the diversified needs or purposes of linguistic communication, thus highlighting different parts of the event structure of the objective scene. The structure of an event at the conceptual level is basically the abstraction of the structure of the real event or objective scene. With the aid of linguistic signs, the mentally represented event structures are mapped onto the linguistic structure in communication, which is actually the linguistic encoding of the event structure in the speaker's mind. To think in this way, the syntactic structures indirectly reveal the structures of the objective scene on account that cognitive process of the speaker's interpretation on the objective world is engaged. In terms of a WH-QA pair, the WH-question and one of its answers are both the linguistic encoding of event structures sourced from the conceptualization of objective scenes.

4.2. The schema-instance cognitive principle

Langacker (1987: 371) claims that a schema is an abstract characterization of a category and is shared by the central and peripheral members of a category. Both the central member and peripheral members are instances of an abstract schema. He made a clear distinction between the terms 'prototype' and 'schema'. The former is the typical member of the category, while the latter is the abstract generalization of the prototype member and the peripheral or extended members in a category. The extended members have more details of the schema than the prototype member does.

However, Taylor (1989:59) holds that the term 'prototype' can be understood as a schematic representation of the conceptual core of a category. A schema can have many examples, and generalizes the commonness of all of them. He claims that the relations between a schema and its instances and those between its instances are bidirectional instead of being unidirectional as suggested by Langacker. The schema-instance cognitive principle assumed by Taylor is illustrated in **Figure 1**.

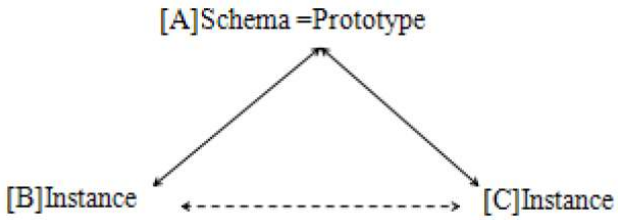

Figure 1. The schema-instance cognitive principle in the view of Taylor (2002: 125).

4.3. Event-based schema-instance model

The WH-word heading a WH-question is schematic in nature, thus resulting in the schematic property of the WH-question (Zeng, 2016). The prototypical relationship between a WH-question and one of its answers is essentially structured on the schema-instance cognitive principle (ibid). To

put it another way, a WH-question functions as a schema in on-going conversations and its answers are its instances, suggesting that a WH-question and its answers share a certain degree of parallelism in structure. According to Du Bois (2014), generally there is a certain degree of parallelism between talk-turns that share commonness in syntactic or conceptual structures, thus producing dialogic resonance between adjacent utterance pairs. Structural parallelisms in dialogue show that speakers derive schemas from priming utterances, re-instantiate those schemas in their own conversational turns and in doing so create an effect of resonance between the primer and its extension (Brône et al., 2014: 472).

Grounded on the cognitive view of event and the schema-instance relation between a WH-question and one of its answers, the ESI model for the WH-QA pairs in discourse can be illustrated by **Figure 2**.

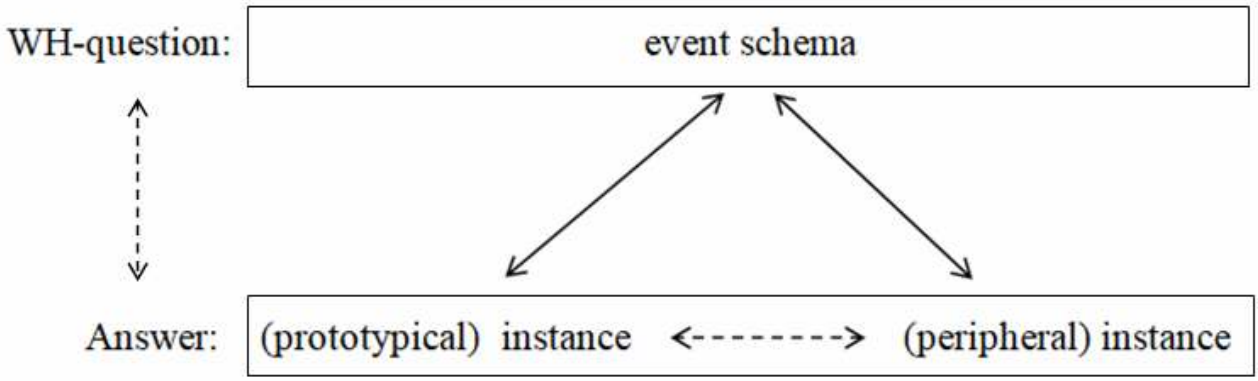

Figure 2. Event-based schema-instance model (ESI) for WH-QA pairs in discourse.

As can be seen from Figure 2, a WH-question is schematic because of the 'non-fixedness' feature of the WH-word, and the answer is an instance of the schema. A WH-question and an answer form a pair in discourse (represented by a vertical dotted line with bidirectional arrows). This figure also shows that there are two kinds of instances of the event schema, as shown by the two solid lines with bidirectional arrows. One is the prototypical instance denoting the prototypical answer to the question, while the peripheral instance indicates that the answer is not the 'standard' one but still associated with the schematic meaning of the WH-word, suggesting that there are different answers to the same WH-question in real conversations between interlocutors. The two types of instances interact with each other and form a prototype-extension relationship (represented by a dotted line with bidirectional arrows). Prototypically, the schematic structure of the question summarizes the commonness of the answers, while an answer specifies the schematic properties of the question in various ways. In addition, the vertical dotted line with two arrows in the figure signifies that speakers in the dialogue interact with each other to negotiate the specific meaning of the WH-word heading a question.

5. Discoursal functions of WH-dialogic construction

Discourse is where structure, use, and acquisition come together; discourse is the use of language (Langacker, 2008: 457). When a WH-dialogue construction emerges in the constructional process of discourse, the current dialogic event, the physical environment of the dialogue, a previous adjacent

usage event and an anticipated adjacent usage event work together to form the Current Discourse Space (CDS) for the current dialogic event, as shown by **Figure 3**.

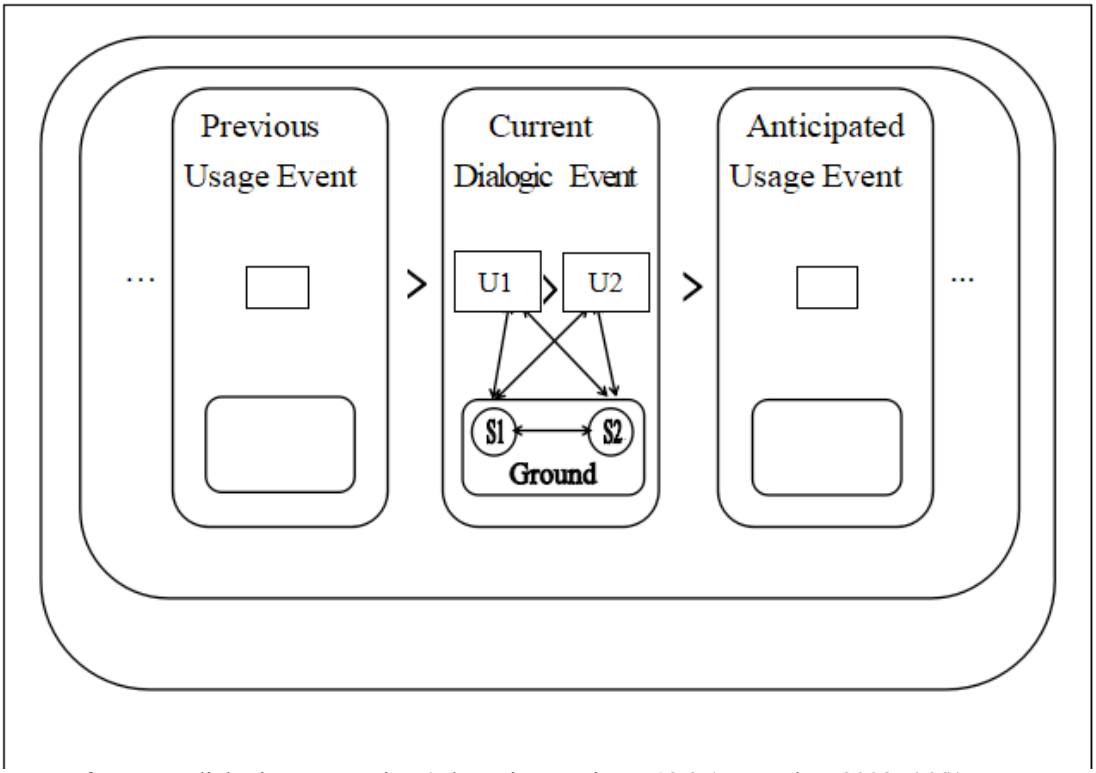

Figure 3. CDS for a WH-dialogic construction (adaptation to Figure 13.2 (Langacker, 2008: 466)).

U1 = Utterance1 U2 = Utterance2 S1 = Speaker1 S2 = Speaker2 CDS = Current Discourse Space

Figure 3 shows that a discourse is constructed in a linear way. In the local CDS for a WH-dialogic construction, a dialogic event embodies its synchronic and diachronic features. By synchronic features, we mean a WH-dialogue construction is characteristic of one-question-and-one answer mode of dialogue, in which the questioner and the answerer cooperate together to negotiate the meaning of the WH-words in given circumstances. The initiation of a WH-dialogue is based on the previous focus of the talk-turn in the same context. The diachronic features of a WH-dialogue construction indicate that in the on-going process of linguistic communication, there may be distinctions between a WH-dialogue construction and its adjacent constructions in terms of the focus of talk-turn, interlocutors, and the background of communication, etc. In the diachronic process of the construction of a discourse, there might be cases that a questioner initiates one question but with multiple answers.

Additionally, Figure 3 suggests that the information conveyed by WH-dialogue is a source of newly gained knowledge. Viewed from epistemic perspective, a WH-dialogue is structured based on a certain extent of known information possessed by a cognitive subject (viz. a speaker). With the progress of WH-dialogues, the unknown aspects concerning the objective world for a speaker become the known information that is occasionally or frequently verified and consolidated, and thus serve as the background information for newly-built dialogues. Therefore, the known information in WH-dialogues and the result of conversations driven by WH-dialogic constructions constitute part of the stable knowledge of human beings with regard to the objective world.

Most importantly, Figure 3 implies that in a local CDS, a WH-dialogic construction is a node of an event network. The use of WH-dialogic constructions is the driving force of the expansion of a discourse and at the meantime a discoursal cohesion in the linguistic communication is achieved.

5.1. Discoursal expansion driven by WH-dialogic constructions

In discourse, the utterance before the initiation of a WH-dialogue is an integral part of the background to construe the focal information whose position is marked by the WH-words heading WH-questions. For communicative purposes, a questioner is supposed to enquire about the specific information conveyed by previous utterances, and through this enquiry, a WH-interrogative speech event is triggered. A WH-dialogue construction, as a whole unit in the view of ESI cognitive model, functions to clarify, add new information to or shift the topics that are emerged before the questioning-and-answering speech acts. In this way, the applications of WH-dialogues expand the size of an on-going discourse. The dynamic process of discourse expansion driven by WH-Dialogues can be instantiated by the local discourse where QA2 is located.

QA2	1 SCHLESINGER:	…**What** are you going to do now?
	2 Ms-LEVINE:	Go upstairs.
Non-wh-QA	3 SCHLESINGER:	Back to your room?
	4 Ms-LEVINE:	Back to my room.
Elliptical QA	5 SCHLESINGER:	And?
	6 Ms-LEVINE:	Sit and wait and read and back in the loop again.

The discourse containing QA2 reveals that SCHLESINGER and MS-LEVINE cooperate with each other to start a WH-dialogue with a direct answer. Based on QA2, SCHLESINGER and MS-LEVINE continue their talks by constructing a non-WH-dialogue and an elliptical one. SCHLESINGER as the questioner pushes forward this conversation, explicitly expanding the size of this local discourse, and in the meantime with the basis of QA2, SCHLESINGER obtains more information about what Ms-LEVINE is going to do, testifying that the usage of WH-dialogue construction is the driving force of discoursal expansion.

5.2. Discoursal cohesion grounded on WH-dialogic constructions

In real conversations, the pervious usage event, the current dialogic event and the anticipated usage event as shown in Figure 3 work together to form a local discourse via grammatical means. To take the pronouns ‘that’ and ‘it’ as examples, they are commonly used in a discourse that is structured by WH-dialogues and other utterances, to ensure that speakers develop a discourse centering on the same or similar topic within shared contexts, thus enabling the talk-turns in the discourse to connect with each other in a cohesive manner. The role of a WH-dialogic construction to establish a cohesive discourse can be exemplified by the series of talk-turns where QA 3 is present.

1 (End-VT) MAGGIE-RODRIGUEZ: As you saw, Hannah Krieger was one of ***the students*** attacked at Wright Middle School and she and her mom Susan join us this morning from Calabasas, California. Good morning, guys. Thanks for taking the time this morning.

2 SUSAN-KRIEGER: Good morning.

3 HANNAH-KRIEGER: Good morning.

4 MAGGIE-RODRIGUEZ: Hanna, let me start with you. Are you okay? How are you doing?

5 HANNAH-KRIEGER: I'm fine. ***It*** was just sort of scary for -- to happen to me.

6 MAGGIE-RODRIGUEZ: I can imagine.

QA3 { **What** were you thinking when – when ***the kids*** started to kick ***you***?

7 HANNAH-KRIEGER: ***I*** was just thinking that ***it*** could have gotten worse and I could have gotten severely hurt. And ***I*** was just sort of scared.

8 MAGGIE-RODRIGUEZ: How bad did ***it*** get? How many ***kids*** are we talking about? And -- and what exactly were ***they*** doing?

9 HANNAH-KRIEGER: Well, to the point where there were ***so many kids*** at -- for every ginger that's at my school or redhead -- redhead, it was…

In this local discourse, MAGGIE-RODRIGUEZ, SUSAN-KRIEGER and HANNAH-KRIEGER are interlocutors, among whom MAGGIE-RODRIGUEZ and HANNAH-KRIEGER are the major participants in the communication. QA3 is used in this three-person conversation.

To begin with, in MAGGIE-RODRIGUEZ' s series of talk-turns, the objective event 'the students attacked at Wright Middle School' is conceptualized, the participants in this event are highlighted and specified step by step: The students → one of the students → Hannah Krieger, followed by the participant in this conversation, *her mom (Susan)*. Essentially, the conceptualized objective event and one of its participants (HANNAH-KRIEGER) serve as the framework information or background to interpret the WH-word '***what'*** in QA3. In the process of answering the WH-question in QA3, HANNAH-KRIEGER uses '***it***' to refer to the objective event 'the students attacked at Wright Middle School', and the first person '***I***' is employed to indicate that HANNAH-KRIEGER is in the window of attention for all interlocutors in the dialogue, suggesting the subjective understanding of the objective event from the speaker herself. Then, MAGGIE-RODRIGUEZ constructs three consecutive WH-questions to focus on the details of the objective event 'the students attacked at Wright Middle School', in which the pronoun '***it***', the noun '***children***' and the pronoun '***they***' are applied here to create the cohesive internal link with the initiative utterance of this local discourse. In the ninth talk-turn, HANNAH-KRIEGER once again triggers an association of her utterance with the objective scene by using '***so many kids***' designating the participants of this ATTACKING event. In this local discourse, the use of WH-dialogic constructions is to specify the different aspects of the same objective event. MAGGIE-RODRIGUEZ, SUSAN-KRIEGER and HANNAH-KRIEGER cooperate with each other and construct a discourse with cohesion that is founded on the consistent focal information of the QA3 with other utterances.

6. Cognitive properties of WH-dialogic constructions in discourse

In the view of ESI model, the typical relationship of event schema and event instance relation between a WH-question and one of its answer in linguistic communication reveals WH-dialogic constructions are featured by several salient cognitive properties as specified in the following.

(1) Generalization of the events

In accordance with the cognitive view of events, WH-questions are fundamentally the linguistic encoding of the event structures that are the conceptualization of the objective scenes in the objective world. Thought in this pattern, answers to WH-questions are therefore the linguistic constructions for more specified event structures. By placing different WH-words at the beginning of WH-questions, a speaker is able to use a set of WH-dialogic constructions to generalize a variety of aspects of an event or scene in the objective world, for instance, ***where***, ***when***, or ***who*** indicating the place, the time, and the participant(s) of the event. Even for the same WH-question, there could be diversified answers that instantiate the same WH-word with different degrees of specificity, generalizing the detailed properties of one single aspect of an event. The process of generalizing the objective world by WH-dialogue constructions is associated with the cognitive process of cognitive subjects (speakers) in categorizing the objective world in possible ways.

(2) Schematization of event structures

A WH-question in a WH-dialogue represents a set of answers. Because of the uncertainty of the content of the WH-word, the question structure in a WH-dialogue is schematic. The schematic properties of WH-dialogic constrictions are therefore derived from the schematic templates suggested by WH-questions. The dialogicality of an answer in WH-dialogue is to designate the specific meaning of WH-words heading WH-questions. In practical dialogues, there are different degrees of semantic details in the process of exemplification of WH-words. The type-level or specific-level instantiations of WH-words reflect the different degrees of schematization of answers to WH-questions. In real linguistic communication, the grammatical structures of WH-dialogues can be applied repeatedly to form a fixed WH-QA pair that might be suitable to construe different events by different cognitive subjects from different perspectives, which embody the productivity of an established model of a WH-dialogic construction. A case in point is that the grammatical pattern of *What do you think of X? I think X is Y, and Why is Y? It is because Z...* has been conventionalized to certain extent and used to drive the discussions on topics in local discourse.

(3) Locality of conventional usage

Brône et al. (2014: 458) propose a dialogic construction grammar approach to natural languages, with a focus on *ad hoc constructions* in linguistic communication, pointing out that constructions in dialogue are conventionalized within the local community whose members are those speakers who temporarily participate in the dialogue (see also Zeng, 2016, 2018a, 2018b). In real conversations, a WH-QA pair exists momentarily. The end of a WH-dialogue signifies the temporary demise of the usage of a WH-QA dialogue, and the interlocutors might start a new dialogue according to the communicative purpose. During the instantaneous duration of a WH-dialogue, in order to instantly convey information and quickly understand each other's intentions, the speakers will use some language resources, including words, sentence patterns and intonation, to serve the current

communication. The locally conventional use of WH-dialogue constructions also denotes the fluid focus of WH-dialogues.

7. The dynamic process of constructing meaning in discourse

The dialogic process is in essence the dynamic negotiation between interlocutors in terms of the meaning of utterances. Negotiation on meaning in a local discourse refers to the fact that speakers need to make joint cognitive efforts or need to have multiple dialogues to achieve partial or full consensus on the dialogic focus. The negotiation of meaning in discourse is embodied in the interaction between subjects (speakers) and object(s) (events or object scenes) in the dialogue, which might be involved with two speakers or multiple interlocutors. The consequence of the negotiation can be the case that speakers reach consensus on dialogic focus and understand each other; or that the views from the interlocutors are contrary and speakers need to start new talk-turns of conversation; or that the respondent refuses to comment on the speaker's words, thus ending the dialogue; or that the respondent introduces new topics into the communication or shifts the focus of the current dialogue. For a discourse where WH-dialogic constructions are located, participants of the conversations interact to negotiate the specific meaning of WH-words, which are naturally focuses of WH-dialogues. The dynamic process of constructing the meaning of WH-words in WH-dialogues can be exemplified by the local discourse in which QA 4, QA5, and QA6 are produced.

Speaker 1:

GEORGE-STEPHANOPOU# (Off-camera) Wait a second. Hold on one second. I'll ask the governor about this.

QA 6

QA 5

QA 4

(Question) What is wrong with jobs for teachers, firemen and police officers?

Speaker 2:

VAN-JONES-1FORMER# Exactly. I can tell you. **(Answer 1)**

Speaker 3:

ANN-COULTER-1CONS# I'll answer that. **(Answer 2)**

Speaker 4:

MIKE-HUCJABEE-1RE# There's **nothing** wrong with it. My dad was a fireman. I love firemen jobs. But here's what you need. You need enough firemen to put out the fires. You don't arbitrarily go hire firemen, policemen or teachers unless you have more kids in school. And what we need to be talking about is not hiring more teachers…**(Answer 3)**

As a matter a fact, this local discourse contains a WH-question and three different types of answers, thus consisting of 3 WH-QA pairs, namely, QA4, QA5, and QA6. The process of

specifying the meaning of '***what***' in the WH-question is embodied in these three WH-dialogues, where GEORGE-STEPHANOPOU is the initiator of the dialogue, while the other speakers are the respondents (VAN-JONES-1FORMER, ANN-COULTER-1CONS, MIKE-HUCKABEE-1RE), whose utterances are correspondent to Answer 1, Answer 2, and Answer 3 respectively.

To start with, GEORGE-STEPHANOPOU, as the first speaker (Speaker 1), raises the WH-question with the focal information linguistically encoded as '***what***'. Simultaneously, the semantic property of this question is defined by the known information of the event, namely, 'with jobs for teachers, firemen and police officers'.

However, Speaker 2 (VAN-JONES-1FORMER) shifts the focus '***what***' of the WH-dialogue towards the cognitive ability of the respondent by uttering '***I can tell you***' in the interactive process with Speaker 1, hence Speaker 1 does not get the desired information on '***what***" through QA4, in which Speaker 1 and Speaker 2 do not reach an agreement in the negotiation concerning the meaning of the focal information of the WH- dialogue.

Following QA4, Speaker 3 starts a dialogue (QA5) with Speaker 1 on the dialogic focus '***what***'. Speaker 3 also does not provide any specific instance of the schematic focus of the WH-question, but turns the dialogic focus '***what***' into the attitude of the answerer (ANN-COULTER-1CONS) by saying '***I will answer that***', demonstrating that Speak 1 and Speaker 3 failed to reach consensus on the meaning of '***what***' in the negotiation process.

After QA5, Speaker 4 launches a dialogue (QA6) with Speaker 1, with an effort to instantiate the exact meaning of the focus of the WH-question. Even though Speaker 4 does not offer any specific instance of the schematic meaning WH-word, answer 3 signifies that Speaker 4 directly answers the WH-question but with zero instance, exhibiting schema-instance relation in this WH-QA pair.

It can be seen from the utterances by Speaker 1 and Speaker 4 that there are paralleled structures producing dialogic resonance in the meaning negotiation on '***what***', as suggested by **Figure 4**.

Schematic event frame		**X**		**is**	**wrong**	**with**	**Y**	
Frame resonance	(Speaker 1) Question	**What**		is	wrong	with	jobs	… .
	(Speaker 4) Answer 3 ↓		There	's				
		nothing						
					wrong	with	it	.
Type of resonance		Focal resonance						

Figure 4. The dialogic resonance in QA6.

(↓: the direction of constructing discourse)

It is observed from Figure 4 that there is a schematic event structure shared by the utterances by Speaker 1 and Speaker 4, which is '**X IS WRONG WITH Y**', producing both frame resonance and

focal resonance based on parallelism in the dialogue (teachers: teachers; firemen: firemen; police officer: policemen; etc. shown by the bold black words).

In the dialogic process, the questioner principally evaluates the quality of the answer by examining whether there is a match between the utterance focuses. For QA6, Speaker 4 still keeps consistent focus with Speaker 1 by answering referring to the zero-instance of the WH-word. The usage of QA3, QA4-QA6 implies that WH-dialogic constructions function to expand a cohesive discourse, in which the focal information of the dialogue is constructed dynamically, suggesting the interactional process of negotiation regarding the specific meaning of the dialogic focus.

8. Conclusion

In line with the view of cognitive construction grammar (Goldberg, 1995, 2006), a WH-QA pair in a local discourse is virtually a WH-dialogic construction that is the paring of form with meaning or function. According to the ESI model, a WH-question and one of its answers prototypically embody the relation between an event schema and an event instance. In real conversations, WH-dialogic constructions function to expand the size of a local discourse, whose textual cohesion can be achieved via the logically connected focal information of WH-dialogues and other utterances. Grounded on the ESI model, the utterance meaning in a local discourse embracing WH-dialogic constructions is dynamically constructed. The function of WH-QA pairs in discourse reveals such salient cognitive properties of this type of dialogic constructions as the generalization and abstraction of objective scenes, the schematization and productivity of event structures, and the locality and conventionality of paired linguistic expressions.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Using ethnography in politeness studies: A discursiveness-based approach

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Abstract: The current study points out the methodological limitations of contemporary discursive politeness research and suggests that in-depth ethnographic data provides a potentially crucial solution. Discursive politeness studies advocate a data-driven, bottom-up analytical approach that stresses the importance of participants' own contextual assessments. Analysis of such kind requires the corresponding methodological design which allows researchers to obtain the defining information that can be seemingly absent in the on-going interaction. However, in the current body of literature, politeness research focuses on theoretical discussion without specifically organised consideration regarding methodology. Therefore, aiming at providing a more valid methodological approach, the current study proposes to consider ethnography as the foundational data-collection method for discursive politeness research, stressing 'long-term' and 'in-depth' as the core features in conducting fieldwork.

In order to clarify this view, the current study demonstrates a case study via examining an interaction naturally occurring among several family members during dinner time in China. This interaction is examined on two levels respectively (i.e., based on demographic data and in-depth ethnographic data). This paralleled analysis reveals that in complicated real-life interactions, lacking of thorough contextual information of both cultural norms and individually shaped cognition can be misleading in analysis. Therefore, understanding (im)politeness as an interactionally situated contextual/cognitive judgement, long-term ethnography is needed and that the fieldwork should be conducted carefully and patiently in order to gain access to comparatively more solid data and achieve more valid conclusion.

Keywords: ethnography; discursive politeness; framing

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1. Introduction

The current study considers in-depth ethnography as one of the solutions to methodological issues in politeness studies; this argument is essentially connected to the cognitive-based 'discursive turn' in this field. To be more specific, the main contemporary approaches to politeness, discursive and frame-based studies, are limited in various ways, most of which are caused by confined methodological designs. The current study suggests that through conducting detailed long-term in-depth ethnography, part of the dilemma may be solved. In order to clarify this argument, it is necessary to first elaborate the issues emerging in the body of current literature.

2. Politeness as a discursive/cognitive phenomenon: current issues

2.1. Discursive approach and its limitation

The contemporary discursive politeness studies are established on developing and critiquing early works in this field, such as the maxim-based studies (Lakoff, 1973; Leech, 1983) and the face-based perspective (Brown and Levinson, 1987). The notion of discursive politeness emerges from critiquing the positive correlation between the indirectness of linguistic forms and its degree regarding being polite. In doing so, Eelen (2001) and Watts (2003) firstly argue for a distinction between politeness2 and politeness1. By leaning towards politeness1 (Eelen, 2001; Watts, 2003) and conceptualising it as a contextual phenomenon, both theoretical and methodological features are kept consistent in the literature of discursive approach (Eelen, 2001; Watts, 2003; Locher and Watts, 2005).

More specifically, in terms of theoretical foundations, this approach: 1). views politeness as context-sensitive and negotiated within the interactions; 2). considers meaning as dynamic and emergent; 3). views social norms as to predetermine meanings, but instead to connect with markedness regarding appropriateness and inappropriateness and; 4). repeatedly stresses the importance of context. Second, regarding methodology, this approach: 1). advocates a discursive, data-driven, bottom-up approach; 2). stresses the importance of assessment of the participants regarding (im)politeness and (in)appropriateness in given contexts and; 3). favours qualitative analysis rather than the quantitative approach.

The main limitation of this approach concerns the analytical framework. In terms of data analysis, Locher and Watts (2005) propose the framework of 'relational work'. This refers to the work that "individuals invest in negotiating relationships with others" (2005: 10). This framework is established on the 'markedness' of behaviours: being either negatively marked, unmarked, or positively marked. 'Markedness' is related to the notion of 'appropriateness' (behaving in accordance with social norms), which is also an index of categorisation: inappropriate behaviours are negatively marked, and appropriate behaviours are positively marked or unmarked (often go unnoticed).

Evidently, relational work deconstructs the polite-impolite dichotomy and establishes a continuum that allows a full range of behaviours to be located. However it is the corresponding (im/non-)polite results that are questioned due to the highly dynamic nature of context. For instance, Wang (2008) examines naturally occurring conversations among females in Taiwan, and concludes

that the negatively marked behaviours (i.e. inappropriate behaviours) may not be evaluated as impolite by specific addressees in given situations. In other words, it is likely that negatively marked behaviours may be interpreted as non-polite or polite, whereas positively marked behaviours may be interpreted as non-polite or impolite.

This dilemma reveals the hidden methodological issue regarding discursiveness. As this approach views politeness as context-sensitive and meaning dynamic and emergent, its corresponding methodological design requires detailed understanding of interactants, which crucially functions to shape their perceptions. Therefore, it should at least include the particular given situations of the on-going interactions and interactants' special cognitive contexts activated interactionally. This information cannot be obtained without researchers' high-degree familiarity with their participants. In other words, without thorough ethnographic work, researchers are confined to study their close relatives and friends in order to reach a validate conclusion; and thus, large amount of potentially worthy data can be undervalued.

2.2. Frame-based approach and its limitation

The emphasis of a discursive approach on context and addressee's perception is closely related to the cognition of individuals. In this regard, the notion of frame is invoked to account for the cognitive manifestation of politeness (Terkourafi, 2001, 2002; Watts, 2003; Locher and Watts, 2005). Here, frame refers to a cognitive notion constituted by the knowledge that connects certain linguistic expressions and certain contexts; and by repeatedly experiencing the regulative co-occurrence of certain expressions and contexts, individuals obtain the knowledge of how to behave in certain contexts and acquire the anticipated default behaviours (Terkourafi, 2001, 2002). Central to this notion is that the context and its co-occurring expression remain unchallenged. In other words, when the on-going context remains unchallenged and consistent with the context experienced by the addresses with the co-occurring expressions, addresses would draw on previous experience to interpret the on-going expressions (similar to Locher and Watts' use of Bourdieu's 'habitus', 2003).

Based on this concept, it is argued that politeness is recognised through this process (Terkourafi, 2005: 251). Firstly, by repeatedly experiencing the co-occurrence of expression x and context x which positions this expression as polite, an individual would establish a generalised implicature for expression x in this context as polite; and then, assuming that this context remains unchallenged for this person, when expression x is uttered in a similar context, he or she is likely to draw on previous experience and conclude this expression to be polite without inferring the intent of the speaker.

However, the focus on the 'unchallenged' context of frame-based studies suggests that this approach emphasises the stable aspect of cognitive manifestation of politeness. As Terkourafi (ibid.) argues, at the heart of all inferential politeness based on particularised implicatures is still the generalised implicature. However, as the current study argues, in real-life communication, context should not be assumed as always stable and unchallenged; hence the question of whether an implicature is recognised as generalised or particularised should be delicately addressed.

In addition, it is the constantly challenged and shifting on-going nature that causes theoretical dilemma and consequently, methodological problems. Although this approach provides foundational explanation on the cognitive mechanism of stably realised politeness, it does not deal with the dynamic aspect of real-life interactions. Therefore, in terms of a highly complicated interaction,

this approach can only be applied to analyse politeness manifestation of 'habitus' nature, such as certain culture norm occurred in its appropriate situation without incurring any different perception. For example, saying 'cheers' to a kind stranger who just hold the door for you in the UK. However, many real-life interactions are highly complicated. In these cases, only analysing the shaping process of framing of such kind is likely to be insufficient, as 'cheers' or 'thank you' used in a particularised situation are possible to stimulate negative emotions.

Moreover, it is likely that framing based on culture norms is often intertwined with particularised individual perceptions. In this case, researchers need to carefully examine the cultural environments in which interactions take place, interactants' specialised cognitive contexts, as well as their interactional intents. In other words, focusing only on framing can result in overlooking individual cognition, which in turn, can lead to a wrong direction in data analysis. In this sense, detailed ethnographic data is likely to remedy such situation in that long-term fieldwork helps obtaining certain seemingly irrelevant information. At a later stage of research, it may be proven as crucial in analysis; following case study is a typical example of such kind.

3. Case analysis and discussion

The current study closely examines one naturally occurring family dinnertime interaction as a typical case to demonstrate the crucial role of in-depth ethnographic data. In order to do so, data analysis is divided into two sections: section 3.1 examines the language features in this interaction based on basic demographic information obtained though short-term ethnography; whereas section 3.2 analyses the same features based on in-depth ethnographic data obtained through long-term field work. Moreover, both types of analysis are conducted under the analytical framework of Spencer-Oatey's (2002, 2005) 'rapport-management model'. In this way, the difference in analytical conclusions evidently shows the importance of in-depth ethnography.

3.1. Analysis on the stable manifestation of (im)politeness

The interviews I conducted for this study took place in J city, a county-level city of Sichuan province in southeast China with a roughly average population of around 900,000. For the purpose of participants' anonymity and readers' convenience, participants are referred by their family relational identity; such as, the mother-in-law is referred as 'M', the daughter-in-law as 'D', and their son/husband as 'HS'

3.1.1 Initial field notes: A general overview

By interviewing members of the participating family, I was able to obtain basic information on the participant demographics, including details such as age, education, job status, marital status, their usual style of living, as well as their self-evaluation and commentary on their relationships.

3.1.1.1 Demographic features

M in this family is 55 years old; she used to run a small business before retirement, and now receives a monthly income from her tenants. M's husband passed away 7 years ago, and her son has been living here both before and after her marriage. M did not receive an official school education, but she is able to read. D is 29 years old and used to work as a sales person in a supermarket, but quit her job after pregnancy to fully focus on educating and caring for her child. Now her son is

three years old and has been attending a local kindergarten since September, 2012. As for the HS in this family, he is 30 years old and works as a driver for government cadres. Both D and HS acquired a diploma from a vocational school (equivalent to high school). In taking care of the child, D is responsible for his education (such as teaching him how to read), whereas M has the responsibility of cooking for the whole family; though both share responsibilities with the housework.

3.1.1.2 Evaluations

During the group interview, M and D appeared to evaluate their relationship positively: D described it as "generally harmonious" and that they "don't have problems", whereas M indirectly answered that "It's just ordinary life, nothing special". When asked how they manage to maintain a peaceful relationship, M hesitated with a brief smile and then said: "She's (D) doing fine". As D seemed to be reluctant to answer this question, I repeated the question from a different angle by asking: "what do you think about your mother-in-law?". She first laughed and then answered in jokingly: "Well, she does take care of the child. She cooks. But you know, there is somewhat of a gap; probably an age issue. After all, you can't expect us to fully understand each other". When I asked exactly what the issues were where they had difficulty in understanding one another, she smiled in silence for a few seconds, and then offered the vague answer of: "All little things really; it is just part of the trivia of daily life." After these responses, as she began to seem increasingly unwilling to discuss the issue, I ceased pressing her with further questions.

From this conversation, both parties were clearly reluctant to discuss topics related to the MIL-DIL relationship in detail, and intentionally shifted the conversations to other topics. When child education/caring was mentioned in one interaction, M began talking about her grandson and his daily routines, interests, and current reading capabilities. Additionally, when a neighbour came to ask M whether she would like to play Mah-jong, D immediately stopped answering the MIL-DIL related questions, and shifted the conversation to describing the relationship between M and their neighbours, which carried the conversation over to the family's current living conditions.

3.1.1.3 Additional information

The members of this family live with their tenants in a house they built on a plot of land that was once close to the countryside. However, now that the city is expanding, this land is now directly on the verge of city centre and is considered by the local authorities to undermine the city's construction plans. Because of this, the government is set to demolish the property in a few months. As compensation for the family, the government has offered them an apartment in a new building near where this land is located or a similar apartment within the city. However, M is reluctant to move into either of these apartments as she considers that 'relationships with neighbours in large buildings are not very close" and prefers the companionship with her current tenants in the current house as well as well as her old friends as this means that she "would not feel lonely". Furthermore, as HS insists on living with his widowed mother, this also means that the family currently still lives in the old house. Additionally, despite their financial difficulty, D displayed enthusiasm towards having a daughter and discussed this with HS. However, M appeared hesitant with this idea as she was "already tired enough of taking care of this one (grandson)".

3.1.1.4 Observations

As I entered their house, the young couple were sitting on the main sofa and M was sitting on the

chair behind. During the interview, M served me hot water and fruits as the conversation unfolded between the couple and myself. Although she joined the conversation later, when compared to D and HS who did most the talking, she appeared to be the quietest during the interview. When she did talk, she was interrupted on several occasions. As the interview came to an end, she left the house to play Mah-jong with the neighbours.

3.1.2 Data analysis

3.1.2.1 Extract from audio recording of family dinnertime talk

1. M: **feeling bad** recently
2. D: huh? **what happened**?
3. M: all the: er (.) all old problems;
4. (1.0) (hhh) there're **problems all over my body**.
5. (0.4)
6. D: **which part do you feel uncomfortable**?
7. M: this **dizziness** in my head all the time.
8. getting old is **depressing**; (.) **useless**=
9. D: =DO:N'T say <<all> useless.
10. **I'll take you to the hospital to [check someday**>]
11. M: [I just went] to the hospital recently_
12. D: **you should NOT (.) not think about these all the time**;
13. **implying yourself something_**(1.0)
14. people reaching certain age (.) **all have little problems**;
15. if your problem is really big(.) you would have be hospitalised already_
16. M: **SERIOUSLY**. (1.0)
17. EVERY time they say cerebral thrombosis and high blood pressure
18. (1.5) just poor body (.hhh) nothing to do about it.
19. (8.6)
20. D1 **mom, you're already VERY well**.
21. **that health of m:y mom's truly bad** (.) she wouldn't even go to hospital to check;
22. er: terribly annoying;=
23. M: =**your mom is in perfect condition!**

24. we often say your mom is blessed(.)
25. regularly exercised (.) and often goes tra[velling]
26. D: [**N:O**]
27. she's just going around while still can walk.
28. **in fact her problem is bad**!
29. her heart disease (-) who knows if she needs operation in future=
30. HS: =you two were just talking (.) not eating.
31. (3.7)
32. D: I mean it (.)
33. she's just like this (1.5) worrying (.) **worrying too much** (.) non-stopping.
34. told her don't be like this (.) **she wouldn't even listen!**
35. so [bothering]
36. M: [asking] your sister-in-law to help her!
37. <<all>it's indeed too much for one person to do all the housework. >
38. (2.0)
39. D: she's busy all day (.) working and taking care of child;

3.1.2.2 Analysis A: Self-evaluation

After M opened the topic about her health condition in line 1, she showed an overtly negative attitude, which is manifested in depreciative evaluations not only in descriptive ways (line 2, "old problems"; line 7, "this dizziness in my head"; line 17, "they say cerebral thrombosis and high blood pressure"), but also in an exaggerated manner (line 4, "there're problems all over my body"; line 8, "getting old is depressing; useless"; line 18, "just poor body. nothing to do about it.").

In the context of China, this kind of self-denigration is linked to modesty. As Spencer-Oatey et al. (2008: 109–110) point out, the two components of modesty, minimisation of praise of self and maximisation of self-dispraise, are not evaluated and perceived in the same way in different cultures: for instance, while "the vast majority of the British respondents did not associate the self-denigration…with modesty at all", "the vast majority of the Mainland and HK Chinese respondents linked the two" (ibid.). In this sense, M's self-denigrative utterances are culturally identifiable as a display of modesty.

Therefore, in this interaction, as M's self-denigrative evaluations are culturally linked to modesty in Chinese, she managed to uphold one of the SIPs (the socio-pragmatic principle of modesty) which in turn appears to be polite and help maintain rapport.

3.1.2.2 Analysis B: Compliment and self-evaluation (reciprocal responses)

In line with Leech's (2005: 16) argument that the kind of gratuitous self-deprecation, such as M's way of showing modesty, will often be followed by an (implied) denial and an (implied) compliment, D responded with a direct compliment in line 20 ("mom, you're already VERY well."), which is the favoured response (ibid.) as paying appropriate compliment is seen as a typical speech act to "place a high value" on addressee's qualities in pursuing politeness (Leech, 2005: 15). Moreover, in relation to rapport-management theory, D's compliment ascribes M with the positive attribute of physical strength, and consequently supports M's quality face.

This compliment in line 20 was further enhanced by D's following denigrative evaluations of her own mother's health condition in line 21–22 ("that health of my mom's truly bad, she wouldn't even go to hospital to check; terribly annoying"), which implies M's advantageous condition by comparison. This comparison stresses M1's better health condition, thus enhances D's compliment in line 20 and reinforces the boosting of M's quality face.

Furthermore, D's negative evaluations on her mother in line 21–22 also exhibited modesty in the context of Chinese culture. As Gu (1990, 246–247) points out, in Chinese "the concept of 'self' and 'other'…have wide extensions" in that the self or other's physical conditions; mental states; properties; values; attitudes; writing; spouse; family; relative, etc., all fall inside the sphere of self or other, and consequently the Self-denigration Maxim applies to them." This, for instance, is exemplified by the lexicalisation of some denigrative address terms: in order to show modesty, one is likely to refer his wife as "domestic helper" ("内助") and his school as "humble school" ("敝校") (ibid.). In other words, modesty can be achieved not only through making denigrative evaluations on attributes of speaker him/herself, but also on attributes of people whose relationships to the speaker are close enough to be seen as certain a "extension" of the speaker. In this sense, although D's derogative evaluations were made on her mother instead of herself, in Chinese context it is still considered as a display of modesty, thus is considered as upholding socio-pragmatic principle.

As a response, D's compliment was followed by M1 indirect denial in the form of returning a compliment (on the health condition of D' mother, line 23-25). As Leech (2005: 16) points out, four main types of responses to the compliment favour maintaining modesty: in paying a compliment in return, disbelief, expressing gratitude, and deflecting a compliment. Regarding the context of Chinese, studies (for instance, Ye, 1995; Spencer-Oatey et al., 2008) show that there are different cultural preferences in responding to a compliment, in the sense that "in contrast to English, the 'best' response to compliments in Chinese is traditionally thought to be a rejection or denial" (Spencer-Oatey et al., 2008: 99). Leech (2005: 16) also points out that in Chinese, "traditionally a hearer will disagree with a compliment".

In this interaction, in M's reaction to D's compliment, a (implied) denial was made by returning a compliment. Although M did not directly deny D's compliment in line 20 ("mom, you're already VERY well."), she denied D's negative evaluation on her mother (and hence denied the comparison between M and D's mother) through paying compliment on D's mother in line 23–25: line 23 ("your mom is in perfect condition!"). And this compliment is enhanced by an intensified tone and the following supportive moves in line 24 ("we often say your mom is blessed") and line 25 ("regularly exercised and often goes travelling"). In this way, M ascribed the positive attribute of healthy with D's mother that in turn boots D's quality face. As D's negative evaluations on her mother were made as supportive moves to enhance compliment, M's denial on these evaluations functions as an

indirect rejection in respond to D's compliment. As Ye (1995) points out, in Chinese, the rejecting attitude to a compliment is considered as a routinised response, which is associated with modesty: minimisation of praise of self and maximisation of self-dispraise (Spencer-Oatey et al., 2008: 109). In this way, M's compliment/rejection not only supports D's quality face (through praising her mother), but also shows modesty, a value-laden SIP in Chinese.

In the same way, in respond to M's compliments in line 23–25, D also displayed a denying attitude in line 26–29 in a more direct, intensified manner. As the head act, the prolonged and stressed "No" in line 26 directly denies M's compliment on D' mother. And line 27 ("she's just going around while still can walk."), as a supportive move, further denies M's implied connection between the health condition of D's mother and M's compliment of "often goes travelling" (line 25). Line 28–29 ("in fact her problem is bad! Her heart disease, who knows if she needs operation in future") give details about her mother's health condition, which reinforce her previous negative evaluations in this regard. Line 32-35 further enhance this negativity ("I mean it", "worrying too much", "won't even listen", "so annoying"). Similar to M, D's denial of compliment is in accordance with the culturally routinised way of displaying modesty, thus upholds sociopragmatic principle. Moreover, her denial also functions to confirm her previous compliment on M's physical condition and the comparison between M and D's mother, therefore indirectly supports M's quality face.

Consequently, according to Spencer-Oatey (2008), both upholding socio-pragmatic principles and boosting addressee's quality face will appear to be polite and help maintaining the interactional rapport in this interaction.

3.2. Analysis based on in-depth ethnography: the dynamic realisation of (im)politeness

The in-depth ethnographic data is obtained through close socialising, observation, and conducting self-report session for over six-month. It reveals information that participants were reluctant to tell me initially: M and S had previous relational discords regarding housework distribution. D was especially angry regarding M's lack of care-giving during D's pregnancy, and that D's own mother had to come to take care of her during her pregnancy. This information was revealed to me in great details, which is incorporated in the following analysis.

Although the main language features initially appear to be polite and rapport-maintaining considering external variables such as sociocultural norms, M and D's shared cognitive context (their previous discords, and consequentially their shared sensitivity on M's health, D's mother, dietary habits), however, functions to redirect the meanings to be perceived as face-threatening and infringing sociality rights and obligations and thus rapport-challenging.

3.2.1 Analysis A: Self-evaluation

M's self-denigrative evaluations on her health condition are previously identified as acts of upholding the SIP of modesty in Chinese and thus are rapport-maintaining. However, based on their unpleasant experience regarding housework distribution, which D described as "unfair" (especially the pregnancy-related issue), she developed the opinion that M's claiming of physical weakness was to imply a justification for her "laziness" and "escaping responsibility".

In relation to rapport-management theory, the notion of 'equality right' (in sociality rights and

obligations management) is central to clarifying the link between D's interpretation of M's self-denigration as justification and her perceived impoliteness. As Spencer-Oatey (2000: 14) points out in explaining equality right, "we have fundamental belief that we are entitled to personal consideration from others, so that we are treated fairly", which consists of two components: the notion of cost-benefit, and the related issue of autonomy-imposition. Actions that cause addressees' feelings of being unduly imposed upon, being unfairly ordered about, and being taken advantage of or exploited (ibid.) infringe their equality rights, and thus impair the interpersonal rapport.

In their previous discord, D's demand of 'fair' housework distribution between her and M may cause M's feeling of being unduly imposed. Although I was not able to closely socialise with M, as according to HS both D and M chose to complain to him instead of disputing with each other directly, HS's opinion of "I can only say that it was not her duty to do it, she can choose to do, if she doesn't, there is nothing I can do" (from interview data) implies M's possible feeling of being unduly imposed and consequently equality right impaired. It is then conceivable that M may choose certain ways to defend her previously impaired equality rights, which in this interaction is manifested as ascribing herself with attribute of physical weakness. It is noted that this is not to deny or confirm the authenticity of her claim on her health condition, but to argue for the experience-shaped predisposition for D to perceive M's self-denigration as justification.

As D considered M's lack of participation in doing housework resulted in an "unfair" situation, it is natural for D to feel being "taken advantage of or exploited" (ibid.) and thus her equality right infringed. And as D perceived M's self-denigrative acts as justification for M1's previous infringing of D's equality right, this justification evidently reinforced the impolite effect of the M's impairing of D's equality right, and in turn harms the interpersonal rapport.

Consequently, in respond to M's justification, D's utterances in line 12-13, although seemed to be comforting M on the surface, implied that M's claimed health issues were result of her over-thinking and self-implication rather than medically diagnosed facts. In this sense, D impaired 's quality face through ascribing M1 with negative attributes such as "drama queen" and "trouble-making" (as described by D herself), as well as through denying M's contextually desired attribute of physical weakness. Moreover, her utterances in line 14-15 suggested that even assuming M's uncomfortableness were authentic, these issues were only "little problems". In this sense, D denied the severity of M's negative health condition, and thus produced threats to M's quality face through associating her with attributes such as "over exaggerating", "pretending to be weak and fragile", etc.

3.2.2 Analysis B: Compliment and self-evaluation

As analysed before, M1's self-denigration elicited D's direct compliment and indirect compliment (self-evaluation), which was responded to by M's act of returning a compliment/ denial that in turn evoked D's direct denial. Although these speech acts are identifiable as polite and rapport-maintaining in context1, they are intrinsically impolite and rapport-challenging considering their interactional sensitivities.

3.2.2.1 D's compliments

When quality face was impaired by D in line 12-15, M responded with a denial in a strongly stressed tone (line 16, "SERIOUSLY") that reinforced her physical weakness. This effect was further reinforced by the details on her diseases provided in line 17-18. As D perceived M's self-

ascribing of physical weakness as a false justification, D thereby made a stressed compliment in line 20 ("mom, you're already VERY well.") which functioned as a direct denial to this justification. On the one hand, as for M1 this justification defended her previously impaired equality right (in the sense that she was physically too weak to be imposed with D's desired load of housework), D's denial on this justification thereby maintained her previous demand for 'fair' housework distribution (in the sense that M was healthy enough to fulfill fair amount of domestic duty), which then may cause M' feeling of being imposed and equality right infringed. On the other hand, as D considered the attribute of physical weakness as situationally and individually desired by M, denying M's self-ascribed, desired attribute, therefore, was to harm her quality face (in a contextually specific way).

D also indirectly complimented M through making self-deprecative evaluations on her mother in line 21-22, of which the implied comparison between her mother and M reinforced the positivity of M's health condition. Firstly, confirming the positivity of M's health condition functions both to evidence D's previous demand for fair housework distribution which then may impair M's equality right (through causing M's feeling of being imposed), as well as to deny her self-ascribed attribute of physical weakness that consequently infringes her quality face. Secondly, as described above, due to the sensitivity of topic related to D's mother, D's self-deprecative evaluations on her mother were in fact act of "bringing up sensitive topic" (Spencer-Oatey, 2008), which may cause addressee's uncomfortable feelings. In this case, this sensitivity was produced by their previous discord during D's pregnancy when D's mother fulfilled duties that D considered as M's. In this sense, D's mentioning of her mother conveyed an intention to index her mother's contribution in doing M's work, which implies M's unfulfilling of her duties. In this way, it suggests the association between M and negative attributes of lazy, irresponsible, etc., and in turn harms M's quality face. In addition, D's negative evaluations on her mother's health condition produced a contrastive effect in relation to her mother's contribution (implied by the act of bringing up this sensitive topic), implying the contrast between M's positive health condition and unfulfilling of duties. This contrast further reinforced the harming of M's quality face.

3.2.2.2 M's returning of compliment

Responding to D's compliments of rapport-challenging nature, M chose paying compliment on the health condition of D' mother in return to express her denial (line 23–25). Those compliments denied D's negative evaluations on her mother and thus the implied comparison. As the comparison was made to stress M's positive health condition, therefore, the denial on this comparison in fact was to deny this positivity, which in turn indirectly asserted her previously self-ascribed attribute of physical weakness. As pointed out above, in this interaction M's asserting of physical weakness was perceived by D as justification on M's infringing of D's equality right (regarding D's feeling of being taken advantage of or exploited), thereby M's utterances again reinforced this effect of infringing D's equality right.

Furthermore, M's compliments ascribed D's mother with highly positive health condition, which mitigated the contrastive effect D made between her mother's negative health condition and her contribution. In this sense, her utterances implied a mitigation on D's mother's contribution, which harmed D's quality face in this regard. Moreover, the consequentially implied contrast between M's positive health condition and unfulfilling of duties was also thereby mitigated, resulting in lessening the face-threatening degree of D's utterances.

3.2.2.3 D's denial

In respond to M's compliments of rapport-challenging nature, D displayed a direct, intensified denial in line 26-29. Her utterances directly denied M's compliments, and thus denied M's indirectly self-ascribed attribute of physical weakness. Therefore, functioning in the same way as D's previous compliments, her denial to M's utterances rejected M's justification through self-ascribing attribute of physical weakness, and implied her insistence on demanding fair housework distribution. As this demand was likely to evoke M's feeling of being imposed, her utterances enhanced the previously occurred infringing of M's equality right.

Furthermore, in supporting this denial, D made more depreciative evaluations on her mother's health condition in line 28-29 and line 32-35. Similar to the evaluations of this kind she made in line 21–22, these evaluations also implied the positivity of M's health condition, which in turn functioned to deny M's situationally desired attribute of physical weakness that consequently infringe her quality face, to support D's demand for fair housework distribution that may harm M's equality right, as well as to strongly reinforce the negativity of her mother's health condition in order to stress her mother's contribution and M's unfulfilling of duty which in turn harms M's quality face.

4. Conclusion

The result of this data analysis reveals that in complicated interactions, it is essential to obtain data sufficient enough so that the researcher can comprehend dynamical nuances in utterances on-going interactions. In order to do so, it is important to conduct ethnographic fieldwork carefully over a long-term. This allows researchers to share interactants' cognitive context as much as possible, and consequently, provides more valid analytical foundation.

Furthermore, this approach is in-line with a recently developed tendency of combing linguistic analysis with ethnography, which has been defined as linguistic ethnography. These notably include Eisenhart, 2001; Creese, 2008; and Hammersely, 2007. Additionally, as highlighted by Creese (2008), the emphasis of this growing tendency in the literature is to benefit from the advantages of combining multiple analytical approaches rather than relying on one approach. Moreover, this approach enables researchers to examine data closely and locally, and is argued by Rampton et al. (2004: 4) to be "tying ethnography down and opening linguistics up" for a more effective analysis.

Author contributions

SQ conceived the idea, designed research, performed research, analysed data, and wrote the paper.

Conflict of interest

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ORIGINAL ARTICLE

A philosophical investigation of catchwords in Chinese

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Abstract: Catchwords spread rapidly because of their simple form and strong replicability. New catchwords enter our daily life every once in a while. Therefore, the study of catchwords is extremely urgent, because the study of language is the study of human life. This article takes the catchword 'wo keneng yudao le jia N' (I might encounter fake N) as an example to discuss its internal structure (which has been largely ignored in the existing research). The focus is on the study of the adjective 'fake' and its combined meaning with the noun after. Based on this, the meaning generation mechanism of the catchword is analyzed, including the relationship between necessity and probability, the evolution of meaning of the catchword, and the precipitation of construction meaning. Finally, the philosophical basis of communicative mechanism of the catchword is clarified. The main line of this study is to provide philosophical foundation for the popularity of catchwords.

Keywords: catchword; jia N; fake N; construction grammar; generation mechanism; communication mechanism

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1. Introduction

At the beginning of 2017, the sentence pattern 'wo keneng yudao le jia N' (I might encounter fake N)[1] was widespread in China's network. For instance, college students have just finished taking the final exam, and the test paper is not easy, which is much higher than their expectation. Therefore, many questions cannot be done. At this moment, the students said (1) to show their dissatisfaction and complaint about the examination. One more example, when a patient has ear discomfort, yet what the doctor prescribes is medicine for nose, and the patient said (2) to show his confusion and bewilderment.

1. In Chinese, it is '假' (jia). In this article, the counterpart adopted in English is 'fake' rather than 'counterfeit' or 'false'. The reason is that in western literature, mainly 'fake' is investigated (e.g. Kamp, 1975, Partee, 2003; Cappelle et al., 2018), and the subtle nuance would not be considered here. Besides, 'N' means a noun, and in Chinese there is no article used before a noun. Thus, in English, the article is not presented, which would not bother our discussion.

(1) wo keneng yudao le jia shijuan.
1SG might encounter EXP fake test paper.
'I might encounter fake test paper.'

(2) wo keneng yudao le jia yisheng.
1SG might encounter EXP fake doctor.
'I might encounter fake doctor.'

Language reflects human life to a certain extent. Thus, the study of new linguistic facts plays a very important role in understanding human beings themselves. In view of this, many Chinese scholars have devoted themselves to the study of this sentence pattern. The phenomenon is mostly investigated from Construction Grammar (Lu, 2017), pragmatics (Chen, 2019), and mimic theory (Kuang et al., 2018). Besides, there are also researches based on traditional text and grammar (e.g. Deng, 2017; Wu, 2019). However, current researches on the catchword are not deep enough, which is shown in the following aspects: first, the existing literature has not analyzed the internal structure of this catchword, especially the combination of adjective 'fake' and the noun after; second, if this sentence pattern is a construction (as is evidenced in literature review), what does this construction mean (prototypically)? What is the mechanism of meaning generation and extension? Third, what is the philosophical basis for the spreading of the catchword?

These problems are the direct motive force for this article, which intends to draw wisdom from western philosophy of language, reflects on the meaning generation mechanism and communicative mechanism of the catchword, and tries to provide philosophical foundation for them.

The structure of the paper is as follows. Section 1 is a brief introduction. Section 2 focuses on the inner structure of the catchword, especially the problem caused by jia (fake). Section 3 discusses the meaning of the catchword, including its origin and evolution. Section 4 provides a new angle to describe the linguistic phenomenon. Section 5 concludes.

2. Inner structure of the catchword

Let's turn to the catchword. The sentence pattern is 'subject + modality verb + verb + adjective + noun'. The meaning of subject and modal verb is definite, while the compositional meaning of adjective and noun structure faces some problems. Traditionally, the attributive-head Chinese compound words composed of adjective and noun reflect the relationship of modification (Chao, 1968). For example, a 'red car' means a car that is red, and a 'round table' means a table that is round. Meantime, a 'red car' is still a car and a 'round table' is still a table. However, this is not the case with a 'fake gun'. Although the syntactic form of the 'fake gun' is the same as the above two examples, there are great differences in meaning. A 'fake gun' is not a gun (Kamp, 1975; Cappelle et al., 2018). It might be a toy gun with similar appearance, but it is definitely not a weapon capable of firing real bullets and killing people. Therefore, in order to clarify the differences between them, we need to further study the internal structure of the 'fake N' structure.

2.1. The failure of introspection in defining 'fake'

The question is not raised without any ground. Kamp (1975) firstly points out that 'A fake gun is not a gun', claiming the adjective 'fake' is not as common as 'red' in 'red flower'. Later, Kamp and Partee (1995: 136–138) distinguish different types of adjectives from the semantic features of adjective and noun structure: the first type is *intersective adjective*, and the referents of compound words are the intersective of the referents of adjectives and that of nouns, such as 'carnivorous mammal'; the second type is *non-intersective adjective*, also known as subsective adjective. The referents of compound words is a subset of that of nouns, such as 'skillful surgeon'; the third type is *non-subsective adjective*. The referents of compound words are neither the intersection of that of adjectives and that of nouns, nor the subset of that of nouns. Non-subsective adjectives can also be further divided into *private adjectives*, that is, the referents of adjective and noun structure can never be an instance of the referents of the noun. They also point out that 'fake' and 'counterfeit' are private adjectives, but 'alleged' is not, because an 'alleged gangster' may or may not be a gangster. For some non-subsective adjectives, it is not entirely clear whether they are *private adjectives*, and 'fake' is actually controversial. However, there are two problems that lead to the ongoing debate. First, the author does not give an explanation for the division but only present some concrete examples. Second, the author does acknowledge that 'fake' is a controversial example[2] (our view will be presented below).

Partee (2003) divides the third type of adjectives into *plain non-subsective* and *privative adjectives*. The former includes 'alleged', 'likely' and 'disputed', while the latter includes 'past', 'imaginary' and such morphemes as 'pre-' and 'non-'. It is worth noting that the author points out in this article that 'fake' is actually a subsective adjective, which is jointly defined by the 'Non-vacuity principle' and 'The Head primacy principle' (Kamp and Partee, 1995: 161).

This article argues that Partee (2003) has a problem with the presupposition of interpreting 'fake' as a subsective adjective. According to the 'Non-vacuity principle', "in any given context, try to interpret any predicate so that both its positive and negative extension are non-empty" (ibid.), then the positive extension and negative extension of 'fake' are both non-empty. However, the negative extension of 'fake' is easy to determine, i.e. to find out what is true, but what is the positive extension of 'fake'? This goes back to the original point. What is 'fake'?

In a nutshell, what Kamp and Partee did is based on their introspection, and they tried to set a rule, claiming that 'fake' is a privative adjective, without enough linguistic evidence though, while they did not further illustrate why the distinction should be made this way. Therefore, a shift of view of point may be needed.

2.2. A perspective from qualia structure

In this article, it is argued that the adjective 'fake' can be viewed from another angle. If Kamp and Partee approach the study with introspection (or a rule), then another possible idea is to focus on the noun after 'fake'. A typical method is qualia structure (Pustejovsky, 1991, 1995).

Qualia structure is a method to express the lexical semantic structure of nouns, saying, to describe the referent of the noun, the constituents of the referent, the generation process of the referent, and the use or function of the referent. It mainly includes four levels of semantic knowledge, which is

2. The debate is ongoing, see Warren (1984), Jassem (2002), Farsi (2010) for further discussion.

depicted as four qualia roles:

a) Constitutive: the relation between an object and its constituents, or proper parts, including material, weight, and parts and component elements;

b) Formal: that which distinguishes the object within a larger domain, including orientation, magnitude, shape, dimensionality, color, and position;

c) Telic: purpose and function of the object, including purpose that an agent has in performing an act, and built-in function or aim which specifies certain activities;

d) Agentive: factors involved in the origin or "bring about" of an object, including creator, artifact, natural kind and causal chain (Pustejovsky, 1995: 85–86).

According to this view, there is a core set of lexical meanings in the lexicon, and its internal structure is richer than that of traditional theories, that is, it carries more information in the representation framework. For instance, there are two senses of 'bake': change of state sense (as in 'he baked a potato') and creative sense (as in 'he baked a cake'). They are determined by its complements which 'carry information which acts on the governing verb, essentially taking the verb as argument and shifting its event type' (Pustejovsky, 1995: 123). In this way, the verb 'bake' itself is not polysemous.

It seems that the rule could be applied to the adjective 'fake'. A 'fake gun' is not a gun that is made from metal material and that is always used as a weapon to shoot enemies in fight, while it may just look like a gun in appearance. In other words, what 'fake' negates is the agentive role and telic role of a gun, but adopts the formal role. However, it is still a question whether there is any effect on the constitutive role (Verspoor, 1997).

One the one hand, it is likely that the 'fake gun' is made from the metal material, yet no bullet could be shot from the inside owing to the erosion of the trajectory; one the other hand, the 'fake gun' might be a toy gun, i.e. a toy which is made from plastic material. Therefore, whether the constitutive role is asserted or not, it is not clear before an access to rich contextual information.

It should be noted that the adjective 'fake' does not always perform like this, and it may also negate or assert other roles[3]. For instance, 'fake flower' is not flower. What 'fake' negated is the agentive role, constitutive role and telic role of 'flower', only making use of the formal role. Specifically, there is no possibility for 'fake flower' to be flower, and 'fake flower' is mostly made from plastic material for decoration even though there is not any smell of flavor.

In section 2.1, it is suggested that there is controversy on the adjective 'fake', and the problem does not disappear in qualia structure. However, the disagreement could be resolved by appealing to qualia structure of the noun after the adjective 'fake'. In reverse, if the debate is gone, this is the real problem. The reason behind the disagreement lies in different properties of the noun.

In short, Pustejovsky's qualia structure is much more helpful than Kamp and Partee's plan, and the former is justified with authentic linguistic facts. Meantime, the various explanation of 'fake N'

3. There are examples in Chinese that cannot be explained by qualia structure, like 'jia yao' (fake medicine). It is 'jia' (fake) because it is not registered in China Food and Drug Administration. However, this kind of medicine preserves the four qualia roles well. This challenge would not be addressed in this article, and the qualia structure is still a useful tool for current purpose.

structure derives from ‘N’ rather than from ‘fake’, which is a move against tradition.

3. Meaning generation mechanism of the catchword

Language is not an entirely closed and autonomous system. It is always in evolution. The same is true of catchwords. In order to find out where it is going, we need to know where it is coming from. This article will discuss the meaning generation mechanism of the sentence pattern, ‘wo keneng yudao le jia N’ (I might encounter fake N), from three aspects and try to make a reasonable explanation for it. Specifically, first of all, we will discuss why modality verb is involved; secondly, we will talk about the origin and evolution of the meaning of this sentence pattern. Finally, it is proved that this sentence pattern is indeed a construction.

3.1. Judgement of ‘fake’

In the last section, we have noticed the source of possible interpretation of ‘fake’ in different linguistic context. Here, we would like to show a comparison which is nearly ignored by almost all researchers who are involved in the catchword at issue, where the modal verb is a focus.

As a pioneer of anti-realism, Dummett attacked Davidson’s realism. Davidson believes that when we understand language, the evidence that enables us to understand it is self-evident and can be found in the world, regardless of whether people have the ability to know or grasp it. On the contrary, Dummett (1999: 309–311) associates the meaning of a sentence with its assertability condition, and understanding a statement means knowing what can be used as evidence to support or oppose that sentence. In other words, a sentence is meaningful if and only if we have gained the evidence to judge whether it is true or not, and a statement is true because of the existence of such evidence. The underlying reason here is that the concept of truth cannot be grasped in a way beyond evidence.

When a speaker says (3), what he wants to express is totally different from (4). In logical expression, the former is ◇ E(I, F), and the latter is □ E(I, F), where ‘E’ means ‘encounter’, ‘I’ means ‘I’ and ‘F’ means ‘fake test paper’. Probability and necessity is distinguished[4].

(3) wo keneng yudao le jia shijuan.

1SG might encounter EXP fake test paper.

‘I might encounter fake test paper.’

(4) wo yudao le jia shijuan.

1SG encounter EXP fake test paper.

‘I encounter fake test paper.’

Further, we have reason to believe that the speaker does not have enough evidence to support the condition that renders the sentence (4) true. To say the least, although the speaker does not have exact evidence to prove the authenticity of the test paper, he still regards the event of ‘authenticity

4. ◇ means ‘probably’, and □ means ‘necessarily’. They are logical symbols.

of the test paper' as the central meaning conveyed by his words, and all he can do is report his true judgment completely. In other words, he cannot make a judgment of necessity, but only a judgment of probability. This article holds that this is the embodiment of the rational people's appeal to the function of expressing meaning by language in a community. In the face of the complicated world, the powerlessness of language is also highlighted (e.g. Quine, 1951; Wittgenstein, 1953; Burke, 1966). However, this requires us to use language more carefully and creatively. Therefore, the sentence (3) completes the speaker's thoughts.

The comparison is not without reason. Medin and Shoben (1998) has suggested that the concept of a word is composed of centrality and diagnosticity. The basis of this division lies in the fact that two individuals have different degrees of understanding of the same object, and they are in an intermediate state from diagnosticity to centrality. According to the principle of economy (Zipf, 1949), those who can be judged simply by diagnostic features need not resort to central features. Unless two individuals differ in their judgment of the same object by using diagnostic features, central features will come into use. Most ordinary people only have diagnostic features, which is enough to for them to communicate successfully in daily life, while only professional researchers may be equipped with central features.

The division of a concept into centrality and diagnosticity indeed shows a 'division of linguistic labor' (Putnam, 1975). For example, ordinary people can judge what category an animal belongs to according to its shape, color, size and other characteristics, and zoologists' judgment is based on the animal's DNA, biological lineage and so on. Then, when ordinary people dispute over a certain judgment, they can resort to zoologists for help. What's more, a tiger has lost one leg and only three legs are left after being wounded by hunters, so ordinary people may give different answers to the following question: Is this animal a tiger? Although this animal has black and yellow fur, and its shape looks like a tiger, it is possible for differences to arise even if one leg is missing, because the standard of appearance which ordinary people resort to (i.e., a tiger has four legs) has been challenged.

The reason why ordinary people have disputes is that the criteria they use to make judgment (tiger's diagnostic features) are not enough to draw definite and accurate conclusions, so it is necessary to seek help from experts. The criteria that experts have (tiger's central features) are relatively more convincing.

Besides, the division of a concept into centrality and diagnosticity also promote the efficiency of human communication. In fact, the division is not restricted to linguistic communication, but also plays a role in physics. Newton's theorem can explain most of the problems in daily life, including non-discrete factors such as time and place. Under the conditions of low speed and weak gravity, classical mechanics is quite accurate. As it happens, the environment in which we live is just low-speed and weak-gravity. Therefore, classical mechanics can solve 99.9% of the problems of 99.9% of our people. In daily life, Newtonian mechanics is very scientific, which is enough to explain most phenomena in the world. Running trains, flying planes and rushing seas are all covered by the basic assumptions of Newtonian mechanics.

Although Einstein's theory of relativity refutes Newton's classical mechanics, it is a more professional career. In other words, Newton's theorem can solve 99.9% of the problems, while Einstein's theory of relativity is born to solve the remaining 0.1%. Ordinary people only need to

know Newton's theorem, while the theory of relativity could be left to physicists.

Another example is about the height. When one is asked about his height, the number need not to be accurate to nanometer. A relatively inaccurate number like 170cm would suffice. What's more important is the application in description of a wanted man on the poster. The police should not specify the height into 170.25cm, which would lead to confusion and bewilderment in the mass. An appropriate description may be 'around 170cm' (Qian, 2015).

Thus, through an analysis of 'might', it is found that the judgment of 'fake' is not easy at all. Perhaps one is sure about the result, or he is not that sure. The difference renders us various interpretation of 'fake', which would be discussed next.

3.2. The origin and evolution of meaning of the catchword

As to 'wo keneng yudao le jia N' (I might encounter fake N) structure, there are two possible sources:

First, from January 14, 2017, a Chinese test paper from New York Middle School in the United States has been wildly circulated on the Internet[5]. The test paper is not easy, which is much higher than the expectation of native Chinese. Therefore, many questions cannot be finished and they are so surprised that Chinese teachers in the United States should give students such examination papers, rendering countless netizens in china exclaim sentence (5);

Second, at the end of 2016, a piece of news caught the attention of Chinese netizens: illegal businesses in Russia turned personal washing products containing alcohol into fake alcohol and sold them, resulting in poisoning and even death of many people[6]. As a result, the sentence (6) circulated on Weibo (a Chinese version of Facebook).

(5) wo keneng yudao le jia zhongwen.
1SG might encounter EXP fake Chinese.
'I might encounter fake Chinese.'

(6) wo keneng yudao le jia jiu.
1SG might encounter EXP fake alcohol.
'I might encounter fake alcohol.'

For the first source, the speaker expressed his evaluation of his native language level with the sentence (5). Generally, Chinese proficiency of a native Chinese speaker is much better than that of a foreign speaker (e.g. British and American), so the Chinese test paper of foreign speakers should be a piece of cake in the eyes of a native Chinese speaker. However, native Chinese speakers should find that they could not answer the Chinese test paper of New York Middle School well, which makes them feel a little ashamed. Therefore, they coined the sentence. It should be noted that native Chinese speakers are basically experts in Chinese, so their uttering of 'jia zhongwen' (fake Chinese) is based on their language ability, and the judgment has certain objective verifiability. In other

5. https://baijiahao.baidu.com/s?id=1556762220734698&wfr=spider&for=pc

6. http://world.people.com.cn/n1/2016/1223/c1002-28971730.html

words, Chinese that native Chinese speakers have learned lags behind that of foreign learners of Chinese. Thus, the sentence expresses self-mockery and helplessness of one's own Chinese level.

For the second source, 'jia jiu' (fake alcohol) here is opposite to 'zhen jiu' (authentic alcohol). The former violates the production standard of drinking alcohol and arbitrarily changes its composition ratio, which is different from the authentic alcohol. This also involves the division of linguistic labor in language (Putnam, 1975). Most people only learn names of the linguistic expression of an object in a community, but they do not learn the way to judge whether the referents of that expression are correct or not. However, the division of labor and cooperation between speakers enable them to use words correctly. Since the Russian consumer is not an alcohol expert, he could only make a judgment which he thinks is correct, based on his physiological reaction (poisoning), so the speaker said (6). It should be pointed out that 'fake' here is the judgment made by the speaker based on his own experience, because drinking authentic alcohol does not cause poisoning. The judgment of Russian consumers also has certain objective verifiability.

No matter what the source is, China's college students combined it with the final exam they have just finished and forged the sentence (3), i.e., 'wo keneng yudao le jia shijuan' (I might encounter fake test paper). As to the authenticity or fakement of the alcohol, we can resort to the standards of the alcohol industry, while the truth and falsity of test paper itself is not a question at all, because there is no standard to judge, even we cannot imagine such a standard. Then, the meaning expressed by students using (3) is quite different from the meaning expressed by (6). Therefore, what is fake test paper? What constitutes the fake-ness of the test paper?

This article holds that the 'fake' here has broken away from its literal meaning and has become a pragmatic meaning. According to qualia structure (Pustejovsky, 1995), 'fake test paper' is not fake at all. The four roles are well preserved, which exhibits a different 'fake-ness' that we regard it as *pragmatic, subjective evaluation*.

Specifically, as a participant in the final exam, students have the obligation to complete the test paper, and what they need to do is to finish the questions on the test paper. The objective factors such as the difficulty of the test paper and the question type setting are beyond their control. When students are confronted with problems that do not conform to what they have prepared, or when the difficulty of the problems falls short of their expectations, students express their subjective evaluation with 'fake'. They knew that the test paper was a real one, but they did not meet the test paper that they expected, so they said they encountered 'fake test paper'. Moreover, what is important is that for such students, different people have different standards of 'fake', after all, individual expectations vary[7]. In this way, in a specific context, the word 'fake' completes the transition from semantic (literal) meaning to pragmatic meaning.

At the same time, pragmatic meaning has the potential to replace its semantic meaning. In fact, fact judgment (objective) is no longer what language users care about, and they turn their energy to value judgment (subjective). This change can also be witnessed from the sentence (7).

(7) wo keneng yudao le jia mama.

1SG might encounter EXP fake mother.

7. This idea is now presented as semantic relativism. For further discussion, see Predelli (2005) and MacFarlane (2007).

'I might encounter fake mother.'

Mother and child are genetically homologous individuals in biology, and 'fake mother' literally refers to individuals with different genes, but the speaker uses this sentence to describe his mother, so 'fake mother' here actually refers to the genetically real mother, and the use of 'fake' is to disagree with some of the mother's characteristics. The literal meaning of the word 'fake' has fallen off and has become the pragmatic meaning of the speaker. We can imagine that someone else's mother cooks delicious food for their children every day, while his mother's food is hard to swallow, so he said that sentence to actually complain with the cooking skills of his mother, and gently express his unhappiness and dissatisfaction in the speaker's heart. Of course, this sentence can also be used to satirize another characteristics of the mother, which is not repeated here.

In summary, 'fake test paper' is different from 'fake alcohol', and there is a difference between semantic (literal) meaning and pragmatic meaning. And the pragmatic meaning is preferred and adopted for novel use, which in turn makes the sentence pattern a very productive schema that seems to be a construction. This is the topic of the next part.

3.3. The crystallization of construction meaning

We have talked about that the word 'fake' has gradually lost its semantic meaning in (3), i.e., 'wo keneng yudao le jia shijuan' (I might encounter fake test paper), and pragmatic meaning is preferred as illustrated in 'fake mother'. It is not hard to find out more examples, such as 'fake doctor', 'fake teacher' and so on.

After a mass use, the meaning of the sentence 'wo keneng yudao le jia N' (I might encounter false N) has exceeded the sum of the meanings of its constituent elements, i.e. its meaning cannot be completely predicted from the meaning of its constituent elements. Goldberg (1995: 4) claims that "C is a CONSTRUCTION iff C is a formal-meaning pair $<F_i, S_i>$ such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions". Therefore, we can regard the sentence pattern, 'wo keneng yudao le jia N' (I might encounter false N), as a construction.

Thus, what construction meaning does this construction express? According to our discussion above, the construction actually expresses the speaker's disagreement with N (noun), which does not conform to the speaker's expectation, thus revealing the speaker's regret and self-mockery, confusion and bewilderment, unhappiness and dissatisfaction and another subjective evaluation.

It should be noted that the construction could express more than one meaning. Specifically, the prototype meaning of this construction expression is the speaker's self-mockery, revealing his dissatisfaction with N. And the fake-ness of N in this case is no longer the truth-conditional meaning, that is, the truth of N is not an objective fact, but the speaker expresses his dissatisfaction with N by using the word 'fake'. Further, the compositional meaning of the adjective fake and the noun structure underdetermines the meaning of the whole sentence pattern, which is the credit of construction coercion on the one hand (Wang, 2009, 2013), and an instance of linguistic underdeterminacy on the other (Carston, 2002; Picazo Jaque, 2019).

Thus, the prototype meaning of the construction is pragmatic rather than semantic, which has become a kind of social default (Jacsczolt, 2005, 2016), or general communicative norms (Huang,

2012: 37). However, this understanding is a 'direct access view' (Gibbs, 2002) in the Chinese context, without first calculating the literal meaning.

So, as to the construction, can it express semantic meaning? The answer is yes. Let's go back to the sentence (6), i.e., 'wo keneng yudao le jia jiu' (I might encounter fake alcohol). The Russian consumer use this sentence to precisely express the meaning of 'the alcohol is highly likely to be fake'. This is truth-conditional and can be verified by objective situation. At that time, if we regard (6) as a means of expressing the speaker's self-mockery, this may not be the case. Moreover, for scientific researchers (especially in hard science), the construction 'wo keneng yudao le jia N' (I might encounter false N) is also likely to express semantic meaning-incomplete judgment on certain research results, rather than the prototype meaning of the construction.

To sum up, the construction can express both pragmatic meaning as a prototype and semantic meaning. To determine which one it expresses depends on the objective context and the identity of the speaker.

4. The communication mechanism of the catchword

One of the great advantages of taking the sentence pattern 'wo keneng yudao le jia N' (I might encounter false N) as a construction is that its appearance indicates its own intrinsic construction meaning. Although N has not been specified yet, the reader can probably guess its meaning. In this way, the construction retains its original meaning, i.e. high fidelity in transmission. Meantime, such language fragments also conform to the principle of economy in linguistics (Zipf, 1949), because people are accustomed to using simple ellipsis to express their thoughts in communication, which is actually an 'ostensive-inferential process' (Sperber and Wilson, 1986). On this basis, people keep filling new words into the framework, which in turn enhances the vitality of the framework.

This article agrees with the aforementioned explanation of communication, but this is not enough. The nature and performance of any kind of research object are various, and the methods close to it are also diverse. Owing to this, each theoretical thinking and method construction only reflects one aspect. Therefore, we can study the communication mechanism of the catchword from another aspects. This article intends to draw wisdom from later Wittgenstein's philosophy of language and try to provide philosophical support.

4.1. A change of focus in early and later Wittgenstein

As a representative of the Artificial Language School, early Wittgenstein used logical methods to reveal the structure of sentences in the early period, and then clarified meanings and concepts, trying to understand the world through language. Picture theory is his main contribution (Wittgenstein, 2001). "For philosophical problems arise when language goes on holiday" (Wittgenstein, 1953: §38). It is not too much to say that this famous saying is the core of his early thoughts. Philosophical problems stem from the split reflection between language and the world. In short, when the tools used for interpersonal communication, expressing thoughts, proposing assumptions and other behaviors are excluded from the relevant context and abstracted as the object of investigation, the question arises: why can linguistic expression express meaning and what is the essence of linguistic meaning?

However, Wittgenstein himself abandoned the research approach of this essentialist tendency. Ordinary language philosophy does not deny the fuzziness and ambiguity of ordinary language, but believes that there is no need to resort to artificial language, and ordinary language can answer these questions. It is just like rough ground which has more friction than painted ground, so it is more suitable for walking. "We want to walk: so we need friction. Back to the rough ground" (Wittgenstein, 1953: §107). On this basis, Wittgenstein put forward the conceptions of 'language game' and 'form of life' in the later period, which inspired the author to discuss the mechanism of catchword communication.

4.2. Catchword and language game

Wittgenstein's 'language game' is actually a whole composed of language and activity. However, Wittgenstein did not give a clear definition of what a 'language game' is, but only explained it through a series of examples. This is consistent with his anti-essentialist position. For example, the bricklayer said 'slab' to the apprentice. The apprentice did not point his finger at the slab and showed it to the master. However, it was appropriate to pass the slab to the bricklayer. This is a language game.

Similarly, the use of catchword is also a language game. When the speaker utters a catchword, the catchword itself serves as the language, while the intention behind the use is the speaker's activity. "Every utterance is ultimately the product of an agent acting for a reason" (Lepore and Stone, 2015: 230). Of course, this special language game takes place in specific form of life.

Cavell (1996) divides form of life into two dimensions: vertical and horizontal. The former is a shared biological attribute in language communication, such as visual characteristics, while the latter is a social and historical background, which is relatively stable but constantly changing. Xu (2012) suggests that there are two main reasons for the spread of catchwords: the specificity of the language unit in content reflects people's social mentality on the one hand, and the specificity of the language unit in form reflects people's language mentality on the other hand.

Furthermore, this article holds that these two reasons actually correspond to the horizontal form of life and the vertical form of life. Social mentality highlights the game part of 'language game', while language mentality highlights the language part of 'language game'. The two parts complement each other and jointly construct a complete speech act. Thus, language itself is a whole set of form of life or form of game including form of thought (Qian, 2001).

People use catchwords (as 'language games') to do things: to express self-mockery, to show off, to admire, or to complain. Catchwords reflect the social mentality and language mentality in a specific period of time, both of which are jointed together as 'language games'. To accept and use catchwords is to accept the 'being' of the catchword, saying, the world hidden behind the catchword. After all, people always own the world through language (Li, 2006: 30). It is in 'language game' that catchwords are spread.

5. Conclusion

In daily life, catchwords are here and there, but we don't know them well enough. In this article, through the study of the sentence pattern 'wo keneng yudao le jia N' (I might encounter false N), the

following findings are made:

(1) The compositional meaning of the adjective 'fake' and the noun after can be explained from the perspective of qualia structure, thus avoiding setting 'fake' as a polysemous word, and its different semantic realizations are indeed affected by the following noun;

(2) The modality word 'keneng' (might) in the sentence pattern usually reflects the fact that the evidence held by the speaker is not sufficient to make a definite judgment, which can be explained by the division of linguistic labor;

(3) This sentence pattern is indeed a construction. Its prototype meaning is the speaker's dissatisfaction, unhappiness, spitting or self-mockery with a certain object. The extended meaning may be semantic, and the construction has a coercion effect on N, that is, no matter what N is, as long as it enters this construction, its primary meaning is prototype meaning;

(4) The spread of catchwords resonates with later Wittgenstein's conception of 'language game'. Language itself includes form of life and form of game. People have to find themselves through and in language.

Meantime, it should be noted that the study on *jia* (fake) in the paper is central to qualia structure, especially the four norms. However, there are linguistic facts that are controversial. For instance, a fake fun might also preserve the purpose of an authentic gun to terrify a bank clerk in bank robbery. Thus, a much more detailed study on qualia structure is needed in further study.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Translation from EFL textbook to classroom: Pedagogy, semiosis and strategy

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Abstract: The modern semiotic world has undergone dramatic changes. Due to the development of technology, a wide range of media and mode are now available to sign makers, facilitating as well as requiring translations within and across semiotic systems. This research takes a social semiotic multimodal approach to study translation practices in educational situations in China. It explores how meaning is translated from EFL textbook to classroom teaching in Chinese universities, from the aspects of pedagogy, semiosis and effects. Focusing on translation, this article analyzes how pedagogy is redesigned in terms of situated practice, overt instruction, critical framing, and transformed practice. Based on the analysis of semiotic resources available in textbook and classrooms, this article discusses the functional loads of modes, patterns of mode combinations, translation categories, and semiotic strategies for realizing multiliteracies pedagogy. Finally, the effects of translation are explored in terms of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality.

Keywords: social semiotics; translation; multiliteracies; EFL

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1. Introduction

Translation is "a part of human semiosis" and can be traced as far back as there are records such as sculptures, paintings, carvings in caves, on rock faces, in sites of ancient habitation (Bezemer and Kress, 2008). According to Kress (2010: 10), translation is the shift of meaning from one context to another, involving transformative uses of semiotic modes and producing changes in both form and content. It is a process requiring semantic and semiotic redesign of the source text to suit the target context. In representation practices, meaning is constantly transferred within the same mode or modal ensemble, or from one mode or modal ensemble to another. It is not surprising to see books written in ancient Chinese translated into modern Chinese, poems in English translated into Chinese, or novels translated into film. Such translations are inevitable because of the cultural, social and

situational changes in the meaning-making environment on the one hand, and the differences in the materiality of semiotic resources on the other. In modern communicational landscape, intersemiotic translation practices are increasing. The semiotic world of representation is transformed by the increasing use of modes beyond language (Kress, 2000: 182) and many new media are available to sign makers. This indicates that sign makers have to frequently make choices from semiotic options and to obtain correspondent semiotic knowledge in their translation practices.

In school education, teachers always incorporate information or knowledge from various sources into their class teaching practices, in which the source texts or multimodal ensemble must be redesigned to suit the classroom situation and the students' background. From the media perspective, now most of the classrooms in schools are equipped with multimedia equipment , so teachers have to frequently choose from the media of projection screen, blackboard, audio equipment, and their bodies, as well as to make choices of available modes when they transfer knowledge from other sources into classroom teaching. Whether they choose the same mode as the original text or not, teachers have to familiarize themselves with the semiotic affordances of a variety of modes present to them and also be aware of the multimodal translation mechanism, otherwise they will not be able to transfer and represent meaning in an appropriate way.

Of all the sources for translation, the textbook is one of the main source many Chinese teachers depend on, so the aim of this research is to examine translation from EFL textbook to classroom teaching in Chinese universities. Classroom teaching, surely, is not always an exact translation from textbook, so this research tries to investigate and identity parts of teachings that could be taken as translation because the textbook source text and teaching target texts are representing the same or very similar semantic contents. This article first presents relevant literature on social semiotic framework and multiliteracies pedagogy, then introduces research data and methodology, finally discusses the translation from the aspects of pedagogy, semiosis and effects.

2. Translation and multiliteracies

2.1. Multimodal approach to translation

In the modern communicational landscape, the semiotic world of representation is transformed by the increasing use of various semiotic modes beyond language (Kress, 2000: 182), such as image, sound, gesture, space, etc.. According to the social semiotic theory, these modes realize three metafunctions: ideational, interpersonal and compositional. From a multimodal social semiotic perspective, Kress defined translation as "a process in which meaning is moved. It is moved 'across', 'transported'—from mode to mode; from one modal ensemble to another; from one mode in one culture to that 'same' mode in another culture" (Kress, 2010: 124).

Early in 1959, Jakobson differentiated three types of translation: intralingual, interlingual and intersemiotic ones (Jakobson, 1959). The first referred to translation in the same language, the second referred to translation across languages, and the last referred to translation across semiotic systems. In the social semiotic framework, Kress (2003, 2010) differentiated two types of translation: transformation and transduction. The former refers to "the process of meaning change through re-ordering of the elements in a text or other semiotic object, within the same culture and in the same mode; or across cultures in the same mode" (Kress, 2010: 129) while the latter refers

to "the process of moving meaning-material from one mode to another" (Kress, 2010: 125). These descriptions actually they shows three key criteria for the categorization of translation: 1) intramode and intermode; 2) monomode and multimode; 3) same culture and different cultures.

2.2. Transformative pedagogy of multiliteracies

Due to the increase of media and modes in classrooms as well as the changes in working life, public life and private life, the New London Group (1996) recognized that the traditional language-centered approach to literacy should be changed, thus they proposed the notion of multiliteracies, which emphasized the diversity of culture and society and the multitude of representational resources, such as language, image, music, and space as well as the rules and conventions of those systems.

To achieve multiliteracies, the New London Group (1996) proposed a framework that consisted of situated practice, overt instruction, critical framing, and transformed practice. Situated practice provides lifeworld experiences for students and situates meaning making in real world contexts. Overt instruction requires the use of metalanguage to guide students to "describe the form, content, and function of the discourse of practice" (New London Group, 1996). Critical framing "help learners frame their growing mastery in practice and conscious control and understanding in relation to the historical, social, cultural, political, ideological, and value-centered relations of particular systems of knowledge and social practice" (New London Group, 1996). Transformed practice requires students to transform their existing knowledge through recreation of discourses for their own purposes.

Kalantzis and Cope (2005) developed the above framework into four "knowledge processes" of "experiencing", "conceptualizing", "analyzing", and "applying". They identified eight subcategories and proposed the Learning by Design model (see **Figure 1**). "Experiencing" correlates to situated practice, including experiences of known and unknown discourses, perspectives, domains, and situations. "Conceptualizing" correlates to overt instruction, including conceptualizing by naming and conceptualizing with theory. The former "involves or drawing distinctions of similarity and difference, categorizing and naming", and the latter involves "making generalizations and putting the key terms together into interpretative frameworks" (Kalantzis and Cope, 2005). Analyzing correlates to critical framing, including analyzing functionally and analyzing critically. The former "includes processes of reasoning, drawing inferential and deductive conclusions, establishing functional relations such as between cause and effect and analyzing logical and textual connections", and the latter refers to evaluation of students' and authors' perspectives, interests, and motives (Kalantzis and Cope, 2005). Applying correlates to transformed practice, including analyzing appropriately and applying creatively. The former "entails the application of knowledge and understandings to the complex diversity of real world situations and testing their validity", and the latter "involves making an intervention in the world which is truly innovative and creative and which brings to bear the learner's interest, experiences and aspirations" (Kalantzis and Cope, 2005). The four knowledge processes also draw on Kolb (1984), and Bernice McCarthy's (1987) two continua of perceiving and processing. Experiencing and conceptualizing relate to perceiving while analyzing and applying relate to processing (Mills, 2006).

What lies at the center of the transformative pedagogy of multiliteracies is design. The role of a teacher should shift from an authority that transmits knowledge to a designer of learning process

Pedagogical Orientations - 1996 Formulation	*Knowledge Processes - 2006 Reformulation*
Situated Practice	Experiencing ... the Known ... the New
Overt Instruction	Conceptualising ... by Naming ... with Theory
Critical Framing	Analysing ... Functionally ... Critically
Transformed Practice	Applying ... Appropriately ... Creatively

Figure 1. The Learning by Design model

and environments. The content of teaching was suggested not to be static rules and principles, but dynamic and active process of making meaning. In the transformative designing process, the available designs will be redesigned, and the redesigned signs may be used as the available designs in the next meaning-making process. In this process, the available designs are re-presented and re-contextualized, involving semiotic and semantic transformations of the available resources.

3. Research data and methodology

At one of the top universities in China, four 45-minute EFL lessons for 32 first-year non-English majors were video-recorded from three perspectives: the teacher, the students and the Powerpoint presentation. In addition, 16 teaching videos were downloaded from the Jingpinke (http://www.jingpinke.com), an open-course database where video-recordings of excellent courses from many Chinese universities are made publicly accessible.

The EFL textbook used are the *Integrated Course of New College English and New Horizon College English* textbooks, published by Shanghai Foreign Language Education Press and Foreign Language Teaching and Research Press respectively. According to the preface of the textbooks, their objectives are: to create a self-study environment, to emphasize personalized learning, and to foster students' comprehensive ability of using the English language, especially the abilities in listening and speaking, so as to enable them to communicate effectively in written and spoken English in their future work and social life. The textbooks were scanned into PDF files, named, numbered, and stored for further analysis. Videos were converted into MP4 files, named and numbered for ELAN annotation. Based on textbook units, the textbook and teaching data were segmented into different stages in an attempt to elucidate their generic structures. The segmentation was mainly based on the functions and purposes of each book and teaching section.

The classroom teaching, of course, is not always a translation of the textbook because teachers often incorporate contents from other sources. This is also the reason we collected 17 teaching cases, hoping to find short clips where those parts of teaching are particularly consistent with the textbook content which could allow the possibility of comparison between the textbook and teaching.

This research adopts a qualitative method to analyze the translation from EFL textbook to

classroom teaching. Focusing on the translated parts, we aim to examine the redesign of pedagogy and semiosis and to identify the patterns and effects of translation. The analysis is based on multiliteracies and social semiotic framework. Multiliteracies analysis cover the four components of the New London Group (1996) model and the eight knowledge processes proposed by Kalantzis and Cope (2005). As for semiotic analysis, the actual deployment of media and modes in the translation, the Metafunctions of modes, the patterns of modal combinations, and the semiotic strategies for realizing multiliteracies pedagogy are analyzed.

4. Translation from EFL textbook to classroom

4.1. Translation of pedagogy

To investigate the pedagogical design of textbook and classroom teaching, the four components of multiliteracies pedagogy (New London group, 1996) were used to analyze their generic structures and contents (see **Table 1** and **Table 2**). We found that the textbook provides massive situated practices throughout its generic stages, overt instructions are present in every stage following the introduction of units, critical framings are utilized in the design of listening tasks and reading comprehension exercises, and transformed practices are offered only in exercise sections, such as vocabulary, translation, and cloze. In classroom teaching, the redesigns of the above multiliteracies pedagogy could be seen in the following:

In terms of situated practice, teaching incorporates more lifeworld experiences into classrooms. According to Kalantzis and Cope (2005), situated practice correlates to the knowledge process of experiencing, including experience of the old and the new. While textbook contents are mainly centered on the target topic and text, teachers activate students' previous knowledge by associating textbook contents with students' old experiences. In one of the unit about the virtual world, the teacher illustrates the advantages and disadvantages of the Internet with regard to students' online experiences of reading news, chatting, and shopping. Through this activation of previous knowledge, it is easier for students to understand the new word "virtual".

Overt instruction starts as early as the unit introduction stage. While the textbook provides visual experiences of image and writing at the unit introduction stage, teachers utilize overt instruction to help students conceptualize the unit topic. According to Kalantzis and Cope (2005), overt instruction correlates to the knowledge process of conceptualizing, either conceptualizing by naming or with theories. In classroom teaching, at the stage of unit introduction, the primary strategy is conceptualizing by naming. For example, in order to help students develop the concept of the "American dream", the teacher gives its definition from *Cambridge Advanced Learner's Dictionary*: "the belief that everyone in the US has the chance to be successful, rich and happy if they work hard". After this quotation of this definition, the teacher points out the key elements in the concept: "so in this definition, two words very important, so, one, you should work hard, yeah, then you can be successful, and rich and happy. So this marks the definition of American dream". In this way, the intentions of the concept are identified.

Critical framing is used frequently in teaching, including not only functional analysis but also critical analysis in terms of knowledge processes. The textbook design emphasizes functional analysis of text structure, text content, and grammar. In some teachers' classroom teaching, apart

from these functional analyses, teachers also guide students to critically analyze the cultural background, and writing intentions. However, it is found that most of the analyses in teaching still belong to the first category, leaving critical analysis insufficiently addressed in most of the classrooms.

Transformed practice is used in one third of the generic stages, offering plenty of opportunities for students to apply what they have learned. According to Kalantzis and Cope (2005), transformed practice correlates to the knowledge processes of applying appropriately and creatively. Textbook designs application of knowledge primarily in the exercise sections and emphasizes on the appropriate uses of the learned language points. In teaching, applications of knowledge go through more generic stages, including language points, text explanation, text discussion, in-class activity, and exercises from the book. Apart from appropriate application, teachers also design creative application of knowledge through various in-class activities, such as role-play, imaginary dialogue, and oral presentation (see Table 2). For example, in a lesson addressing the moral implications of cloning, the teacher provides chances for students to create imaginary dialogues between the original and the copy during class.

The effect of such pedagogical redesign could be seen in sentient perception and cognitive process (see Table 1 and Table 2). In terms of sentient perception, teaching translates the visual-oriented design into visual- and aural- oriented design. This transformation situates students in a context more closely to real communication and gives them constant visual and aural experiences of English language. In terms of cognitive process, teaching also requires students to actively 1) experience information through attention, 2) recall previous knowledge through memory and retrieval, 3) conceptualize information through comprehension, and 4) analyze information through induction, comparison, judgment, evaluation, etc.. In these ways, students could construct new knowledge and transform their previous knowledge.

Table 1. Knowledge processes, sentient perception and cognitive processes in the textbook

Generic structure	**Content**	**Pedagogy**	**Knowledge process**	**Sentient perception**	**Cognitive process**
Unit introduction	Unit title, image, unit preview	SP	Experiencing	visual	ATT
Reading text lead-in	Pre-reading: listening	SP, OI, CF	Experiencing, conceptualizing, analyzing	aural & visual	ATT, MEM, RET, JUD
Reading text	Text A & B	SP, OI	Experiencing, conceptualizing	visual	ATT, COMP
Vocabulary	New words, phrases, expressions, proper Names	SP, OI	Experiencing, conceptualizing	visual	ATT, MEM, RET, COM
Exercises	Comprehension, language points, translation, cloze, structure analysis, writing	SP, OI, CF, TP	Experiencing, conceptualizing, analyzing, applying	visual	ATT, MEM, RET, JUD, EVA, COMP, ANA, IND, COM

Note: ATT=Attention; MEM=Memory; RET=Retrieval; JUD=judgment; COMP=Comprehension; COM=Comparison; EVA=Evaluation; ANA=Analysis; IND=Induction

Table 2. Knowledge processes, sentient perception and cognitive processes in teaching

Generic structure	Content	Pedagogy	Knowledge process	Sentient perception	Cognitive process
Class opening	Stand up; movement; clap hands; greetings	SP, OI	Experiencing, conceptualizing,	visual, aural,	ATT
Unit introduction	Introducing unit topic, image, song, recorded speech, video				ATT, COMP
(Teaching objectives)	Illustrating what are to be achieved				ATT
(Review of the previous lesson)	Review what learned previously				ATT, MEM, RET
Reading text lead in	Pre-reading questions, images, songs, videos	SP, OI, CF	Experiencing conceptualizing, analyzing	visual, aural,	ATT, COMP, JUD
(Background information)	Cultural background, text background	SP, CF	Experiencing, analyzing	visual, aural,	ATT, COMP, COM
Students reading text	Read and discuss	SP	Experiencing	visual	ATT, COMP,
Language points	Words, expressions	OI, TP	Conceptualizing, applying	visual, aural,	ATT, MEM, RET, COM, JUD
Text explanation	Interpretations of words, sentences and paragraphs	OI, CF, TP	Conceptualizing, analyzing, applying	visual, aural,	ATT, COMP, IND, ANA, EVA, JUD
Text discussion	Text structure, text content	CF, TP	Analyzing, applying	visual, aural,	ATT, ANA, COMP, IND
In-class activity	Presentation, role play, paired dialogue	TP	Applying	visual, aural,	ATT, MEM, RET, COM, JUD
Exercises on book	Vocabulary, translation, cloze	TP	Applying	visual, aural,	ATT, MEM, RET, COM, JUD
(Summary)	Summary of present lesson	SP	Experiencing	visual, aural,	ATT, MEM, RET
Assignments	Composition; interview; presentation				ATT, MEM
Class closure	Announcement of ending; arrangements for next				ATT

Note: ATT=Attention; MEM=Memory; RET=Retrieval; JUD=judgment; COMP=Comprehension; COM=Comparison; EVA=Evaluation; ANA=Analysis; IND=Induction

4.2. Translation of semiotics

4.2.1 Deployment of semiotic resources

Mode and medium

In terms of media and semiotic modes, textbooks and teaching practices are designed in very different contexts. In a textbook, the main modes are writing, image, layout, color, and typography, which are materialized into the medium of a book. Apart from these, speech, music and sound are materialized into the medium of a CD-ROM. In classroom teaching, there are more media and modes than in the textbook. The embodied modes like speech, facial expression, gaze, gesture, and movement are available within the medium of teachers' bodies. Writing, image, layout, color and typography are available within the medium of blackboard, and the same modes are available within the medium of projection screen. Speech, music and sound are available within the medium of audio facility. The medium of classroom offers the modes of space and layout (See **Table 3**).

The primary differences in the modal ensembles between textbook and teaching lie in the embodied modes and in the dynamic and multimodal resources afforded by computer-enhanced technologies, such as PPT, projection screen and audio facility. Due to the differences of media, affordances of similar modes differ between textbook and teaching. In terms of image, book affords static features while PPT affords both static and dynamic utilities. In terms of layout, book provides a 2-dimension (2D) space while classroom provides a 3-dimension (3D) one.

Table 3. Mode and medium in textbook and teaching

Genre	**Mode**					**Medium**
Textbook	Writing	Image	Layout	Color	Typography	Book
	Speech, Music, Sound					CD-ROM
Classroom teaching	Speech	Facial Expression	Gaze	Gesture	Movement	Teacher's Body
	Writing	Image	Layout	Color	Typography	Blackboard
	Writing	Image	Layout	Color	Typography	Projection Screen
	Speech, Music, Sound					Audio facility
	Layout					Classroom

Functional loads of modes

From a social semiotic perspective, every mode, like language, has the potential to realize three metafunctions: ideational, interpersonal and compositional. Based on the analysis of the 17 classroom teachings, it is found that designers have preferences when selecting semiotic resources for the realization of metafunctions. Although all modes could realize three metafunctions, they are differently used for different metafunctions.

As shown in **Table 4**, the capitalized modes are primarily used for realizing ideational and interpersonal metafunctions. In textbook, writing and image are the main modes for representing knowledge and expressing interpersonal meanings. Within the medium of CD-ROM, speech is the main mode for representing knowledge. It is found that, in textbook, writing is more frequently used than image and image is more frequently used than speech. In teaching, speech, writing, image, and gesture are the primary modes for representing knowledge and expressing interpersonal meanings. It is found that the frequencies of their use decrease from speech to gesture.

The italicized modes are primarily used for realizing interpersonal metafunctions. In teaching, embodied modes like facial expression, gaze and movement, and some gestures are used to develop social relations, control social distance and express attitudes. These modes usually do not convey experiential meanings.

For the rest of the modes, some are used for realizing compositional metafunctions, including layout, color and typography within textbook, music and sound in CD-ROM, layout, color, and typography within projection screen, music and sound within audio facility, and layout within classroom. As for the modes available within blackboard, although they may have ideational and interpersonal potentials, they are constantly ignored and remain unused in most of the classrooms.

Table 4. Categories of modes according to functional loads in teaching

Genre	**Mode**					**Medium**
Textbook	WRITING	IMAGE	Layout	Color	Typography	Book
	SPEECH, Music, Sound					CD-ROM
Classroom teaching	SPEECH	Facial Expression	Gaze	GESTURE	Movement	Teacher's Body
	Writing	Image	Layout	Color	Typography	Blackboard
	WRITING	IMAGE	Layout	Color	Typography	Projection Screen
	SPEECH, Music, Sound					Audio facility
	Layout					Classroom

Note: Capitalized modes: ideational & interpersonal; Italicized modes: interpersonal; Other modes: compositional

Patterns of mode combination

In multimodal discourse, when one mode can not fully satisfy the semantic and rhetorical needs of sign makers, several modes will be utilized together for meaning making. In the two kinds of EFL textbooks investigated, it is found that there are five mode combinations (see **Table 5**). In terms of visual representation, the most frequent combination is "Writing + Image + Typography + Color + Layout", followed by "Writing + Typography + Color+ Layout". Linguistic signs are usually accompanied with images. Visual and aural representation is used for listening tasks and reading texts. In *New College English*, listening instruction, new words explanation, and questions are printed in book while listening material and reading text are provided as recorded speech in CD-ROM. In *New Horizon College English*, the whole textbook is projected into CD-ROM. Listening instructions and questions in book are visually repeated on screen while listening material and reading text are provided as recorded speech. In both textbooks, listening tasks locate at the second page of each unit, taking up about half a page and lasting for one to two minutes. Images provided in listening task are usually small icons. For example, in *New Horizon College English*, image of small headphones is used to indicate this part involves listening practices.

An analysis of 17 instances of classroom teaching, revealed that there are 12 mode combinations (see **Table 6**). According to Zhang and Ding (2013), in EFL classroom teaching, choices are made from mode combinations instead of single mode. Combining the findings of Zhang (2010), Zhang and Wang (2010), and Zhang and Li (2012), Zhang and Ding (2013) summarized 14

mode combinations in EFL teaching. However, their classification has some problems: first, they did not attend to the mode of gaze but in this research it is found gaze is an important mode for teacher-students interaction. Second, they have missed three mode combinations (the first three combinations in Table 6). These combinations are used at the stage of text reading. Third, they did not distinguish media. According to Table 4, the same mode could be provided by different media and different media offer different modal affordances, so it is necessary to clarify which media provide the combinations. Lastly, some of the combinations they identified could be conflated. Smile and serious facial expression (Zhang and Wang, 2010) could be conflated because the classification is at the level of mode and the above two belong to the same mode of facial expression. Similarly, static image and dynamic image belong to the same mode of image, because the difference between static and dynamic results from the extra dimension of time not from the nature of mode. Under these circumstances, this research summarizes the mode combinations into twelve, adds the mode of gaze, and distinguishes between media (see Table 6).

Table 5. Mode combinations in investigated EFL textbooks

No.	Mode combinations	Media	Sensory
1	Image+Color+Layout	Book	Visual
2	Writing+Typography+Color+Layout		
3	Writing+Image+Typography+Color+Layout		
4	Writing+Typography+Color+Layout+Speech+Sound	Book+CD	Visual+Aural
5	Writing+Typography+Color+Layout+Speech+Sound+Image		

Table 6. Mode Combinations in investigated EFL classroom teaching

No.	Mode Combinations	Media	Sensory
1	Writing+Typography+Color+Layout	Book	Visual
2	Image+Color+Layout		
3	Writing+Image+Typography+Color+Layout		
4	Speech+Writing+Typography+Color+Layout	Body+PS	Visual+Aural
5	Speech+Image+Color+Layout		
6	Speech+Writing+Image+Typography+Color+Layout		
7	Speech+Facial Expression+Gaze		
8	Speech+Gesture+Facial Expression+Gaze		
9	Speech+Movement+Facial Expression+Gaze		
10	Speech+Gesture+Movement+Facial Expression+Gaze		
11	Speech+Music+Image	PS+AF	
12	Music+Image+Sound		

Note: Body=Teachers' bodies; PS=Projection screen; AF=Audio Facility

In Table 6, the first three combinations are usually used when students are asked to read text and teachers are silent. As for the last two kinds of combinations, they are usually used for playing audio or video clips. It is found that combinations four to ten are most frequently used. These combinations are dominated by speech, and accompanied with writing and image. Most of the time,

teachers talk with visual representations in projection screen.

Furthermore, our analysis of the above mode combinations reveals that mode combinations are governed by two principles. First, the combination pattern could be represented as: **Obligatory mode** + (**Optional mode**) + **Accompanied mode**. Of all the mode combinations in Table 5 and 6, one or more mode from the obligatory group must be present, mode or modal ensemble from the optional group may be present, and relevant modal ensemble from the accompanied group is always present (for the three groupings, see **Table 7**). If writing is used, color, layout and typography always accompany it. If image is selected, color and layout always accompany it. If any embodied mode is utilized, gaze and facial expression are always co-present. If music is present, so is sound. This indicates that the main functional load is carried by the modes in the obligatory group. This also implies that in the selection of modes, teachers first select one or more modes from the obligatory group, then decide whether to make choices from the optional group (the unused modes from obligatory group will automatically fall into the optional group), and there is no need to make decisions on the accompanied group because they always accompany modes from the first two groups.

Table 7. Groupings of modes in textbook and teaching

Obligatory	**Optional**	**Accompanied**
Writing	Movement	Color
Speech	Gesture	Layout
Image	Music	Typography
		Gaze
		Facial Expression
		Sound

The combinations of mode are also constrained by media. As shown in Table 5 and 6, if the main functional load is carried by visual modes, the modes must be provided by the same medium. Otherwise, the visual representation of meaning would be contradictory. Students could not simultaneously engage with projection screen and book, no matter whether the signs are writing, image or both writing and image. Similarly, if the main functional load is carried by aural modes, the modes should also be provided by the same medium. In classroom teaching, if teachers speak while the audio facility is on or while students are speaking, their words could not be clearly heard nor understood. In our data, it is found that some teachers tried to play background music while they were speaking. It turns out that the music actually distracted students' attention and decreased the clarity of teachers' voices.

Comparing the mode combinations in the textbook and in teaching, it is obvious that many more combinations are available in teaching than in textbook. With a closer look, it is found that the extra combinations are primarily provided by the media of teachers' bodies and projection screen. Although these two media offer a variety of modes, it is found that the main functional loads are carried by speech, image, and writing (see Table 7).

4.2.2 Translation categories

According to the analysis of modes and media above, the accompanied modes actually do not

carry the main functional load. Therefore, in our discussion of translation categories, we focus on the intramodal and intermodal translations among those obligatory and optional modes. As shown in **Table 8**, within the four categories of translation, there are 11 specific types. The capitalized types are frequently deployed. It is found that there are more intermodal translations than intramodal translations, as writing is frequently transducted into speech, body language, or image.

The shift from writing to other modes will inevitably result in the issue of epistemological commitment. As we have illustrated earlier, different modes offer different modal resources. Writing and speech share lexical and grammatical resources, but they have quite different graphic and phonological resources. Graphic resources like space and punctuation are not available in speech. Phonological resources like stress, pitch and intonation are not afforded by writing. In image, the differences are even more obvious. Image provides resources like spatial position, size, color, shapes, and so on. These are totally different from linguistic resources. Each mode demands specific epistemological commitment be satisfied. If meaning is transducted from writing to image, sign makers have to meet the commitment of position, size, shape, and color that are demanded by the mode of image. Such epistemological commitment increases creativity of meaning making.

Table 8. Categories of translation from EFL textbook to classroom teaching

Intra-monomodal	**Intra-multimodal**	**Inter-mononmodal**	**Inter-multimodal**
WRITING	Writing+Image	WRITING→SPEECH	WRITING→SPEECH+GESTURE
Image		Writing→Image	WRITING→WRITING+IMAGE
			Writing→Speech+Image
			WRITING→SPEECH+GESTURE+MOVEMENT
			Writing→Speech+Writing+Image
			WRITING+IMAGE→WRITING

4.2.3 Semiotic strategies for realizing multiliteracies pedagogy

As illustrated above, the multiliteracies pedagogy of textbook and teaching include the four knowledge processes of experience, conceptualization, analysis and application. In the analysis of data, the following semiotic strategies are found to be utilized for realization of these processes (see **Table 9**).

In terms of experience, to create a real communicative environment, teaching translates textbook contents into various sensory experiences by utilizing linguistic, image, music, sound, and embodied modes like gaze, facial expression and movement. Apart from these, textbook declaratives are often translated into interrogatives to create a real communicative situation between the teacher and students. In terms of the experience of old and new information, teaching expands textbook by incorporating familiar information to activate students' previous knowledge. These are usually achieved by relating textbook contents to students' life experience through linguistic association or discussion. If the textbook topic is far from students' life, some teachers choose to incorporate films, songs or images familiar to students.

Table 9. Semiotic strategies for realizing multiliteracies pedagogy

Experience	Create real communicative environment Provide various sensory experiences: linguistic, image, music, sound, embodied; linguistic interrogative transformation	Activate previous knowledge Bridge with students' life experience through language; incorporate familiar films, songs, images
Conceptualization	Generalization	
	Generalize and abstractize through intralingual and interlingual translation	Generalize and abstractize through image and linguistic translation, gesture and speech translation, 3D artefacts demonstration, linguistic conceptualization.
Analysis	Analyzing text	
	Linguistic: reasoning and identifying relations and patterns	Image and writing: analyzing logical structures, orders, relations
Application	Create opportunities for knowledge output	
	Linguistic interrogatives: Q & A, discussion, dialogue	Multimodal role play, presentations, performance

In terms of conceptualization, intralingual and interlingual translations are the most frequently used means for translation. The most common method is to replace source words with synonyms in English or translation into Chinese. With the assistance of modern media, teachers also use image to translate English nouns, use audios to translate the pronunciation of words, use videos or gestures to translate verbs from textbooks. Such intersemiotic translation delinguistify (Habermas, 1987) the original texts. As shown in **Figure 2**, the word "clone" is conceptualized through image and writing. The linguistic words illustrate that the key elements in the concept of clone is "100%", "genetic information" and "from one individual", and the image shows vividly the result of clone through cartoon figures. Through such translation, students get to know the method and result of clone in an impressive way.

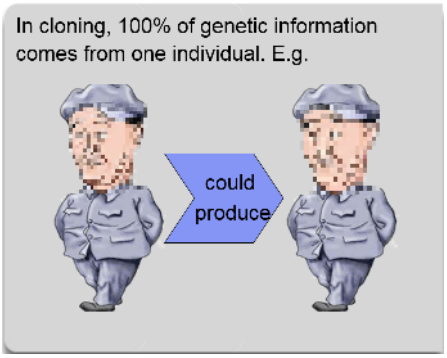

Figure 2. Conceptualizing "clone" with image and writing

Gestures are also used to illustrate words. As shown in **Figure 3**, the teacher uses hand gesture to translate the word "range". This gesture consists of three phases: preparation (picture 1 in Figure 3), the stroke (picture 2 & 3 in Figure 3), and retraction (picture 4 in Figure 3). In preparation, the teacher raises his two palms to his chin so as to catch students' attention. During the stroke, the teacher uses his right arm to form an arc, showing students the meaning of "range". After that, the teacher retracts his right arm back. Through such transduction, the teacher fulfills the

epistemological commits of gesture by specifying the position and scope of "range". As the teacher does not further explain the intensions of the concept through speech, this gestural translation develops the concept of range by specifying the scope of one range, and at the same time, transforms the abstract concept into a concrete instance.

Figure 3. Gestural illustration of "range"

Occasionally, teachers use 3D artefacts to demonstrate concrete words and also use speech to further explain the words. As shown in **Figure 4**, the teacher takes out a card from his pocket and illustrates to students: "I have an E-card here. Everybody has an E-card, right? You can get money and buy food with this thing. OK, very easy, very convenient". Through this translation, the card shows what an E-card may look like, the speech illustrates the key elements of the concept of E-card as "get money", "easy" and "convenient".

Figure 4. Translation with a 3D artefact

In terms of analysis, teachers often use speech to explain to or discuss with students about the structure of texts, the main idea of each part in texts, the rhetoric strategies of texts, the relations between sentences, and the patterns of lexis and grammar. Apart from these, there are increasing uses of image and writing to translate the structure of texts, the orders or sequences of teaching stages, or the cause and effect relations in texts. Text components are usually summarized into simple words. Imagery shapes are used to represent components and arrows are used to indicate the relations between components. In terms of application, teachers usually create opportunities for students to use what they have learned. This is usually known as language competency practices. In the investigated data, teachers emphasize the listening and speaking applications. To achieve this, teachers usually translate textbook contents into interrogatives so as to interact with students through questions and answers. To help students appropriately apply language knowledge, the

pattern of question initiation, student response and teacher evaluation (IRE) are often utilized. In this research, a range of variations of IRE is found in teaching, including IDRE (initiation-discussion-response-evaluation), GCE (guidance-complete-evaluation), and GAE (guidance-all students answer-evaluation). Apart from teacher-student interaction, group discussion and paired dialogue are also deployed in classrooms for application of knowledge. In addition, some teachers design multimodal role-play, presentation and performance to help students apply their knowledge. In such applications, teachers often emphasize more on creativity and less on the appropriateness of language.

4.3. Translation effects

From EFL textbook to classroom teaching, the translation effects could be examined from the aspects of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality.

In terms of pedagogy, the shift from transmission to enquiry softens the power difference between teachers and students. The interrogative transformation of textbook contents creates a learning environment more like real communication. Through such translation, knowledge is negotiated and co-constructed by teachers and students. The increase of conceptualization and the balance of application among teaching stages produce better pedagogical design of multiliteracies.

Concerned with sentient perception, classroom teaching deploys many more semiotic modes than textbook and creates visual-aural perceptions throughout lessons. In terms of visual perception, teaching incorporates various images into classroom. The use of diagrams is a special feature in teaching that helps students understand abstract logical relations in reading texts. In terms of aural perception, teaching translates most of the visual language in textbook into aural signs in teaching. This increases listening practices for students.

From the cognitive processes aspect, the multiliteracies pedagogy utilized in teaching provides students with more opportunities of conceptualization, analysis and application. Cognitive processes of attention, memory, retrieval, judgment, evaluation, comprehension, analysis, induction and comparison are required at various teaching stages.

With regard to physical features, the frequent uses of multimedia facilities display screen-oriented physical features to students. The constant use of aural speeches makes the learning environment more like real communications. However, due to the volatile nature of face-to-face communication, the dissemination of embodied signs (speech, gesture, gaze, facial expression, movement) is troublesome because it is very hard to keep and review those embodied signs. The medium of PPT may come to compensate but it is impossible to keep the teaching as a whole.

5. Conclusion

This research on translation from EFL textbook to classroom teachings in China demonstrates that teaching requires a transformative recreation of source texts from the perspectives of pedagogy and semiosis. In this article, the redesign of pedagogy is discussed from the multiliteracies perspective and found that in the translation process, 1) teachers incorporate lifeworld experience to activate students' previous knowledge, in which they use the "old" to facilitate the "new"

and this transformed the original "situated practice" designed in textbooks; 2) teaching actually redesign some the "situated practice" in textbook into "overt construction" aiming at help students conceptualize the topics in class; 3) teaching added "critical analysis" to the "functional analysis" on textbook; 4) teachers create more chances for students to not only appropriately apply what they've learned, but also creatively apply knowledge.

Approaching translation from the social semiotic framework, this article compares the mode and medium available in textbook and classroom, analyzes their functional loads and discovered patterns for mode combinations. Based on these semiotic analysis, it is found that there are 11 specific translation categories, covering intra-monomodal, intra-multimodal, inter-monomodal and inter-multimodal types. Semiotic strategies for realizing multiliteracies pedagogy are explored from the perspectives of experience, conceptualization, analysis and application. Finally, effects of translation are discussed in terms of pedagogy, sentient perception, cognitive process, physical features, and dissemination quality. Hopefully, these findings may contribute to the understanding of EFL textbook, classroom teaching, and their relations and they may also produce implications for EFL classroom teaching and textbook design.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Marked causative structures of Chinese verb-resultative construction

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Abstract: This paper aims to study the syntactic and semantic features of 'marked VRC causative structures', those special syntactic-semantic structures formed by verb-resultative constructions (VRCs) which violate both the Uniformity of Theta Assignment Hypothesis and the Thematic Hierarchy. Their syntactic and semantic features are defined as follows: 1) VRC has a causative relation within itself; 2) the argument in the object position is the causee and the only argument of the resultative complement; 3) the causer in the subject position is any conceptual component from the cause event other than the agent of the predicate verb. This paper then attempts to propose an extended account to expound how they are formed syntactically and semantically. On this account, a marked VRC causative structure is re-causativization of a VRC when the VRC is self-causative; it enables other conceptual components of the cause event than the agent to become the causer when a VRC is not self-causative. There are some constraints on what becomes the causer of a marked VRC causative structure.

Keywords: verb-resultative construction; marked causative structure; self-causative VRC; re-causativization

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1. Introduction

In mandarin Chinese there are many verb-complement structures, such as *zhui-lei* 'chase-tired', *xi-ganjing* 'wash-clean', which usually consist of two verbs or a verb plus an adjective, the first predicate verb indicating an action and the second resultative complement a result. It is generally considered that in such a structure there is a causative relation between the predicate verb and the resultative complement and the latter is a result caused by the former. They are rather complex in semantics, yet they are syntactically used in the same way as individual verbs. Some scholars, especially overseas scholars, define them as compounds, like 'resultative verb compounds' (e.g. Thompson, 1973; Ross, 1990; Li, 2013), 'V-V compounds' (e.g. Chang, 1997; Li, 1990),

'resultative V-V compound' (e.g. Zou, 1994), 'resultative compounds' (e.g. Li, 1997; Cheng and Huang, 1994). However, in Chinese literature the majority of the related studies still regard them as phrases rather than compounds. There do exist a small number of compounds deriving from verb-complement structures, but their semantic meanings have somehow changed and they no longer have complex semantic relations within themselves. Most of the existing studies are more focused on those structures with a causative relation than on those compounds with a relatively fixed meaning. Scholars of construction grammar or cognitive grammar tend to name these structures as constructions (e.g. Goldberg and Jackendoff, 2004; Zhang, 2009; Song, 2007). Considering the naming of such structures in Chinese literature, this paper adopts a corresponding term, namely verb-resultative constructions (henceforth VRCs).

Unlike English resultatives, VRCs in Chinese are known to be peculiar in that the predicate verb (V for short) and the resultative complement (R for short) of a VRC are syntactically close, allowing no element between them. The predicate verb can be a transitive verb, like the verb *chi* 'eat' of *chi-bao* 'eat-full', which can take two arguments, and its resultative verb *bao* 'full' is an intransitive verb, which takes one argument. The predicate verb can also be an intransitive verb, like *ku* 'cry' of *ku-shi* 'cry-wet', which takes only one argument, and the resultative adjective *shi* 'wet' has one argument.

Chinese VRCs are quite simple in syntax, namely 'NP1 VR (NP2)'. However, they have quite complex argument structures, thematic relations and semantics. In sentence (1), the predicate verb of the VRC is a transitive verb, yet the VRC *chi-bao* 'eat-full' is generally intransitive as a whole. However, in (2) the predicate verb *ku* 'cry' is an intransitive verb, yet the whole construction *ku-shi* 'cry-wet' is transitive, having two arguments, the argument of *ku* 'cry' as the subject of the sentence and the argument of *shi* 'wet' as the object of the sentence. In (3) the predicate verb is transitive, yet the object is not subcategorized by the predicate verb.

(1) *Wo chi-bao le*.

I eat-full ASP

'I am full from eating'.

(2) *Xiao nvhai ku-shi le shoupa*.

little girl cry-wet ASP handkerchief

'The little girl cried and (wiping away tears with a handkerchief) as a result the handkerchief became wet.'

(3) *Yeye kan-dun le futou*.

grandpa hack-blunt ASP axe

'Grandpa hacked (something with an axe) and as a result the axe became blunt.'

In addition, there are also VRC sentences like (4), in which the subject of sentence is semantically the patient of the predicate verb *chi* 'eat' while its agent *san-ge ren* 'three people' becomes the object and also serves as the undergoer of the resultative verb *si* 'die'. Some VRCs also occur in sentences like (5), in which the subject of the sentence is the theme of the predicate verb

xie 'write' and the object is not subcatergorized by the predicate verb, yet the object is the theme of the resultative adjective. What's more, some VRCs are even used in sentences like (6), in which neither the subject nor the object is subcategorized by the predicate verb.

(4) *Zhe kuan bingjiling yijing chi-si le 3-ge ren.*

this sort ice cream already eat-die ASP 3-CL people

'Three people have died because of eating this sort of ice cream.'

(5) *Na-ben shu xie-bai le Zhangsan de toufa*.

that-CL book write-white ASP Zhangsan 's hair

'Zhangsan wrote that book and as a result his hair turned white.'

(6) *Na-ge youmo gushi xiao-wan le Zhangsan de yao*. (adapted from Li, 2013)

that-CL humorous story laugh-bend ASP Zhangsan 's waist

'That humorous story caused Zhangsan to laugh and as a result of laughing his waist bent.'

VRCs are very productive in Chinese. Many studies try to explain the asymmetry between argument structure and syntactic structure and between syntactic structure and semantics of VRCs (e.g. Thompson, 1973; Sybesma, 1991, 1999; Li, 1990, 1995, 1997; Chang, 1997; Her, 2007; Li, 2007, 2013; Gu, 1992; Zou, 1994). Among them some scholars try to account for the particularly complex thematic relations and semantics of VRCs used in syntactic structures like (4)-(6), yet there is still some disagreement among the accounts.

This paper is not intended to review all the literature on Chinese VRCs. It focuses mainly on the representative studies on the special syntactic-semantic relations of VRCs involved in sentences like (4)-(6), poses their problems and then offers an extended account on the basis of the existing studies.

The paper is organized as follows: section 2 reviews some lexical-syntactic and lexical-semantic accounts for this special kind of syntactic-semantic structures of VRCs; section 3 gives a critical review of the main studies on this kind of structures within the framework of cognitive linguistics and poses problems with those studies; section 4 offers an extended account based on the previous studies and states how they are formed syntactically and semantically; section 5 contains some concluding remarks.

2. Lexical-syntactic or lexical-semantic accounts

The idiosyncrasy of the argument structures and thematic relations of Chinese VRCs is not so readily understood. Researchers have made varied assumptions to account for their complex thematic and syntactic-semantic relations. Some focus on lexical-syntactic accounts, some offer an account from a lexical-functional perspective while others present a lexical-semantic account. In this section, we will review the most representative studies, in which those special structures are discussed.

2.1. Y. Li's causative hierarchy account

Y. Li's studies on Chinese VRCs are very representative. He discusses Mandarin VRCs in several important papers. The review here will focus on his 1990 and 1995 papers, because the very special kind of structures is also discussed in these papers. Take the well-known ambiguous VRC *zhui-lei* 'chase-tired' for example:

(7) *Zhangsan zhui-lei le Lisi.* (adapted from Li, 1995)

Zhangsan chase-tired ASP Lisi

a. 'Zhangsan chased Lisi and as a result Lisi got tired.'

b. 'Zhangsan chased LIsi and as a result Zhangsan got tired.'

c. 'Lisi chased Zhangsan and zhangsan got Lisi tired.'

d. * 'Lisi chased Zhangsan and Zhangsan got himself tired.'

As is shown in the English translation, the sentence has more than one reading. Y. Li (1990) proposes that the reading of (7d) is bad because it violates the head-feature percolation, yet his assumptions also incorrectly rule out the third reading (7c), which is in fact a good one. Y. Li (1995) recognizes the problem and further assumes that "in addition to the theta-roles assigned by lexical words and regulated by the thematic hierarchy, there are two causative roles (c-roles), Cause and Affectee, that arguments acquire when they are associated in a particular way with two causally related predicates" (Li, 1995: 265). The two causative roles form the 'causative hierarchy', in which Cause is more prominent than Affectee. According to Li (1995), the causative hierarchy interacts with the thematic hierarchy to determine the linking between theta roles and syntactic argument positions and when in conflict the latter can be overridden by the former. Li assumes that this interaction accounts for the inverse theta role assignment in the reading of (7c), namely, the Patient argument *Zhangsan* of *zhui* 'chase' is the Cause and becomes the subject while the Agent argument *Lisi* is the Affectee and gets into the object position.

It seems that Li's assumption of the interaction of the causative hierarchy and the thematic hierarchy is also able to account for sentence (4). When in conflict, the causative hierarchy overrides the thematic hierarchy, thus *bingjiling* 'the ice cream', the Cause and the Patient of V, occupies the subject position while *san-ge ren* 'three people', the Affectee and the Agent of V, becomes the object. However, the phenomena are more complex than the inverse theta role assignment shown in (7c) or (4). As is shown in sentence (5) and (6), the Cause may not be the Patient argument of the predicate verb and/or the Affectee may not be the Agent argument of the predicate verb.

According to Li, the two causative roles are assigned on the following conditions:

(8) Conditions for c-role assignment (Li, 1995: 267)

a. The argument in the subject position receives the c-role Cause from a resultative compound if it receives a theta role only from V_{caus};

b. The argument in the object position receives the c-role Affectee from a resultative compound if it receives a theta role at least from V_{res}.

In sentence (5), the argument in the subject position, *na-ben shu* 'that book', is the theme of the predicate verb *xie* 'write', receiving a theta role from V_{caus}, and thus receives the c-role Cause from the VRC *xie-bai* 'write-white'; the argument in the object position is *Zhangsan de toufa* 'Zhangsan's hair', which receives the theta role of the undergoer from V_{res} *bai* 'white'. In this case, sentence (5) does follow the above conditions, although it is not explained why the agent of the causing event *Zhangsan* cannot receive any c-role. As Li (1995: 255) mentions, "Chinese has a productive resultative V-V compound in which the first verbal morpheme refers to the causing event and the second refers to the resulting event." Even though resultative V-V compounds are referred to as verb-resultative constructions in this paper, there is a causative relation in VRCs. Li does not further clarify the relationship between his causative hierarchy and the causative relation within a VRC.

In sentence (6), the argument in the object position, *Zhangsan de yao* 'Zhangsan's waist', has no thematic relation with the predicate verb, but it receives a theta role of the undergoer from the resultative verb wan 'bend', therefore it can be assigned the c-role Affectee according to the second condition. But the argument in the subject position, *na-ge youmo gushi* 'that humorous story', has no thematic relations with either the predicate verb *xiao* 'laugh' or the resultative verb *wan* 'bend'. That is, it receives no theta role from the predicate verb, thus it violates (8a) and should not be assigned the c-role Cause. In this case, Li's account fails.

There is actually such a sentence as (9) that Li (1995) tries to account for. By (8a), the NP in (9) cannot be assigned the Cause role.

(9) *Na-chang jihuang e-si le henduo ren*. (adapted from Li 1995)

that-CL famine starve-die ASP many people

'Many people starved to death in that famine.'

In order to account for (9), Li restates (8a) as follows:

(8) a'. The argument in the subject position receives the c-role Cause from a resultative compound only if it does not receive a theta role from V_{res}.

Li argues that *na-chang jihuang* 'that famine' "may well carry an intrinsic temporal theta role and therefore does not directly receive a theta role" from the verb e 'starve' (1995: 268). By (8a) it cannot be assigned the Cause role, but by (8a') it can, since it is not a thematic argument of the resultative verb *si* 'die'. As Her (2007) and Li (2007, 2013) point out, Li's conditions are stipulative and prediction made about causative relations on the basis of the proposed conditions is not always borne out. It is important to point out that the restatement of (8a) into (8a') should be based on the premise that identical thematic relationships between items are represented by identical structural relationships between these items at the level of D-structure, namely the Uniformity of Theta Assignment Hypothesis (UTAH). However, this premise cannot stand in Chinese. A huge number of Chinese sentences, especially those with VRCs, violate the Uniformity of Theta Assignment Hypothesis (UTAH) (Baker 1988) or the thematic hierarchy (Jackendoff, 1972; Grimshaw, 1990) and even pose a great challenge to the causative hierarchy (Li, 1995).

2.2. Her's LMT account

Her (2007) tries to account for the argument-function mismatches in Mandarin VRCs. He formulates an account within a revised Lexical Mapping Theory (LMT) which incorporates a unified mapping principle. According to the Lexical Mapping Theory, an argument structure serves as an interface between the lexical semantic structure and the syntactic structure of a predicator; each argument in an argument structure is mapped onto a grammatical function; the argument roles and grammatical functions are assumed to have a hierarchical organization (Bresnan and Kanerva, 1989; etc.).

The thematic hierarchy assumes an order of prominence among thematic roles in the argument-structure, descending from the most prominent Agent role. The LMT adopted in Her (2007) assumes that in the a-structure argument roles are represented in a left-to-right order according to their prominence. Grammatical functions are likewise assumed to have a universal hierarchical organization, with Subject, the most prominent and the least marked, at one extreme and Object at the other extreme. Her proposes a universal classification of roles in the a-structure, namely the intrinsic classification of argument roles for functions (IC). In addition, the version of LMT proposed in Her (2007) replaces the multiple mapping principles and well-formedness conditions in other formulations of the theory with a single Unified Mapping Principle (UMP) in (10), which applies to all syntactic assignments.

(10) The Unified Mapping Principle (UMP): (Her, 2007: 229)

Map each argument role, from the most prominent to the least, onto the highest compatible function available.

(* A function is available iff it is not linked to a role.)

Her further presents the assumption of causitivity assignment in resultative compounding, namely, "an unsuppressed role from V_{res} receives [af] iff an unsuppressed role from V_{caus} exists to receive [caus]" (2007: 234). On the basis of the assumption he then formulates the resultative compounding for Mandarin VRCs when V_{caus} is transitive and for those when V_{caus} is intransitive.

There are some problems with Her's account. First, his account makes wrong predictions. According to his account, under the mapping principle, a composite role, formed by two composing roles, receives syntactic assignment via one composing role only; the second composing role is thus suppressed (Her, 2007: 221). In other words, when argument sharing takes place, a certain thematic role involved will be suppressed. When it comes to sentences like (7), by assuming that the Agent argument of the causing predicate is suppressed, the account makes the wrong prediction that Lisi cannot be interpreted as the Agent argument of V1. Another problem with Her's account is that it fails to account for some VRCs. Her assumes a strict one-to-one argument-function correspondence, yet his formulation fails to account for VRCs with an intransitive predicate verb like (6) (cf. Li, 2013).

2.3. C. Li's lexical-semantic account

Li (2013) offers a lexical-semantic account of Mandarin VRCs. Li first makes his assumptions and presents the linking rules in (11) below. The realization of the Causer (Cause) argument and the Causee (Affectee) argument is assumed to follow the rules.

(11) Linking Rules for Complex Causative Events in Active Sentences (Li, 2013: 106)

a. The Causer argument is realized in the subject position and the Causee argument in the object position, when both arguments are overtly expressed by different linguistic expressions.

b. When the Causer argument and the Causee argument are realized by one and the same linguistic expression, it appears in the subject position.

c. When only the Causee argument is expressed, it is realized in the subject position.

Li then proposes a lexical-semantics account of Mandarin VRCs. On his account, there are two separate thematic tiers, an individual thematic tier and a composite thematic tier. The former refers to the thematic relations between V1 and V2; the latter is the Causer-Causee relation (i.e. the Cause-Affectee relation in Y. Li's terms), the composite causative relation at a higher level. Li assumes that the complex thematic relations associated with VRCs result from an interaction of these two thematic tiers.

The possibilities of realizing the Causer and Causee arguments are summarized in **Table 1** (Li, 2013: 107). Among the sixteen potential combinations, eleven are attested except that 2-b is bad for semantic reasons and 1-c,2-c, 3-a, 3-b are illicit because of conflicting requirements on the transitivity of V1.

Table 1. Causer and Causee realization

Causer =	**Causee = single argument of intransitive V2 =**
1. Agent argument of transitive V1	a. Agent argument of transitive V1
2. Patient argument of transitive V1	b. Patient argument of transitive V1
3. Single argument of intransitive V1	c. Single argument of intransitive V1
4. Participant distinct from any argument of V1	d. Participant distinct from any argument of V1

According to Li's lexical-semantic account, the combination of sentence (12) is 2-a, in which the Patient argument of a transitive V1 is realized as the Causer, and the single argument of V2 is identified with the Agent argument V1; the combination of (13) is 4-b, in which the Causer is not identified with any argument of V1 and the single argument of V2 is identified with the Patient argument of transitive V1; and that of sentence (6) is 4-d, in which neither the Causer nor the Causee is identified with any argument of V1.

(12) *Na bao yifu xi-lei le Zhangsan.*

that bundle clothes wash-tired ASP Zhangsan

'(Zhangsan washed that bundle of clothes) and the clothes got Zhangsan tired.'

(13) *Feizao shui xi-ganjing le yifu.*

soap water wash-clean ASP clothes

'The soap water washed the clothes clean.'

Li (2013) gives a detailed analysis of many complex thematic relations of VRCs. His account is more comprehensive than previous ones and seems more desirable with fewer assumptions and stipulations as the author claims. However, there are still some problems with his account. First, Li's account does not really account for the formation of these sentences. It is more like a description of the good combinations between theta roles and c-roles. Second, Li does not define 'participant distinct from any argument of V1', which may result in his failure to exclude illicit sentences and explain why they are illicit. For example, if *feizao shui* 'soap water' in (13) is replaced by *mabu* 'duster', the sentence will become illicit. However, according to Table 1, the combination is still 4-b, yet Li's account fails to account for its illicit use.

3. A critical survey of studies within the framework of cognitive linguistics

The study of the above syntactic structures is a classic subject of formal linguistics and functional linguistics. In recent decades this particular type of structures has also aroused wide concern and interest among researchers from cognitive linguistics, especially construction grammar and cognitive grammar, including many Chinese scholars.

The naming of this type is varied from scholar to scholar, such as inverted causative structure (Gu, 1992; Li, 1999), inverted resultative construction (Zhang, 2009; Xiong and Wei, 2014), patient-as-subject clause (Zhang, 2004). In this section, we will review three specialized and most representative studies in Chinese literature.

3.1. Zhang's study

This special type of syntactic-semantic structures is first referred to as 'inverted resultative construction' in Yi Zhang (2009), in which he argues that it is a special usage of resultative construction and believes that it is an autonomous structure, having its own motivation. According to Zhang (2009), inverted resultative construction has its specific form and semantic characteristics. Its basic form is 'NP1+V1+V2+NP2', and its variant forms can be summarized as 'XP1+V1+V2+NP2', in which XP can be VP or S, but whatever it is, it can be semantically construed as the cause of the resulting state 'NP2+V1+V2'. Zhang maintains that inverted resultative constructions are generally used to convey the meaning of unexpected causations and results. He believes that since it is unexpected causation, it is not under the control of the participants in the event. This semantic feature puts forward requirements for the components entering the construction: 1) in general, there cannot be a typical agent participant in the construction; 2) the predicate verb of the construction must be a non-autonomous verb.

Zhang (2009) is one of the few important studies focusing on this particular phenomenon, yet there are some problems with his study. First, as Song (2018) points out, the naming of this structure is not reasonable, for the inversion is more suitable to be understood as the inversion of the predicate verb and the resultative complement of a VRC, rather than the inversion of the theta roles of the predicate verb in the configuration of a VRC sentence. In addition, it is quite confusing that the term is sometimes used to refer to a kind of VRCs and sometimes to a syntactic structure of VRCs. Even if the term can be used to refer to a construction, they fail to grasp the uniform characteristics of the construction, because not all of them are the inversion of the Agent argument and the Patient argument of VRC's predicate verb in syntactic configuration.

Second, Zhang's arguments for inverted resultative construction being an independent construction are hard to establish. Whichever 'inverted resultative construction' refers to, a construction or a syntactic structure, his arguments are problematic by analyzing the structure from the perspective of the thematic structure of the predicate verb in the VRC rather than the whole thematic structure of 'VR'. In addition, Zhang makes a mistake in his reductive analysis. To prove that inverted resultative construction is an independent structure, the evidence Zhang provides is that inverted resultative construction cannot be reduced to a general VRC, and there exists no corresponding expression. For example, sentence (14a) cannot be reduced to (14b), the latter being ungrammatical.

(14) a. *Ganmao yao chi-si Laochen*.

cold medicine eat-die Laochen

'Laochen took medicine for cold and as a result he died.'

b. * *Laochen chi-si Ganmao yao*.

Laochen eat-die cold medicine

c. *Laochen chi-si le*.

Laochen eat-die ASP

'Laochen died from eating (something).'

d. *Laochen chi Ganmao yao chi-si le*.

Laochen eat cold medicine eat-die ASP

'Laochen died from taking medicine for cold.'

Zhang is not right by simply switching the positions of the subject and the object and by assuming that (14b) is the reduced form of (14a). In fact, the basic form of *chi-si* 'eat-die' should be 'NP VR', namely (14c), since it is an intransitive construction as a whole. Some scholars, such as Song (2018), argue that its underlying sentence pattern is a verb-copying sentence, like (14d). But we take (14d) as an expanded form of (14c) by complementing the Patient argument of the predicate verb *chi* 'eat'.

Third, Zhang's generalization of the constructional meaning is not strong enough. Zhang concludes that inverted resultative construction is a cognitive construction, used to express the meaning of unexpected causations and results just on the basis that most of the data in his corpus convey the meaning of unexpected causations and results. He does not present any explanation for those without such a specific meaning. Besides, structures like non-causative and verb-copying sentences can also express the meaning of unexpectedness. Thus, it is still doubted whether the meaning of unexpectedness can be taken as its constructional meaning.

The fourth problem is that there is contradiction in Zhang's discussion and analysis. When it comes to sentence (15), Zhang points out that NP2 *quan zhongguo* 'the whole China' has no thematic relations with V *chang* 'sing' or R *hong* 'popular' and thus it is not the subject of the resultative state; the resultative event cannot be analyzed as NP2+V1+V2. Therefore, Zhang

believes that the above sentence is less typical and proposes that they form a continuum. This analysis clearly contradicts his arguments about resulting state and resultative event.

(15) *Xianggan yueyu ge chang-hong le quan zhongguo.*

Hongkong Cantonese song sing-popular ASP whole China

'Cantonese songs from Hongkong become popular all over China because of being sung (by people).'

What's more, Zhang (2009) points out that XP in the form of PP no longer indicates the cause of the NP2's resulting state, but the place where the event of 'NP2+V1+V2' occurs, which directly negates his previous statements. Although realizing that since there is no explicit causer in the expression it is doubted whether these examples can be analyzed as causative structures, Zhang still believes that there should be no doubt to regard them as VRCs since NP2 still has a change of state and brings about a result.

Another problem with Zhang's study is that his argumentation on the cognitive motivation is circular. According to Zhang (2009), whether XP indicates the cause of the state change or the place where the change occurs, there must be a reason for it to appear at the beginning of the sentence. However, when discussing the cognitive motivation of the primary focus, Zhang argues that since most of the constructions have the meaning of unexpected causations and results the cause naturally becomes the first object the speaker and the listener pay attention to, which meets the requirement of the primary focus. It is quite obvious that his argumentation is circular. Besides, he reverses the logical order. It is not the construction expressing the meaning of unexpected causations and results that enables the cause to become the focus. Instead, it should be the speaker's intentionality that chooses the cause as the focus, which is then linguistically represented in such a way.

3.2. Study of Xiong and Wei

Xiong and Wei (2014) adopt Zhang's (2009) Chinese naming for those structures concerned (though they use 'reversal resultative construction' in their English abstract instead of 'inverted resultative construction'). They define them as a special form of Chinese VRCs, referring to a construction that violates the Uniformity of Theta Assignment Hypothesis or the thematic hierarchy; it is a causative construction, which is special in that the nominal phrase in the subject position is not the agent of the verb, but the causer of the causation of the VRC, while the nominal phrase in the object position is not the patient of the verb either, but the causee of the causation.

Xiong and Wei (2014) study the syntactic and semantic characteristics of Chinese inverted resultative constructions from a causative perspective. They believe that there are lexical causatives and constructional causatives. The latter can be transitive and intransitive according to the transitivity of the verb. They argue that "the major difference between these two is that the transitive construction specifies its causer as having the [+R] feature while the intransitive construction itself injects the [+V] feature into the causer so that the relationship between the subject and the causer is indirect." (2014: 507).

Based on the existing research, Xiong and Wei argue that it is difficult to appropriately describe the nature of this type of VRCs if studies are just conducted on its deep structure merely within

the framework of syntactic generation. They propose it should be studied as an independent construction, which has its own semantic features and syntactic representations. Thus, factors such as semantic, pragmatic and cognitive factors, should be taken into consideration, yet they point out that the existing studies from such perspectives deviate on their explanations, more or less failing to fully explain its motivation and semantic uniqueness. They try to present a semantic classification for inverted resultative construction from the perspective of its internal causation and analyze its motivation and the necessity of the inverted thematic structure.

Xiong and Wei (2014) adopt a causative approach and pay more attention to the causation of this particular structure. However, there are some problems with their account as well. First, their classification standards are inconsistent. They divide inverted or reversal resultative constructions into two types: lexical causatives and constructional causatives. According to them, the former are compounds in nature and entail a causative meaning while the latter do not entail a causative meaning and its causative meaning is coerced by the inverted construction. However, in this very article they also point out that inverted resultative constructions are constructional causatives and are different from lexical causatives. Obviously, they are not consistent in their classification.

Second, as is mentioned by Song (2018), the naming of the subclasses is not reasonable. Xiong and Wei further divide constructional causatives into transitive ones and intransitive ones, yet their subdivision is based on the transitivity of the predicate verb of a VRC rather than the transitivity of the whole construction, which is not natural to most people. Besides, their classification is not a good generalization of the phenomena. Syntactically speaking, inverted resultative constructions are all transitive, for they have both subjects and objects. The focus of the study should be why those intransitive VRCs can govern two NPs. However, by their classification, what falls into the category of transitive inverted resultative construction also includes constructions used as intransitive as a whole in their basic usage, such as *chi-si* 'eat-die'; what falls into the category of intransitive inverted resultative construction also includes constructions used as transitive as a whole, such as *ku-shi* 'cry-wet'. Thus, whether a VRC is transitive as a whole should be considered more fundamental for classification (Song, 2018).

3.3. Song's study

Song (2018) argues that the so-called Chinese inverted resultative construction ('reversal VR compounds' is used in his English abstract) is a kind of marked causative construction formed by VRCs and the markedness comes from the fact that the conceptual structure of the event expressed by the language structure is out of convention. The causative events expressed by this causative structure are not normal and they are different from typical causative events. According to him, this marked causative structure has the following core features: 1) the causer has no volition and its animacy is lower than the causee. Even when the causer is a human NP, its volition is not as strong as that of a typical causer. The causee is usually a person with high animacy, but meanwhile it has the same characteristics as a typical causee, namely, no control and no volition over its own behavior or change. 2) The sentence embodies strong subjectivity. In other words, there is strong subjectivity in the conceptualization mechanism of the causative event expressed by this marked causative structure of VRCs.

Song divides this kind of constructions into two subtypes: one deriving from the causativization of intransitive VRCs, the other as a result of reassigning a new causer to transitive VRCs. Song

believes that they are all closely related to verb-copying constructions and assumes that the cognitive mechanism of its formation process is not reversal reasoning, but reconceptualization of the events expressed by its fundamental usage. According to him, although intransitive VRCs and transitive VRCs have different syntactic-semantic operations in causativization, the cognitive mechanisms of their formation are basically the same: in contrast to animate human beings, inanimate objects have lower influence and are less salient; the reason why they can become causers is mainly motivated by the speaker's subjective attribution and reconceptualization of the event expressed by the fundamental usage of the VRC.

Song points out that the output of a sentence is first developed by the speaker to form what needs to be expressed and then followed by a choice of morphosyntactic coding. He proposes that what enables an intransitive VRC to have a causer is the process of reconceptualizing the event and that the referent of the causer is the conceptual element that the speaker highlights from the background information of the event. Song's account is quite impressive and efficient, nevertheless there are still some problems with his study.

First, Song's views on natural results are questionable. Song stresses that the classification of 'inverted resultative constructions' should be conducted according to the transitivity of VRCs in their fundamental usage. According to him, the difference between sentence (16) and (17) lies in that they have different fundamental forms, the former verb-copying sentence while the latter a general intransitive sentence. He argues that it is because *dai* 'stiff' is not a natural result of 'watching' and the combination of the two is hard to predict, so the sentence "*Laozhang kan-dai* 'watch-stiff' *le*" cannot be independent and needs some contextual support, which is realized by verb copying. As for (17), he argues that *xiao-si* 'laugh-die' belongs to VRCs in a broad sense, the complement of which describes the degree of laughing. He maintains that the combination of the two is very natural, so it does not need to take the form of verb copying. Although Song fully realizes that it is a verb-degree structure instead of a verb-resultative construction, indicating degree meaning rather than result meaning, he still focuses his discussion on this case. Besides, in this case *xiao-si* 'laugh-die' does not mean 'laugh to death'; *si* 'die' is not used in its literal meaning and it is virtually a function word. What's more, it is really hard to tell it is a natural result of laughing as Song believes.

(16) *Na-fu hua ba Laozhang kan-dai le.*

That-CL painting BA Laozhang watch-stiff ASP

'Laozhang was transfixed by that painting.'

(17) *Taotao de gushi xiao-si wo le.*

Taotao 's story laugh-die me ASP

'Taotao's story makes me laugh badly.'

According to Song, in (5) (repeated as (18) below), *toufa bai* "one's hair turns white" is not a natural result of *xie* 'write', while *ganjing* 'clean' of the construction *xi-ganjing* 'wash-clean' is a natural result of *xi* 'wash'. Song does not define and clarify what a natural result is, then how to tell whether a result is natural or not? We argue that it is more powerful to explain them from the semantic perspective, avoiding terms such as 'natural results', 'expected results'. For example,

ganjing 'clean' is a result entailed in the semantic meaning of *xi* 'wash'. The Modern Chinese Dictionary defines *xi* 'wash' as "clean sth. using water, gasoline, kerosene oil, etc". Thus, 'clean' is an entailed result of the semantic meaning of 'wash'.

(18) *Na-ben shu xie-bai le Zhangsan de toufa*.

that-CL book write-white ASP Zhangsan 's hair

'Zhangsan wrote that book and as a result his hair turned white.'

Second, Song's view that the causitivization of an intransitive VRC depends on the affectedness of its subject is a far-fetched explanation. His analysis of *xie-bai* 'write-white' has much to be discussed. He argues that the subject of the basic usage of *xie-bai* 'write-white' is not a real agent, but an actor. Unlike an agent or a typical causer, an actor does not have volition. The subject is the affectee of the change expressed by the predicate and its affectedness is crucial to the causativization of the construction. It is not easy to causativize an intransitive VRC if its subject does not have obvious affectedness. He takes *teng-xing* 'ache-wake' and *shui-xing* 'sleep-wake' as examples to illustrate his point, yet there are some problems in his discussion. In sentence (19a), Song argues that Zhangsan is the actor of *teng* 'ache' and its affectedness enables the construction *teng-xing* 'ache-wake' to be causativized and hence sentence (19b), in which 'severe gastro spasm' occupies the subject position while Zhangsan is in the object position. However, Zhangsan is an experiencer or an undergoer more than an actor. Meanwhile, Song takes *shui-xing* 'sleep-wake' as a counterexample to illustrate that it cannot be causativized because the actor has no obvious affectedness, so (20b) is ungrammatical.

(19) a. *Zhangsan teng-xing le*. b. *Julie de wei jingluan teng-xing le zhangsan*.

Zhangsan ache-wake ASP severe stomach spasm ache-wake ASP Zhangsan

'Zhangsan woke up in pain.' 'Zhangsan woke up because of severe gastro spasm.'

(20) a. *Zhangsan shui-xing le*. b. **qingchen niao jiaosheng shui-xing le zhangsan*.

Zhangsan sleep-wake ASP morning bird call leep-wake ASP Zhangsan

'Zhangsan woke up.'

However, whether the semantic relationship between *shui* 'sleep' and *xing* 'wake' is a verb-result one remains to be further discussed. It is obvious that there is no causative relation between them. In other words, *xing* 'wake' is not a result caused by *shui* 'sleep'.

Third, the account of reconceptualization needs further research. According to Song (2018), the cognitive mechanism of the formation process of 'inverted resultative construction' is reconceptualization of the events expressed by its fundamental usage, the key to which is the speaker's identification of and emphasis on the new causer. Song assumes it is motivated by the speaker's subjective attribution. The speaker adjusts the focused object by shifting attention to some conceptual component in the background and interpreting it as a causer. In other words, the speaker endows the automatic events with causers, finds new causers for the causative events and makes them prominent in the foreground. Song's study is quite impressive and insightful, but further questions need to be asked about what influences the speaker's attention focus and whether there are

any constraints on the speaker's subjectivity.

4. An extended account

In this section, we offer an extended account based mainly on previous studies in an attempt to give a more comprehensive account of the special kind of structures formed by VRCs and to solve some problems in the existing research. In what follows, we will first define the terms for clarity and then present our account in detail.

4.1. Marked VRC causative structures

As can be seen from the existing research, the use of terminology is very inconsistent. In this paper, verb-resultative construction (VRC) is used to refer to the construction consisting of two verbs or a verb followed by an adjective, the second indicating a result caused by the first verb. Not all of those special syntactic-semantic structures of VRCs, which are referred to as 'inverted resultative constructions' or 'reversal resultative constructions' in literature, have inverted theta roles. Inverse theta role assignment is not their uniform feature, thus 'inverted or reversal resultative construction' is not an appropriate name for them. In addition, the term is confusingly used by some scholars to refer to both construction and syntactic structure. Based on the existing research and the survey on such sentences, this paper defines the features of this kind of VRC sentences as follows: 1) a VRC has a causative relation within itself; 2) in the syntactic structure formed by VRC, the argument in the object position is the causee and the only argument of the resultative verb or adjective; above all, 3) the causer in the subject position is any conceptual component from the cause event other than the agent of the predicate verb. The last feature is unique and it is this feature that distinguishes those structures from general ones. To avoid confusion, this type of syntactic structures is referred to as marked VRC causative structure while VRC refers to a construction.

Some Chinese VRCs can occur in the sentences whose subjects and objects can be transposed without changing the meanings of the sentences. For example:

(21) a. *Zhangsan chi-ni le zhe-dao cai*. b. *Zhe-dao cai chi-ni le zhangsan*.

Zhangsan eat-bored ASP this-CL dish this-CL dish eat-bored ASP Zhangsan

'Zhangsan got bored with this dish (because of eating it too often).'

The subject of (21a) 'Zhangsan' moves to the object position of (21b) while the object of (21a) 'this dish' becomes the subject of (21b). Oddly enough, they have the same semantic meaning. Only a few VRCs can be used in this way. In this case, (21b) is a marked causative structure, in which the construction *chi-ni* 'eat-bored' is intransitive and self-causative.

4.2. An extended account based on the previous studies

The majority of VRCs used in marked causative structures are intransitive VRCs. Intransitive VRCs are self-causative. In other words, the theme that undergoes the change of state or the theme of the resultative verb is identical with the agent of the predicate verb. Intransitive VRCs have only one theta role and govern one argument. We propose that marked VRC causative structures are actually double causative structures, in which VRCs have a causative relation between the predicate verb and the resultative complement and meanwhile the whole sentence is a causative one. Thus, the

reason why intransitive VRCs can be used in marked causative structures and govern two arguments is that marked causative structure is a higher causative structure above the self-causative VRC. It focuses on the causative relation between an external cause and the VRC's self-causation. That is, what causes the self-causation is expressed and emphasized in a marked VRC causative structure.

In addition to intransitive VRCs, transitive VRCs can also be used in marked causative structures. For example, (22a) is the fundamental usage of xie-bai 'write-white', which is a transitive construction. Zhangsan's writing causes his hair to turn white.

(22) a. *Zhangsan xie-bai le toufa*.

Zhangsan write-white ASP hair

'Zhangsan's hair turned white because of writing (something).'

b. *Na-ben shu xie-bai le Zhangsan de toufa*.

that-CL book write-white ASP Zhangsan 's hair

'Zhangsan wrote that book and as a result his hair turned white.'

c. *Zhangsan xie na-ben shu xie-bai le toufa*.

Zhangsan write that-CL book write-white ASP hair

'Zhangsan wrote that book and as a result his hair turned white.'

Shibatani (1976) and Dowty (1979) have long pointed out that the causer is an event in nature and explained it from the perspective of the proposition expressed by the causer. This is also true of marked VRC causative structure. Many scholars use metonymy to explain the phenomenon that participants in the event structure, such as the agent and the patient, replace the event itself (e.g. Song, 2007; Xiong, 2004; Wu, 2013; Xiong and Wei, 2014).

Metonymy is a good account. Xiong and Wei (2014) use metonymy to explain why the causee of sentence (22b) (namely (5)) is 'Zhangsan's hair' instead of Zhangsan. They argue it is an argument metonymy of the genitive structure. It is necessary to recognize the agent of the verb by metonymy, that is, Zhangsan, the owner of 'hair' or 'waist'. But we argue that there is no metonymy in the causee of this sentence. It is (Zhangsan's) hair that turns white. The construction *xie-bai* 'write-white' is formed by the conceptual integration of *xie* 'write' (x, y) and *bai* 'white' (x') based on causality. There is a causative relation between V and R in a VRC. The causative structure aims to explore what causes his hair to turn white. In reality, the causer is not merely Zhangsan or that book but the event of Zhangsan writing that book. If the proposition of the cause serves as the causer in the sentence, the sentence will be (22c). Sentence (22c) is a good sentence, in which the whole proposition of the cause event occurs in the sentence. The above sentence is usually regarded as a verb-copying sentence. But we assume that the sentence is actually formed by the whole proposition of the cause event getting into the subject position, being the causer of this marked causative structure. Any conceptual component of the cause event is a potential causer to represent the event, yet due to their different semantic contribution, some of them seem more natural to people than others, say, if they have volition or they are animate. As is shown in (22), (22a) is less marked than (22b), since Zhangsan is animate and is the agent of the action. Both the agent and the patient of

the cause event are capable of replacing the event to serve as the causer of the whole marked VRC causative structure.

Take another example:

(23) a. *Wo zou-lan le san shuang xie*.

I walk-torn ASP three pair shoes

'I wore out three pairs of shoes by walking.'

b. *Shi li shan lu zou-lan le san shuang xie*.

ten 1/2km mountain road walk-torn ASP three pair shoes

'Three pairs of shoes were worn out as a result of walking 5-kilometer mountain road.'

c. *Wo zou shi li shan lu zou-lan le san shuang xie.*

I walk ten 1/2km mountain road walk-torn ASP three pair shoes

'I wore out three pairs of shoes by walking 5-kilometer mountain road.'

d. *Zou shi li shan lu zou-lan le san shuang xie*.

walk ten 1/2km mountain road walk-torn ASP three pair shoes

'Three pairs of shoes were worn out as a result of walking 5-kilometer mountain road.'

The construction *zou-lan* 'walk-torn' in (23) is transitive, for the object that undergoes a change of state is not the agent of the predicate verb. It is not self-causative and there must be an affectee or a causee, namely, the shoes. The difference between (23a) and (23b) lies in that the subject of the former is the agent of the predicate verb *zou* 'walk' while the subject of the latter is not. (23a) is a general structure in accordance with UTAH and the thematic hierarchy. But (23b) violates both of them and belongs to what is referred to as marked VRC causative structure.

Song (2018) is right by assuming that sentences like (23b) are a result of reassigning a new causer to transitive VRCs and it is motivated by the speaker's selection of and emphasis on the causer. We agree that they are a kind of marked causative structures, in which the causer is not the agent of the predicate verb but something else. The focus of this study is to explain why semantic components other than the agent of the verb can represent the cause event to be the causer and occupy the subject position of the sentence.

(23c) and (23d) further illustrate that the causer is conceptually an event, however, it can be syntactically represented by any conceptual component of the event as long as the very component can trigger the whole cause event in the causative sentence. In contrast, (23b) is the most economical linguistic way to express the causation.

In (22) and (23), the causees remain unchanged, yet the causer is represented by varied linguistic forms, among which the agent of the predicate verb is the least marked causer and is usually taken as a default one. Other conceptual components are marked ones when they serve as the causer. All of the varied sentences in (22) or (23) have the same semantic meaning, yet the marked sentences

differ from the unmarked one in that they likely have a different pragmatic meaning. The other conceptual components than the agent become the causer, which is motivated by the speaker's intentionality to highlight the causative relation between the cause and the result. The speaker decides which component to choose to represent the whole cause event, which is quite subjective and varied, but there are also some constraints on the speaker's selection. The conceptual component must be a component within the framework of the cause event. The more representative the causer is, the easier the causation is semantically and cognitively constructed.

Song (2018) has assumed them as results of reconceptualization of the events. Based on his study, we further argue that conceptually speaking, the cause event of the result is the same, the reasons why the cause event is represented in linguistically different ways are as follows: First, when the conceptual structure is represented linguistically, it has to conform to the syntactic rules and argument configuration, meanwhile it is subject to the economy principle of language. Second, the speaker is driven by his intentionality and focuses on a certain component of the cause event, believing that contributes more to the result. Third, the semantic relations of a cause event are consistent with those of a resultative event and thus they can be constructed based on the intra-linguistic context and cognitive principles. It is because the semantic elements between these events are mapped that various semantic relationships can be established between events.

4.3. Special cases

If there is a lack of mapping semantic elements between the cause event and the resultative event, or the cause event is a relatively complex conceptual event, it is difficult for the listener to completely construct the event based on the intra-linguistic context and cognitive abilities like decompression, then the linguistic representation of the cause event need to be relatively complex. For example:

(24) *Gongsi juhui kuang pin jiu he-si xin yuangong*.

company party crazy compete liquor drink-die new staff

'The crazy drinking competition in the company party caused a new staff member to drink himself to death.'

The cause of sentence (24) is a quite complex event; much of its conceptual information cannot be deduced on the basis of linguistic context. Therefore, what appears in the subject position of the whole sentence is a clause. In many cases, VP also appears in the subject position as the causer, like the above (23d). In a word, the cause is actually an event at the conceptual level.

When it comes to sentences like (9) or a similar one (25), Shi (2008:164) thinks that (25) is composed of two causative events, the underlying one of e 'starve' and the high-level one represented by e-si 'starve-die'. According to him, the semantic structure of (25) is as follows: [(that famine) **cause** [(many villagers)→hungry]] **CAUSE** [(many villagers)→die].

(25) *Na-chang jihuang e-si le bushao cunmin*. (from Shi 2008)

that-CL famine starve-die ASP many villager

'Many villagers starved to death in that famine.'

For our part, (25) is also a double causative structure, containing two causative events. However, unlike Shi (2008), we argue that sentence (25) is the result of re-causativization of a self-causative VRC. That is, the construction *e-si* 'starve-die' is self-causative, somebody starving to death. It is the same animate being that suffers from hunger and then dies. The other causation is about what causes the event of 'starve-die'. Thus, we assume that the semantic structure of (25) should be as follows: [(that famine)] **CAUSE** [[(many villagers)→hungry] **cause** [(many villagers)→die]]. A famine may render a lot of people hungry; some might survive while others starve to death. Those who starve to death in the resultative event do not amount to those who suffer from hunger in that famine. Thus, the semantic structure we propose is more reasonable and logical. The difference between the two semantic structures lies in the causative hierarchy.

Sentences like (26) are also considered to belong to this structure (e.g. Zhang 2009). However, (26) is essentially different from the above ones, for it cannot be reduced to "NP2 VR le".

(26) *yi-shou ge chang-hong le yi-bu dianying*.

a-CL song sing-popular ASP a-CL movie

'A movie becomes popular because of a song being sung.'

The formation of (26) is more complicated. The construction *chang-hong* 'sing-popular' is not a self-causative VRC and NP2 has no thematic relation with the predicate verb. What's more, NP1 is not the agent of the predicate verb, but the patient. What makes the movie become popular is that the song is sung by people and it becomes popular. Sine the song becomes popular, the movie with which the song is somehow related also becomes well-known. The premise for this sentence is that the song is part of the movie, say, the opening song, the ending song or a song in the movie. The causation between them is not direct but a compressed causative relation. In addition, it does not matter who sings the song. It might be performed by professional singers or just be sung by average people. It follows that the song represents the cause event and becomes the subject of the sentence.

5. Summary

To summarize, this paper has shown that those special syntactic-semantic structures formed by VRCs have been studied in the existing research, but there is still some disagreement and the use of terminology is also inconsistent. In accordance with what it usually refers to in Chinese literature, this paper first adopts a more equivalent term, namely 'verb-resultative construction (VRC)', for the lexical structures consisting of a verb plus a resultative complement, the latter being a verb or an adjective and a result caused by the former. Those special structures of VRCs, simple in syntax but complex in semantics, violate both the Uniformity of Theta Assignment Hypothesis and the Thematic Hierarchy. A review of the most representative studies in English literature, Y. Li (1990, 1995), Her (2007), C. Li (2013), in which those special structures are discussed, shows that some problems still remain unexplained. We then present a critical survey of the major specialized studies on those structures within the framework of cognitive linguistics in Chinese literature.

The review shows that inverse theta role assignment is not the uniform feature of those structures. Considering that they are special causative structures, we refer to them as 'marked VRC causative

structure' and define their features as follows: 1) VRC has a causative relation within itself; 2) in the syntactic structure formed by VRC, the argument in the object position is the causee and the only argument of the resultative verb or adjective; above all, 3) the causer in the subject position is any conceptual component from the cause event other than the agent of the predicate verb. Only causative VRCs are likely to form marked causative structures. Among the features, the third one is the most important distinguishing feature to judge whether it is a marked VRC causative structure.

Based on the previous studies and accounts, we draw on their insights and propose an extended account to give a more comprehensive explanation for the problems. If VRC is self-causative, then marked VRC causative structure is re-causativization of the VRC by establishing a causative relation between an external cause and the self-causation of VRC. They are double causative structures. If VRC is not self-causative, then marked VRC causative structure enables other conceptual components than the agent to be the causer to represent the whole cause event. There are some constraints on what conceptual component of the cause (event) becomes the causer of a marked VRC causative structure. First, it has to conform to the syntactic rules and argument configuration and be subject to the economy principle of language. Second, the speaker is driven by his intentionality to select a certain conceptual component to be the causer, yet the causer should be capable of triggering the whole cause event on the basis of the intra-linguistic context aided by human cognitive abilities.

These marked causative structures formed by verb-resultative constructions are a very complicated linguistic phenomenon, unique to mandarin Chinese. They still need further and more comprehensive research.

Author contributions

XP and LL conceptualized the study. XP analysed the data and led the writing of the manuscript. LL supervised and provided valuable critical revisions of the manuscript. Both of the authors agreed in both contents and form of the final version, being XP the responsible of this article.

Conflict of interest

No conflict of interest was reported by the authors.

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ORIGINAL ARTICLE

Intonational pitch features of interrogatives and declaratives in Chengdu dialect

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Abstract: As a representative of southwestern Mandarin, the Chengdu dialect has its own distinctive pitch features in phonology of tone and intonation. Research on the pronunciation and lexical tone of the Chengdu dialect has a long history with a certain amount of theoretical results. However, research on intonation of Chengdu dialect is still rare. The writer provides an acoustic analysis of research into intonational pitch features of interrogative and declarative sentences of Chengdu dialect, discussing the F0 contour at the final syllable (character) of each sentence to find out if the statement or question mood is carried by the edge tone as well as the pitch perturbation between lexical tone and intonation on it. The results of this acoustic analysis show that there exist statement and question mood of Chengdu dialect carried by the final syllable within an intonational phrase as well as the perturbation on the final syllable (character) by the coexistence of its lexical tone and intonation.

Keywords: Chengdu dialect; lexical tone; intonation; pitch features; perturbation

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1. Introduction

Although the Chengdu dialect belongs to the Northern group of Chinese dialects, it has some of its own distinctive characteristics in both tone and intonation. Thus far, research on Chinese intonation has primarily focused on Standard Chinese (Putonghua). Studies on intonation in the Chengdu dialect are rare, especially those based on acoustic experimental analysis. In the late 1950s, Chang (1958) discussed tones and intonation in the Chengdu dialect based on his father's sound samples. Since then, it is hard to find other research reports in intonation of Chengdu dialect. What is more, over the last 70 years, the local dialects have changed in various ways as the young generation speak the Standard Chinese more than the local dialects in their daily lives. Thus, although they also speak the Chengdu dialect, we can find some changes in their local accent due to the impact of Standard Chinese. The writer conducts an acoustic analysis of research into

intonational pitch features of interrogative and declarative sentences of Chengdu dialect and the perturbation on the final syllable (character) by the coexistence of its lexical tone and intonation.

2. A brief introduction to the study of standard Chinese intonation

2.1. Intonational pitch features of Standard Chinese

As a tone language, Chinese intonation is more complex than non-tone language (intonation language) because the lexical tone and sentence intonation exist at the pitch level on the intonation bearing character in the same time. Wu (1990) pointed out that in a sentence there are both surface intonational components and the bottom of the character (lexical) tone or ligatures elements. They are mixed and even combined, and the pitch contour is very complicated and difficult to analyze clearly. Lin (2004) also remarks that distinguishing the pitch in intonation and in lexical tone has always been the core and difficulty in the study of Standard Chinese intonation.

In his study of intonational pitch features of Standard Chinese, Zhao (2002) firstly proposed that "the intonation of Chinese is actually the algebraic sum of the inherent lexical tone of character with the intonation itself", which he called a "small waves" coexisting with a "big waves", and this relationship can be further divided into "simultaneous superposition and continuous superposition". So far, the study of Chinese intonation has been deeply influenced by the view of "algebraic sum", mostly around the superposition of the tone and intonation. Wu believed that the "algebraic sum" that Zhao referred to was an increase in the adjustment of the pitch range, rather than a change in the pattern of pitch contour. The algebra of small waves and big waves can be understood as the algebraic sum of the average pitch value of the lexical tone and the intonation, while the shape of lexical tone has basically no change, which proves why it does not lose its lexical meaning. The big wave of intonation raised the small wave of tone, "only" for "the expression of mood, attitude ... and so on." (Wu, 1996)

Lin (2006, 2012) studies Chinese intonation from the perspective of AM theory, holding that Chinese intonation also has two variables: pitch accent and boundary tone, which respectively convey the focus information and mood. He points out (Lin, 2004): "The main feature of Standard Chinese intonation is the position and/or range of pitch (F_0) curve to pitch accent and boundary tone, while the feature of lexical tone is its pitch (F_0) contour. Therefore, the performance of intonation and lexical tone on pitch (F_0) is different." In terms of the intonation of tone language, Ladd (2008: 156) believes that it is important to consider the relation between tone (lexical) and intonation (postlexical) pitch features. As to tone-intonation interactions, Ladd (2008: 158) mentioned:

At least three kinds of phenomena have been cited as intonational features in tone languages. These are overall expansion or contraction of pitch range to express emotions, and/or to express intonational distinctions like question versus statement or incompleteness versus completeness; modification of specific tones, especially at the ends of phrases or utterances, to signal distinctions like question versus statement; and modification of overall contour shapes to signify certain intonational messages.

As for the relationship between lexical tone and intonation, most scholars agree that the mode of expression of lexical tone is the F_0 contour shape and the function is to express the lexical meaning of the character. The mode of intonation is the key of the sentence or utterance tune and the function

is to express the mood (Wu, 1990).

2.2. The pitch features of interrogative sentences in Standard Chinese

Chinese linguists have divergent opinions on pitch features of the intonation of Standard Chinese interrogative sentences. One view is that compared with the declarative sentence intonation pitch pattern, the question intonation pitch pattern is maintained as its lexical tone while the whole pitch scale is raised (represented by Wu and some other scholars). Another view is that the intonation pitch range is divided into treble lines and bass lines, and the degree of pitch change with different sentence types on these two lines is inconsistent. The change of intonational pitch range, however, is restricted by these two lines (represented mainly by Shen).

Ma (1988) observes that the typical feature of the phonetic expression of Chinese interrogative sentences is the rising of pitch at the final character. The range of pitch rising at the end of an interrogative sentence is a sign to the strength or weakness of the question mood. Lin (2006) holds that question mood can only be carried by boundary syllable (character). That is to say, the distinction to the intonation between statement and question can only come from the boundary tone and has nothing to do whether with the F_0 pitch movement of each character before the boundary tone, or with the treble and bass lines of F_0. His research (Lin, 2004) on echo question in Standard Chinese corpus and declarative question in natural corpus finds that "for intonation phrase (IP), the information of question and statement is carried by one or two non-neutral syllables in the final prosodic character of the phrase, while a few are carried by the initial syllables. The syllables that carry this information are called boundary tones." This point of view illustrates the position of intonation in Standard Chinese. Through the phonetic experiments on declarative and interrogative sentences in the Beijing dialect, Shi (2013) finds that the intonation pitch pattern of interrogative sentences, compared with that of the declarative sentences, shows the raising and expansion of tone range, which illustrates that the intonational pitch features of Beijing dialect is close to that of Standard Chinese.

3. Statement and question intonation analysis of Chengdu dialect

3.1. The pitch features of lexical tone system in Chengdu dialect

Before discussing the intonation, it is necessary to briefly notice the lexical tone system of Chengdu dialect. As a representative of the southwestern official dialect, Chengdu dialect is classified as a "branch of the northern dialect" (Liang, 1982), but many previous studies (Chang, 1958; Cui, 1994; Liang, 1982; Liang and Huang, 1998; Zhen et al., 1990) in last century, have shown that Chengdu dialect has a significant differences in both the pronunciation and tone in many Chinese characters. Though having the differences from Standard Chinese, however, they have a relatively regular correspondence in lexical tone as Chengdu dialect is also a four-tone system -- the same as Standard Chinese. Although in some suburbs of Chengdu, a fifth tone known as *rù shēng* can still be detected.

The lexical tone system of Standard Chinese has four basic tone types: *yīn píng* (high-level), *yáng píng* (high-lift), *shǎng shēng* (falling-rising) and *qù shēng* (full falling). The sound values in a 5-scale measurement are as: *yīn* [55], *yáng* [35], *shǎng* [214] and *qù* [51]. Compared with the lexical tone system of Standard Chinese, the pitch values of each tone in Chengdu dialect are *yīn*

[55] (high level), *yáng* [21] (low falling), *shǎng* [53] (high falling) and *qù* [213] (falling-rising), and we can easily find the differences from the pitch value. Compared with the pitch value of Standard Chinese and Chengdu dialect, their pitch pattern of *yīn* is the same; the pitch patterns of *shǎng* and *qù* of Chengdu dialects are the same as *qù* and *shǎng* of Standard Chinese respectively. Therefore, the lexical tone of the characters with qù such as "*kàn*" (look) in Standard Chinese, are pronounced as the lexical tone of *shǎng* in Chengdu dialect. And the lexical tone of the characters with *shǎng* of Standard Chinese such as "*cǎi*" (color) are pronounced as the lexical tone of *qù* in Chengdu dialect. It can be seen that except for the tone of *yīn píng*, the pitch contour of the rest of the lexical tones are just reversed between Standard Chinese and Chengdu dialect.

3.2. AM theory as an analytical tool

The AM theory adopts the phonological goal of being able to characterise contours adequately in terms of a string of categorically distinct elements, and the phonetic goal of providing a mapping from phonological elements to continuous acoustic parameters (Ladd, 2008: 43). Ladd indicates that under the perspective of intonational phonology, intonation represents pitch contours phonologically as sequences of discrete intonational events. For languages like English, there are two main types of such events, pitch accent and edge tones. In tone languages with lexically specified pitch features, tonal events may have different functions, but the basic phonological structure is essentially the same (Ladd, 2008: 45). Ladd (2008: 46, 47) also mentions that the edge tone includes phrase accent and boundary tone, and both of which occur at or near the end of a prosodic phrase, after the last pitch accent. So for English, most of the nuclear tones of the British tradition can be readily translated into combinations of pitch accents and edge tones. According to Pierrehumbert, the edge tones are divided into two types: phrase accents and boundary tones and every intonation phrase ends with a sequence of a pitch accent, a phrase accent, and a boundary tone (Ladd, 2008: 88). According to Ladd (2008), Pierrehumbert's notation represents the contour as a string of pitch accents and edge tones. Thus, all pitch accents consist of a single H or L tone, or a combination of two tones.

When we observe the pitch features of intonation on tone languages, we can find that AM theory is the best-suited analytical tool, as Ladd (2008) indicated AM theory claims to provide a universal framework for discussing intonation. By analysing the intonational contours at one level of description as strings of tones, AM theory provides the basis for describing pitch phonology in all languages in the same terms. For tone languages like Chinese, because the lexical tones occur at nearly every character (syllable) and the pitch transitions between them span only milliseconds, whereas in English the pitch accents occur mostly only on prominent words, and the transitions may span several syllables (Ladd, 2008). Even if there are differences between tone and non-tone languages, Ladd indicates, however, there is no need to assume that tone languages involve an essentially different layer of phonological structure. So, for English and Standard Chinese, the edge tones act as signals of phrasing and in some cases also cue the difference between statements and questions (Ladd, 2008: 157). Therefore, it is suitable for AM theory as an analytical tool to observe and discuss the intonational pitch features of Chengdu dialect.

3.3. Statement and question intonation analysis

In this paper, the acoustic analysis hypothesis is based on the studies in Standard Chinese by Lin (2006) that assert "Question and statement tune are carried by the boundary syllable of the phrase."

and Chang (1958) in Chengdu dialect that holds "I regard a sentence as having a rising or a falling tune depends on whether, after undergoing perturbation, its final syllable is a rising or falling tone." By investigating the acoustic pitch features of the phonological F_0 contour on the final syllable (character) of the sample sentences, the writer mainly observes whether the statement or question mood are carried by the final character (syllable) and the status of its tonal pattern after undergoing perturbation.

3.3.1 Method and procedure

Participants were 22 undergraduate and postgraduate students who grew up in Chengdu and mainly speak local dialect in their daily lives. The specific recording method is as follows: the reader reads a pair of sentences randomly displayed on the computer screen, and the statement or question mood is determined according to the punctuation (period or question mark). So, the interrogative sentence is like a declarative question in English. The order of the sentence displayed is the statement and then the question. Thus, when the screen displays: "This character is read as *cāi* (guess)", the reader reads it as a declarative statement; and when the screen shows: "This character is read as *cāi*?", the reader reads it as a question. Since all the samples are simple short sentences, we can treat them with only one IP. According to the experimental hypothesis, the intonation will be carried by the final character of the sentence. So, this analysis focuses mainly on the F_0 contour of final character in each sentence.

3.3.2 Pitch features of character with different tones at the end of a sentence

The writer first observed whether the question or statement mood is carried by the final character as well as its pitch features in Chengdu dialect. **Figure 1** shows the F_0 contour of the statement: "This character is read as *zhě* (person)." The final character "*zhě*" has the longest duration (0.3079 sec.) in the sentence. The starting pitch value of "*zhě*" is 12.52 (semitone re 100 Hz), the highest point is 13.25, and the ending is 11.15. The overall contour is relatively flat and the pitch of the starting point is higher than the ending point, and the actual sense of hearing is close to a falling tone. According to AM theory (Ladd, 2008) mentioned before in 3.2, though the pitch transitions in a character (syllable) spans only milliseconds, it still can be analyzed as the nucleus with the pitch accent sequence L*+H L L% (rising-falling).

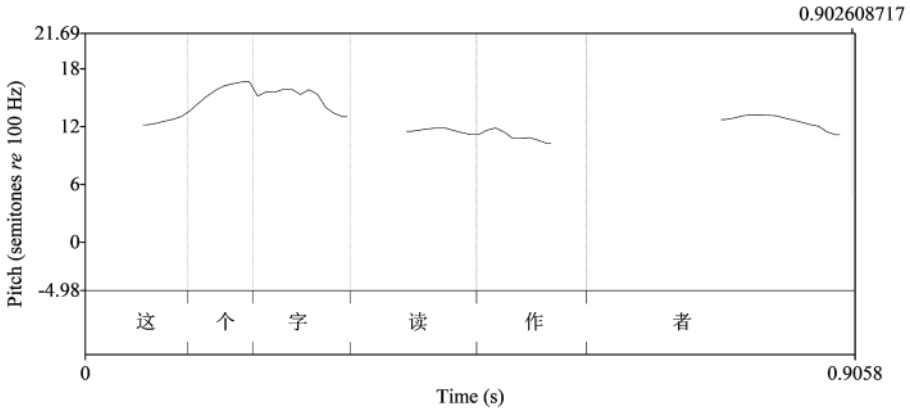

Figure 1. F_0 contour of declarative: This character is read as *zhě.*

Figure 2 is the F_0 contour of the declarative questions: "This character is read as *zhě*?" At the

end of the sentence, the character *zhě* can be clearly marked as the intonation-bearing syllable with the longest duration of 0.2285 sec. The initial pitch of *zhě* is 14.41, the highest point is 20.82, and the ending point is 12.11. We can find out that the mean pitch value of *zhě* in question is higher than that of statement, but the duration is almost same. The pitch accent sequence of the final character "*zhě*" in question is L+H* L L% (rising-falling). The contour curve of question (rising-falling) remains similar to the statement, but we can find the difference in the way of phonetic realization. Since Chinese characters are of monosyllable, we can observe a very rapid F_0 movement on the final character with slightly different accent sequence. For "*zhě*" in statement, the accent sequence is: it is accented at the beginning and followed a rising phrase, then falling to L boundary tone. For that of question, the accent sequence is: the real accent H* on the top of the contour after the initial L, and then also falling to L% boundary tone.

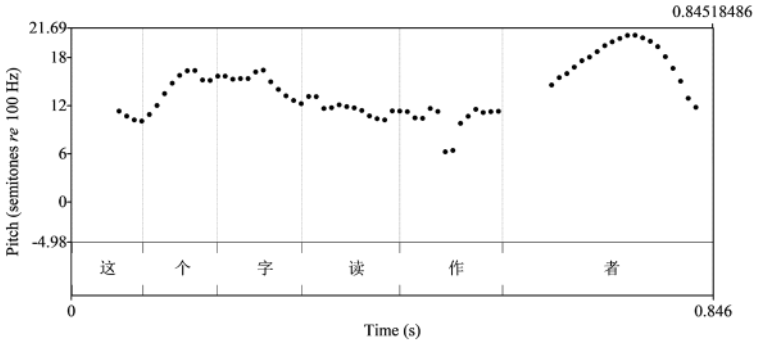

Figure 2. F_0 contour of interrogative: "This character is read as *zhě*?"

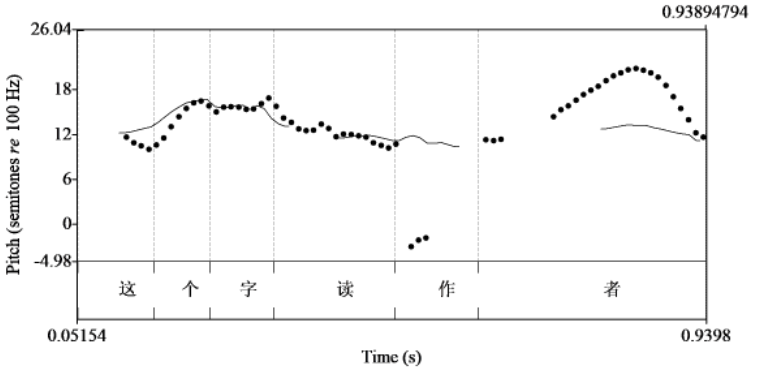

Figure 3. F_0 contour of declarative overlap with interrogative: "This character is read as *zhě*".

In order to compare the pitch features of the two F_0 contours, the writer overlaps the two contours together as **Figure 3**. We can see that the pitch level of the two contours before the character *zhě* are lower or higher than each other. But the overall pitch level of the final character *zhě* in question is obviously higher than that of statement, especially at the highest point of the two contours. Figure 3 illustrates clearly, like Standard Chinese, the question or the statement mood is conveyed at the final character of the sentence or IP. The intonational pitch feature of question shows that its F_0 contour has a bigger slope at both rising and falling phrases compared with the statement sentence. And it clearly demonstrates that the two F_0 contour patterns retain relatively with the F_0 contour shape of syllable's lexical tone, which let the hearer be able to identify the lexical meaning of the character no matter whether there are differences in the pitch accent sequences due to the statement or question mood indication.

Addition to the tune of *shǎng* sample discussed above, the writer also observes the overlapped contours of which the final characters with other 3 lexical tones. **Figure 4** shows the overlapped sample contours of the sentence "This character is read as *zhē* (cover over)." The lexical tone of final character is *yīn* and its F_0 contours in both sentences are a mid-rising, but the question has bigger slope. The accent sequence of statement is L* L H%, while the question is L* H H%.

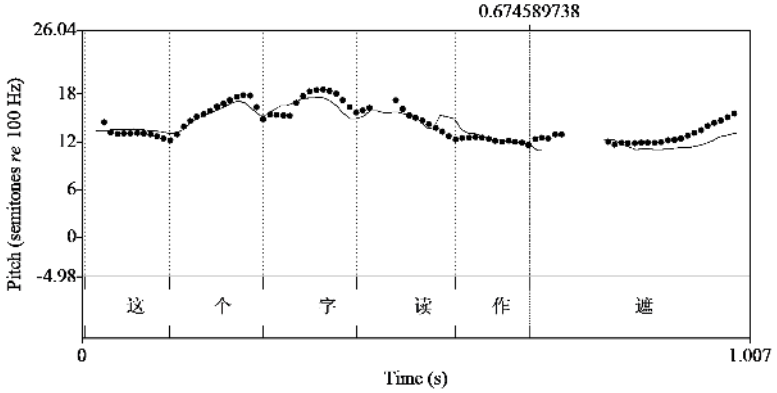

Figure 4. F_0 contour of declarative overlap with interrogative: "This character is read as *zhē*".

Figure 5 shows the overlapped sample contours of which the final character of the sentences is *cái* (just) with the lexical tone of *yáng*. The F_0 contour of *cái* in statement is marked as a mid-falling, but the question is regarded as a mid-level. Differ from other 3 tunes, the F_0 contour of question has a little bit small slope than that of the statement. The accent sequence of statement is H* L L%, while the question is close to L* L H% which is indicated by Ladd (2008: 91) as "low rise (narrow pitch range)".

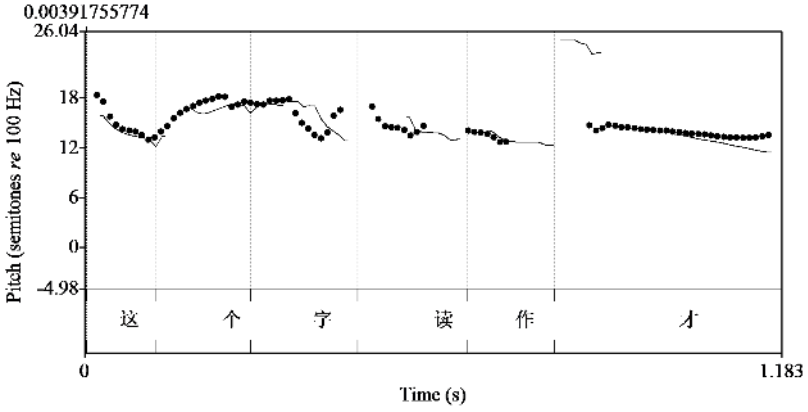

Figure 5. F_0 contour of declarative overlap with interrogative: "This character is read as *cái*".

Figure 6 shows the overlapped sample contours of which the final character of the sentences is *tào* (knot) with the lexical tone of *qù*. The F_0 contours of *tào* in statement can be regarded as a falling-rising tone, and the accent sequence is H* L H%, and the question is marked as a rising tune with the accent sequence L+H* H H% which is indicated by Ladd (2008: 91) as "high rise (with low head)".

From the above figures, the sample contours show more pitch movements on last character than that of the previous characters (syllables), regardless of its lexical tone types, and the duration of them are longer significantly in the sentence. The F_0 contour patterns of question almost remained

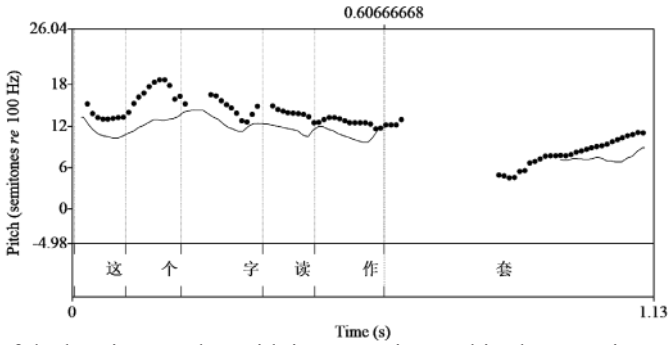

Figure 6. F0 contour of declarative overlap with interrogative: "This character is read as *tào*".

similar to that of the statement, but the overall pitch level of the boundary tones (%) or top point of the contours are usually higher than that of the statement. The F_0 contours of the question also have a bigger slope (rising or falling phrase) than that of the statements.

3.3.3 Identification test

In order to confirm that the question or statement mood is conveyed by the last character of the sentence, the writer invited 7 students to an identification test. 24 sentences were randomly selected from all the sample sentences, in which the declarative and interrogative sentences were half to half. The main stimuli are the last character in each sentence and these characters cover the four lexical tones of Chengdu dialect. Testing procedures: the subjects hear each sentence for three times in a random manner, allowing them to determine if they heard a declarative or interrogative sentence. The statistical results show that the overall recognition accuracy of the 7 subjects reached 89.58%, and the tunes with lexical tone of *shǎng* and *qù* are all correctly identified; the *yīn* had 2 failures of identification, accounting for 4.76% of all the *yīn* samples; the failures on *yáng* recognition are the highest, reaching 8 cases with the ratio of 19.05%. From figure 5 we can find that the pitch value of the two contours at final character have very slight differences, which also indicates that the question mood of *yáng* samples are relatively weak.

In addition to the sentence identification, the writer also cuts off last character of the 24 sentences to conduct an identification test without any context and allows 4 subjects to hear them in a random manner. Among the total of 96 results, the correct rate reaches 90.63%, even slightly higher than the sentence correctness rate. Only 9 cases of hearing results differ from the actual sentence, of which 3 failures are *yīn*, 4 failures are *yáng*, and 2 failures are *shǎng*. The number of identification failures in characters and sentences are consistent in the tone distribution of these characters. The overall results of the identification test further prove that the question or statement mood in Chengdu dialect is indeed conveyed by the final syllable in simple sentence.

4. Discussion

Acoustic analysis of the F_0 contour on the final character of the sentences highlights the rapid pitch movement and the differences of accent sequence which show the existence of perturbation on the lexical tone, and also proves that the statement or question mood is carried by the final character in the Chengdu dialect. With regard to the issue of the perturbation, we have found that the listener can still identify the lexical meaning of each final character in the sentences, which indicates that most of the final characters retaining the F_0 contour pattern relatively as that of their character's

lexical tone. The writer has also found that after undergoing perturbation, the pitch patterns of final characters with different lexical tones are slightly different as the brief discussion below.

Table 1. A typical pitch value of the final character and its lexical tone with *yīn* samples

Pitch value	Starting	Lowest point	Ending %
Lexical tone	12.5	11.74	14.64
Statement	17.12	11.07	18.49
Question	16.77	11.46	22.52

The final character with *yīn* (161 samples): 83% of the sample contours are rising or falling-rising tune (**Table 3**), which means most of the boundary tone of the two sentence types are as H%. Compared with the intonation pitch pattern of statement, the F_0 contours of question have a bigger slope at the rising phrase of the contour, while the statement has the highest pitch at the starting point than that of question and its lexical tone (**Table 1**). Table 3 also shows that there are no level tone among the samples, which illustrates the difference from the traditional conclusions on the pitch pattern of *yīn* by Chang (1958), Liang (1982), Liang and Huang (1998) and Zhen et al. (1960) of Chengdu dialect.

The final character with *yáng* (121 samples): the F_0 contours of the final character are almost the same as the two sentence types with L% boundary tone, which are as a whole falling or rising-falling (Table 3), and their mean pitch value of contours are very close to each other, which indicates the declarative question sentence with the final character's lexical tone of *yáng* has the weakest question mood. The *yáng* samples show the pitch pattern is close to the traditional conclusions on that of yáng by Chang (1958), Liang (1982), Liang and Huang (1998) and Zhen et al. (1960) to Chengdu dialect.

Table 2. A typical pitch value of the final syllable and its lexical tone with *shǎng* samples

Pitch value	Starting	Highest point	Ending %
lexical tone	11.35	14.31	11.82
Declarative	10.19	15.51	12.15
Question	13.1	20.53	16.0

The final character with *shǎng* (158 samples): about 92% of the sample contours are rising-falling which is not as the same as traditional conclusions by Chang (1958), Liang (1982) Liang and Huang (1998) and Zhen et al. (1960) of the Chengdu dialect, which indicate that the younger generation of Chengdu dialect speakers' tune of *shǎng* changed in some ways. The contour pattern and pitch level of the statement is close to their lexical tone, but the question has the highest pitch point at the contours compared to that of statement as well as their lexical tone. The F_0 contours of question have a larger slope at the both rising and falling phrases of the contour, which also clearly illustrates the perturbation on the accent sequence at the sentence final character. (**Table 2**)

The final syllable with *qù* (196 samples): about 18% of the statement and question sample contours are not the same which indicate an obvious perturbation on the final character (Table 3). Among the *qù* samples, there are about 54% of their tone patterns retained as their lexical tone

Table 3. The F0 contours of intonation with the two sentence samples

Lexical Tone / Contour	*yīn*	*yáng*	*shǎng*	*qù*
Level				5
Falling	17	47	3	23
Rising	30	1	1	10
Falling-rising	84	14	5	106
Rising-falling	11	45	145	23
Falling-rising-falling		14	4	16
Rising-falling-rising	19			13
Contour not the same	**19**	**10**	**6**	**36**
Total samples	**161**	**121**	**158**	**196**

indicated by traditional conclusions on *qù* by Chang (1958), Liang (1982), Liang and Huang (1998) and Zhen et al. (1960) of Chengdu dialect. Since the contour patterns of *qù* are distributed in all of the tune types as illustrated in Table 3, it may indicate that the younger generation of Chengdu dialect speakers' tune of *qù* have changed in some ways.

5. Conclusions

This study, through an acoustic experiment, aims to illustrate that the question or statement mood is carried by the final character in a simple sentence and the existence of perturbation on the final character's pitch contour in the Chengdu dialect. The acoustic experimental results prove two hypotheses of the study. The study also finds that most of the sample contours of *yáng* and more than half of *qù* are close to the traditional conclusions on their pitch patterns of lexical tone in the Chengdu dialect, but there are still some differences in general pitch level and F_0 contour patterns.

The most interesting results in this study are the differences of the F_0 contour patterns of *yīn* and *shǎng* to the traditional conclusions. The writer finds in this acoustic experiment, no matter if there is the lexical tone of a character with *yīn* or the character at the end of the declarative or an interrogative sentence in Chengdu dialect, the large proportion of the samples' F_0 contour patterns are falling-rising or rising tune, rather than the high level tune as determined by the phonological survey to Chengdu dialect by Zhen et al. (1960). Almost all of the sample contours of the character with lexical tone of *shǎng*, no matter if the character is at the end of a declarative or an interrogative sentence, are shown as rising-falling tune which is not as a high falling—the traditional conclusions by Chang (1958), Cui (1994), Liang (1982), Liang and Huang (1998) and Zhen et al. (1960) of Chengdu dialect.

The pitch features of *yīn* and *shǎng* illustrated in this acoustic experiment have shown that the lexical tone pitch patterns of single character in Chengdu dialect is more undulating than that of the Standard Chinese. Regarding to the pitch pattern differences between *yīn* and *shǎng* in this acoustic experiment and their traditional conclusions, we should further study the two tone patterns of Chengdu dialect from diachronic and synchronic dimensions. In addition, although the core of intonation analysis is pitch pattern, for tone languages like Chinese, the preliminary findings from this acoustic experiment may lead to further acoustic analysis on the coordination and marking

effect of tone duration, pitch intensity and pitch on the sentence intonation bearing character. In this way, we may be able to reveal more accurately the pitch features and functions of Chinese intonation (including Standard Chinese and different dialects), which may also guide to future studies in this field.

Conflict of interest

No conflict of interest was reported by the author.

Acknowledgments

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ORIGINAL ARTICLE

Investigation into the research on doctoral writing: A synthesis of recent research (2010-2019)

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Abstract: Doctoral writing has been concerned by linguistic scholars and the practitioners of English for academic purposes. This review explores the literature on doctoral writing which got published in peer-reviewed international journals of English between 2010 and 2019 to examine three questions: (1) From which perspectives do the recent researches adopt when examining doctoral writing of the ESOL students? (2) What methodology do the authors apply to research doctoral writing? (3) What kind of text or resource was analyzed by the authors? The goal of the review is to provide the pedagogical suggestions to the future teaching of doctoral writing and viable supports for the writing practice of doctoral students by a comprehensive analysis of the current research. After the overall search on *Scopus*, 210 titles and abstracts have been searched out through a combination of search terms. The inclusion and exclusion criteria have been used to identify the qualified articles for this study and disqualify the possibly irrelevant articles from the included. Ultimately, 82 articles have been confirmed to be further reviewed for the solution of research questions. This review indicates the relationship between doctoral writing and pedagogical and social context is complex, and thus necessary supports from inside and outside of doctoral community need to be given to improve the writing competence of doctoral students.

Keywords: doctoral students; doctoral writing; systematic review; Scopus

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1. Introduction

Over the past few decades, the number of multilingual doctoral students has been increasing globally. Even though the doctoral students have different language background, a growing number of doctoral students are being required to publish their research outcomes in English, and even write their doctoral dissertation or thesis in English. Surely, the dissertation written in English and the publications on top journals of English provide a way for doctoral students to engage themselves into the academia, thus enhancing career opportunities. For English to Speakers of Other Languages

(ESOL), however, writing in English for dissertation and publication is quite a unique challenge. Therefore, exploring doctoral writing from various perspectives is very critical for helping enhance the writing competence of doctoral students. This decade has been witnessing the research on doctoral writing has been conducted deeper and wider, and some changes have emerged as new trends in facilitating the scholarly development of doctoral students (Morton, 2019: 15-23; Ma, 2019: 72–79; González-Ocampo, 2018: 387–401). This review is thus to examine how the literature characterizes the construction of the overall research on advanced academic writing of doctoral students. Such a synthesis is helpful for understanding the fruits of previous studies and figuring out the possible gaps for future study.

Specifically, the present review examines a more updating range of relevant studies about doctoral students' writing, including different aspects concerning writing practice, and pedagogical approaches, and institutional supports for achieving better writing outcomes. The research goals would be set as follows. First, it aims to provide an overview of the studies ranging from 2010 to 2019 about doctoral students' writing. Second, based on the review, some constructive suggestions will be hopefully given to improve the writing practice of doctoral students and the pedagogical approaches. Therefore, this article is constructed for achieving these two research goals. The data selection and collection have been first described in the Method section. Then, the results of the reviewed 82 articles are coded into the four categories, namely, key themes, theoretical perspectives, methodology, resources for analysis, and what the literature said has been specifically explicated in the discussion section. Finally, future research has been discussed after the limitation of this review has been stated.

2. Method

2.1. Search strategy

The research method of systematic review emphasizes selecting studies systematically for analysis and analyzing studies with transparent criteria (Cheng, 2019: 36–47). This subpart includes the description of the search process, inclusion criteria, exclusion criteria and the reasons for these criteria in order to help evaluate the findings from this systematic review more effectively.

The systematic review procedure was developed to locate studies for consideration. The literature search was conducted via the Scopus since "Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings." (https://www.elsevier.com/solutions/*Scopus*). Multiple configurations of the content search terms have been used, *doctoral writing, academic writing, writing for academic purposes*, with the population search term: *doctoral student, PhD student*, and finally this search yielded 210 titles and abstracts (The last visit was on June. 4 2019). The 210 titles and abstracts were downloaded in the format of PDF.

2.2. Inclusion and exclusion criteria

The following inclusion criteria for identifying the articles have been established: (a) published in a peer-reviewed international journal of English between 2010-2019, (b) focused on doctoral students and their writings in English for academic purposes, such as for publication or for degree, (c) examined some certain aspects of writing activities and outcomes, and all that related to writing process, and (d) specified research for supporting doctoral student's writing. These criteria have

been applied to the 210 titles and abstracts, and resulted in 156 unduplicated abstracts (See **Table 1**).

Table 1. Inclusion and exclusion criteria

Criteria	**Definition**
Inclusion	
Published in a peer-review journal	In order to be included, the study limited the scope of review to the journals. Book publication or book chapters or conference papers were excluded.
Focus on doctoral students	In the review, only doctoral students will be examined. Master students, bachelors, and other groups of students were excluded.
Focus on academic writing	In this review, articles must be closely related to academic writing. Narrative writing / creative writing / medical writing were excluded
Exclusion	
Just mentioned doctoral writing	Studies examining the general writing, just mentioning doctoral students in the discussion part were excluded.

Citations would be excluded if they discussed *doctoral students*, but no substantial research about academic writing has been involved. For instance, through the consultation of full articles, quite a lot articles are found to be about medical writing or writing prescription by medical students, which probably results from the search term doctoral student. In such cases, the articles would be excluded. Besides, there are two duplicate abstracts because they both appear in proceedings of conferences and journals, so they were excluded. Finally, 82 articles in total met these abovementioned criteria and they were included in this review. All 82 studies were published in English. The PRISMA flow diagram of screening the literature was shown in **Figure 1**.

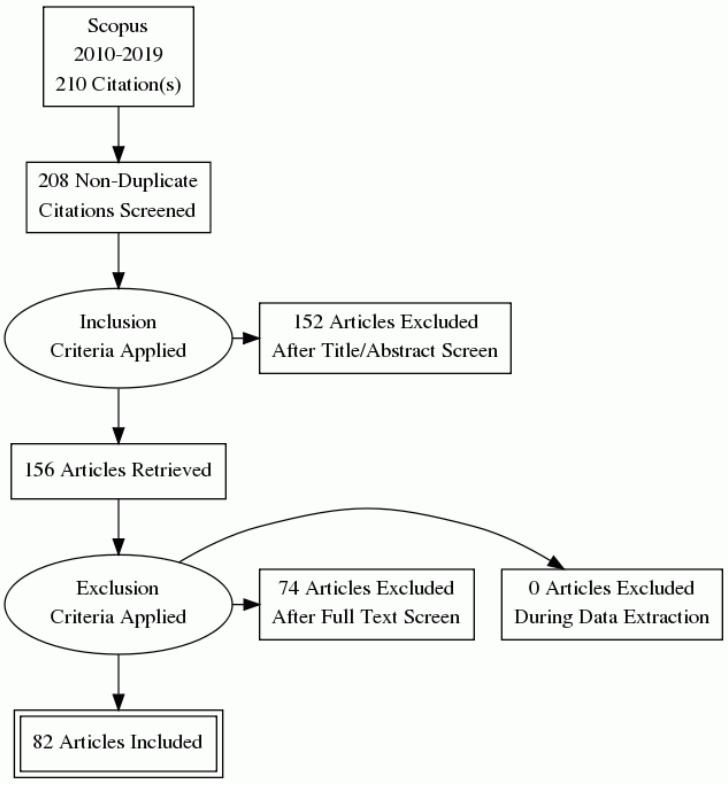

Figure 1. The PRISMA Flow Diagram of screening the literature

2.3. Research questions

The following three questions were addressed in this systematic review.

(1) From which perspectives do the recent researches adopt when examining doctoral writing in English for advanced academic purposes?

(2) What methodology do the authors apply to research doctoral students' academic writing?

(3) What are the resources or texts collected by the authors for research analysis?

These questions are aimed to profile the common scope of the literature and the specific topics the literature discussed, will contribute to a better understanding of how the research on doctoral writing has been theorized and approached over the past ten years, highlighting what strength the existing studies have and what the studies have possibly overlooked. In general, the three questions have been aimed to achieve a wider coverage of the existing research of doctoral writing in the ESOL field.

2.4. Analysis procedures of the articles

The data has been analyzed by using conventional content analysis to address the research questions and possibly obtain insights into doctoral students' academic writing development. First, each article has been read in order to gain an overall mastery of the investigation. Second, the purpose of each study, research methods, major findings, have been examined. Two independent reviewers, who are English majors in their second year of postgraduate program, determine if the research questions listed above were discussed or answered in the studies. When there is a certain study addressing one of three questions, the two independent reviewers recorded the finding of that study and a citation. If there were disagreements between them, they resolved those disagreements by face-to-face discussion. Likewise, the author conducted another comprehensive analysis, and compared her own analysis with that of the two independent reviewers for avoiding the possible bias. We discussed together to confirm the results we have found in order to increase the reliability of the analysis.

3. Results and discussions

The 82 articles were investigated by using the coding method and accordingly drawn out themes from the data (Creswell 2013). Information about the theoretical perspectives adopted by the articles, the methodology of each study, and the texts selected by the authors, were recorded manually. Specifically, methodology refers to the qualitative and/or quantitative method, and the tools or approaches for data analysis; texts or resources have a broader sense in that it includes the digital text or corpus. See **Table 2** for the example of codes.

3.1. The overall research between 2010 and 2019

Doctoral education would be aimed at providing the prospective research platform for the academic and teaching personnel, future experts and researchers. Writing competence of doctoral students for advanced academic purposes is essential for their future research career. That's reason why researchers have been exploring into the nature of writing competence of doctoral students by conducing the macro or micro investigation. In terms of the overall situation indicated in the

Table 2. Examples of codes

Authors	Year	Title	Theoretical perspective	Methodology	Type of text analyzed	Findings
Lei, J., Hu, G	2019	Doctoral candidates' dual role as student and expert scholarly writer: An activity theory perspective	An activity theory perspective	Qualitative; Yamagata-Lynch's approach	The students' manuscript drafts and related artifacts (comments on manuscripts, or correspondence with journal editors).	The students dealt with this tension concerning the students' dual role as student and expert scholarly writer. These findings point to a deep-seated structural tension in doctoral education could also enable them to acquire the skills of the trade to publish and to be socialized into their disciplinary communities.
Inouye,K., McAplpine,L	2019	Developing academic identity: a review of the literature on doctoral writing and feedback	A systematic review perspective	The systematic search; code	Abstracts; full articles	The literature draws primarily on sociocultural perspectives of examining writing and feedback through the lens of the practices of the groups. Two gaps are highlighted. The first is the lack of attention to individual variation. The second is the potential influence of feedback on critical thinking.
Negretti, R., McGrath, L	2018	Scaffolding genre knowledge and metacognition: Insights from an L2 doctoral research writing course	Scaffolding; metacognition	Inter-disciplinary approach; qualitative	An account of writing context; genre visualization; a record of interview	The metacognitive tasks elicited an integrated view of genre and encouraged students' conceptualization of this knowledge as a tool for writing.
Okuda, T., Anderson, T.	2018	Second Language Graduate Students' Experiences at the Writing Center: A Language Socialization Perspective	A language socialization perspective	Case studies; Braun and Clarke's phases of thematic analysis;qualitative	Records of Semi-structured interviews; records of student-generated written narratives	Students spend considerable time and effort seeking out writing support, but only the master's students make full use of the writing center tutorials due to her strategic socialization of the tutor.

existing studies, the number of documents about doctoral students' writing has been growing steadily during the ten years. In the year of 2010 were 3 articles about doctoral writing published, but it came to 17 related papers published in the year of 2018 (See **Figure 2**). According to the documents by countries or territory provided by *Scopus* statistics, the number of authors from English speaking countries has been much more than authors from non-English speaking countries. The result indicates that it is quite a demanding task for authors of ESOL to publish academic papers in English, and that writing dissertation or writing for publication in English brings heavy pressure to doctoral students of ESOL. This might partly explain that research on how to provide efficient supports for doctoral writing has been apparently increasing.

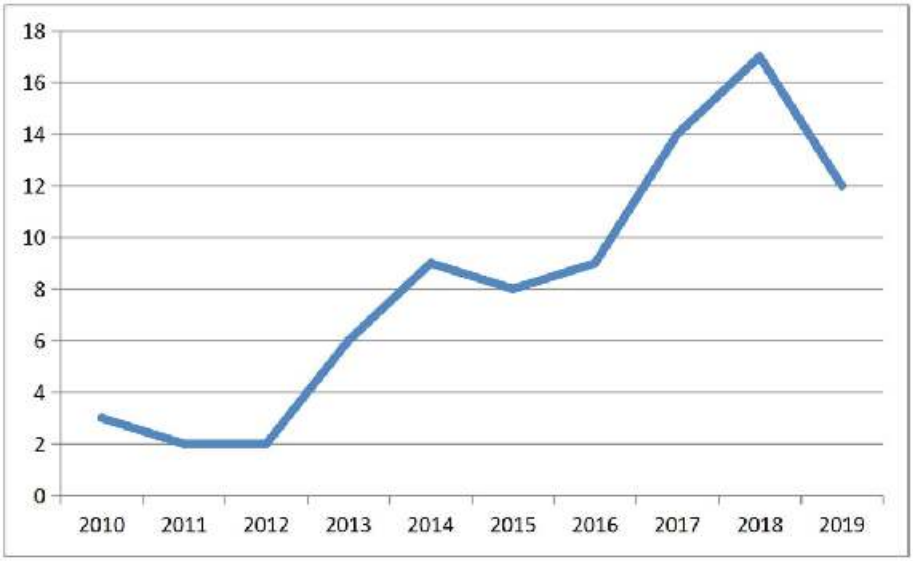

Figure 2. The documents published between 2010 and 2019.

3.2. The findings about the three questions

During the period of 2010-2019, the research of doctoral writing hasn't evidently manifested a new trend or a radical change of orientation, but undoubtedly, the investigation has been becoming much deeper and more comprehensive based on a relatively larger population of doctoral students and a longitudinal timespan of study. Interdisciplinary or cross-discipline study has been flourishing during the ten years, partly because learning at doctoral level is interdisciplinary in nature. Therefore, the methodology adopted by the researcher could possibly integrate the research methods of language teaching and learning with those of other disciplines rather than simply from the field of linguistics, and the text or resource collected for analysis has been multifaceted. The results of the review are presented in **Table 3**.

At the ranking of occurrences of the same *key theme*, the number of research on feedback and supervision was ranked as the first place. The result coincidentally matches the finding of Inouye and McAlpine's research in that they ensure the relevant studies have the centrality of feedback on doctoral writing (Inouye and McAlpine, 2019: 13). Pedagogical research has focused on the classroom activities of doctoral students in narrow sense, and in broader sense, on the research of performance and activities of doctoral students, so 18 researches were pertinent to the theme. Authorial identity has been concerned by many researchers in the field of doctoral writing. The

importance of an authorial voice in doctoral writing has been widely acknowledged, so the related studies have been much deeper than ever. All studies, no matter what specific aims they struggle to achieve, share a similar objective to support doctoral writing in a more effective way. The analyses of doctoral dissertation and journal articles have been conducted by many researchers for digging into the doctoral writing. Research on academic literacy development has been relatively scant during the ten years. Nevertheless, the academic literacy development has been considered and discussed by researchers in their specific studies. Admittedly, although the key themes could not be clear-cut but inevitably overlapping in the existing researches, the themes have been categorized into the six subtopics in accordance with the focus of each individual study. The theoretical perspective and methodology listed in Table 3 would be further discussed in the following part. The section below would specify the texts or resources collected for analyses.

Table 3. The results of reviewing the existing research between 2010-2019

Key themes	Occurrences (Total=82)	Theoretical perspective	Methodology	Text or resource collected for analysis
1. Pedagogical research	18	(1) activity theory perspective; (2) auto-ethnographic theory; (3) Review theory; (4) language socialization perspective; (5) system theory; (6) a text-linguistic perspective; (7) Positioning theory; (8) Goffman's theory of Stigma	General methodology of qualitative and/or quantitative: (1) Case study; (2) Person-centered approach; (3) semi-structured in-depth interview; (4) systematic review; (5) specialist software, NVivo; Confirmatory factor analysis (CFA); LISREL, etc. (6) Structural Equation Modeling	(1) tutorial record; (2) reflective journals; (3) web-based corpus; (4) the collection of writing tasks;
2. Supervision and feedback	20			
3. Authorial identity or voice or stance	12			
4. Support from universities or institutions	15			
5. Academic literacy development	2			
6. Analysis of dissertation or journal articles	15			

3.3. What the literature said specifically

With regard to the research of the doctoral writing published in the year of 2010, The studies were characterized by exemplifying the experience of doctoral students (Evan and Stevenson, 2010: 239–250), or pointing out the difficulties experienced by doctoral students when writing (Castelló et al., 2010: 521–537). During that period, researches were mainly about the degree dissertation, which is quite interesting. Probably, publishing hadn't been so significant as that in the present time. Coincidentally, one article, entitled as *Starting to publish academic research as a doctoral* student, may partly explain the situation ten years ago, and it presented some opinions, views and advice that graduate students might consider in order to assess and improve their success as new scholars (Stoilescu and McDougall, 2010). Back to the year of 2010, researches were mostly performed in a retrospective way by describing the situation then or reflecting upon the situation. Though topics about internalization and cross-disciplinary structured programs have been becoming popular in 2011 (Bastalich, 2011; Magyar, 2011), it seemed that the trend didn't influence the research of doctoral writing which still remained within a specific discipline. The qualitative and quantitative method had been adopted in a research for doctoral students' perceptions and attitudes toward written feedback for academic writing. This study investigated social science doctoral students' perceptions and attitudes toward written feedback about their academic writing and

towards those who provide it. An explanatory model was established in the study to describe the complex relationships between what the students have responded to the feedback and other relevant factors. Structural Equation Modeling analysis was applied into the questionnaire analysis and the explanation of the complex relationships about feedback practices relating to doctoral students (Can and Walker, 2011: 508–536).

In the year of 2012, five articles concerning doctoral students' writing got published. Paltridge & Starfield examined the overall organization patterns of doctoral theses, and the texts that students submit as part of examination; and compared the patterns of organization with those of more established doctoral dissertation (Paltridge and Starfield, 2012: 332–344). More theoretically, a text-linguistic approach to advanced academic writing was put forward to compensate a typical corpus approach to explore lexico-grammatical patterns at the sentence level. The study discovered that effective authorial stance-taking plays an essential role in effective academic argument based on a stance corpus. Computer corpora tools and contextual examples would help L2 academic writers (Chang, 2012: 209–236). At a relatively micro level, Lei investigated the linking adverbials in the academic writing of Chinese doctoral students, and the results indicated that the doctoral students had preference to use a limited set of linking adverbials than the professional writers did (Lei, 2012: 267–275). Carter illustrated by the record of his own experience that academic writing can be regarded as a form of action research as writing makes individuals more competent in academic research and accumulates knowledge for favorable changes (Carter, 2012: 407–421).

The year of 2013 witnessed the diversity of research about the writing of doctoral students. As interdisciplinary research becomes increasingly common in universities, Guerin has proposed that multidisciplinary doctoral writing groups could bring researchers together, and that the cross-discipline connection and cooperation will benefit students in the current research environment. (Guerin, 2013: 137–150). In order to measure doctoral students' understanding of academic writing, Lonka created the writing process questionnaire to analyze 669 Ph.D students from a major Finnish university in terms of their ideas of academic writing. Their study covered scales for measuring six distinct theoretical constructs: Blocks, Procrastination, Perfectionism, Innate ability, Knowledge transforming, and Productivity. The quantitative analysis tools of CFA (Confirmatory factor analysis) and LISREL were adopted to verify the construct and the writing scale (Lonka et al., 2013: 245–269). In order to examine if the diversity in collaborative research communities could promote doctoral students' writing, Guerin C et al. investigated an academic developer and eight members of a writing group of a Discipline of Public Health through their experiences of cooperation in a multicultural, multidisciplinary group of thesis writing. Since doctoral projects are interdisciplinary in nature, the findings of their research confirmed that students with diversified backgrounds can build an inclusive, dynamic research community through collaboration (Guerin, 2013: 65–81). With regard to the review process, supports of peer-reviewers and editors would help authors a lot to produce their best work, and thus Wisker explored the entire review process in which doctoral students, researchers, teachers, other academic practitioners were involved (Wisker, 2013: 344–356). And system theory was utilized to examine non-native English-speaking student writing for publication through the data of field interviews, semi-structured and text-based interviews.

Writing support still seemed to be a common concern in 2014. Murphy, et al. conducted a study of a writing support group composed of graduates in a research-based university in Canada and adopted a self-study to investigate how the support group helped them to guide the process of

their dissertations' writing, and the results revealed the supportive role of writing group is very important in developing the identity of researcher and their writing (Murphy et al., 2014: 239–254). Colombo stated that the problem of low graduation rates at the graduate level has been linked to the challenges of dissertation work, and thus discovered that the emotional, financial, economic, and academic support offered by social ties was necessary, based on the qualitative study of in-depth interviews (Colombo, 2014: 81–96). Chang presented a more comprehensive perspective to investigate doctoral students' knowledge of authorial stance and the relationship of conceptions to the participants' epistemic beliefs (Chang, 2014: 525–542). Hakkarainen examined that the social shaping of practices of collaborative authoring in doctoral programs (Hakkarainen, 2014: 11–29). Maher established a socialization and supervisor pedagogy framework and exposed challenges encountered by students in the writing process based on the narratives of faculty (Maher, 2014: 699–711). An exploratory mixed methods approach was adopted to discover doctoral students' preferences and needs concerning written feedback on academic writing (Can, 2014: 303–318). Basturkmen examined the supervisors' on-script feedback comments on drafts of dissertations and set up descriptive frameworks which may be valuable for supervisors (Basturkmen, 2014: 432–455). Dressen-Hammouda paid attention to how the voice of a scientific writer changed after the PhD dissertation through a longitudinal exploration of experienced writers in geology (Dressen, 2014: 14–25). In EAP writing, the ability to combine content and language contributes to the participants' academic researches in the future, and integrating thinking patterns and cultural awareness in academic writing would be important for writers (Gao, 2015: 113–123). Mandell et al. presented a course for Social Work PhD students called Writing for Publication, and they reported the study of evaluating its success in supporting students to develop and submit a paper for a refereed journal (Mandell, 2015: 197–212). Bartkowski et al. outlined a series of strategies for doctoral students to achieve the objective of publishing in academic journals and addressed the role of academic mentors in fostering their students' research productivity (Bartkowski, 2015: 99–115). Maringe et al. examined the experiences of international doctoral students in their academic writing by utilizing Harré and van Lagenhove, 1999 Positioning theory and Goffman's theory of Stigma (Maringe et al., 2015: 609–626)

There were 9 articles about doctoral writing in the year of 2016, the authorial voice or author identity was the big concern in the research field (Chiu, 2016: 48–59; Thompson, 2016: 139–157; Chang, 2016a: 49–79; Chang, 2016b: 175–192; Eastman, 2016: 355–372). Thompson explored how three doctoral students of ESOL used personal and impersonal forms of self-representation and evaluative stance to construct authorial voices in the introduction sections of their written PhD Confirmation Reports. Chang rendered explicit linguistic resources for stance-taking and engaged ESOL doctoral students in exploring stance expressions in published research. Publication pressure on doctoral students or challenge has still brought out some academic discussion (Li, 2016: 545–558; Habibie and Hyland, 2019). Li suggested that the focus on "publishing SCI papers or no degree" should be shifted and the EAP-qualified language training should be undertaken. What's more, analysis of the feedback could provide useful ways for doctoral students to acquire a higher level language awareness (Stracke, 2016: 122–138) and also relieve their pressure of doctoral writing. When it came to the recent two years, the related research appeared to be more methodological and to be conducted from various dimensions (Inouye, 2019: 1–31; Ma, 2019: 207–222; Lei and Hu, 2019: 62–74; Danvers, 2019: 32–46; Tusting, 2018: 401–422; Odena, 2017: 572–590; Burford, 2017: 17–32; Levchenko, 2017: 28–40; Okuda, 2018: 391–413; Negretti, 2018:

12–31; Lam et al., 2019: 111–128).

3.4. What is possibly unsaid in the literature

To summarize, the findings in the literature confirm that a wide coverage of topics has been investigated among the existing research, and the methodologies adopted by the researchers range from that within the linguistic field to interdisciplinary fields. Resources collected for the research or analysis of doctoral writing have been more diversified during the ten years. Evidently, the existing studies make great contribution to the nature of doctoral writing. Nevertheless, the future studies could have been improved by shifting away from the focus on the applicability to the focus on the theoretical exploration. The fruits of Cognitive Linguistics and Construction Grammar during these decades may bring some insights into the research of doctoral writing, for example, the Event-domain Cognitive Model could help get close to the nature of doctoral writing by mapping the process of doctoral writing onto the domain of writing event. The conception of construe in cognitive linguistics may better explain the stance or authorial identity or voice in doctoral writing. Construction Grammar has developed greatly since 1970s and provided more insightful ideas into the nature of language. One of the tenets of construction grammar is to assume that construct is the fundamental unit of language and construct is a pair of form and meaning. What if we hypothesize the entire text of doctoral writing as a construct? What could we discovery about the process of doctoral writing based on the concept of the construct? In response to the perceived gap or deficit of the existing studies, we might enhance the research in the field of doctoral writing by virtue of the most updating development of linguistics and other disciplines.

4. Conclusion and future research

Although this review is aimed to give a systematic analysis of the research on doctoral writing, it has still an obvious limitation which should be overcome by future research. Because the review has been restricted to articles written in English, some relevant studies published in other languages hadn't been included, for example, articles in Chinese from *cnki.net*. Likewise, the review hasn't included books and conference papers, and only the literature of peer-reviewed journals has been collected in this review, so some other valuable research on doctoral writing were not encompassed. Besides, some relevant English-language articles could be possibly filtered out by the search term employed in this study, and the single search database of *Scopus* could not get all the relevant literature included. Because the review focuses on the research which should be primarily about the doctoral students and their writings, some relevant discussions about doctoral writing could possibly be neglected.

It has been noted that the Ph.D student quality has substantially dropped (Strokova, 2018). Knowing what may increase the quality of PhD students will enable to improve upon current pedagogical practices. The pedagogical practices should be aimed to build up doctoral students' confidence in writing since confident writing for research or publication and overcoming obstacles of writing are crucial to step into the academic circle. Research about how to improve doctoral writing for publication should be deeply explored in the future. Doctoral students will become novice writers or junior scholars after they gain their Ph.D degree, and as newly initiated academics, they do need supports to overcome the pressures of research and publication. Scholarly publication on top journals or by top publishers definitely brings the full sense of achievements to the novice

scholars. It's a really huge and complex task or process for doctoral students or newly scholars to get the research published, and the process involves very complicated factors if we view from various perspectives, for example, perspectives on scholarly publication itself, perspectives of authors, perspectives of mentors, perspective assessors (Habibie & Hyland 2019). Also, Tonks and Williams identified seven key areas in doctoral research: (1) quality of scientific writing, (2) general presentation of thesis, (3) statistics /data analysis, (4) understanding / critical appraisal, (5) experimental design, (6) English language and (7) supervision (Tonks A J & Williams, 2018). The research of academic writing of doctoral students or young scholars may be only just starting. Some questions still remained further exploration. For example, the allocation of attention while novice scholars do their research, is it more effective to focus on one specific research topic in years till the desirable outcome would be eventually achieved? Or is it more practical to keep relatively wide concerns on several research topics in case they would get bored? The research of development of expert scholars from a newly to a senior scholar may be very helpful for the starter scholars if the research would be conducted from a longitudinal perspective based on a bit large samples. As with the empirical research and theoretical exploration, the existing literature in the field of doctoral writing paved way to the future research, but there are still some topics waiting to expose.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Revisit euphemisms from the perspective of intentionality

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Abstract: This paper studies the role of intentionality in the process of generating euphemisms. Intentionality, as the key to human consciousness activities, is not only the starting point of the language user's consciousness activity related to euphemism generation, but also functions through the whole generating process. Its functions can be specified as triggering, orientation, and selection. Collective intentionality restricts individual intentionality and has the function of identifying and integrating individual intentionality. Under the effect of collective intentionality and social environment, the euphemisms are renewed with the time and bear features unique to a particular group.

Keywords: uphemisms intentionality; collective intentionality

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1. Introduction

Euphemisms are a common linguistic phenomenon which pervades in every part of people's life. As the "lubricant" for verbal communication, euphemisms provide enormous cases for scholars to study what has been (and is) going on in our language, our minds and our culture. The existing research on euphemisms have been done from the perspectives of rhetoric, general linguistics, pragmatics, sociology, cross-cultural comparison, etc., and the findings well explain the formal features of euphemisms and the rules and external factors of its use.

Cognitive linguistics provides a new approach to the study of euphemisms by analyzing and interpreting the cognitive mechanism of euphemisms. The relevant studies mainly apply Lakoff & Johnson's Mapping Theory and Focaunnier's Blending Theory to explain that the cognitive basis of euphemisms is the similarity/contiguity association between the source and target domains in people's conceptual systems. Then they further propose the metaphorical mechanism, metonymy mechanism and metaphor/metonymy mechanism of euphemisms (Chen, 2006; Shao and Fan, 2004; Lu and Kong, 2006). However, the cognitive-mind mechanism of euphemism generation calls for more research efforts, that is to say, what kind of mental activity being processed in the brain of the

language user needs to be studied in detail.

This paper attempts to study euphemisms from the perspective of philosophy of mind. The focus lies on the role of intentionality in the process of euphemism generation, including individual intentionality and collective intentionality. The philosophy of mind has carried out in-depth research on intentionality, revealing its intentional and intellectual attributes from many aspects, and thus providing a good foundation for examining the role and characteristics of intentionality in language use.

2. General description of intentionality

The concept of "intentionality" comes from scholastic philosophy. In the nineteenth century, German philosopher and psychologist Franz Brentano introduced it to contemporary philosophy and defined it as one of the characteristics of "mental phenomenon", thus distinguishing it from "physical phenomenon". For Brentano, every mental phenomenon involves the "intentional inexistence" of an object toward which the mental phenomenon is directed (Brentano, 1973). After Brentano, Husserl further developed the theory of intentionality, arguing that intentionality is the directionality of consciousness to an object. He analyzed intentionality in terms of three central ideas: intentional act, intentional object and intentional content. The intentional act cannot be distinguished from its object, which is the topic, thing or state of affairs that the act is about. The intentional content of an intentional event is the way in which the subject thinks about or presents to her/himself the intentional object. (Husserl, translated by Ni, 1998: 436)

The American philosopher John Searle also systematically studied and explained intentionality. In his view, intentionality is the generality of the mind that can be directed, about, or related in various forms, to objects and events in the world. (Searle, translated by Li, 2007: 83) The human mind is thus based on the intentional aboutness, linked to the world through human cognition and practical activities. "It connects us to the real world through intentionality" (ibid. 98). It is easy to see that directionality is the most important feature of intentionality. The human mind uses the aboutness of intentionality as the starting point for construe, and people's cognition and practical activities are thus connected to the outside world in a targeting manner. In another word, the human mind can be about an object and on the object express some kind of intention, or beliefs, hopes, wishes, likes, hates, praises, etc., so as to better carry out the activities targeting at the object, getting the personal act and the society linked.

Intentionality generally has three characteristics: aboutness, directionality, and parasitism. Regarding the use of language, the starting point of meaning initiates with the intentionality of the mind. That is to say, the language user can only develop the object-directed activities on language through the intentional function of the mind. Directionality means the selectivity of intentionality in linguistic representation. When the language user is trying to construe meanings, he/she always chooses something that is meaningful to him/herself, making it the focus of attention and also salience, and representing the salient point in certain linguistic forms or expressions. E.g. *a) My father spends most of the morning on the bus. b) Dad wasted most of the morning on the bus.* The two sentences describe the same event, but the behavioral states expressed are different and the speaker's attitudes toward the event are apparently different. The differences result from the directionality of the speaker's intentionality. Parasitism means to "parasitize" the intentionality of

the language user to linguistic symbols, that is, to parasitize the language user's own psychological state or feelings into the language. When the representation of various mental states embodying intentionality is realized in the form of language, the linguistic representation of intentionality is fulfilled.

Searle also introduces collective intentionality to explore the role of intentionality in human social groups. He distinguishes between "We-intentionality" and "I-intentionality". There are intentional forms such as "I intend", "I hope", "I believe", etc. and also intentional forms such as "we intend", "we hope", "we believe", etc. The latter is the embodiment of collective intentionality. Individual intentionality derives from collective intentionality. Collective intentionality is the foundation of all social activities, which builds up the basis for people in a group to cooperate and to share ideas and emotions. (Searle, translated by Li, 2007: 117) For example, a basketball game, a rally, a performance, a class in a school, etc. can all reflect the role of collective intentionality. It is via collective intentionality that human consciousness, mind, language and society are inter-related and inter-connected. The process of language use exemplifies the cooperative process based on collective intentionality. The acquisition of language and language communication are, to some extent, the result of collective interaction.

3. Intentionality and euphemisms

"Substitution" is the core feature of euphemistic expressions. The so-called "substitution" means that in a certain context blunt expressions which are usually coarse, painful or offensive words can be replaced by euphemistic expressions which are naturally mild, agreeable or roundabout words. If we set the blunt expression, i.e. words that for some reason cannot be said or written directly, is "A" and the euphemism is "B", then in a certain context, "A" and "B" are identical and can be replaced by each other. The substitution can be formularized as "A is B".

The semantics of euphemisms have two levels of meanings--exterior and interior. The exterior meaning is auspicious, implicit, polite, inclusive and beautified meanings, and the interior meaning is the euphemized objects which are normally unpleasant things or events. In addition to seeing euphemisms as the semantic substitution, we will further explore how the two levels of semantics are combined and united and why euphemisms can be used to refer to the things/events that are not actual referents of the euphemistic expressions.

To answer the above questions, we should not only analyze euphemisms from the aspects of linguistic features, semantic substitution and pragmatic functions, but also further study why language users can use euphemisms to refer to external things that are different from their direct referential objects. Here, for the convenience of detailed examination, we tentatively give a new definition of euphemism from a cognitive-mind perspective as follows:

An expression of "B", in place of another expression of "A" to refer to the thing/event of "A'", is a euphemism, if and only if:

1) A' is something that cannot be expressed straightforwardly for some reason;

2) B cannot refer to A' in the context of the actual situation;

3) But can refer to A' under the specific intentionality of the language user;

4) B and A have similarity/contiguity relationships.

First, the semantic feature of euphemisms is the substitution of two expressions (A and B). The reason for the substitution is that in a particular context, the language user needs to mention things that for some reason cannot be said or written directly. "The actual situation" refers to the real life situation which people are accustomed to and tend to take as normal. In the actual situation, the direct referent of "B" is not "A'", but under the specific intentionality, "B" can be used to refer to the external thing "A'". "B" can be used to refer to "A'" because of the similarity/contiguity relationship between "B" and "A".

Intentionality includes two dimensions: intentional content and intentional attitude. Intentional content refers to the content of the language user's consciousness activities and how such content is embodied in a certain linguistic expression. Intentional content is the content of the language user's intentional activities, indicating the focus of his/her attention, and thus the core content of a linguistic expression. As the intentional content is the attention focus of the language user, it is the point that intentionality is positioning at. When it is embodied in linguistic forms, it is the autonomous component, i.e. the kernel of expression. The external objects that euphemistic expressions try to position at are often things or events that are not pleasant to say in a straightforward manner, such as: the old and sick, defects, errors, body organs, physiological functions, crime, war, the appellation of vulnerable groups, etc. When the language user focuses his/her attention on these things or events, the process of generating euphemisms thus starts up.

Since the same intentional content can be delivered with different attitudes, this leads to multiple ways of generating expressions and discourse. Here is another dimension involved in intentionality: intentional attitude. The intentional attitude means what kind of attitude the language user holds toward the intentional content. Any intentional content, once entering the intentionality of the language user, will be under the observation and operation of the intentional attitude. In terms of language use, intentional attitude is the basis of intentionality positioning, which can be divided into three sub-categories:

1) psychological state, such as beliefs, knowing, doubts, fears, hopes, love, hatred, etc.;

2) psychological measurement of the effect on the object, for example, the object is considered to be primary to [as opposed to "secondary"], prior to, and prominent to [as opposed to "latent"], before ... some other things;

3) certain psychological orientation of observing things, such as being normal (neutral), vivid, euphemistic, humorous, exaggerated, affectionate/cold, reproachful/complimentary, positive/negative, beautifying/uglifying, etc. (Xu, 2013)

As for the generation of euphemistic expressions, the intentional attitude is the basis of the language user's intention orientation in the whole process: under the observation of psychological modes such as fear, doubt, hope, intention, etc.; under the observation of psychological measurement of behind and latent; under the observation of psychological orientations such as being roundabout, humorous, complimentary, beautifying, kind, etc., the language user chooses gentle, pleasant, inclusive, euphemistic words to replace harsh, offensive, discriminatory, and crude words. In the form of [A is B], the language user chooses B to replace A under the observation of certain psychological state, measurement and orientation.

Intentionality, as the key to human consciousness activities, is not only the starting point of the consciousness activity related to euphemism generation, but also functions through the whole generating process. Its functions can be specified as follows: triggering, orientation, and selection. The triggering effect is reflected when the language user focuses his/her attention on an external object, namely, the first positioning in the process of generating euphemisms. When the language user focuses their attention on a thing or event that cannot be said or written directly, the process of euphemism generation begins. It triggers a series of consciousness activities in the mind of the language user, and completes the process of generating euphemisms under certain conditions. After positioning, the language user focuses on the selected information to achieve the orientation of the usage event. For example, in English the euphemistic expressions for "old people" include "*sunset years*", "*white tops*", "*wrinkles*", "*seasoned citizen*", "*nursing home residents*", and so on. These expressions have different literal meanings of their own, but they are all euphemisms that can be used to mean the "old people". This is because under the orientation of intentionality, language user focuses on different information, that is, the different characteristics of "old people": the last lap of the process of life, whitening hair, wrinkles on the face, colorful and rich life experience, likely to live in nursing homes, etc. The language user focuses on the different characteristics of the "old people", realizing the orientation of the usage events, and ultimately generating different euphemisms that replace "old people". However, people cannot arbitrarily choose an expression to replace the blunt expression to achieve euphemistic effect. "Newly-made euphemisms must be related to their original language symbols to a certain extent, and can provide the clues for people to understand what they refer to." (Shu, 1989). The establishment of the connection between euphemisms and blunt words is the result of the intentional choice. The establishment of the connection between "old people" and "sunset" in the above example is that the subject's intentionality is located in the structural characteristics of "sunset" and thus establishes the connection between "old people" and "*sunset*" based on the similarity. The connection between the two is based on the similarity of the "process stage", the "old people" is the last stage of life, and "*sunset*" is the last stage of the day.

4. Collective intentionality and euphemism

Collective intentionality was originally proposed by R. Tuomela and K. Miller in the journal article of "We- intentions" published in the issue of Philosophical Studies in 1988. They analyze the collective intentionality with respect to individual intentionality and mutual beliefs, and believe that collective intentionality is reflected in the collective actions of members of society, on the premise that members of society have common beliefs. (Tuomela and Miller, 1988: 53) Margaret Gilbert believes that collective intentionality is the intention of each group member, and that this intention is open to the collective, and they follow the common commitment to carry out effective actions to achieve the intention (Liu, 2008: 84) John Searle believes that collective intentionality is a primary intentionality, existing in the individual's brain the same way as the individual intentionality. (Searle, translated by Li, 2007: 116) That is to say, collective intentionality and individual intentionality coexist in the individual's brain, and the individual has both "I-intentionality" and "we-intentionality". Michael Bratman further proposed that the generation of collective intentionality is a kind of connection between individual intentions, not just the interaction between individuals and the external environment (Liu, 2008: 86) The philosophers have made different yet co-related

discussions on collective intentionality from different angles. From their discussion, it can be seen that collective intentionality is the basis for social activities and exchanges. Collective intentionality not only helps group members collaborate with each other but also helps intentional states shared among group members such as beliefs, wishes, intentions and the like.

According to Searle, objective social reality is literally created by means of We-intentionality. The general form of such intentionality is "X counts as Y in context C", or "X becomes Y in context C". (Searle, translated by Li, 2007: 120) This form can be interpreted as: X counts as Y, and the prerequisite is that the collective member C forms an agreement, acknowledging that X is Y under certain conditions. By adopting a We-intentionality that X counts as or becomes Y in C, individuals take it as a fact that X counts as or becomes Y in C. A familiar example is the institution of money, which is created by the We-intentionality to treat certain pieces of paper or metal, issued by the appropriate governmental authority, as money. The making of a promise (X) counts as getting married (Y) in the context of a marriage ceremony (C). The making of a promise can function as getting married on the premise that members of a particular community have an agreement on that and all tend to accept it accordingly.

It is through collective intentionality that people connect the mind, consciousness, language, and society. Searle believes that collective intentionality is the foundation of all social activities. Collective intentionality gives a particular group of people a shared mind and emotion and forms the basis for mutual cooperation and communication. Important ideas and viewpoints that are widely prevalent in a group are stored in people's knowledge structure and long-term memory, and become a kind of conventional consciousness. They will be activated and used for making reference, description, comprehension and representation in certain situations. (Xu, 2006: 35)

Collective intentionality is the foundation of all social communication. Individual intentionality exists in the brain of the individual and has a private nature. Under the collective intentionality, people form a unified intentionality within a specific group, and thus cooperate and communicate on that basis. Individual intentionality is the basis of collective intentionality while collective intentionality is a set of intentions that are formed on the basis of all members of a group. At the same time, individual intentionality is subject to collective intentionality. "As for individual intentionality, collective intentionality plays a role in restricting and is useful for the identification and integration of individual intentionality. (Xu, 2006: 36) In terms of the generation of euphemistic expressions, the role of identification and integration of collective intentionality are reflected in the following aspects:

1) Euphemisms are in a constant state of flux as the tabooed objects change with the times. The euphemisms originate from social taboos. Social taboos change with the times, from the initial death taboo to the later euphemisms of illness, defects, errors, body organs, some physiological functions, indecent or inappropriate behavior. In modern times, inclusive language emerges which are used to take the place of discriminatory language. This process of change reflects the identification and integration of collective intentionality. Let us revisit Searle's general form of collective intentionality "X counts as Y in C", where X is the original phenomenon, X is Y under people's collective intentionality, that is, people's mutual agreement, consent and acceptance. Searle's general form of collective intentionality can well explain how and why a certain things or events are seen as tabooed and need to be euphemized. X is a variety of things, events or phenomena.

Under the identification and integration of collective intentionality, that is, the agreement, consent and acceptance among group members, a certain event or thing is determined to be the euphemized object Y. For example, in the old days, "opera performance" was an industry that was despised by people in China, and its status was low in society. Under the effect of identification and integration of collective intentionality, the "opera performance" was identified as a euphemized object. That is to say, the "opera performance" is taken as a euphemized object by means of We-intentionality, its being recognized as a low-ranking and despicable industry. When it is mentioned, it needs to be replaced by euphemistic words. Therefore, there are a great number of euphemisms for actors, such as "*伶伦*" (*ling lun*), "*伶人*" (*ling ren*), "*秋娘*" (*qiu niang*), "*小怜*" (*xiao lian*), "*妙音*" (*miao yin*) and so on. In modern society, the social status of actors has been greatly improved, and acting has become the career most of the young people eagerly pursue. Consequently, under the effect of collective intentionality, members of society no longer recognize acting as the euphemized object, and those euphemisms relating to actors and acting that have been widely used are almost dying in daily Chinese. It can be seen that the change of euphemized objects is the result of synergistic effect between the collective intentionality and social environment.

2) Different social groups produce different euphemisms for the same tabooed object. Taking death as an example, in Chinese, "*去见马克思*" (*going to see Marx*) is the euphemistic expression for death. However, in English, "going to see Marx" does mean death or to die. English euphemisms for death such as "*be asleep in the Arms of God*", "*to be with their Father*", "*join the angels*", "*have fallen asleep in the Lord*", "*pay Saint Peter a visit*" do not have equivalent expressions in Chinese. That is to say, in the conventional consciousness of the Chinese, the concept of "Marx" and "death" are stored as stereotypical relations in people's brains. Under the effect of the collective intentionality, "the stereotypical relations are retrieved as the structural premise and logical presupposition of language use". (Xu, 2006:36) This plausibly explains why in Chinese "*going to see Marx*" can be used to mean death. However, in the conventional consciousness of people in English-speaking countries, there is no stereotypical relations between "Marx" and "death" that can be used as a structural premise of language use. In their conventional consciousness, concepts of "God", "Father", "angels", "Lord", "Saint Peter" and "death" are stored as stereotypical relations in their brains and the above euphemisms are generated under the effect of collective intentionality to indicate death.

3) Some euphemized objects cannot be found in certain languages. The categories of euphemisms in English and Chinese have a lot of commonalities, including death and funeral, diseases and disabilities, body organs, secretion and excretion, crime and punishment, war and disaster, occupation, shortcomings and mistakes. However, euphemized objects in English and Chinese also have their own characteristics. There are a large number of euphemisms of titles and appellations in Chinese, with a total of 177 entries in *Dictionary of Chinese Euphemisms* compiled by Zhang Gonggui. They are classified into three categories: "interpersonal relationship and appellation", "couple's titles and relationship", "titles for other members and relationship". In Chinese, father is respectfully called as "*令尊*" (*ling zun*) and "*家尊*" (*jia zun*), and father-in-law is respectfully called as "*泰山*" (*tai shan*) and "*冰翁*" (*bing weng*). Such euphemisms are rare in English. In the old days, China was a highly hierarchical society, advocating the norms of feudal ethical code. Under the effect of identification and integration of collective intentionality, the "interpersonal title" was identified as a euphemized object which required people to use polite and respectful

expressions to refer to. In addition, English has a lot of euphemisms about old age, and RW Holder has compiled a total of 58 old age euphemisms in *A Dictionary of Euphemism*, such as "*blue hair*", "*evening of your days*", "*golden years*", "*mature*", "*middle-aged*", "*senior citizens*". However, there are very few euphemisms about the old age in Chinese. Zhang Gonggui's *Dictionary of Chinese Euphemism* contains zero entry for old age. The reason is the different orientations that the different groups make toward the old age/old age under the effect of the collective intentionality. In English-speaking cultures old age is identified as a stage of loneliness in life, and it sometimes arouses negative association in people's mind. It is regarded as a euphemized object, which leads to many euphemistic words related to old age. Old age, however, is regarded differently in Chinese culture. In the conventional consciousness of the Han nationality, old age is a stage of rich experience and old people are normally respected in society. Therefore, it is usually not considered as a euphemized object, and the conventional consciousness of respecting the elderly is the result of collective intentionality.

In sum, collective intentionality restricts individual intentionality and has the function of identifying and integrating individual intentionality. Under the effect of collective intentionality, euphemisms are renewed as the time progresses and bear some uniqueness of a certain group.

5. Intentionality interpretation framework of euphemisms

Based on the above discussion, we summarize the intentionality interpretation framework of euphemisms as follows:

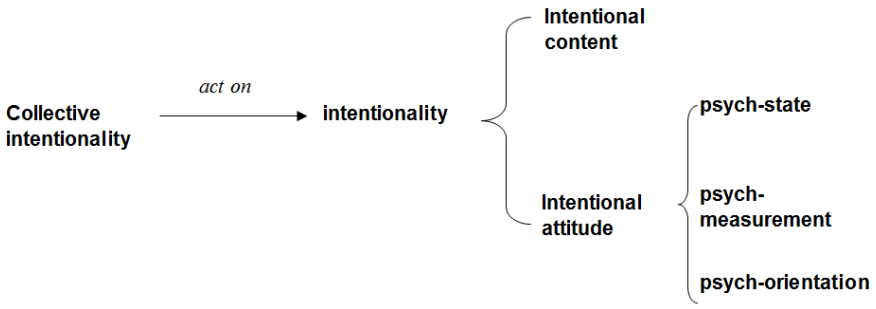

Figure 1. Intentionality interpretation framework.

1) The intentionality interpretation includes two aspects, namely collective intentionality and individual intentionality.

2) Under the effect of collective intentionality, a certain group forms common cognition, intention and emotion. Under the synergic effect of collective intentionality and social environment, the euphemisms are renewed with the time and bear features unique to a certain group.

3) Collective intentionality restricts individual intentionality and has the function of identifying and integrating individual intentionality. Individual intentionality assumes the task of "meaning incarnation". Only with the intentional participation of individuals can the meaning be obtained in the form of intentional activities and be embodied.

4) Individual intentionality has two dimensions, namely the language user's intentional content

and intentional attitude.

5) Intentional content is the content of the language user's intentional activities, indicating the focus of his/her attention. In the process of euphemism generation, the intentional content is the thing or event the language user focuses his/her attention on, that is, the thing or event the euphemism represents.

6) Intentional attitude is the attitude the language user holds toward the intentional content. It is the basis of the language user's intentional orientation. Intentional attitude can be divided into three sub-categories: psychological state, psychological measurement, and psychological orientation. In the process of euphemism generation, under the observation of psychological states such as fear, doubt, hope, intention, etc.; under the observation of psychological measurement of behind and latent; under the observation of psychological orientations such as being roundabout, humorous, complimentary, beautifying, kind etc., the language user chooses gentle, pleasant, inclusive, euphemistic words to replace harsh, offensive, discriminatory, and crude ones.

7) Intentional content and intentional attitude work jointly in the process of euphemism generation. There is an autonomy-dependence relationship between intentional content and intentional attitude. On the one hand, with different intentional attitudes, the same intentional content can be processed into different euphemisms. That is to say, in the formula of "A is B", "B" is not a single one; instead it is a collection of B1, B2, B3, B4… On the other hand, the same intentional attitude can be dependent on different intentional contents, thus generating different euphemisms. For example, under the effect of the psych-orientation of beautifying, barber is euphemized as "*hair dresser*", tailor as "*fashion designer*", butcher as "*meat technologist*", housewife as "*domestic engineer*".

6. Conclusion

This paper analyzes the role of intentionality in the process of generating euphemisms, and expounds and explains the relationship between individual intentionality and collective intentionality and the role of both in euphemism generation. The intentionality interpretation framework provides a unified explanation of the generation mechanism and epochal characteristics of euphemisms. This is a tentatively new way to study euphemisms, in the hope of enriching and deepening the research on euphemisms.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Research on motion-emotion metaphor and its social cognitive mechanism—A case study of Chinese Mandarin, Yi language and English

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Abstract: Chinese motion-emotion metaphor and its social cognitive mechanism are explored, for the first time, with a comparison between Mandarin Chinese, the Yi language and English. The interaction between motions and emotions is the key to do the research from the perspective of cognitive functionalism. Cognitive functionalism argues that language reflects people's consciousness, and the cognitive aspect of language interacts with the communicative function of language very well. According to this argument, motion-emotion metaphor, as a popular language phenomenon, can testify to such interactions. The comparative analysis of motion-emotion metaphors, from the perspective of cognitive functionalism, in this paper has proved to take the following aspects into consideration: the subjects' experiences of physical motions and their effects on objects; the universality and the specificity of such experience; the emotions' observable traits and their related motions; the common knowledge and normal beliefs among the motions' subjects and their surrounding contexts.

Keywords: motion-emotion metaphor; cognitive functionalism; intersubjectivity; social cognition; interaction

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1. Introduction

Metaphor is a prevalent part of everyday life. The topic of metaphor has drawn intellectual interest since remote antiquity and can be traced back to the ancient Greeks, who listed rhetoric as one of their seven Liberal Arts and metaphor as one of the paramount rhetorical devices. Smart methods have been tried in studying metaphor, viewing it syntactically, pragmatically, and cognitively.

In cognitive linguistics, there are three prevalent theoretical perspectives of metaphor study:

(universal) conceptual metaphors (Lakoff and Johnson, 1980), discourse metaphors, and language-consciousness interactionism. Trying to discover the evidence of support for these positions, Zlatev, Blomberg, and Magnusson (2012) conducted an empirical study to compare motion-emotion metaphors (MEMs) in English, Swedish, Bulgarian, and Thai, focusing on the source domain MOTION, showing some support for all three perspectives. A considerable degree of overlapping of MEMs among the four languages supported the universalism of conceptual metaphor theory, while clear differences supported a more cultural-specific approach. When taking all these results into consideration, there is strong support for the interactionist view (Zlatev, Blomberg and Magnusson, 2012: 425–426).

Furthermore, cognitive functionalism holds that language reflects not only people's consciousness, but also pragmatic and communicative functions. Cognitive and communicative functions are equally important in understanding languages and scientific research of them (Mischler, 2013: 1–2).

In the west, previous studies on emotional metaphors, from Jim Averill (1980) to Zoltan Kovecses (2000), and to the Conceptual Blending Theory (1997), have provided effective tools for the construal of metaphorical constructions. In China, the study of emotional metaphors originated also has a long history, traced back to the first collections of poems *Shijing* (1059 B.C.E.–476 B.C.E.) (Cheng, 1985). Chinese linguists began to introduce cognitive methodologies since the 1990s, which threw light on the emotional metaphor in a more cognitive way. Later specific studies on such emotional metaphors of anger, happiness, sadness, sorrow, and etc., with comparisons between Chinese and English, have explored the cultural overlap and cultural specificity; Ning Yu (1995) was a good example. Recently, a result of the comparative study on motion-emotion metaphor in four languages by Zlatev, et al. (2012), in which motion is the source domain and emotion the target domain, demonstrates the language-consciousness interactionism with full evidence and, furthermore, implies socio-cognitive functionality.

Motion-emotion metaphor, in which objectively observable motion descriptions have been used to metaphorically refer to subjective emotions, seems to have accomplished an impossible mission in this "transferring from motion to the emotion" process, but it exists in a large number of real languages. This strongly demonstrates how intersubjectivity vividly binds the two different categories of behavior and emotion together. From the perspective of cognitive functionalism, some motion expressions can express emotions metaphorically in essence, because: we first need to express our subjective feelings; and secondly, we often use our subjective experience to express these feelings. These objective experiences themselves can be perceived and felt by us through physiological reactions, and thus can be observed and experienced as a third party. This is the inter-subjectivity. It is this intersubjectivity that enables us to explain how the MEM realize the interaction among the actors, emotions, acts and emotions, and the surrounding social environment, especially the linguistic environment.

Just as Jordan Zlatev et al. has put forward in his previous studies, there are two main problems to be solved around the interaction between language and consciousness: one is what role subjective experience plays in MEM; the other is what role language or culture specificity plays in MEM (Zlatev, 2012: 424). Here we have a third question, that is, how can the psychological process be smoothly carried out from physical behavior to subjective emotion? Therefore we took a comparative analysis

of Mandarin Chinese, the Yi language, and English (as a meta material), to illustrate the how the MEM realize its social cognitive mechanism.

2. Hypotheses and specific questions

Initially, from a socio-cognitive perspective, we bring forth some hypotheses on the study of motion-emotion metaphor: first, the interaction can be processed within a culture and across cultures as well; second, the understanding these metaphors, no matter intercultural or cross-cultural, share a lot of common traits with body experiences and mental representations on the one hand, but preserves their language/culture specificity on the other hand (Zlatev, Blomberg and Magnusson, 2012); third, the degree of the overlap of MEMs is in direct proportion to the degrees of the interaction; last, the effect of such interaction can be testified through the understanding of MEMs cross-culturally. To test these hypotheses, we made a case study on Chinese MEM, and a cross-linguistic study later with specific questions concerning the following:

a. How to choose the corpus (sources, steps, principles)?

b. What are the roles of the participants in the interaction?

c. How about the frequency of the occurrences of organs in the source domain?

d. What about the frequency of positive emotions and negative emotions in the target domain?

e. Is there some correspondence in other languages, and what are their similarities and differences?

f. What is the culture-specificity of Chinese MEMs?

3. Classification of MEMs

3.1. Classification of "motion" in MEM

Here is a reasonable definition to motion: "the experience of continuous change in the relative position of an object (the figure) against a background, in contrast to stasis—where there is no such change—and in contrast to a dis-continuous change, as when a light suddenly lights up in position A, 'disappears' and then appears in position B (Zlatev et al., 2010: 393)." To further define, the "motion" we are discussing here refers to the change of relative position caused by motion, which includes the action of external force and the motion under its own action. The change of relative position refers to the spatial change of reference, including the lateral and vertical, displaced and non-displaced motion changes. Including direction and path. Based on this, Jordan Zlatev et al. classified motions into three categories: translocative/non-translocative motion; bounded/unbounded motion; self-caused/caused motion (Zlatev, 2010: 389–418).

3.1.1 Translocative/non-translocative motion

According to the special framework of reference, the behavior of continuous change relative to the average position occurs, that is, translocative behavior, while the behavior without such change belongs to non-translocative behavior, such as break, tear, wave, swing, knock, float, tear,

shake, etc.. According to different reference points, we have three different translocative motions: Geocentric (referring mainly to Vertical or Horizontal), Viewpoint-centered (speaker or listener) and Object-centered (figure or landmark) with moving objects or backgrounds as reference points. For example:

(1) He turns left. (Viewpoint-Centered, speaker)

(2) Please go away. (Viewpoint-Centered, hearer)

(3) He walked up. (Geocentric, vertical)

(4) He walked west. (Geocentric, horizontal)

(5) I push the car into the garage. (Object-centered, figure)

(6) I push the car forward. (Object-centered, landmark)

This classification is basically applicable to verbs in Mandarin:

(7) 他向左转了。 (Viewpoint-Centered, speaker)

(8) 请向左转。 (Viewpoint-Centered, hearer)

(9) 他站了起来。 (Geocentric, vertical)

(10) 汽车一直往西开。 (Geocentric, horizontal)

(11) 我把车推进了车库。 (Object-centered, figure)

(12) 大家一起把车向前推。 (Object-centered, landmark)

This classification is also applicable to the verbs in the Yi language.

(13) cy^{33} vy^{33} $tɕo^{34}$ $tɕo^{33}$ o^{33} （他向左转了）。

(14) vy^{33} $he^{21}ta^{33}$ $tɕo^{33}$ $hʌ^{33}$ （请向左转）。

(15) $cy^{33}te^{21}ko^{33}hi^{55}o^{33}$ （他站了起来）。

(16) $tʂhə^{33}tsy^{33}bu^{33}dʒi^{33}tɕo^{33}he^{21}ta^{33}khɜ^{33}ko^{33}ʂe^{34}$（汽车一直往西开）。

(17) $tʂhə^{33}tsy^{33}ŋa^{33}di^{21}ta^{33}de^{21}da^{33}$ （我把车推进了车库）。

(18) $tʂhə^{33}tsy^{33}ŋo^{21}di^{21}nho^{33}bho^{33}li^{33}$ （大家一起把车向前推）。

3.1.2 Bounded and unbounded motion

The so-called bounded means that the behavior itself must lead to the state-transition, such as the change of path: the starting point of action (S), the mid-point (M), and the end point (G).

(19) He left the company at 5 o’clock pm. (S)

(20) They moved to California. (G)

(21) The train will pass that small town. (M)

(22) The train has left from Copenhagen to Frankerfort. (S+G)

(23) Go across the river to the church! (M+G)

(24) They left from school across a church to the railway station. (S+M+G)

(25) The tree was split into two halves by the thunder. (state change)

Some people may disagree with (25), because the verb split has neither displacement nor specific path, but it causes the tree to change its state (into halves), so (19) is also a description of motion.

This kind of behavior has corresponding description in Mandarin:

(27) 孩子们从教室里跑了出来。 (S)

(28) 孩子们跑到了操场上。 (G)

(29) 他一下子跳过了那条沟。 (M)

(30) 孩子们从教室里跑到了操场上。 (S+G)

(31) 他穿过那片小树林来到了小山下。 (M+G)

(32) 他从屋子里跑出来穿过那片小树林来到了小山下。 (S+M+G)

(33) 他把柴一下就劈成了两半。 (state change)

There are also corresponding expressions with example 27 to 33 in the Yi language:

(34) ʌ^{33}ʑi^{3}ɣo^{34}mha^{55}ʑi^{33}ko^{33}ta^{33}du^{33}la^{33}（孩子们从教室里跑了出来）。

(35) ʌ^{33}ʑi^{33}ɣo^{33}bo^{55}bɛ^{33}ge^{33}de^{33}ko^{33}xi^{33}（孩子们跑到了操场上）。

(36) sti^{33} sti^{34}lo^{33}mu^{33}tɕhe^{33}la^{33}da^{33}tho^{55}ŋga^{33}（他一下子跳过了那条沟）。

(37) ʌ^{33}ʑi^{33} ɣo^{33} mha^{55} ʑi^{33}ko^{33}ta^{33}bo^{55}ŋge^{21}bɛ^{33}de^{33}xi^{33}（孩子们从教室里跑到了操场上）。

(38) sti^{33}si^{33}tɕo^{33}ʌ^{33}tsi^{34}ma^{33}ŋga^{34}du^{33}lo^{33}bo^{33}ze^{33}xy^{33}xi^{33}（他穿过那片小树林来到了小山下）。

(39) sti^{33}i^{33}go^{33}da^{33}bo^{55} si^{33}tɕo^{33}ʌ^{33}tsi^{34}ma^{33}ŋga^{34}du^{33}lo^{33}bo^{33}ze^{33}xy^{33}xi^{33}（他从屋子里跑出来穿过那片小树林来到了小山下）。

3.1.3 Self-caused and caused motion

This kind of verb is well understood to refer to the actions we can feel under the influence of external forces or our own forces. The latter also includes the forces of nature itself, such as the drop, fall, fall, fall due to gravity. Take English and Yi language as an example:

(40) He pushed the car forward. (Caused)

(41) 我们冒雨一起推车。 (Caused)

(42) ŋo^{21}ma^{33}ha^{33}tɕi^{21}ko^{33}ɕhy^{21}tʂe^{33}di^{21} (Yi language)

(43) The cup dropped. (Self-caused)

(44) 大家纷纷从车上跳下来。 (Self-caused)

(45) khe^{33}di^{33}ŋi^{33}hi^{55}tɕo^{33}mu^{33}tʂhe^{34}tsy^{33}ko^{33}da^{33}tɕhɛ^{33}la^{33} (Yi language)

To sum up, the "motion" discussed in this paper can be grouped into the following eight categories: "caused translocative bounded, caused translocative unbounded, caused non-translocative bounded, caused non-translocative unbounded, self-caused translocative bounded, self-caused translocative unbounded, self-caused non-translocative bounded, self-caused non-translocative unbounded". In order to correspond to the "motion" discussed earlier, we define "emotion" as "change in affective consciousness", which must emphasize change rather than a static state of emotion (Zlatev, 2012: 434).

3.2. Classification of MEMs

In order to delimit the material for the study and to unify all MEMs we have selected in English and Chinese, the following selection criteria were used as adapted from those mentioned by Zlatev, et al. (2012):

a. the sentence in which the MEM occurs does not express actual motion;

b. Substitution of figure expression in the MEM can lead to actual motion in a sentence.

c. Motion is expressed by the verb-root and not only in a satellite or preposition.

d. The expression of the figure denotes the self or a part of the self in a MEM.

e. Both source (motion) and target (emotion) meanings are accessible to speakers.

Based on this, many candidate motion-metaphors were removed from the analysis. For example:

(46) *He trembled with anger.*

(47) *四姨太太便马上拉下脸*

Lia xia nian

Pull down face

≈ got angry

(48) *They were filled with joy and happiness.*

(49) *你务必把这件事放到心里 !*

... Fang dao xin li

... Put arrive heart inside

≈...put it in your heart!

We can see that there is actual motion in (46), and according to criteria a, 46 is not the MEM. While (47) is a MEM with non-actual motion. In examples like (48), what moves are emotions (joy and happiness are filled in) and not the self, based on criteria d, while (49) is not a MEM because it is some other agent that moves, and not the self, either.

3.3. Corpus gathering and analysis

In previous studies made by Zlatev, et al. (2012), a method based on native or near-native speaker knowledge has been mainly used to identify MEMs. In this study, speaker intuition has mostly been used to direct the search, whereas all expressions (except the English MEMs taken from the Zlatev et al. (2012) study), are actual examples found in current language corpora, to a large extent in Acdemia Sinica Balanced Corpus of Modern Chinese with 10 million words. The dictionary of XDHYCD2005FifthEd accounts for another part, checking and providing some authentic examples for the selected motion verbs. Some online dictionaries, such as Webster, Oxford, Longman, Xinhuazijian, and cihai have also been consulted, especially in the search of creative metaphors.

Theoretically, the starting point for the investigation was to make a list of all motion verbs in the Zlatev, et al. (2012) study and to find the corresponding Chinese ones with overlapping semantics. Actually, we started from all possible expressions from 10,418 Chinese sentences with both motion and emotion expressed in the meantime, primarily aiming at identifying metaphors in a running text and a discourse, not for searching for specific metaphors. Therefore, a mixture of intuition and observation methods was used in the search and selection of metaphors. During this course, we try to discard word-to-word translation. Sometimes, new MEMs have been discovered, and we test them in the corresponding dictionaries.

Using the taxonomy of motion situation types of Zlatev, et al. (2010), all selected 56 MEMs (see **Table 1**) in Chinese were also classified into 8 types on the basis of their source domain: self-caused translocative bounded (10), self-caused translocative unbounded (6), self-caused non-translocative bounded (4), self-caused non-translocative unbounded (3), caused translocative bounded (7), caused translocative unbounded (7), caused non-translocative bounded (15), and caused non-translocative unbounded (5).

4. An analysis of the interaction between motion and emotion in MEM

Theoretically, observable motions and perceived emotions are the key to explain the interaction between them, falling into the following three aspects:

Firstly, MEM involves emotions which are commonly experienced in our daily life and has cultural uniqueness;

Secondly, the emotions here involved in MEM are all belong to human's basic emotions, and also has the unique characteristics of a specific individual.

Thirdly, when people express their emotions, they usually consider the physiological changes that are usually involved in these emotional changes, which can be directly observed and experienced by the cognitive subject. Many of these physiological changes are common and basic experiences, such as blood circulation acceleration, shortness of breath, staring, blushing, muscle tightness in the whole body when people are angry, shrinking, clenching and other behaviors noticed by the third party, and understood by the observer because of the common experience. This is what we call intersubjectivity.

It is because of the intersubjectivity mentioned in the third process that we can use the basic behavioral experience of the people mentioned in the first part to express emotional changes, and

Table 1. Motion-emotion metaphor types in Chinese

	Self-caused	**Caused motion**
+translocative/+bound	(1) F 掉进 LM (F falls into LM) (2) F 落进 LM (F falls into LM) (3) F 陷入 LM (F sinks into LM) (4) F 坠入 LM (F falls into LM) (5) F 出 LM (风头) (F goes out of LM) (6) F 下 LM (台) (F steps down LM) (7) F 过 LM (坎) (F crosses LM) (8) FP (心) 回 (FP returns) (9) FP (心) 落 LM (地) (FP falls to LM) (10)FP (心意) 到 (FP arrives)	(23) A 吹 F 上 LM (A blows F up to LM) (24) A 捧 F 到 LM (A carries F to LM) (25) A 放 F 在 LM (心上) (A puts F at/in LM) (26) A 冒 FP (火) (A sends out FP) (27) A 撒 FP (气) (A lets out FP) (28) A 泄 FP (气) (A lets out FP) (29) A 给 FP to LM (A gives FP to LM) (30) A 交 FP (心) (A gives FP)
+translocative/-bound	(11) FP (心) 沉 (FP sinks) (12) FP 倒 (FP falls) (13) FP (气) 来 (FP comes) (14) FP (心) 落 (FP falls) (15) FP 涨 (FP rises) (16) FP (心) 飞走 (FP flies away)	(31) A 吹捧 F (A blow carry with both hands F) (32) A 牵挂 F (A pulls hangs F) (33) A 牵动 F (A pulls moves F) (34) A 吸引 F (A attracts F) (35) A 吊 FP（胃口) (A lifts up FP) (36) A 拉下 FP (脸) (A pulls down FP) (37) FP (心) 提 (FP lifts up)
-translocative/+bound	(17) F 崩溃 (F cracks breaks down) (18) F 爆发 (F explodes) (19) FP (心) 碎 (FP breaks to pieces) (20) FP (肺) 炸 (FP explodes)	(38) A 放松 F (A lets F go and loose) (39) A 安 FP (心) (A stabilizes FP) (40) A 刺伤 FP (心) (A stabs wounds FP) (41) A 分 FP (心) (A divides FP) (42) A 放 FP (心) (A puts aside FP) (43) A 关 FP (心) (A closes FP) (44) A 静 FP (心) (A stabilizes FP) (45) A 开 FP (心) (A opens FP) (46) A 偏 FP(心) (A tilts FP) (47) A 撕 FP (心) (A tears FP) (48) A 释 FP (手) (A lets FP go) (49) A 翻 FP (脸) (A turns over FP) (50) A 断 FP (念头) (A cuts off FP) (51) A 扫 FP (兴) (A clears away FP) (52) A 解 FP (气) (A removes FP)
-translocative/-bound	(21) FP (心) 飘 (FP floats) (22) FP (心) 荡 (FP swings)	(53) A 打动 F (A beats stirs F) (54) F 动摇 (F stirs shakes) (55) A 担 FP (心) (A shoulders FP) (56) A 动 FP (心) (A stirs FP)

Note: F = Self is Figure, FP = Part of self is Figure, LM = Landmark, A = Agent

from these basic behavioral expressions we can understand the metaphorical meaning of the basic human emotional changes associated with them. In this way, the behavior of the subject, others (observers), society and subject interact in the MEM, realizing the mapping from the behavioral domain to the emotion domain.

In Table 1, we summarize and analyze the basic types of MEMs that we can find in Chinese. Now we discuss the interaction from the perspective of concrete behavioral expressions.

First, all the acts involved in the expression are not the acts which actually happened by the agent.

(50) 我的 心 要 碎 了。

wode xin yao **sui** le

ŋa^{55} hɜ^{33}mʌ^{33} ʤʅ^{55}lʅ^{21}ʨi^{21} (Yi Language)

my heart will break to pieces PFV

≈ I feel very sad.

(51) 坠 入 爱 河

zhui ru ai he

ci^{33}la^{33}ŋgu^{33}yʅ^{33}tsʅ^{21} (Yi Language)

drop into love river

≈ to fall into love

(52) 别 翻 脸 不 认 人

bie **fan lian** bu ren ren

sʅ^{33}da^{33} ȵi^{55}phu^{33} co^{33} a^{21}sʅ^{21}ma^{55} (Yi Language)

Don't **turn over** face not know people

≈ Please don't turn hostile.

The "xin" in "xin sui" in Example (50) is not actually "broken"; the "love" in "falling in love" in Example (51) does not exist in real life; and the "fan" in Example (52) does not really turn over the face, which is metaphorical expression.

Secondly, apart from the agent, all the acts involved in the expressions are human's experience in daily life. For example, the act of "sui" in "xin sui" really exists in real life, since lasses can be broken and stones can be broken. Similarly, in real life, we also have the experience of falling into rivers and turning over a page of books. That is to say, these actions themselves have been directly or indirectly experienced by people in real life, regardless of who performs these acts or bears them.

Moreover, all the motion expressions involved here are related to emotions, which are subjective, but people can perceive these behaviors themselves via inter-subjectivity. So when these motions

occur in our expressions, it's easy for people to understand how they happen, how they end, and what the consequences will be, just like what we have experienced before. Examples might be when something is broken (碎了 ; sui), it changes the original state of integrity, which can easily make us feel scattered, but mostly not so good; or those behaviors like " 落 , 沉 , 崩溃 , 炸 , 爆 " (fall, sink, claps, explode, etc.) are also associated with negative emotions such as "depression, sadness, disappointment, despair"; and " 开 , 放 , 释 (opening up, letting go, despair, etc.)" and so on, naturally associated with such emotions as "relaxation and reassurance"; the positive and upward behaviors such as " 上 , 涨 , 提 (up, lift and carry, etc.)" are naturally associated with such emotions as "excitement and happiness".

(53) 我的 心 终于 **落** 地 了。

wode xin zhongyu **luo** di le

ŋa^{55} hə^{33}ma^{55} tɪ^{55}da^{33} ŋo^{21}ʑu^{33} o^{33} (Yi Language)

my heart finally **fall** ground PFV

≈ I was relieved finally.

(54) 我 对 书 爱 不 **释** 手

wo dui shu ai bu **shi** shou

ƆŋaƆ^{33} the^{21}ʑɿ^{33} hɛ^{33}vu^{33} lo^{55} a^{21} ci^{33} (Yi Language)

I for book love no **let go** hand

≈ I loves books very much.

(55) 我的 心 **提** 起 来 了

wode xin **ti** qi lai le

ŋa^{55} hɛ^{33}ma^{55} ŋgo^{55}tʂɿ^{21}o^{33}0^{33} (Yi Language)

my heart **lift** stand up come PFV

≈ I became extremely nervous.

5. Conclusion and prospect

MEM is a metaphorical expression that expresses emotional changes by means of motion expression. It reflects the interaction of language and consciousness from the way of the interaction of motion and emotion. The comparative analyses of MEM in Mandarin Chinese and the Yi language, and Mandarin Chinese and English, all demonstrate the cognitive mechanism of MEM, the interaction of motion and emotion. From the perspective of cognitive functionalism, the social cognitive study of MEM in Chinese is undoubtedly an attempt and innovation of the paradigm of cognitive linguistics. The interaction between language and consciousness should be further reflected in the comparative analysis of MEM in other languages. In addition, many words in Chinese are not usually understood separately, such as: 担心 , 放心 , 崩溃 , 冒火 , 牵挂 (worry, rest

assured, collapse, anger, concern, etc.), but if they are considered separately, it is difficult to find corresponding partners in other languages, and with an infeasible result.

The result of the research illustrated a social-cognitive approach to metaphor, aiming to study the interaction of social cognition and personal/individual cognition in the process of construing metaphors; MEMs within a specific language, Chinese for example, and a cross-linguistic study of them between Chinese and English, can both testify such interaction within one specific language and across different languages.

Conflict of interest

No conflict of interest was reported by the author.

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ORIGINAL ARTICLE

Strategy instruction and transfer in the EFL classroom

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Abstract: This study examines the generalizability of research in the areas of instruction; learning; and transfer of learning to the role these play in the area of the use of strategic competencies in foreign language contexts (FLC). While previous studies have tended towards a focus on learner variables, this study includes the conditions of applicability with a task that can impact learning and transfer as well. The contributions of both variables, learner and task, were investigated through note-taking strategy instruction and transfer, to ascertain the effect on reading comprehension of textual materials in the English as a foreign language (EFL) classroom. Learning was measured as a precursor to transfer. In order to investigate the role of instruction and transfer in the transfer of strategy use, a mixed design using both qualitative and quantitative approaches for design and analysis was used. Findings suggest that the relationship between instruction and transfer as represented by strategy use and task performance is a multidimensional one, and that there are implications for language learning instruction in the foreign language classroom.

Keywords: classroom strategy instruction; foreign language learning; reading comprehension; research methods; transfer of learning

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1. Introduction

Over the past few decades, there has been a shift in the field of education in which less emphasis has been put on teachers and teaching and a greater emphasis has been placed on learners and learning. Congruent with this, second language (SL) instruction has moved to a more learner centred approach to teaching and learning (Cohen, 1998), where learner variables such as the role of learning strategies and how they contribute to success in the SL classroom have been explored (Griffiths, 2007; Nyikos, 1996; Rivera-Mills and Plonsky, 2007). The research suggests that empowering language-learners with strategic competencies assists them in their learning and performance outcomes. Learning strategies within the SL learning literature are defined in various ways. A general description of learning strategies is they are controllable processes that facilitate particular performances, or more specifically, they are plans oriented toward successful

task performance. Learning strategies can be described as specific mental process or systematic plans used by learners to regulate their language learning and to increase their skill (Cohen, 1998). In addition, the literature in second language learning extends this definition to include specific actions taken by learners to enhance learning (O'Maley, 1990; Oxford and Leaver, 1996), that is, 'the steps or actions selected consciously by learners either to improve the learning of a second language or the use of it or both (Cohen, 1998: 5). Research on the characteristics of successful foreign language (FL) learners indicates that, firstly, they use strategies, and secondly, they apply them differently from less successful learners (Chamot and El-Dinary, 1999; Qingquan et al., 2008). For example, in a classroom study in which Turkish EFL learners' reading strategies and the effect of reading strategy instruction on reading comprehension were investigated (Salataci et al., 2002), the results revealed improved performance on reading tasks. In another study (Spörer et al., 2009), the effects of strategy instruction on reading comprehension tasks with elementary school students in German were explored. It was found that learners who receive learning strategy instruction achieved higher scores on reading comprehension tests when compared to those learners who did not receive strategy instruction. A further review of the literature indicates that in addition to using a particular strategy constantly, successful language learners use a variety of learning strategies, and these strategies can be viewed as tools for effective learning, and that appropriate use of learning strategies results in improved proficiency, and consequently greater self-confidence (Griffiths, 2007; Qingquan et al., 2008; Oxford and Nyikos, 1989). In addition, research suggests that the use of learning strategies correlates with learner success and confidence, where more successful learners are reported to use a larger repertoire of strategies more frequently than less successful learners (Griffiths, 2007). Furthermore, researchers have reported the impact of learning outcomes, noted through the difference in the variety and use of learning strategies between successful and unsuccessful language learners in an English as a foreign language (EFL) context in China (Qingquan et al., 2008). The results of this study indicate that more successful language learners use a variety of learning strategies, such as using context to find the meaning of difficult words, previewing lessons before attending class, reviewing lessons after class, and having a positive attitude toward the target language. This research indicates that learning strategies do contribute to the language learning process and subsequent performance of FL learners, be it communicative competence or examinations.

While the usefulness of learning strategies in improving learners' language development can be observed generally, it can also be argued that learning strategies are beneficial in the more specific development of individual language skills, for example, reading comprehension. Reading, as one of the receptive language skills, is commonly taught in a FL context as a separate subject apart from other language skills such as writing, listening and speaking. Since reading in the target language requires knowledge about the language, setting, content and text structure, language learners in FL contexts often encounter difficulty when trying to construct meaning out of what they read. To minimise the difficulty they encounter, learners can benefit from employing a number of learning strategies during the reading process (O'Malley and Chamot, 1990; Oxford and Leaver, 1996). For example, to find a main idea quickly, learners can apply cognitive strategies such as skimming and scanning. To understand unfamiliar words found in the reading texts, students can apply guessing strategies and other strategies such as the use of linguistic and contextual clues. These types of strategies, when used appropriately, can facilitate learners' understanding, thus giving the learner practical means to facilitate comprehension. So, it makes pedagogic sense in a

reading classroom to teach learning strategies. The responsibility for this lies with the teacher. In an EFL context teachers need to integrate learning strategy instruction into classroom learning. In order for instruction to be effective, teachers must engage with the teaching of learning strategies. The challenge for teachers in integrating learning strategies into practice is to reconceptualise how they view teaching and learning; traditionally, teaching and learning has been a teacher-focussed activity involved in transmission, whereas learning strategy instruction is aimed at equipping the learner to take responsibility and control of their own learning, a learner centred view. In addition, integrating learning strategy instruction into classroom teaching and learner practice requires a conceptualisation of teaching centred on empowering the learner, the role of the teacher is no longer only of a disseminator and enlightened one. Instead, they become facilitators of learning. Another challenge that language teachers can face, particularly in a FL teaching context, is the limited time available for language instruction, and any new approach takes time and effort to implement and master (Chamot, 2004). Learning strategies can be taught either explicitly or implicitly (O'Malley and Chamot, 1990). In explicit instruction, teachers inform learners about the benefits and the purpose of using learning strategies as part of language learning activities. By contrast, in implicit strategy instruction, learning strategies are presented to learners indirectly through an embedded approach, using activities and materials to draw out the strategies being taught, without explicitly informing the students about the benefits and the reasons why they need to learn the strategies. However, research indicates that explicitly teaching strategy use is more effective. Firstly, in instruction, that is teaching the strategy (O'Malley and Chamot, 1990; Qingquan et al., 2008); and secondly, in promoting the subsequent application of the strategy to other tasks, that is, transfer (Ross, 1984). Drawing from studies in education and SL acquisition research reveals that strategy transfer is affected by three variables: first, quality of instruction; second, the task; and third, the learner. First, quality of instruction involves the amount of practice, especially practice that varies in content and difficulty (Salomon and Perkins, 1989); the amount of guided feedback (Chamot, 2004); the degree of initial learning sufficient to assume learning has occurred (Salomon and Perkins, 1989); and whether or not the learner is actually able to successfully use a strategy after the initial learning. Quality of instruction also entails training aimed at developing the learners' awareness of strategy use in conjunction with cognitive learning strategy use. Cognitive learning strategy involves training in the use of judicious instructional strategies (Gagne et al., 1993; Ross, 1984), that is, which strategy to use to achieve the desired outcome. Second, transfer of a strategy is enhanced by task similarity. The probability of transfer from one task to another is increased when the new task is similar to the previous task (Ross, 1984), but this this is not always easy for learners to identify. Therefore, learners need to understand the purpose of a task clearly and the structure of the task, in order to know the conditions under which a strategy applies (Cohen, 1998; Oxford and Leaver, 1996). Third, learner variables, such as the degree of control the learners have over a strategy and what they believe about strategy effectiveness, affects strategy transfer (Salomon and Perkins, 1989). This again involves the extent of initial learning of the strategy; whether or not learners consciously evaluate strategy effectiveness; and whether or not learners attribute their success to effort or to use of the strategy (Gagne et al., 1993). It also includes whether or not learners can screen out distracting thoughts when trying to analyse a new problem (Kuhl, 1985), and the degree of relevant declarative knowledge possessed by the learners (Bjork and Jacobs, 1985). Ultimately, in order for learners to transfer strategies, they must first learn a strategy successfully, and then, recognise a new task as an appropriate context for the implementation of the strategy. Based on a review of the

literature, this study asks two general questions: 1) are the general findings on strategy learning and transfer applicable to the FL classroom? and 2) to what extent is transfer an interaction of task and learner variables? In order to explore these two questions, a note-taking strategy instruction program based on reading materials will be implemented. The following hypotheses are proposed:

1) Learners who receive note-taking strategy instruction will perform more successfully on the post-test and transfer tests than those who do not.

2) Among learners who receive strategy instruction, those who use the note-taking strategy will perform more successfully on the post-test and transfer tests than those who do not.

3) Similar content on the post-test and transfer tests will lead to greater transfer of the note-taking strategy by strategy users.

4) There is a relationship between note-taking strategy mastery as indicated by the number of main ideas correctly identified on the post-test, and post-test performance.

2. Method

2.1. Participants

Participants were enrolled in a core English course at a Japanese Institute of Technology. From a population of 2000 first-year students 338 students participated in this study. All participants were Japanese, average age of 19 years old, and had six years of English as a part of their secondary school education (years 7-12). The English level of the learners was basic, and students' struggled to communicate in English. The students had yet to declare their majors but their interests ranged from mechanical and material science engineering, information and computer sciences, architecture, civil engineering, to environmental sciences. The 338 participants were randomly assigned to ten classes and then the ten classes randomly assigned into two groups. Of the ten classes, six classes (totalling 203 learners) were assigned to the control group and four classes (totalling 135 learners) to the treatment group. Of the 338 learners, 260 were male and 78 were female. 23% of both the control and treatment groups were female.

2.2. Materials

2.2.1 Instructional materials

The inclusion of an instructional intervention such as the note-taking strategy-training programme required a tailored and appropriate set of instructional materials. The researcher developed both teacher materials and student worksheets for the teaching of the note-taking strategy. The materials focussed on two areas: 1) "what is note-taking?" and "why take notes?" and 2) a technique for taking notes in which the learners were to be instructed. Materials addressing skills such as identifying main ideas and supporting details as well as transitions were taught as part of the existing curriculum.

2.2.2 Reading passages

In order to select level and length appropriate reading passages to be used for the pre-test, post-tests, and transfer tests, three independent raters were used. Inter-rater consensus was required on

the criteria for the reading passages.

The reading passages contained an equal number of main ideas and word length of the passages comparable. For this study, all the reading passages contained four main ideas. The pre-test passage, 338 words in length; the post-test was 330 words in length. Transfer test A, 334 words; and transfer test B, 310 words.

2.2.3 Comprehension questions

Ten questions, designed to gauge the learners' ability to understand and contextualize the textual material, particularly content, of the reading passages, were developed. Understanding the content of the text was essential for the participants to be able to continue. The next step required participants to be able to recognise levels of information, such as main ideas, supporting ideas, examples and explanations and therefore, comprehension vital. The 10 questions were rated for level of difficulty by two independent raters. The participant response model for the 10 questions used a three choice option: True/False/Doesn't Say. The comprehension questions were designed to be quick and easy to integrate into class sessions.

2.3. Procedure

It was necessary that all activity related to the study be integrated into the existing classroom time allocation and curriculum. That is, serve a complementary role at the least. Therefore, the strategy instruction was embedded into 45 minutes of the regular 75-minute English class period. All participants in the study were taught a sequence of lessons in which they learned about basic reading skills including recognising main ideas, finding supporting ideas and recognising transition words. The instructional period for these three topics took place over the same period of time for all participants and was conducted with the same materials. In addition, the strategy-training (treatment) group received instruction in a specific note-taking strategy. The note-taking strategy instruction addressed how and why note-taking helps us to remember, that the process of note-making matters, and judicious strategy use, knowing when to take notes. In contrast, the participants in the control group did not receive the treatment instruction on note-taking and its benefits, but did continue with the regular curriculum that presented main ideas, supporting ideas, and transitions.

2.3.1 Design

The study was of a mixed design using both qualitative and quantitative approaches for design and analysis. The design and analysis have been previously piloted and the design replicated in this study. All instruction and testing were in English. The study took place over a nine-week period out of a ten-week term. The pre-test was administered to the participants in the first two weeks, and seven weeks later, post-test given to the participants. Ten to twelve days after the post-test, the Transfer-test was completed by the same participants. In the three class periods between the post-test and transfer-test, the participants engaged in their regular class curriculum such as listening and speaking tasks, and there was no reference to the strategy-training program.

In order to operationalize the investigation into instruction, transfer and performance, a one between factor (instruction) and a within subject factor based on the order in which participants received Transfer Test A, and Transfer Test B were used. A repeated measure was essential with three trial factors: post-test, Transfer Test A, and Transfer Test B. All classes took the pre-test, the

post-test, and the transfer tests and completed the same class work. The intervention being only with the treatment group which, in addition, received the note-taking strategy-training program.

2.3.2 Variables

In light of the four proposed hypotheses for this study:

1) Learners who receive note-taking strategy instruction will perform more successfully on the post-test and transfer tests than those who do not;

2) Among learners who receive strategy instruction, those who use the note-taking strategy will perform more successfully on the post-test and transfer tests than those who do not;

3) Similar content on the post-test and transfer tests will lead to greater transfer of the note-taking strategy by strategy users;

4) There is a relationship between note-taking strategy mastery as indicated by the number of main ideas correctly identified on the post-test, and post-test performance;

the following variables are identified: 1) pre-test performance; 2) strategy instruction; 3) strategy use; and 4) task similarity. 1) Before the strategy instruction program began, a pre-test was conducted, in which the participants completed a reading comprehension test based on a reading passage they had completed for homework from the previous class. The purpose of the pre-testing was to have a reliable point from which to measure any effect. 2) the groups into which participants were placed determined if they were in a treatment or control group. The treatment group received strategy-instruction in the form of explicit training and practice with the note-taking strategy. The control group did not receive any practice or training or feedback on the specific note-taking strategy used for the treatment group. 3) strategy use was determined by categorising the learners' study notes as either note-taking strategy use as per instruction or non-use. 4) task similarity was determined by the transfer tests. Two different two transfer tests were used. One transfer test was similar in content to the post-test, and the other transfer test was unrelated in content. The transfer tasks were: Task A (similar content to the post-test), and Task B (dissimilar content to the post-test). Successful use of the note-taking strategy was measured by the percentage of main ideas identified, as was evident in the learners' notes for the post-test, Transfer Test A and Transfer Test B.

2.3.3 Counterbalancing

In order to minimize any effect due to the order that Transfer Test A and Transfer Test B were taken by the participants, that is, first or second, the order in which participants took the tests varied.

2.3.4 Scoring

To be able to determine if using the note-taking strategy made a difference, performance scores between the treatment and control groups on the pre-test, post-test, Transfer Test A, and Transfer Test B, were measured. This was determined by how many of the comprehension questions for that particular reading passage participants could correctly answer. In order to determine note-taking strategy use, all the materials used by participants in preparing each of the reading passages were collected at each testing phase, and evidence of use rated. A dichotomous scale of 'used' or 'not used' was applied to note-taking strategy presence on the pre-test, post-test, transfer Test

A, and Transfer Test. 'Use' was demonstrated by signs that the participants had made an effort to apply the note-taking strategy as taught during the treatment phase. Once note-taking strategy use was supported in the notes of a participant, the notes were then rated for the number of main ideas correctly identified. During the process of scrutinizing notes and study materials, two independent raters were used.

2.4. Data analysis

In order to gain quantitative insight into the data, a fully factorial (M)ANOVA was used. This is a least squares programme designed to minimise problems related to unequal group sizes. As participants in this study were measured under each of the three test conditions (post-test, Transfer Test A and Transfer Test B), repeated measures analyses were necessary. In addition, to establish a starting point to measure change from for each group, differences between the control and treatment groups' pre-test scores were examined through a one-way ANOVA. Finally, a one-way ANOVA using a teacher variable with the post-test scores was conducted for both the treatment and control groups was applied to check for teacher effects in the delivery of instruction.

3. Results and discussion

3.1. Overview of results

The findings of this study were consistent with the general research into learning strategy instruction and transfer in school contexts. The findings reveal a significant relationship between learning strategy use and success in FL classroom learning. This was demonstrated by significantly greater overall use of learning strategies among more successful learners. Furthermore, the findings revealed patterns of use, and highlighted the relationship between strategy transfer and successful performance in foreign language learning.

3.2. Pre-test scores

All participants were pre-tested at the commencement of the study and this coincided with the beginning of the University semester. The purpose of pre-testing was to establish a starting point, or baseline, from which changes during post-testing could be seen. In addition, the need for parity between the treatment and control groups at the beginning of the study was essential. Results from the pre-test indicated that there was no significant difference ($F [1, 335] < 0.01$, $p = .95$) in learners' performance between the control and treatment groups, ($M = 6.08$, $SD = 1.37$, and $M = 6.08$, $SD = 1.07$, respectively).

3.3. Teacher effect

Within the design of the study, there was an awareness of the possibility of a teacher influence during the instructional phase for the treatment group due to individual differences in style, pedagogy and relationship. Data indicated that there was no significant difference between the control groups for Teacher A and Teacher B on the post-test. Furthermore, a significant improvement (increase of 1.75 and 1.11, respectively) was noted at the post-test between the performance of the treatment groups when compared to the control groups for both Teacher A and Teacher B, $F (1, 316) = 6.72$, $p = 0.01$. In summary, the treatment groups for both teachers outperformed the control group supporting the effectiveness of the strategy note-taking instruction.

3.4. Strategy instruction and test performance

Hypothesis 1 posed that learners who received note-taking strategy instruction would perform more successfully on the post-test and the transfer tests than those who didn't receive the note-taking instruction. This interaction was found to be significant, $F(1, 303) = 142.45$, $p = .01$, and indicated that the strategy instruction program had been successful. This then gave a sound base from which transfer could be measured. Results indicated that participants in the treatment group successfully engaged in applying, or transferring, the note-taking strategy to novel tasks. Notably, when compared to the control group ($M = 7.03$, $SD = 1.35$, $M = 6.70$, $SD = 1.83$, and $M = 6.59$, $SD = 1.58$, respectively), the treatment group achieved significantly higher performance scores on the post-test ($M = 8.38$, $SD = 1.07$), Transfer Test A ($M = 8.34$, $SD = 1.31$), and Transfer Test B ($M = 7.78$, $SD = 1.69$).

The success of the strategy instruction program in this study draws attention to two important points related to instruction and transfer. The first is a learner variable and that is, learners need to be aware that there are strategies available and that using them can improve comprehension and test performance. The second is a pedagogic variable and that is, it is essential to allow enough time for the inclusion of the instructional program with in the class periods. The significant effect of the training program confirmed that strategy instruction must be conducted over a substantial enough period of time to allow for learning (Salomon and Perkin, 1989). While a simple thing, time for learning within the context of this study was critical. Without evidence of learning of the strategy in the instructional period, the transfer phase of the study would not have been possible. To this end, the strategy training explicitly addressed the learners' awareness of strategy use, stressing the positive contribution applying strategies could make to their comprehension and wider study (Chamot, 2004; Gagne et al., 1993). In addition, the strategy instruction program encouraged the participants to reflect on their strategy use and the contribution it made to their learning outcomes, for example, in test performance (Gagne et al., 1993). Embedding the instructional materials into the existing curriculum and teaching them as an extension to core material gave relevance and purpose to the note-taking strategy instruction used for the treatment. During the training program learners were encouraged to see the note-taking strategy as a tool for assisting and enabling reading comprehension (Salataci and Aykel, 2002; Spörer N et al., 2009). Strategies were something they had control over and were able to use to work independently. To summarize, based on the findings of this study, a significant relationship was found between the condition participants were in (treatment or control), using the strategy, and test performance scores. It can be summarised as follows: 1) participants within the treatment group out performed participants in the control group; and 2) participants within the treatment group who applied the strategy performed the best.

3.5. Strategy use and test performance

In order to measure transfer of the strategy to novel tasks as hypothesized in hypotheses 2, 3 and 4, only the treatment group was used. Hypothesis 2 stated that among learners who received strategy instruction those who used the note-taking strategy would perform more successfully on the post-test and transfer tests than those who did not. Not only was there initial support for this from hypothesis 1 data, but also in the data for hypothesis 2, $F(11, 122) = 5.47$, $p = 0.02$. Participants who used the note-taking strategy as presented in the treatment phase, out performed participants who did not. The distinction between hypothesis 2 and hypothesis 1 is important. The study would claim that not only

is exposure to strategy instruction important, but participants who apply the strategy will perform more successfully. Being able to demonstrate learning in this study in order to claim transfer was foundational to hypotheses 2, 3 and 4. The program started by requiring participants to complete the pre-test. This testing was used to confirm that none of the participants demonstrated use of a note-taking strategy when studying the reading. From this point, the implementation of the note-taking strategy program as the instructional phase, and results from post testing as the use phase, indicating that the treatment group achieved significantly higher performance scores on the post-test ($M = 8.38$, $SD = 1.07$), and Transfer Test A ($M = 8.34$, $SD = 1.31$) and Transfer Test B ($M = 7.78$, $SD = 1.69$) as the applying phase. In order to encourage use the note-taking strategy, the literature had highlighted the importance of participants recognizing a benefit and value to the effort involved in applying it. In order to build this kind of attribution in the participants, the training program encouraged strategy evaluation (Oxford and Leaver, 1996; Gagne et al., 1996). For example, participants were encouraged to compare their pre-test performance with their own progress during the training program, and in doing so, it became apparent to the participants that use of the note-taking strategy was resulting in higher test scores (Salataci and Aykel, 2002; Spörer N et al., 2009). This was aimed at developing the learners' awareness and understanding of the strategy and thereby encouraging the learners to attribute success to use of the strategy (Chamot, 2004; Gagne et al., 1993).

3.6. Strategy use and task similarity

Task similarity has long been a stumbling block to novice learners. Recognizing occasions for use requires that the participant see past the surface features of a task, features such as content, structure, context or language. Hypothesis 3 purports that task similarity on the post-test and transfer tests would lead to greater transfer of the note-taking strategy by strategy users. The findings of this study did not support this. It was found that participants were able to recognise occasion for use and applied the strategy on both Transfer tasks, regardless of content similarity (Qingquan et al., 2008; Oxford and Nyikos, 1989; Kuhl, 1985). Flexible use of the note-taking strategy is a solid indicator of successful initial learning (Salomon and Perkins, 1989). 71 of the participants ($n = 87$) who used the note-taking strategy on the post-test applied the note-taking strategy to Transfer Test A (similar), while 77 participants who used the note-taking strategy on the post-test also used it on Transfer Test B (dissimilar).

3.7. Mastery of strategy and score

The final hypothesis proposed that mastery of the strategy would result in higher test performance scores. This relationship was supported by the results of the study. Hypothesis 4 stated that there was a relationship between note-taking strategy mastery as indicated by the number of main ideas correctly identified on the post-test, and post-test performance. It was noted in this study that with the increase in participants' scores on the post-test scores came evidence of an increase in the number of main ideas identified for the reading passage. This relationship was surmised as one of the criteria for mastery. Within the treatment group, the number of main ideas correctly identified on the post-test reading by participants had a significant effect on post-test scores, $F (4, 122) = 6.58$, $p = 0.01$. The relationship is as follows: the more main ideas correctly identified by the learner, the higher the learner's score. Research in the note-taking literature suggests that prose-learning strategies, including note-taking, are beneficial in at least two ways relevant to this study: 1) enhancing the learner's understanding; and 2) facilitating recall by giving it organisation and

structure (Qingquan et al., 2008; Salataci and Aykel, 2002; Spörer N et al., 2009; Brown, 1984).

3.8. Limitations for the study

It was important to this study that it was conducted under regular classroom conditions with a program of instruction that complemented and was integrated into the existing curriculum. For instructional programs to be useable by classroom teachers, they must be integrated and seen as worth the effort. This had to be demonstrated under naturalistic conditions. There were specific limitations due to the integrated approach of the training program, for example, timeframes and an existing curriculum. For example, the time between the post-test and transfer tests was four class sessions. While this was adequate, a longer time between the post-test and transfer-test would be something to consider. There were also general points for consideration. For example, the population in this study was homogenous in age and schooling and all participants had a low English level. Limitations related to the choice of strategy for instruction; how performance was measured; and how strategy use was demonstrated should be considered in understanding the results of this study.

3.9. Implications for instruction

It is evident from the success of the strategy-training program used in this study that strategies can make a difference, and cognitive strategies are relevant to all fields of study, including second and foreign language learning. The most salient findings relevant to classroom practice are: 1) that an integrated and explicit approach to strategy training is effective; 2) that strategy training can be included into existing curriculums; 3) learner awareness and attribution of success are important. Pedagogic implications also emerged. The study confirmed that instruction, and practice that encourages exposure to a range of reading tasks and requires a variety of response activities from learners is important in teaching for learning and mastery. And that instructional materials must be appropriate to the reading level of the students if there is to be meaningful testing (Salataci and Aykel, 2002; Spörer N et al., 2009) and learning strategy transfer (Brown, 1984).

4. Conclusion

In this study, the contributions of learner and task variables in strategy learning and transfer were investigated. This was achieved through examining the effect of explicit instruction in the use of a note-taking strategy as a means of improving comprehension of textual materials in the English as a foreign language (EFL) classroom. Within the school context and within the language leaning classroom success in education is measured by demonstrated achievement. This study has looked at the contribution learning strategies can make to language performance. Strategic competencies remain an integral part of the learning process and the benefits of strategy use can be seen in learners' achievement. The findings suggest that performance in the language classroom is influenced by the relationship between instruction and transfer as represented by strategy use and task performance is a multidimensional one of which, language is but one aspect.

Author contributions

RLN is the sole researcher of this study and the writer of this paper.

Conflict of interest

The author reported no conflict of interest.

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