Non-canonical passives in Chinese

A mental space account

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This paper examines a non-canonical passive construction in Chinese. In this construction, the passive marker *bei* can proceed a constituent including intransitive verbs, adjectives and nouns, in such expressions as *bei zisha*/'commit suicide,' *bei xing fu*/'happy' or *bei gaotie*/'high speed train.' Following Mental Space Theory (Fauconnier 1994, 1997), this paper argues that the construction serves as a space builder, which prompts conceptualizers to build a counterfactual space to hold the event conveyed by the constituent but deny the event or its associated assumption in the base space. The Mental Space operations produce the interpretations of the construction featured by ambiguity and irony. This study demonstrates the existence of dedicated counterfactual constructions in Chinese. It showcases an attempt to posit cognitive operations as the constructional function and outlines a cognitively plausible procedure to derive specific interpretations of the construction in the context.

Keywords: the non-canonical passive construction, constructional function, Mental Space, counterfactuality, irony

关键词：非典型被字构式、构式功能、心理空间、反事实、反讽

1. Introduction

In the last decade Chinese passive constructions have attracted intense scholarly interests and generated prolific research (Chen 2010; Chen 2017; Huang & Liu 2014; Jing-Schmidt & Jing 2011; Shen 2010; Shi 2013; Wang 2011; Xiong & He 2012; Yao, Song, & Singh 2013; Yuan & Liang 2016; Zhang & Zhu 2010). Most recently, a non-canonical passive construction has emerged with the development of networked communication. Its structure can be formally represented in (1). Position 1 is filled by an NP which serves as the subject of the sentence. Position 2 is fixed with a passive marker *bei*. Position 3, marked by X, can be filled

in with a verb, an adjective or a noun (Huang & Liu 2014), in contrast to the canonical passive structure that requires a transitive verb to fill in X. An example is given in (2). Position 1 is taken up by the subject (i.e., *Ta*/'He'). Position 3 carries the intransitive verb of *zisha*/'commit suicide.'

(1)   ... NP ...*bei* ...X...
          1   2   3

(2)   他被自杀。
      Ta bei zisha.
      He passive marker commit suicide.
      'He *was said to have* committed suicide.'[1]

Existing research has proposed different interpretations associated with this non-canonical passive structure. For instance, Shi (2013: 14) came up with three interpretations of *bei zisha*/'commit suicide.' First, the participant was killed by someone else but was claimed to have committed suicide. Second, the participant was forced to commit suicide but claimed to have done so by his or her own choice. Third, the participant did not die but was rumored to have committed suicide. Notably, the interpretations of the construction carry a sense of irony (Yao, Song & Singh 2013), featured by the negation of the salient meaning (Giora 1995). In this structure, the salient meaning is coded by the filler of X, for instance, the suicide that the speaker was informed of. Nevertheless, the speaker, by using the construction, denies the truthfulness of this message as reflected in the three interpretations, none of which matches the claim of suicide.

   If the non-canonical passive is viewed as a construction (i.e., pairing of form and function), it begs the question with regard to the constructional function (Goldberg 1995, 2006). The constructional function must enable the conceptualizers to produce the interpretation of the construction in the context, such as the three interpretations of (2) with the ironic effect. This research argues that the non-canonical passive construction functions as a Mental Space builder. It prompts the conceptualizers to carry out Mental Space operations to derive the interpretations of the construction. Empirically, this study contributes to the study of counterfactuality by demonstrating the existence of dedicated counterfactual constructions in Chinese. Theoretically, the study stands for an attempt to posit cognitive operations as the constructional function and outlines a cognitively plausible procedure to derive specific interpretations of the construction in the context, including the rhetoric effect.

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1. The English translation is only a rough paraphrase of the intended meaning, as English does not share this type of non-canonical passive expressions.

The paper is structured as follows. Section 2 describes the form/function pairing of the non-canonical passive construction. Section 3 describes how the Mental Space operations produce the interpretations of the construction in the context. Section 4 describes the way that the ironic effect is produced. Section 5 concludes the paper.

2.   Form/function pairing of the non-canonical passive construction

The non-canonical passive can be viewed as a construction, given its unpredictability of the filler of X. Construction Grammar (Goldberg 1995) requires a construction to be unpredictable from canonical rules of grammar with regard to its form or function. In the present case, the rule of passivization in Chinese canonically requires a transitive verb to be passivized. However, it turns out that intransitive verbs, adjectives and nouns can follow the passive marker in the non-canonical passive structure (See Section 2.1 for illustration), making it impossible predict the range of constituents that can be the filler of X. Consequently, the non-canonical passive structure can be viewed as a construction, that is, a pairing of the constructional form and the constructional function (Goldberg 1995, 2006). This section examines the form and the function of the construction as well as their pairing.

2.1   The form of the construction

The form of the non-canonical passive construction can be illustrated by a comparison with its canonical counterpart. In Chinese there are two types of canonical passive structures, the short passive and the long passive (Chappell & Shi 2016: 467). The long passive has the agent of the action followed by the passive marker. The agent is further followed by the verb that receives a passive reading, as in (3a) and (3b). The short passive has the verb directly follow the passive marker with the agent un-coded, as in (4a) and (4b). The long and the short passives resemble the English passive with and without the by-phrase respectively, as illustrated by the translations.

(3)   a.   他被凶手杀了。
            Ta bei xiongshou sha-le.
            He passive marker murderer kill-ASP
            'He was killed by the murderer.'

b. 他让坏人骗了。
   Ta rang huairen pian-le.
   He passive marker bad guy cheat-ASP
   'He was cheated by the bad guy.'

(4) a. 他被杀了。
   Ta bei sha-le.
   He passive marker kill-ASP
   'He was killed.'

b. 他被抢了。
   Ta bei qiang-le.
   He passive marker rob-ASP
   'He was robbed.'

The non-canonical passive construction resembles the short passive in two aspects.[2] First, while the long passive allows alternative passive markers such as *rang* and *jiao, bei* is often the only one allowed to signal the passive meaning in the short passive and the non-canonical passive construction (Chappell & Shi 2016). Second, as the short passive, the non-canonical passive construction has the passive marker *bei* followed by a constituent that receives a passive reading, with the agent un-coded.

However, there is a major difference between the non-canonical passive construction and the canonical short passive. In the latter, the passive marker is usually followed by a transitive verb that is passivized, such as *sha*/'kill' in (4a) and *qiang*/'rob' in (4b). In contrast, the non-canonical passive construction expands the range of constituents that can follow the passive marker *bei.* This is why in Position 3 in (1), an abstract label of X is used. The X can be filled by an intransitive verb, an adjective or even a noun.[3] Consider Examples (5) to (10):

(5) 上海知名主持人曹可凡'被自杀' 2名造谣者已被抓
   Shanghai zhiming zhuchiren Cao Kefan 'bei zisha' 2 ming zaoyaozhe yi bei zhua
   Shanghai famous TV host Cao Kefan 'passive marker commit suicide' 2 classifier rumormonger already passive marker arrest
   'Cao Kefan, the famous TV host in Shanghai, "*was said to have* committed suicide." The two rumormongers have been arrested.'[4]

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2. See Yuan and Liang (2016) for a Conceptual Blending analysis of the non-canonical passive construction, which holds that the interpretation of the construction derives from blending the canonical passive construction with the encyclopedic knowledge of the event activated by X.

3. Such terms as 'verb' and 'noun' serve merely as convenient and conventional labels to describe formal features of the construction. They do not carry syntactic or semantic implications.

(6)   为何'被涨工资'？60%以上人没达到平均工资！
Weihe 'bei zhanggongzi'? 60% yishang ren mei dadao pingjun gongzi!
Why 'passive marker raise the salary'? 60% over people not reach average salary!
'Why "*being said to have had* a pay raise"? Over 60% of the people do not receive the average salary!'

(7)   (但是，3/4的被调查者自感幸福，这样的幸福感数据在网上引起了质疑。)
特别是年轻网友纷纷用脚投票，直言自己'被幸福'。社会竞争加剧，生活成本居高不下，安居梦想不易实现…
(However, it was said that three quarters of those surveyed claimed that they felt happy. This statistic of the happiness feeling aroused doubts online.)
Tebie shi nianqing wangyou fenfen yong jiao toupiao, zhiyan ziji 'bei xing fu'. Shehui jingzheng jiaju, shenghuo chengben jugaobuxia, anju mengxiang buyi shixian…
Especially are young netizens one after another use feet vote, directly claim they 'passive marker happy.' Social competition increase, living expense remain high, comfortable life dream not easy to realize
'The young netizens in particular voted with their feet and claimed that they were "*being said to be* happy." With increasingly intense competitions and consistently high living expenses, the dream of a comfortable life is not easy to realize …'

(8)   (城市里的穷人要为生计奔波，他们也没有闲情逸致参与幸福感调查，回答自己幸福不幸福)
从这个意义上讲，有人感觉自己'被幸福'并不奇怪。
(The poor people have to struggle to make a living in the city. They are not in the mood for a survey about their feeling of happiness and have no interest in answering question regarding whether they are happy or not.)
Cong zhege yiyi shang jiang, youren ganjue ziji 'bei xing fu' ye bu qiguai.
From this sense talk, some people feel themselves 'passive marker happy' not surprising.
'In this respect, it is not surprising that some of them feel that they were "*being said to feel* happy".'

(9)   (昨天的看片会上记者发现，早在网上以'舌尖'名义打广告的华子鱼其实在今晚这一集里才出现。)

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4. All the examples of non-canonical passive constructions are collected from authentic language usage, mostly from news reports. The discourse context of the examples is included in some examples and put in brackets to help with comprehension, as mental spaces are often found to emerge online as discourse progresses (Dancygier & Sweetser 2014, p. 81).

对此，总制片人无奈表示，如此'被广告'，我们也无力控制。
(In yesterday's premiere, the reporters found that the Huazi Fish, which had been advertised for long in the name of 'A Bite of China,' actually would not appear until tonight's show.)
Duici, zongzhipianren wunai biaoshi, ruci 'bei guanggao', women ye wuli kongzhi.
With regard to this, chief-producer helpless explain, like this 'passive marker advertisement', we too cannot control.
'Asked about this, the producer-in-chief said that they could do nothing and have no control over the situation if they "*are said to be running* advertisements".'

(10)   你的生活需要'被广告'吗
Nide shenghuo xuyao 'bei guanggao' ma
Your life need 'passive marker advertisement' interrogative marker
'Does your life need to "*be carried in the* advertisement"?'

These examples show that the non-canonical passive construction is formally featured by a passive marker *bei* followed by the coding of the event in different lexical categories such as verbs, adjectives and nouns. In (5) and (6), the passive marker is followed by an intransitive verb and a verb phrase respectively, that is, *zisha*/'commit suicide' and *zhang gongzi*/'raise the salary.' In (7) and (8), it is followed by an adjective, that is, *kaixin*/'happy' and *xingfu*/'happy.' In (9) and (10), it is followed by a noun, that is, *guanggao*/'advertisement.' The fact that the passive event can be coded by constituents other than transitive verbs explains the productivity and novelty of the construction.

Note that a conspicuous feature of the construction lies in that the passive marker and the following constituent are often put in quotation marks. The quotation marker signals the unconventional feature of the expression. It also marks the function of attribution, which plays a crucial role in interpretation (See Section 2.3).

2.2   The function of the construction

Paired with the constructional form is constructional function. This research argues that the function of the construction consists in the Mental Space operations. Specifically, the construction prompts the conceptualizers to set up a base space and a counterfactual space when processing the information in the construction. The constructional function explains why the construction formally resembles the short passive with the agent un-coded. The construction is not

concerned with holding anyone responsible for the event. Therefore, the agent is not coded.

Mental Spaces are small conceptual packets constructed as we think and talk for purposes of local understanding and action (Fauconnier & Turner 1998: 137). They are cognitive structures prompted by language (Dancygier & Sweetser 2014: 76). The theory of Mental Space has proved useful in handling counterfactual usages, especially in situating counterfactual event in spaces distinct from the reality (Fauconnier 1994, 1997; Dancygier & Sweetser 2015). In the present case, the construction prompts the conceptualizers to set up two Mental Spaces: a counterfactual space in order to hold the event conveyed by the filler of X and the base space to hold their knowledge of reality. In (5), the rumor had it that the host had committed suicide. A counterfactual space was set up to hold this information. In the meantime, there was a base space to hold the information about the reality. Obviously, the rumor contradicted the information held in the base space. When processing the information in (5), the hearer will situate the event of suicide in the counterfactual space and infer what has happened in reality and the speaker's attitude towards the event. The procedure of interpretation will be discussed in Section 3.

The notion of counterfactuality is borrowed from existing research such as Jing-Schmidt (2017), despite the distinctions. In existing research, counterfactuality in language is often associated with the description of what could have happened. In English and Chinese, for instance, it can be coded with a bi-clausal structure, specifying what would follow from a condition that did not hold in reality. Therefore, counterfactuality often conveys a sense of relief or regret, when the actual result is better or worse than the hypothetical situation (Yuan 2015; Jing-Schmidt 2017). The notion of counterfactuality in this paper, however, is broader in that it refers to what did not occur in reality or what was not true when compared with reality. Nevertheless, it resembles the notion of counterfactuality in Jing-Schmidt (2017) in that it is evaluative and conveys certain emotions. In a way, it helps us to "make sense of reality" (Jing-Schmidt 2017: 31).

(11)   六小龄童微博"被死亡"：太太真以为我出事了
        Liuxiaolingtong Weibo "beisiwang": taitai zhen yiwei wo chushi-le
        Liuxiaolingtong Weibo "passive marker die": wife really think I something
        happen-ASP
        'Liuxiaolingtong *was said to* have passed away on Weibo: My wife really
        thought something had happened to me.'

By conventions in Mental Space analysis (Fauconnier 1997), the base space is marked as M in this paper, and the counterfactual space as M'. The necessity of setting up two spaces derives from the observation that the construction conveys

seemingly contradictory information. For instance, in (11), X codes the death of the actor. However, the entire construction makes clear that it is a rumor. As observed in Chappell and Shi (2016: 482), the overall meaning of this construction lies in reporting false information about the subject NP. In the present case, the death of the actor is not true. Consequently, when the conceptualizers are processing the message conveyed by the construction, separate spaces need to be maintained in order to entertain the ostensibly incompatible information. In (11), M holds the information that the actor is alive and well while M' holds the rumor of his death.

Two observations can be made regarding the relationship between the two spaces in the present case. First, M' and M constitute alternative spaces (See Dancygier 1998, 2012; Dancygier & Sweetser 2005, 2014). Alternative spaces can be illustrated by examples of negation, which has been demonstrated to correlate with, or even generate counterfactuality (Yong 2016: 896–897). Negative expressions often deny the existence of an object, but the conceptualizers have to build up an alternative space in which this object exists, so that a contrast can be made between the two spaces in order to convey the meaning of absence (Dancygier & Sweetser 2014: 148–149). Obviously, the information of the two spaces cannot be true at the same time. Similarly, in the case of the counterfactual expressions, M' and M set up by the conceptualizers also constitute alternative spaces. In (2), the M' holding the suicide claim constitute the alternative space with the M holding the real situation, which could be any of the three scenarios in Shi (2013: 14).

Second, M' is minimally different from M, following the optimization principle (Fauconnier 1997: 43). This is in line with the proposal of alternative spaces, which are set up for the purpose of contrast. A contrast presupposes the remaining parts being identical. In the alternative spaces set up in expressions of negation, for instance, the two spaces are identical except for the presence or the absence of the object in question. This is almost the same as the alternative spaces set up by the non-canonical passive construction. Except for the counterfactual information, M' holds identical content as M. For instance, in (11), the information in both spaces is about the actor and the controversy is about what happened to him. The minimal difference enables the hearer to infer what M holds from the message situated in M' (See Section 3).

2.3   The pairing of form and function

Since the constructional form is paired with the function that consists in the Mental Space operations, the construction can be seen as a counterfactual space builder. A space builder is a grammatical expression that either opens a new space or shifts focus to an existing space, and they can take on a variety of grammatical

forms, such as prepositional phrases (e.g., 'in reality'), adverbials (e.g., 'fortunately') and subject-verb complexes (e.g., 'I hope') (Fauconnier 1997: 40, also see Fauconnier 1994, Section 1.4.1). In the present case, the construction carries such special formal features as the passive marker followed by a constituent other than a transitive verb. The unusual formal features prompt the conceptualizers to set up a counterfactual space to hold the information conveyed by the filler of X.

It has to be mentioned that in some cases, the filler does not code an event directly, when it is a noun such as *gaotie*/'high-speed train' in (12). In this case, the filler conveys a canonical event associated with the referent of the noun (Yuan & Liang 2016). For instance, the canonical event associated with the high-speed train is taking the high-speed train. Thus, in *bei gaotie*/'high-speed train,' the conceptualizers hold the canonical event of taking the high-speed train in the counterfactual space.

(12) (不少民众认为此举是铁道部门为了保证客流，促使大家乘坐票价高昂的
      高铁)
      人们纷纷称自己'被高铁'
      (Many people believe that this policy is aimed at keeping the passengers and
      forcing them to ride by the expensive high-speed train.)
      Renmen fenfen cheng ziji 'bei gaotie'.
      People often call themselves 'passive marker high-speed train'
      'They regard themselves as "*being made to ride* the high-speed train".'

The construction, when viewed as a counterfactual space builder, to some extent resembles lexical and grammatical markers of the subjunctive mood. The lexical and grammatical markers instruct the conceptualizers to set up a counterfactual space in order to store the information deemed untrue when compared with reality (Fauconnier 1994, Ch 4). In the present case, the constructional form prompts the conceptualizers to set up M', in order to hold the information conveyed by X. In (6), the reporter cites a survey that claimed a pay raise, but the non-canonical passive construction prompts the readers to hold this so-called pay raise in M', which is distinct from M that contains their true belief about the reality, in which there was no such a pay raise.

The constructional function of setting up a counterfactual space also explains the role of the quotation mark commonly seen in the constructional form. One function of the quotation mark is to quote from sources other than the speaker. It also distances the speaker from the quoted message. Therefore, by using the quotation mark, the conceptualizers attribute the information coded by the filler of X to sources such as the news media. The attribution demonstrates the distance that the speaker holds towards the information, and in this case, the speaker keeps the information in the counterfactual space and deems it untrue. The attributive

function also plays an important role in the creation of the ironic effect when the conceptualizers process the construction (See Section 4).

The attempt to pair the constructional form with the Mental Space operations has empirical and theoretical repercussions in the constructionist research. Two repercussions are discussed in this paper. The first lies in the debate whether Chinese has dedicated counterfactual constructions as English does. The second is the attempt to pair the constructional form directly with cognitive operations.

2.3.1 *The pairing as a dedicated counterfactual construction*

This part attempts to situate the present research in the debate whether Chinese has dedicated counterfactual markers. The present research points to an affirmative answer and demonstrates the importance of using constructions as the appropriate unit to study counterfactuality.

Since the pioneering study of Bloom (1981), an intense debate has centered upon whether Chinese has distinctive grammatical structures that mark counterfactual propositions and the extent to which it affects the counterfactual reasoning (Yuan 2015). The second part of the question calls for psychological experimentation that falls outside the scope of the present research, but some speculations will be made in Section 3. The first part of the debate, nevertheless, receives an affirmative answer. The non-canonical passive construction has been argued to serve as Mental Space builders that set up a counterfactual space. The counterfactual space holds what is conveyed by the filler of X and deemed untrue by the conceptualizers. As a result, the non-canonical passive construction may be considered a dedicated counterfactual construction in Chinese. Together with recent studies such as Jing-Schmidt (2017) that argue for the existence of counterfactual markers and structures in Chinese, the controversial issue whether Chinese has dedicated counterfactual markers as English does is tilting towards a positive answer.

Besides arguing for the existence of counterfactual constructions in Chinese, this study contributes to the discussion with regard to the appropriate linguistic unit by which counterfactuality can be studied. The present research agrees with Jing-Schmidt (2017) that the coding and interpretation of counterfactuality require phrasal or syntactic constructions. According to Jing-Schmidt (2017), the counterfactual structures have their formal and semantic idiosyncrasies, collocational preferences, as well as frequencies of use that enable them to be viewed as constructions based on the criteria of Goldberg (1995, 2006). The present research supports this constructional view of counterfactuality. The non-canonical passive structure is featured by unpredictability of the filler of X with regard to the canonical rule of passivization, and thereby can be considered a construction that pairs the constructional form with the function of prompting cognitive operations.

Nevertheless, the present research goes beyond existing research such as Yong (2016) and Jing-Schmidt (2017) that focus on bi-clausal counterfactual constructions as dedicated counterfactual markers, like the structures headed by *yaobushi*/'if not' and *ruofei*/'if not.' This study extends the repertoire of counterfactual constructions beyond the bi-clausal constructions. The non-canonical passive construction is a single-clausal construction but signals counterfactuality. Moreover, it has both similarities and differences in terms of the counterfactual reading, compared with the bi-clausal construction. On one hand, like the bi-clausal counterfactual construction, it is featured by the evaluative and problem-oriented nature of counterfactual reasoning. For instance, in (11), the conceptualizers encounter the problem of having no choice but to purchase the expensive ticket and by using the non-canonical passive construction, evaluate the situation and express their disproval. On the other, the non-canonical passive construction differs from the bi-clausal constructions in two aspects. First, unlike the bi-clausal, the non-canonical passive construction has only one clause and cannot express a causal or conditional relationship. Second, the non-canonical passive construction conveys different emotions from that of regret or relief typically expressed by the bi-clausal counterfactual construction (Jing-Schmidt 2017). Section 4 will demonstrate that it is featured by a sense of irony instead. Nevertheless, given the distinctions between the notion of counterfactuality in this paper and that in existing research, the extent to which the present research can be integrated in the discussion of counterfactual constructions has to be explored further.

2.3.2   *The pairing as a prompt to carry out cognitive operations*

Compared with most accounts in the constructionist approach, this research pairs the constructional form directly with general cognitive operations, rather than specific semantics. This attempt, nevertheless, receives support from the Cognitive Grammar view of grammar (Langacker 2008) and the study of procedural meaning in Relevance Theory (Blackmore 1987, 1989, 2000; Carson 2016; Wilson 2011, 2016).

Ever since the beginning of the constructionist research (Lakoff 1987; Goldberg 1995), it has been a commonplace practice to pair the constructional form with conceptual content. For instance, in the ditransitive construction, the constructional form of NP1-V-NP2-NP3 is paired with the conceptual meaning of transfer of possession, and in the caused-motion construction, the form of NP1-V-NP2-XP is paired with the meaning of caused motion (Goldberg 1995). The conceptual meaning is represented in the mind, and the constructional form serves to activate the conceptual representation.

The present research argues that the constructional form can prompt the conceptualizers to carry out cognitive operations. Cognitive operations are ontologically different from conceptual content in the mind of the conceptualizers (Ziem 2014). The former is procedural while the latter is conceptual or contentful. Procedures are featured by being non-representational or non-symbolic (Bezuidenhout 2004). In contrast to the mental concepts that store and represent information about the world, the cognitive operations merely operate on the concepts. In the present case, the constructional form of the non-canonical passive construction does not represent any conceptual content per se. Instead, it merely points to the procedures to operate on the content, such as to situate the event coded by the filler of X in the counterfactual space. For instance, in (13), X codes the event of winning a lottery. Nevertheless, the construction form prompts the conceptualizer to set up a counterfactual space and situate the event in that space. The operation suggests that it is not true in reality.

(13)   今天你被中奖了嘛?
       Jintian ni bei zhongjiang le ma?
       Today you passive marker win the lottery ASP interrogative marker?
       'Were you *informed* today that you won the lottery?'

The attempt to pair the constructional form with the cognitive operations receives support from the Cognitive Grammar view of grammar (Langacker 2008) that includes in the scope of semantics both the conceptual content and the cognitive operations that can be applied to the content. For instance, the same conceptual scene can be viewed from different perspectives and with varying specificities. Adjusting the perspectives or the specificities of viewing belongs to the cognitive operations in Cognitive Grammar. In its view, grammar constitutes an inventory of conventional symbols that pair the form with the meaning. Therefore, the cognitive operations, as part of the symbolic meaning, can be paired with the symbolic form. This view not only applies to schematic symbols such as the lexical category of nouns that profiles a thing (i.e., the result of the carrying out the cognitive operation of reification, See Langacker 2008, Section 4.2), but also to specific symbols such as the possessive structure that is paired with the cognitive operation of scanning (Langacker 1993, 2008).

The proposal to pair the constructional form with cognitive operations also receives support from the study of procedural meaning in the framework of Relevance Theory. According to Blackmore (1987), the procedural information guides the inferential processes that help the addressees to arrive at the speaker's intended meaning, and more importantly, it is non-truth-conditional in the sense that they merely encode instructions on how to find the intended interpretation. For instance, the connective 'but' can be analyzed to carry a procedural meaning

to indicate that what follows the connective should cut off a line of inference from the previous clause (Hall 2007). Similarly, the cognitive operations have no truth-conditional content by themselves and only serve as instructions on how to process the conceptual content, such as assigning the content to different Mental Spaces. Moreover, Carson (2016) proposes criteria to distinguish procedural meaning from conceptual meaning, that is, in contrast to conceptual meaning, procedural meaning is introspectively inaccessible, non-compositional, rigid (i.e., coercive to the conceptual meaning), always literal and non-polysemous. The cognitive operations prompted by the non-canonical passive construction satisfy the criteria. The Mental Space operation is not accessible to introspection to average speakers. It merely operates on the conceptual content. It is rigid in the sense that the conceptualizers have no choice but to situate the conceptual content in the Mental Space. The Mental Space operation has no non-literal or polysemous usage. Therefore, just like the procedural meaning, the cognitive operations play the role of guiding the conceptualizers to arrive at the intended interpretation of the utterance. The convergence between the cognitive operations and the procedural meaning manifests in the analysis of attitudinal adverbs such as 'frankly' and 'unfortunately.' While Wilson (2016) considers them as encoding procedural guidance on how to process the information coded by the clause, they are treated as Mental Space builders to hold the clause information (Fauconnier 1994, 1997).

Generally, the proposal to pair the cognitive operations with constructional form goes with the recent research paradigm of drawing upon general cognitive operations to explain language, including its use, acquisition and evolution (Bybee 2007, 2010; Croft 2001, 2012; Fauconnier & Turner 1998, 2002). In this paradigm, the cognitive operations that are claimed to be verified in research of cognitive science and psychology are applied in linguistic accounts, so that the accounts have independent cognitive motivations and can be subject to cross-disciplinary verification. As a result, the proposal to pair the cognitive operations with the constructional form will enable the constructionist approach to have a more motivated account of constructions, especially the way that the constructions are processed.

2.3.3   *From cognitive operations to interpretations*

The proposal to pair the constructional form with cognitive operations, nevertheless, leaves one question unresolved, that is, how the conceptualizers can carry out the cognitive operations to derive the specific interpretations of the construction in usage. After all, the cognitive operations have no intrinsic representational meaning. They have to operate on the lexical items in the constructions and the contextual information in order to produce the specific interpretations of the construction. For instance, Langacker (1993, 2008) pairs the constructional form of

the possessive structure with the scanning operation of establishing a reference point relation. However, as illustrated in Taylor (1996), the possessive construction can receive a number of different interpretations in the context. Although the reference point relation serves as an overarching schema for the possessive construction, a principled procedure is required to illustrate how the scanning operation works on the semantics of the lexical items in the possessive structure to derive the specific interpretations of the construction in the context.

This issue is particularly noteworthy in the case of the non-canonical passive construction studied in the present research. As discussed earlier, this construction is featured by ambiguous and complicated interpretations in the context. It begs the question how the conceptualizers can carry out the Mental Space operations to derive the specific interpretations. Moreover, the construction conveys a sense of irony in the context. For instance, in (14), the construction signals that the farmer is not employed. Neither does he or she receive any monthly salary. Instead, he was merely listed as an employee in a company, so that the company could pay less tax.

(14)   六旬农民办低保发现'被上班'月薪3500元
       Liuxun nongming ban dibao faxian "bei shangban" yuexin 3500 yuan
       Sixty years old farmer apply minimum income welfare discover "passive marker employ" monthly salary 3500 yuan
       'A sixty-year old farmer found that he *was listed in employment* with a monthly salary of 3500 yuan when he was applying for the welfare for receiving minimum income.'

Therefore, how to bridge the gap between the cognitive operations and the specific interpretations has become an important yet unresolved issue in existing research. The non-canonical passive construction serves as an ideal case to bridge the gap. Section 3 will outline a cognitively plausible procedure for the conceptualizers to carry out general cognitive operations to derive specific interpretations of the construction.

3.   Interpreting the construction in context: A cognitive procedure

This section describes a cognitively plausible procedure of producing the interpretations of the construction. In particular, it demonstrates how the hearers, by carrying out the Mental Space operations prompted by the construction, deny the claim or its associated assumption conveyed by the filler of X and infer what has happened in reality.

The construction is used to deny, completely or partly, the claim conveyed by the filler of X or its associated assumption. In (7), the survey claims that the young men are living a happy life. By using the construction, the conceptualizers situate the claimed happiness in the counterfactual space M'. In doing so, they echo the claim in the survey but deny the claim's truthfulness, and the denial is coupled with a description of the struggling life in reality such as the increasingly intense competition and consistently high living expenses. The description in the context reinforces the denial and helps the hearers to infer what has been really going on.

The construction can also be used to deny part of what the filler of X codes. Given the presence of the passive marker in the construction, the denied part is often the volition in carrying out the event conveyed by the filler. Specifically, the conceptualizers store in M' the event conveyed by the filler, echoing the assumption that the event is volitionally carried out. The volitional element, nevertheless, is missing in M. In other words, the conceptualizers intend to tell that the event is not carried out in a volitional manner. Volition constitutes the only difference between M and M', the two minimally different spaces discussed in Section 2. In (15), by using the non-canonical passive construction, the conceptualizers include in the counterfactual space the assumptions associated with the travelers' taking the high-speed train. Riding the high-speed train is usually assumed to be a volitional choice, because it has such benefits as time-saving and comfortable seating. However, by situating the assumption in the counterfactual space, the conceptualizers deny the volitional element in the assumption. In other words, the travelers have no choice but to ride by the high-speed train.

(15)   平时不太出远门，一到过年才知道，真的是"被高铁"了。
(原来的动车也不过200多元，现在高铁至少都是400多元，2倍还多啊。
而且平时的普通列车被取消了很多。)
(A ticket for the train in the old days was a little over 200 yuan, but now the ticket for a high-speed train is over 400. The fare is more than twice as much. Moreover, many of the regular trains in the past have been cancelled.)
Pingshi butai chuyuanmen, yidao guonian caizhidao, zhende shi 'bei gaotie' le.
On average days not often go travelling, until new year find out, really 'passive marker high-speed train' ASP
'I do not often go travelling. It was not until the New Year's time did I find that I have really "*been made to ride* the high-speed train".'

The construction is often used by the speakers to complain about their experience of having no choice but to ride the high-speed train, as in (15). The speakers echo the common assumption that they take the high-speed train out of their own volition, but by situating the assumption in the counterfactual space, they make it clear that the assumption is not true. Had they had an alternative, they would have

preferred other trains with cheaper tickets. As a result, the presumably enjoyable experience is actually an undesirable one. The construction corrects the assumption that the travelers take the high-speed train out of their own choice.

If the filler of X codes a complex event, the denial can target at different components in the event held in M'. Take *bei zisha*/'commit suicide' as an example. Committing suicide is a complex event with several components that can be denied. The event can be roughly paraphrased as volitionally making oneself die. For the hearer, the event in M can be constructed in different ways. First, the volitional element can be denied. Thus in M, the person is forced to commit suicide but claimed to have done so out of his or her own will. Second, the 'making oneself' part can be denied. Then in M the person may die from other causes, including homicide. Third, the dying part can be denied. Then in M, the person claimed to have committed suicide is still alive. This third scenario resembles denying the entire event of suicide, since the person is not dead. Note that the three readings correspond with the three interpretation summarized in Shi (2013, p.14), as discussed in Section 1. The Mental Space operations provide a cognitively plausible process for the three readings to be derived.

(16) (据程晓悠家人介绍，清渭街小学并没有要求学生必须捐多少，但是有发类似通知书之类的东西，要求小学生们必须捐。"当然她是捐的少的，听附近的有些学生捐100的也有。"程晓悠家人说)
学生其实就是"被捐款"了。
Xuesheng qishi jiushi 'bei juankuan' le.
Students as a matter of fact indeed 'passive marker donate' ASP
(According to the family of Chen Xiaoyou, Qingwei Elementary School did not specify the sum of donation the pupils had to make. Nevertheless, it did send something like a notice requiring the pupils to contribute. 'She did not donate much, but it is said that some living nearby had donated 100 yuan,' said a family member of Chen Xiaoyou's.)
'Indeed, the pupils were "*being made to* donate".'

(17) 女士因患病遭遇被捐款烦恼俺根本不需要捐款
Nvshi yin huanbing zaoyu bei juankuan fannao an genben buxuyao juankuan
Woman because sick suffer passive marker donation trouble I no need donation
'A woman was troubled by *being asked to accept* donation after she became sick: I do not need any donation at all.'

If the event coded by X involves two volitional participants, the volitional element of either participant can be denied in M. For instance, the event of donation involves two participants, the donor and the recipient. Presumably, the donor volitionally contributes the money and the recipient volitionally accepts the

donation. However, both volitional elements can be denied with the construction. In (16) and (17), the conceptualizers situate in the counterfactual space the common assumption of a donation event with a volitional donor and a volitional recipient. In the base space, the volition of the donor can be denied, as in (16). In this case, the pupils are forced to make donations, instead of doing so out of their free will. Alternatively, the volition of the recipient can also be denied, as in (17), where the woman has no intention to accept donation, but is forced to.

An important issue discussed in existing research is the extent to which the counterfactual reasoning abilities of the Chinese people are influenced by the counterfactual expressions (See Au 1983, 1984; Bloom 1981; Liu 1985). After over three decades, a tentative conclusion was made in Yuan (2015) that Chinese speakers prefer the mechanism of contrasting results in counterfactual reasoning, as shown by the counterfactual markers such as *xingkui*/'had it not been for' which explains how the result would be different had it not been for someone's contribution. This research demonstrates that contrast is indeed an important element in counterfactual expressions. The fact that two mental spaces are set up for comparison illustrates that contrast is an intrinsic function of the non-canonical passive construction. Nevertheless, this research also demonstrates that the Chinese people are apt to infer from the counterfactual space what has really happened. They can choose to deny certain elements (e.g., volition) of the event coded by the filler of X and infer what has happened in reality. This is, however, also tentative because a definite conclusion is beyond the scope of this paper and has to involve psycho-linguistic experimentations.

4.   The ironic effect of the construction

This section argues that the Mental Space operations can produce the ironic effect of the construction. More importantly, it enables the ironic effect to be produced as an integral part of processing the construction.

Counterfactual expressions in Chinese often carry rhetoric and emotional inclinations. For instance, conditional clauses of counterfactuality with *ruofei*/'if not' or *yaobushi*/'if not' can express the speakers' relief or regret (Jing-Schmidt 2017). The present research shows that counterfactual expressions in Chinese can also express the speaker's ironic stance by denying what is conveyed by the filler of X. For instance, in *bei zisha*/'commit suicide' of (5), the speaker denies that the host has committed suicide. The denial carries strong emotional inclinations, such as the contempt for the suicide claim.

It is argued that Mental Space operations explain how the ironic effect is produced in a cognitively plausible procedure when the non-canonical passive con-

struction is used. The present research follows Wilson and Sperber (1992, 2012) and Yus (2000) that consider irony featured by attribution and incompatibility. An ironic utterance is attributive in that it echoes a message in the context. The message can be a claim or an assumption. However, the echoed message is incompatible with the intended interpretation of the utterance. As a result, by using irony, the conceptualizers reveal their disbelief or denial of the echoed message. Moreover, the echo can prompt a counterfactual space and facilitate the perception of irony (Coulson 2005).

In producing an ironic utterance, the conceptualizers set up M' in order to hold the event that is attributed to a claim or an assumption in the context, such as the claim of a happy life in the survey. The echoed claim or assumption is coded by the filler of X in the construction and held in the counterfactual space. The attribution is further symbolized by the quotation mark that is often used in the construction and functions to attribute the information of the filler to sources other than the speaker. In this way, the construction realizes the attributive function of an ironic utterance. For instance, in (11), the construction prompts the conceptualizers to set up a counterfactual space to hold the common assumption of taking the high-speed train as a volitional event. After all, as argued in the last section, taking the high-speed train has the benefits of speed and comfort, so it is assumed to be a volitional event. Setting up a counterfactual space enables the conceptualizers to echo the common assumption.

Besides attribution, the Mental Space operations explain how incompatibility is produced in an ironic utterance. For instance in (8), by situating the claim of a happy life in the counterfactual space, the conceptualizers make it clear that the claim is not compatible with the reality and in reality there is no such a thing as the happy life. Similarly, in (11), by situating in the counterfactual space the assumption that taking the high-speed train is a volitional choice, the conceptualizers signal the assumption's incompatibility with the reality. In other words, in reality the conceptualizers have no choice but to take the high-speed train. Therefore, the non-canonical passive construction enables the conceptualizers to contrast the counterfactual space with the base space and express their emotional inclinations. For instance, in (11), the conceptualizers, by using the non-canonical passive construction, convey their dissatisfaction with the policy of canceling the other trains.

(18) 了解后才知道，原来自己被上学了
Liaojie hou cai zhidao, yuanlai ziji bei shangxue le
learn after only know, turn out self passive marker enroll ASP
'It was only after learning about what has happened that he found out that he *had been enrolled in a school*.'

To give another example, (18) is used in a case that a teenage found himself enrolled in a school that he never applied for. It turned out that the enrollment was fabricated by the school to obtain subsidies from the government. The irony manifests in the conflict between his enrollment in M' and the reality in M. Note that the conflict does not lie in whether he was enrolled or not. In both spaces, he was. Instead, the conflict lies in the assumptions associated with the enrollment. The common sense informed us that a student could only be enrolled with his or her consent, and that the enrollment provided the opportunity for the student's education in his or her interest. The common-sense assumptions were maintained in M' but denied in M. In M, the student has not been informed of his enrollment. In other words, it is an identity theft. Moreover, the school stole the identity information for its own interest and caused trouble for the student. The contrast between M' and M portrayed the school as a thief and the student as a victim. The noble cause of education – noble for both the school and the student – turned out to be opportunity exploited by identity thieves. The contrast between the two spaces underlines the irony in this expression.

An advantage of the Mental Space approach to irony lies in viewing the generation of figurative meaning as an integral part of processing the construction. Specifically, the construction prompts the conceptualizers to carry out the Mental Space operations that produce the interpretations of the construction together with the ironic effect. It goes with the trend to unify the generation of figurative and literal meanings as advocated in the research conducted in Relevance Theory (Sperber & Wilson 1995) and Conceptual Blending Theory (Fauconnier & Turner 1998, 2002). Moreover, the present study demonstrates that figurative meaning can be built using constructions (Dancygier & Sweetser 2014, p.160). The function of the construction includes the mechanism (i.e., the Mental Space operations) to generate both the literal and the figurative meaning of the construction. As a result, the constructional form can not only be viewed as space builders, but also as formal cues for irony, an indispensable part of ironic expressions (Wilson & Sperber 2012). As observed in Dancygier and Sweetser (2014: 214), the correlations between linguistic form and figurative meaning are not obvious, but they are there. It is the linguists' job to discover and describe them.

5.   Conclusions and implications

This paper argues for a Mental Space account of the non-canonical passive structure in Chinese. It explains how the conceptualizers, when prompted by the form of the construction, go through a cognitively plausible procedure to produce the specific interpretations. It demonstrates the fundamental role of constructions in

linguistic analysis. First, constructions serve as the analytical units to study counterfactuality. It has been a controversial issue whether Chinese has specialized grammatical forms to convey counterfactual meanings (Yuan 2015). The present research gives an affirmative answer and extends existing research of counterfactuality to grammatical patterns other than bi-clausal constructions. Second, this study demonstrates the feasibility of using constructions to study rhetoric meanings. The Mental Space operations that are posited as the constructional function can produce the ironic effect of the construction. That is, irony is produced as an integral part of processing the construction.

Existing research has attempted to posit cognitive operations as the constructional function (Langacker 2008). Nevertheless, it remains an under-studied field with regard to how the cognitive operations can produce specific interpretations of the construction in the context. This study is an attempt to fill this gap. It outlines a cognitively plausible procedure of using the construction, in which the construction is viewed as a linguistic anchor that activates the Mental Space operations, which produce different interpretations of the construction, including the ironic effect.

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