Differences between Translation of Chinese Compound Nouns into English Compound Constructions 'Deverbal Noun - Noun' and 'V.-ing - Noun'

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Abstract—**Chinese compound nouns consisted of a modifier based on a verb meaning and of a head noun may be translated into English 'deverbal noun (dn.)-noun (n.)' compound construction or 'v.-ing-noun (n.)' compound construction. Under the perspective of cognitive linguistics, the two constructions possess cognitive, semantic and pragmatic differences which are looked into in this study. Suggestions on whether adopting 'dn.-n.' compound construction or 'v.ing-n.' compound construction for translation are given. Findings include that 'dn.-n.' is a better choice for translation if the various meanings related to the action of the source modifier need expressing or the ambiguity is in need, while 'v.-ing-n.' is better if only the meaning of the process of the action is needed and to avoid misunderstanding. 'Ing' can be omitted in 'v.-ing-n.' because of the economy principle of language when the semantic effect of 'dn.-n.' and 'v.-ing-n.' is close.**

Keywords—compound nouns; translation; cognitive linguistics; construction grammar; deverbal noun; verb-ing; differences

I. INTRODUCTION

A. Rationale

Compound words, though as a very familiar linguistic phenomenon, has its especially essential role in the development of a language. Referred to Hatch and Brown [1], compounding may be the most efficient process of word formation in English. Zhang Weiyou [2] also has stated that compounding is a main process of word formation in both English and Chinese, which only comes after affixation and derivation in English, but has an especially great importance in Chinese. Thus, compound words occupy a quite big proportion in English or Chinese, and inevitably have frequent occurrence in translation.

Compound nouns, the object of this study, are one of the main results of compounding. The study is to look into the Chinese compound nouns consisted of a modifier based on and often recognized with its verb meaning (like '泳' of '泳衣') and of a head noun modified (like '衣' of '泳衣'). This

kind of compound nouns may be translated into English compound nouns consisted of a deverbal noun (hereinafter referred to as dn.) as the modifier and of a head noun, or into ones consisted of a verb affixed with 'ing' (hereinafter referred to as v.-ing) as the modifier and of a head noun. The reason why there are different translation results is that in Chinese a verb does not have to be affixed or derived to be a noun or to indicate different tenses or meanings, which is different in English.

Though both dn. and v.-ing are nominalization of verbs, and though it seems that whether the modifier of a compound noun is dn. or v.-ing does not differentiate much, there is a huge difference shown between the frequency of the use of the two types of modifiers. Preference for dn. or v.-ing used as the modifier in translation correspondent to different Chinese compound nouns shows obvious difference.

Wang Yin [3] has proposed that language comes from human's experience and cognition of the real world. That means the form of language, the representation of human's cognition, is underlay by meaning (referring to semantics), usage (referring to pragmatics) and cognition. In the sight of construction grammar, the form of language is correspondent with the meaning. Constructions, 'form-meaning correspondences.... themselves carry meaning' and they 'are taken to be the basic unit of language'. Their meaning and functions cannot be well predicted by the properties of their components [4]. Under the perspective of cognitive linguistics, there must be differences stemmed from the cognition between 'dn.-head noun' and 'v.ing-head noun' since their forms are different, which causes the differences between their meaning and usage. The different compound nouns formed by dn. and v.-ing can be regarded as two different constructions, similar in form but cognitively, semantically and pragmatically different different. The two constructions here is to be described as 'dn.-n.' and 'v.-ing-n.'.

To achieve a reasonable translation of the above-defined compound nouns, 'dn.-n.' and 'v.-ing-n.' shall be studied in

their cognitive differences which underlie the representation of their semantic and pragmatic differences.

B. Significance

For translation studies, this study is significant for achieving reasonable translations of Chinese compound nouns with differences between the two likely translation results clarified. Theories of translating compound nouns is likely to be enriched and a cognitive approach to study and understand translation is provided.

For cognitive linguistics, the study compares two constructions of compound words under the perspective of construction grammar, which would shed some light on the cognitive, semantic and pragmatic understanding of the two constructions as well as compound words. An approach of comparison between similar constructions is explored, which is likely to enrich the methodology in studies of construction grammar.

Studies of nominalization is referred to at the same time when two forms of nominalization, dn. and v.-ing, are compared and discussed, which is likely to be promoted with a cognitive approach.

C. Research Objective and Research Questions

The research objective is to discuss and clarify the differences between the two likely translation results of Chinese compound nouns, 'dn.-n.' construction and 'v.-ing-n.' construction, in a cognitive approach.

The research questions can be described as following:

- *Question 1:* What are the differences between the cognitive process of the two constructions, 'dn-n.' and 'v.-ing-n.' as the likely translation results of a Chinese compound noun consisted of a modifier based on a verb meaning and a head noun?

- *Question 2:* Based on the cognitive differences, how are the two constructions different in semantic and pragmatic aspects?

- *Question 3:* Noticing the differences of the two constructions, how can translators make a reasonable choice between the two likely translation results of a Chinese compound noun consisted of a modifier based on the verb meaning and a head noun?

D. Methodology

The study is a qualitative study adopting the methods of comparison between the two constructions and induction to achieve the conclusion.

II. LITERATURE REVIEW

A. Chinese Compound Noun Studies

Chinese compound words have been in the sight of scholars for a long time and Chinese compound nouns as a part of the compound word studies, have been through the same path of the development of the compound word studies.

Approaches to study Chinese compound words change and develop as different approaches are introduced into linguistic studies. Referred to Li Shichun [5], the basic unit of Chinese compound words for composition study was Chinese characters in the early 20th century, which pioneered in the grammatical and semantic studies of compound words and laid a foundation for the following studies. From 1940s, linguistic theories and approaches under structuralism began to be adopted by Chinese scholars to describe the composition of Chinese compound words, which has built a system of word formation based on grammar. Morpheme has mainly become the basic unit of Chinese compound word study. After the shortcoming of structuralism applied in compound word study has been revealed, semanteme has come into the sight of the study and the process of how semanteme combines and forms the meaning of compound words has drawn attention. To meet the demand of a deeper semantic analysis, cognitive theories and approaches are applied to look into the cause and the development of formation of compound words' meaning. Cited from Wang Wenbin [6], the meta study of English compound words is elaborated as first the construction of compound words...second the grammatical relationship and the derived semantic relationship between the components, third the grammatical function and meaning of the formed word, fourth the internal cognitive motivation of the construction... can be studied.

In all, the studies of compound words follow a path beginning with analysis of Chinese characters, then structuralism with the focus on grammar and morpheme, focus on meaning and semantic analysis with semanteme, and at last cognitive approaches.

Grammatical studies and semantic ones are the mainstream of compound word studies, including compound noun studies. While cognitive approaches of compound word study has drawn much attention, most cognitive studies put their focus on metaphors in Chinese compound words like Cai Jigang [7], Huang Jie [8], Zhao & Song [9]. Wang [6] indicated that exocentric compound words refer a lot to metaphors but endocentric not. However endocentric ones as often as not are the results of conceptual blending. Thus, cognitive studies of compound words are likely to develop further than metaphor studies. So do compound noun studies.

B. Translation Studies of Chinese Compound Nouns

Though Chinese compound nouns and compound words occupies a quite big part of Chinese vocabulary, the issue of translation has been seldom taken as an academic topic into consideration. There are some comparison studies like Chen Wangu [10] performing a semantic and cognitive comparison study between compound words in English and Chinese and Zhang Weiyou [2] comparing the structures of compound words in English and Chinese. Translation studies referred to Chinese compound words merely put focus on metaphors, like Zhao & Ding [11] and Liu Zhuyan [12] discussing about maintaining the images or the effect of metaphors when translating compound words. There is still great potential in the translation studies of Chinese compound nouns.

III. THEORETICAL FRAMEWORK

A. Working Definition

Chinese compound nouns here are defined as compound nouns with a modifier based on its verb meaning (like "泳" of "泳衣", "工作" of "工作定义") and of a head noun modified by the modifier (like "衣" of "泳衣", "定义" of "工作定义"). There is no limitation for the number of the characters of the modifier or the head noun.

'Dn.-n.' is the abbreviation of the construction composited by a deverbal noun as the modifier and a head noun. This construction is one of the likely translation results of the above defined Chinese compound nouns.

'V.-ing-n.' is the abbreviation of the construction composited by a verb affixed with 'ing' as the modifier and a head noun. Since how to term the form of a verb affixed with 'ing' is still so confusing in linguistic terminology that 'gerund', '-ing form', 'verbal noun', 'nominal -ing participle', 'gerundive nominal', etc. has been seen in different works [13], here 'v.-ing' is used. 'V.-ing-n.' construction is also one of the likely translations of the above defined Chinese compound nouns.

B. Theoretical Basis

Under the perspective of cognitive linguistics, the symbolic feature is the nature of language. Thus language constructions are verbal signs carrying meaning. The fundamental purpose of language is to realize communication and as a result language is usage-based and grammar originates from usage of language [14]. On the basis of this theory, Langacker [15] who is of representative in cognitive grammar, an essential part of cognitive linguistics, raised that syntax and grammar structure are not standardized and understanding meanings of language, the verbal sign, can be seen as a process of conceptualization. Shen Jiaxuan [16] describes the value of grammar structures as the certain ways which the contents or the details in human's cognitive domain are constructed, and the task of semantic studies as to depict conceptual structures which are the results of cognitive process. Thus, the goal of semantic studies is to clarify the cognitive process in detail.

Stemmed from cognitive grammar, construction grammar portrays the relationship between the form and the meaning of language more clearly and directly. Yan Chensong [17] elaborates Goldeberg's definition of construction in his own words that a construction, no matter a simple one or a complicated one, has its own form, meaning and function, containing pragmatic information including topic, manner, etc. as well as semantic information. A construction is expressive enough to express all the information and it has properties influencing its components and giving more information when they come together.

In the view of construction grammar, though the two likely translation results of Chinese compound words, 'dn.-n.' construction and 'v.-ing-n.' construction are similar to each other, they carry their own information, meaning and function. This is determined by their different representation and cognitive process.

C. Framework

To see the differences of the two constructions, 'dn.-n.' and 'v.-ing-n.', attention has to be drawn on the represented difference between dn. versus v.-ing. As Wang [2] indicated endocentric compound words as often as not are the results of conceptual blending, the differences between the concepts of dn. and that of v.-ing result in the different consequences of conceptual blending. So first, concepts of dn. and of v.-ing are to be compared. Second, the process of the two different concepts as the modifier blending with the head noun to form the construction is to be compared. Cognitive process shall be analyzed as the fundamental reason causing the differences.The framework can be shown as below.
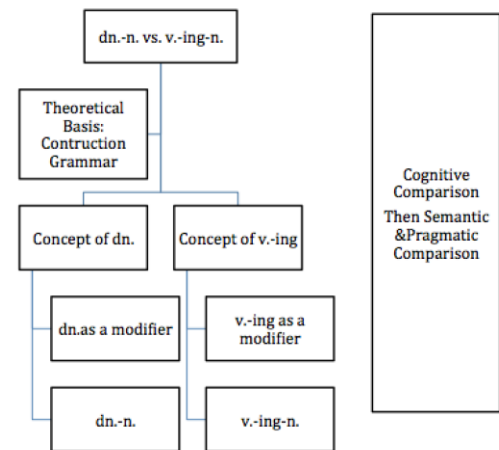

Fig. 1. Analysis framework.

IV. DISCUSSION

A. Differences between the Concept of dn. and of v.-ing

As mentioned above, the comparison begins with differences between the concept of dn. and of v.-ing. Both dn. and v.-ing are the results of nominalization of verbs. Nominalization of verbs, cited from Zhang Quan [18], is the conceptualization of the verbs' action. It is the process of the action being gradually staticized into a dynamic and abstract concept, and even into persons, things or events related to the action. Thus, both dn. and v.-ing maintain the verb properties about the action and at the same time own the substantival properties about persons, things or events after nominalization. The comparison and analysis is to be based on the two properties included in the concept of dn. and of v.-ing.

1) Differences between the verb properties of dn. and of v.-ing: Langacker [19] raised 'boundedness', a concept to describe the cognition of words. 'Boundedness' is a key issue about the semantic feature of nominals and verbals [20]. According to Zhang Quan [18], action has features of

time and kinestate. The time feature is about the time occupied by the action...V.-ing...whose concept of an internal process of the action is prominent and the process is without an end. On the contrary, dn....which can be recognized as a concept about action with an end of time. That is to say, dn. is a bounded concept while v.-ing is an unbounded concept. Zhang & Zhang [21] has also described that v.-ing maintains the feature of persistence, which is an internal process and can be seen as the most typical process nouns. While dan (dn. in this study) as often as not represents a bounded episode in a process, or a sub episode of the whole episode.

In a word, dn. is a bounded concept which is an entirety of an action observed externally while v.-ing is an unbounded concept which is an internal process of an action.

2) Differences between the substantival properties of dn. and of v.-ing: A noun is functioning in three aspects, nominating an object or an event, referring to related episodes of the nominated, and referring to meaning [22]. A noun can express concepts more complicated than an adjective, including various dimension related to the noun...and no prominent dimension is superior to others [23].

Dn. has a more complete grammatical and semantic function as a noun than v.-ing does. Thus, dn. as a complete nominal entirety, its scope of meaning is greatly broad without a dimension especially prominent. As derived from verbs, dn. is staticized to express a bounded episode of an action so that various dimension related to dn. episode such as 'result', 'condition', 'method', 'doer and object of the action', etc. can be involved into the scope. While v.-ing, as analyzed above, is an unbounded internal process of the action, it is only a prominent dimension showing the process of the action in an episode.

B. Differences between dn. and of v.-ing as a modifier

Liu Luying [24] elaborates that the studies of nominalization can be categorized into three types...the third type is to study the role of the nominalization as a major mean of grammatical metaphors semantically getting involved into the lexical grammar ...which focuses on explaining. Dn. and v.-ing as a modifier in the translation of a Chinese compound noun to modify the head noun is the process nominalization getting involved into the lexical grammar.

Under the perspective of cognitive linguistics, a modifier modifying a head noun can be seen as a connection being built between the modifier and the head noun. This kind of connection has been described in different ways by different schools of cognitive linguistics or cognitive psychology, for example, 'schema' by schema theory, 'mappings and blending' by mental space theory. The connection is a process that some certain figure of the modifier shift into or map into or is connected with the head noun, and thus a relationship (maybe 'cause and effect' or 'co-occurrence' or other relationships) is built. According to Shen Jiaxuan [16], a certain figure of a base (a semantic structure) in a related cognitive domain becomes the focus or is prominent, then the figure shall be named "profile". The connection is actually a combination of a prominent profile of the modifier's with the head noun, which results in addressees' understanding of the phrase.

When it comes to dn. as a modifier, it has an extremely broad semantic scope including various dimensions. The process that addressees understand a dn. modifying a head noun is actually a process of searching practicable profiles in its various dimensions to pair with the meaning of the head word. The results of the understanding of dn.-n. would be filled up with enough various meanings. However, since dn. has no especially prominent dimension, results of complexity may be aroused. If there are several dimensions to be practical, more than one cognitive result may occur and ambiguity is caused. In such an occasion, external environment (such as the environment of communication) may have to be relied to judge.

When it comes to v.-ing as a modifier, it is a dimension highlighting the process of an action in an episode. The process that addressees understand v.-ing modifying a head noun is a direct process of adopting the practicable profile, 'internal process of the action' to pair with the meaning of the head word. After pairing, addressees will fill up the blank with their understanding of the relationship between the profile and the head noun and finally achieve an integral cognition of the phrase. For example, the phrase 'swimming cap' has been through a cognitive process that a cap is in the process of the swimming action. Then addressees fill up the blank with "use" as the relationship between the profile and the head noun, and also achieve an understanding that 'a cap is used in the process of the swimming action'. This cognitive process is where the semantic images of v.-ing as 'function', 'usage', 'properties' come from.

If the concepts of dn. as a modifier and the ones of the head noun fit well in their connection, or some certain relationship is especially prominent or obvious to build, there would be of low difficulty in the search of the profile and understanding of the 'dn.-n' construction. In this case, the semantic effect of 'dn.-n.' construction and 'v.-ing-n.' construction are likely to be close (like swimming suit and swim suit).

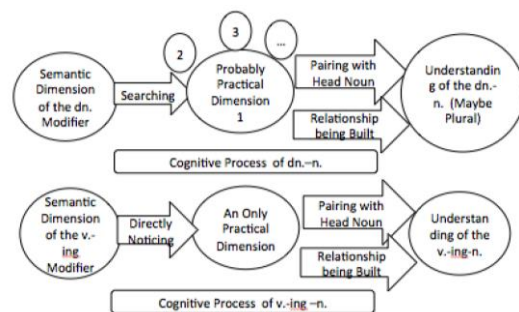The above analysis can be seen with charts as following:

Fig. 2. Cognitive paths of the two English constructions.

In all, a conclusion can be drawn that the path of the cognitive process of 'dn.-n.' is longer and easier and may cause cause ambiguity. On the contrary, that of 'v.-ing-n.' is shorter and clearer.

C. Other Situations

- A verb does not have its dn. so that v.-ing is the only result of nominalization [21].

- Dn of a verb deviates from the original meaning of the verb's action so that only v.-ing is practical when needed.

These situations are suitable to be analyzed with the above discussion about their cognitive processes, but due to their specialness distinctions are not necessary.

D. The Usage of the Two Constructions and the Economy Principle in Language

Chinese Compound Noun	English Translation : Dn.+n. (Frequency of Use)	English Translation: V.-ing+n. (Frequency of Use)
泳帽	Swim Cap(s) (Frequency: 34)	Swimming Cap(s) (Frequency: 9)
画笔,漆刷	Paintbrush(es) (Frequency: 658)	Painting brush(es) (Frequency: 3)
操作系统	Operation System(s) (Frequency: 3)	Operating System(s) (Frequency: 2801)
工作定义	Work Definition(s) (Frequency: 0)	Working Definition(s) (Frequency: 107)

Fig. 3. Frequencies of the use of the two English constructions.

The data above is drawn from COCA and shows some interesting phenomena.

From the above chart, it can be seen that 'operating system(s)' and 'working definition(s)' are much more frequently used than 'operation system(s)' and 'work definition(s)'. The reason is that, as discussed before, understanding of 'dn.-n.' has been through a difficult search process in the broad semantic scope of dn. for the profile, and the results may be of ambiguity if the relationship between dn. and the head noun is not easy to build. 'Operation' of 'operation system(s)' and 'work' of 'work definition(s)' has an extraordinarily broad semantic scope which involves various things, events and persons including doers and objects. "操作系统" or 'operating system(s)' and "工作定义" or 'working definition(s)' are more of specific items that the former is often used in technology and the latter is often used in specific documents or studies like instructions or academic study. To meet the demand of the specific usage of the phrases and to clearly illustrate meanings, 'operating' and 'working' is adopted to avoid ambiguity.

However, 'swim cap' and 'paintbrush' are much more frequently used than 'swimming cap' and 'painting brush', though as discussed before there should not be much differences in the semantic effect. Referred to the economy principle in language based on the premise of the efficiency of speech (parole in French) communication, which means that the participants in the communication activities make an economic arrangement for the language they use in order to reduce the wastage of time and efforts [25], since the semantic effect of 'swim cap' and 'swimming cap' is quite

close to each other, the 'ing' may be inclined to be omitted in their usage.

E. The Usage of the Two Constructions in Translation of Chinese Compound Nouns

According to the above discussion, it is obvious that 'dn.-n.' construction and 'v.-ing-n.' construction is cognitively and thus, semantically and pragmatically different. The path of the cognitive process of 'dn.-n.' is longer and easier and may cause ambiguity. However its results of the understanding provide with enough various meanings. On the contrary, the path of the cognitive process of 'v.-ing-n.' is shorter and clearer to highlight the internal process of the action, which can avoid ambiguity. When it comes to the translation of a Chinese compound noun, 'dn.-n.' is a better choice if the various meanings or profiles of the action need expressing or the ambiguity is in need while 'v.-ing-n.' is a better choice if only the profile of the process of the action is in need to avoid misunderstanding. Besides this, if the semantic effect of 'dn.-n.' and 'ing.-n.' is quite close to each other, the 'ing' may be omitted in translation.

V. CONCLUSION

A. Major Findings

The likely translations of Chinese compound nouns into 'dn.-n.' construction and 'v.-ing' construction are cognitively different and thus, semantically and pragmatically different. Dn. as a modifier has an extremely broad semantic scope including various dimensions. The path of the cognitive process of 'dn.-n.' is longer and easier to cause ambiguity and complexity. In such an occasion, external environment (such as the environment of communication) is likely to be relied to help to judge. However, its results provide various enough meanings. On the contrary, v.-ing is a directly practicable profile, "internal process of the action", of the base. The path of the cognitive process of 'v.-ing-n.' is shorter and clearer to highlight the internal process of the action, which can avoid ambiguity.

If the concepts of dn. as a modifier and the ones of the head noun fit well in their connection, or some certain relationship is especially prominent or obvious to build, there would be of low difficulty in the search of the profile and understanding of the 'dn.-n.' construction. In this case, the semantic effect of 'dn.-n.' construction and 'v.-ing-n.' construction is likely to be close.

When it comes to the translation of a Chinese compound noun, 'dn.-n.' is a better choice if the various meanings or profiles of the action need expressing or the ambiguity is in need while 'v.-ing-n.' is a better choice if only the profile, the process of the action, is in need to avoid misunderstanding. 'Ing' may be omitted in usage out of the economy principle of language if the semantic effect of 'dn.-n.' construction and 'v.-ing-n.' construction is close.

B. Limitations and Suggestions for Future Research

The study of the translation of Chinese compound nouns as well as the comparison of the two construction is under a

static perspective. It is expected to be further developed to a diachronic research.

The study merely collects few linguistic data as cases for analysis. It is expected to take advantage of corpus technology and TAPs to examine the conclusion.

The comparison and analysis of the two constructions are based on their interior traits while external environment is little considered. Their differences can be studied with the reference to the external communication environment.

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