A Corpus-Based Study on Chinese EFL Learners’ Acquisition of English Psych Verb Argument Structure Constructions

Xiao-min WEI
College of Foreign Languages, Hunan University, Changsha 410082, China

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Abstract. This study draws on construction grammar approach to the acquisition of English psych verb argument structure constructions by Chinese EFL learners, for which learners’ mother tongue, cognitive experience and general cognitive mechanism were selected as testing fields in the reconstruction of English form and function of psychological events. Different from previous studies of psych verb acquisition which were mainly focused on learners’ receptive knowledge, this study makes a comprehensive analysis of Chinese EFL learners’ usage of English psych verb argument structure construction in learners’ corpus (CLEC and SWECCL 2.0), in comparison with English native speaker corpus—COCA. The findings show: (1) L2 learners of all proficiency levels do not confuse the ES verb argument structure construction with that of EO verb in their usage of transitive construction, differed from previous studies; (2) the formal transparency and semantic transparency of English psych verbs and its argument construction facilitate the L2 acquisition; (3) L2 learners’ preference of the usage of resultative construction indicates the strong influence of L1, which is further proved in L2 learners’ usage of the prototypical argument construction of psych verbs.

Introduction
Psychological verbs express psychological events. Language reflects the reality, and all languages have ways of expressing psychological events, which not only embody the universality of human cognition but also indicate the differences of how people of different nations construe psychological events. The study of L2 acquisition of psych verbs is supposed to mainly focus on L2 learners’ reconstruction of L2 form and function of psychological events, for which L2 learners’ native language system, cognitive experience and general cognitive mechanisms should be considered.

Since the 1970s, Psychological verbs have attracted attention from both theoretical and applied linguistics fields, because of their implications for the theory of argument structure[1]. Argument structure is a typical problem of syntax-semantics interface concerning lexical-semantic representation[2,3,4], which is studied mainly from two perspectives: projectionist approach and constructional approach. Despite their common interest in studying sentence meaning under the interaction of verb and argument structure, the former holds verb semantics plays a decisive role in syntactic form and argument structure is “the lexical representation of grammatical information about a predicate”[5]; the later argues the argument structure of a sentence is derived from the construction instead of the verb and the overall interpretation of a clause” is arrived at by integrating the argument structure construction with the main verb and various arguments, in light of the pragmatic context in which the clause is uttered”[6]. Constructional approach has obvious superiority over projectionist approach in treating the relation between argument structure and verb: verbs mainly describe various events in the outside world and each distinct sense of a verb is conventionally associated with rich frame semantic meaning that in part specifies certain participant roles; argument structure constructions organize the conceptual components of events, form perspective, time structure of events and provide argument roles which capture surface generalizations over individual verbs’ participant roles. Argument structure constructions and verbs both correspond to events in the real world, and full understanding of the semantics of the two necessarily involves the characteristics of event types and cognitive disposition behind languages.
Psychological events refer to psychological activities and/or states of people with perceptual ability. The syntactic structure of psychological events is represented by words and expressions, word order, morphology, and etc. “Experiencer, causer and theme/target”, important participants of psychological events, represent entities in most cases and is expressed by nouns and noun phrases. “Causative force” is the core concept of psychological events and conveyed by psychological verbs and constructions. In the process of lexicalization and syntacticalization (sentence expression) of psychological events in the real life, psychological verbs provide rich frame semantics of psychological events, and argument structure constructions organize the conceptual components of psychological events, form perspective, time structure of psychological events. The formation of the ultimate meaning of psychological event sentence stems from the interaction between psychological verb and argument structure construction.

Construction grammar views basic sentence types as argument structure constructions and associated directly with semantic structures which reflect scenes basic to human experience. Verbs are not self-sufficient in meaning and its complete meaning can only be expressed in sentences. Therefore, simple sentence is usually the basic means of expressing an event, reflecting event type and participants. Psych verbs are dyadic verbs that often co-occur with two noun components reflected as two participants in the form of sentence which belongs to the category of transitive construction. Therefore, the study of Psychological events’ syntactical representations should involve the event type of the whole sentence, event participants, semantic relations between psych verbs and its collocations, as well as the representation of psych causative force, which can be summed up into two research points: 1) the syntactical representation of psych verb meaning; 2) the reaction between psych verb and argument structure constructions (construction semantic restriction and psych verb selection). Verbs mainly describe various events in the outside world. Since they are not self-sufficient in meaning, the understanding of verbs involves all kinds of components in their corresponding event frames. Talmy’s analysis of lexicalization pattern of motion verbs shows that the meaning of each verb could be further divided into a collection of many event components. The distribution of these event components is highly systematic and has great influence on a verb’s syntactic behaviors[7]. Therefore, this paper holds that the incorporation of event components in psych verb’s meaning could determine whether it is semantically compatible with various argument structure constructions.

Since no language in which there are verbs or simple constructions devoted to encode the target of the caused psychological/emotional episode (while language allows this with periphrastic constructions)[8, 9], languages usually express the construal separately in simple constructions, with psych causative verb for caused psychological episode and psych state verbs for the target/state psychological episode. However, languages vary in linguistic structures and they differ in the syntactic alternation (Syntactic alternation concerns different perspectives on the same event, complex motivations such as information structure, discourse and communication function, as well as restrictions on usage.) when it applies to psych verbs. The choice of sentence patterns is determined by psych verbs’ lexicalization, argument structures, and speaker’s perspective, world knowledge and national customs.

English and Chinese are of different language typology, which gives full play to different linguistic representations of psychological events. Based on the previous studies, we summarize their differences as follows:

1. **Quantitative distribution of causative psych verb and state psych verbs**
   - English has more causative psych verbs (220) than state psych verbs (124) [10], while it is questionable that modern Chinese has causative psych verbs, for Zhao [11] claims that modern Chinese has only state psych verbs and “lacks causative psych verbs of free use as English” but Zhang[12] and Wang&Xu[13] argue that modern Chinese still has more than twenty causative psych verbs left from classical Chinese.” Therefore, many English causative psych verbs do not have Chinese counterparts.
   - **Lexicalization patterns of English and Chinese psych verbs**
Lexicalization differences between English and Chinese psych verbs mainly reflected in causative psych verbs. English causative psych verbs lexicalize the psychological event components “causer, experiencer and result (psychological state change)”. Chinese has experienced “decausative” process and resulted in the fact that causative monosyllabic verbs of classical Chinese has gradually lost its causative meaning in modern Chinese[14] and can only express the meaning of “state, action or result” independently without “accomplished or achieved” meaning. As a consequence, Chinese monosyllabic causative psych verbs don’t encode “psychological state change (result)”. While the same meaning/function of English causative psych verbs can also be realized by Chinese monosyllabic causative psych verbs through adding morpheme (“result”) to form disyllable (bimorphemic) words that allow the same number of arguments of English counterparts.

3) Syntactic behavior of English and Chinese psych verbs

The lexicalization differences of English and Chinese psych verbs must be reflected in its syntactic behavior (morphology and argument structure). English is a synthetic language with a high morpheme-per-word ratio, the syntactic representation of psychological events is reflected on psych verb morphological variations; While Chinese is an analytic language with a low morpheme-per-word ratio, the syntactic representation of psychological events is reflected on syntactic alternation.

Methodology

Research Questions

This study serves to identify developmental patterns of English psych verb argument structure constructions by Chinese EFL learners and to investigate the role of Chinese EFL learners’ mother tongue, cognitive experience and general cognitive mechanism in the reconstruction of L2 form and function of psychological events. On the basis of Talmy’s lexicalization theory and Goldberg’s cognitive grammar, it is hypothesized that Chinese EFL learners’ choice of syntactic representation of English psychological events is determined by psych verbs’ lexicalization, argument structures, and speaker's perspective, world knowledge and national customs. Research questions were thus formulated as:

(1) What is the developmental pattern of psych verb argument structure constructions by Chinese EFL learners?

(2) What are the usage similarities and differences of two types of psych verb argument structure constructions between English native speaker and Chinese EFL learners?

(3) Are Chinese EFL learners tend to use psych verb argument structure constructions which are similar to the mother language system in terms of semantics and syntax?

Instruments

Language acquisition is a cognitive process of psychology and cannot be observed from outside. It is argued that linguistic knowledge is accessible only through productive tests, whereas large part of preview studies on psych verbs acquisition adopted receptive tests such as grammatical judgement, picture identification and multiple choice, or semi-productive tests as cloze test. Since receptive tests only check part of speakers’ linguistic knowledge and its reliability and validity are often questioned, this study looks into corpus to find how native speakers and L2 learners use English psych verbs. Equipped with wide range of authentic and reliable sources of linguistic data and scientific analytical techniques, corpus analysis is assumed to have a better chance of examining learners' specific language behaviors and only usage can reflect speakers’ real knowledge of psych verbs.

In order to provide answers to the above research questions, we make avail of native speakers’ corpus COCA (Corpus of Contemporary American English) and Chinese EFL learners’ corpus CLEC(Chinese Learner English Corpus, 2003) and SWECCL2.0 (Spoken and Written English Corpus of Chinese Learners, 2008). Learners’ corpus represent English learners of four proficient levels: from lower-intermediate (university freshmen and sophomores of non-English major),
intermediate (university juniors and seniors of non-English major), upper-intermediate (university sophomores of English major), to advanced (university seniors of English major). Compared with native speakers’ usage of psych verb argument structure constructions, we analyze the quantitative distribution of learners’ usage of psych verb argument structure constructions and its cognitive motivations behind it, through statistical calculation of frequency and probability data. Thus all the data are be analyzed by Chi-square of goodness of fit test and the L2 learners’ data from two learners’ corpus are to be reanalyzed by ANOVA analysis (both one-way and multiple comparisons) and Post hoc test (Sheffe). All these statistic analyses are made with the help of SPSS(Version 22.0), a statistic computer software.

Test Words Selection and Norming List Creation

The selection of test words is important since only appropriate test word will bring about reliable test results that go with research questions. Three criteria are established as the guideline in choosing the test words. First, test words should be representative, we quote two words(admire, amuse) from Levin (1995) whose study is the most frequently cited when it comes to the study of English word classes and variations; Second, test words should be widely concerned by researchers, we also take two(fear, frighten); Third, test words should be the most frequently used psych words in L2 learners’ corpus, we get the last two(like, please).

We creates a norming list of psych verb argument structure constructions in accordance with the study of Levin[10], and COCA psych verb argument structure constructions samples for which we analyse every 1000 example sentences for each 6 test words

Results

Developmental Pattern of Psych Verb Argument Structure Constructions by Chinese EFL Learners

To answer the first research question, the usage of psych verb argument structure constructions among L2 learners of four proficiency levels in two learners’ corpus are compared. The two learners’ corpus show much the same gradual development pattern of learners’ usage of psych verb argument structure constructions (F=0.251, P>0.05). But different from preview studies, there isn’t much mistake of confusing ES verb argument structure construction with that of EO verb in L2 learners’ data.

Comparison between English Native Speaker and Chinese EFL Learners

Through COCA, we find the strength of association between state psych verbs and argument structure constructions is strong (X²=745.421, df=21, p < 0.05), while that of causative psych verbs is relatively weak (X²=472.012, df=19, p < 0.05), and the prototypical argument structure constructions of psych verbs used by native speakers are transitive constructions, except “fear” of sentence complement construction and “amuse” of reflexive construction. Chinese EFL learners demonstrate the same preference for the prototypical argument structure constructions of psych verbs, while their argument structure construction diversities are much lower than native speakers and there is much long way for them to improve.

Influence of Mother Language System and General Cognitive Mechanism

L1 influence accords with what we find the linguistic representation differences of psychological events between English and Chinese mentioned above: the productive analytical causative construction (resultative construction) is first acquired or transferred because it is the typical causative construction of Chinese. Animate subject is often preferred by learners which is correspondent to Chinese conception of psychological events that should be initiated from human. Animacy can also be viewed as general cognitive mechanism that shared by all human beings, for it is not surprising to find passive construction (human subject) is largely employed by both native speakers and learners in
the linguistic representation of psychological events. And it is also interesting to find learners score slightly high on “frighten”, which has suffix “-en” to indicate causative meaning. So we can easily infer that formal transparency and semantic transparency of English psych verbs and its argument construction may facilitate acquisition.

Conclusion

Psych verbs have unique syntactic structures and semantic properties. This study investigated Chinese EFL learners’ usage of English psych verb argument structure construction in learners’ corpus. The study showed that prototypical argument structure constructions of psych verbs was acquired and construction diversity needs to be improved by L2 learners of all proficiency. The underlying causes were related to opaque of syntactic structures (morphology and argument structure) and cross-language influence. The present study has implications for language pedagogy. It is suggested that argument structure construction learning should be emphasized in verb learning, and learners should be encouraged to use the same verb in different argument structure constructions to learn to differentiate the nuance of each argument structure construction, for which reflects speakers’ specific perspective of event.

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References


