

# Psych Movement Phenomenon in English and Chinese

Chu-hsia Wu

Cheng Kung University

## Abstract

In language processing, the study of sentence or text semantics has a long tradition of its own since the proposal of case relations by Fillmore in 1968. This article tackles the issue about sentence/text semantics with a focus on the psych movement predicates. In English, Psych movement verbs have a derivational system of their own. In order to achieve a thorough understanding of psych movement phenomenon, this study exploits the issue from a comparative linguistic point of view. Case relations and derivational systems of English are reviewed to identify their relationship with psych movement verbs. The evidence of psych movement adjectives in the non-inflectional language Chinese is discussed to support the claims that psych movement phenomenon does occur in Chinese. Three words *amuse*, *bore*, and *interest* in terms of their predicative quality and case relations in English and Chinese are analyzed. The analysis shows that the predicative quality can not fully account for the psych movement phenomenon in a sentence or text. Rather, the integrity of the whole sentence or text should be taken into account to construct a complete semantic relation of psych movement phenomenon in language processing.

**Key Words:** psych movement, sentence/text semantics, case relations, derivation, Chinese-English comparative study, language processing

## 1 Introduction

The derivations in an inflectional language are as widespread as the derivational endings provided for the verbal and adjectival systems, since both verbs and adjectives may occur as predicates. In English, Psych movement verbs have a derivational system of their own. However, there are no derivational endings for verbs and adjectives in the non-inflectional languages like Chinese (Wu 1992, 1999; Li and Thompson 1981, Newnham 1971). One may ask how the psych movement works in Chinese. The issue is exploited along the line of the English psych movement verbs *amuse*, *bore*, and *interest*, resulting with the finding that psych movement in Chinese occurs in types of predicative adjectives rather than verbs. In the case of Chinese, the predicative quality can not fully account for the psych movement phenomenon in a sentence or text. Rather, the integrity of the whole sentence or text should be taken into consideration to construct a complete semantic relation of psych movement

phenomenon in language processing. This finding is crucial to the construction of semantic information. With the high tech advance in language processing, the representation of semantic information in terms of the use of case roles is one of the critical components in a parsing system.

Psych movement verbs are process verbs which take the Object (O)<sup>1</sup> as subject and the Experiencer (E) as direct object such as in the sentence '*The story amused me*'. In terms of case roles, the semantic content reflected in the associated syntactic structure with a psych verb is (O, E)<sup>2</sup>. In English, each of the psych movement verbs has two derived adjectives. One is with the Experiencer as subject and the Object in a prepositional phrase as in '*I / was amused at / the story*'. Another takes the Object as subject and the Experiencer as indirect object as in the sentence '*The story / was amusing / to me*'. The psych movement phenomenon occurs in the propositions with the two types of the derived adjectives, that is, the interchange of the two cases as (E, O) and (O, E). The semantic content reflected in the case frame surfaces its underlying semantic relations in subject choice hierarchical order from left to right. It also mirrors its syntactic structure. Three verbs *amuse*, *bore*, *interest* are taken to exemplify the psych movement phenomenon in English with comparison to their Chinese counterparts.

## 2 Case Relations

What is case relation? The notion of case relations was first introduced in 1968 by Fillmore in its case grammar theory. Case grammar theory is the study of sentence semantics. It is a system used to describe the inner semantics of a clause using the verb's semantic valence as a base in terms of kernel analysis (Fillmore 1968, Cook 1979, 1989). The unit of information is the clause. The basic idea of case grammar is that the central theme of a sentence is its predicate and that each argument in the sentence is engaged in a certain relationship with this predicate. The precise case relationship depends on the semantic properties of the predicate and the arguments in question. The representation of a sentence is the case frame of the predicate with the arguments related to the predicate. The semantics of a sentence can be expressed in terms of case relations which are the relationships between arguments and the verb. Case is claimed to be universal. 'Case frames' is derivable from cases by rules of the grammar, namely, the same sorts of underlying semantic functions could be seen and realized in

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<sup>1</sup> The Object (O) and the Experiencer (E) are case roles as in Case Grammar Theory defined.

<sup>2</sup> This is regarded as Case Frame of the sentence in terms of predicate-argument structure.

the form of case frames which is language independent.

Two key case roles related to psych movement analysis are Object (or Theme) and Experiencer. Object is an entity undergoing the effect of state, process, or action described by the verb, is the neutral underlying theme and an obligatory case found with every verb. With the state verbs the Object<sup>3</sup> (Os) is the thing being described (Cook 1979, 1989). With process or action verbs the Object (O) is the moving object or the thing undergoing change (Cook 1979, 1989). Experiencer (E) is the person undergoing sensation, emotion, or cognition, is the case required by an experiential verb (Cook 1979, 1989, Radford 1988, Saeed 1997). The experiencer is the hearer in verbs of communication, and experience deals with only the inner life of man (Cook 1979, 1989).

For example, in the sentence '*The story interested me.*', the predicate '*interest*' takes two arguments '*the story*' and '*me*'. The grammatical function of the argument '*the story*' is the subject of the sentence being described by the verb, thus is assigned the case role Object. Another argument '*me*' functions as the direct object of the verb undergoing the process of sensation, emotion, and cognition entailed by the semantic content of the verb, thus is assigned the case role Experiencer. The semantic information of the proposition is represented by the case frame (O, E) which mirrors the syntactic structure of the sentence in subject choice hierarchical order from left to right (Fillmore 1968, Cook 1979, 1989). In this case the first case role O is chosen as the subject of the sentence. The psych movement verb *interest* has two derived adjectives. One is with the Experiencer as subject and the Object in a prepositional phrase as in '*I / was interested in / the story.*' (E, O), another takes the Object as subject and the Experiencer as indirect object as in the sentence '*The story / was interesting / to me*' (O, E).

## 2.1 Chinese counterparts

Psych movement occurs in the form of adjectives in Chinese. Take the English psych movement verb *amuse* as the example. The sentence '*The story amused me*' can be translated into Chinese as in (1). This is a complex structure with the word *amuse* paraphrased as *feel*

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<sup>3</sup> In order to differentiate the Object described by the state verbs from the Object described by the process or action verbs, the former is indicated as Os the later O.

*amused* (*gan3dao4 yu2kuai4*)<sup>4</sup>, which is usually positioned at the ending of the sentence.

- (1) *Zhe4ge5 gu4shi5 / shi3 / wo3 / gan3dao4 / yu2kuai4*  
*The story / makes / me / feel / amused*  
 O E

According to the Chinese language specific property, the verb *make* '*shi3*' is added between the two arguments *the story* '*zhe4ge5 gu4shi5*' and *me* '*wo3*' (Wu 1992, 1999, Li and Thompson 1989) in this complex structure. The case roles assigned to these two arguments are not determined by the predicate *yu2kuai4* '*amuse*' only. Rather, they are determined by the two conjoined simple clauses

*Zhe4ge5 gu4shi5 / shi3 / wo3* (*The story / makes / me*)  
 and *wo3 / gan3dao4 / yu2kuai4* (*me / feel / amused*).

The argument *wo3* '*me*' is objective subject connecting two clauses. The resulted case frame (O, E) mirrors the syntactic structure with the predicate *gan3dao4 yu2kuai4* '*feel amused*' in question in subject choice hierarchical order from left to right.

In English, one of its derived forms *amusing* as in '*The story was amusing to me*' is translated as in (2), in which the two arguments *the story* (*zhe4ge5 gu4shi5*) and *to me* (*dui4 wo3*) are immediate constituents with the second one taking an optional transition verb phrase *lai2shuo1* '*to speak*'.

- (2) *Zhe4ge5 gu4shi5 / dui4 wo3 (lai2shuo1) / shi4 yu2kuai4 de5*  
*The story / to me (to speak) / was amusing particle,*  
 O E

In this expression, the predicate *yu2kuai4* '*amusing*' is a predicative adjective with the copular *be* (*shi4*) preceding it and followed by the adjectival particle *de5*. The whole predication *shi4 yu2kuai4 de5* '*was amusing*' is placed at the sentence final position as in sentence (2) with the case frame (O, E).

Another derived form *amused* as in '*I was amused at the story*' is typically uttered as in

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<sup>4</sup> The tonal citation form used hereafter is as such: the numeral 1 as level tone, 2 rising tone, 3 falling and rising tone, 4 falling tone, and 5 neutral tone.

sentence (3) in Chinese.

(3) *Wo3 / dui4 zhe4ge5 gu4shi5 / gan3dao4 yu2kuai4*  
*I / to the story / feel amusing*  
E O

The psych movement occurs in this case. The person *Wo3 'I'* undergoing sensation and emotion is positioned initially as the subject, and immediately followed by the second argument *zhe4ge5 gu4shi5 'the story'* with a prepositional particle *dui4 'to'* leading it. The derived English psych predicate '*was amused at*' translated into Chinese as *gan3dao4 yu2kuai4 'feel amused'* is positioned at the ending of the sentence. The semantic information of the sentence reflects with the case frame (E, O).

## 2.2 Findings and results

These examples tell the differences of the two languages in two aspects. One is related to the quality of the predicate (a verb or an adjective); another is about the word order related to the psych predicate examined in question. It is most likely to conclude that the English verb *amuse* with its two derived adjectives *amusing* and *amused* when used in Chinese tend to function as adjective such as *yu2kuai4(de5) 'amusing'* or *gan3dao4 yu2kuai4 'feel amused'*. This predicative adjectival phrase is a two-valency predicate, normally positioned at the ending of the sentence with the two arguments preceding it. Even though the psych movement phenomenon (O, E) and (E, O) does occur in the Chinese counterparts based on the observation from the sentences being examined. However, the analysis shows that the predicative quality can not fully account for the psych movement phenomenon in a sentence or text particularly in the language like Chinese. Rather, the integrity of the whole sentence or text should be taken into account to construct a complete semantic relation of psych movement in language processing.

This specific point will be further discussed in section 5. The unidirectional and bidirectional derivational systems and psych movement derivation in English are reviewed first in section 3.

### 3 Literature Review: Derivation

In the Endo-European languages, the verbs of a language tend to have a derivational system. That is there are related sets of verbs based upon the same lexical root. These related verbs often include three verb types as state, process, and action (Cook 1989). Given one verb in the set is basic, a derivational system will explain how other verbs, process and action, are derived from it.

In linguistic literature, there are unidirectional derivation as proposed in generative semantics and bidirectional derivation as proposed by Chafe (1970). However there are still other derivational endings provided for the verbal and adjectival systems, since both verbs and adjectives may occur as predicates. For example, in English psych movement verbs have a derivational system of their own. The derivational systems of unidirectional and bidirectional ones are delineated below.

#### 3.1 Unidirectional derivational system

The derivational system proposed in generative semantics is a unidirectional system which assumes the state form is always the basic form. This unidirectional system is independent of the morphology and syntax of any particular language (Cook 1979, 1989). Process and action forms are derived from the state form by adding abstract predicates. The process forms are derived by adding the inchoative predicate BECOME (McCawley 1971) or COME ABOUT (Lakoff 1970) to the state forms. The action forms are derived by adding the predicate CAUSE, a two-place predicate with an Agent or event as its subject and an event as its object (McCawley 1971), to the process forms.

An example that state forms become process forms is as such *the door opened*. The sentence is interpreted as COME ABOUT + *be open* and is read as 'the door was not open AND NEXT the door was open'. An example that process forms become active forms is as such *Mary opened the door*; x open y: x CAUSE (COME ABOUT (y OPEN)). The sentence is interpreted as CAUSE (Mary, COME ABOUT (BE OPEN) door))) and is read as *Mary caused it to come about that the door is open*. The unidirectional derivational system is given as

State + inchoative = Process; Process + Causative = Action

### 3.2 Bidirectional derivational system

The bidirectional derivational system for English was proposed by Chafe (1970) using four derivational units: inchoative, resultative, causative, and decausative. The basic form may be a state, a process, or an action verb. A set of forms derived from the same morphological root may be related by the bidirectional system. This bidirectional derivational system is represented as

State + Inchoative = Process; Process + Resultative = State  
Process + Causative = Action; Action + Decausative = Process;

A state verb may become a derived process verb by adding the inchoative derivation. The logical structure is represented by adding the predicate COME ABOUT to the state verb. For example,

- (4) State + Inchoative = derived Process  
eg., *be wide* (Adj) + inchoative = *widen* (intransitive V)  
*widen* (intransitive v) = COME ABOUT (BE THICK))

A process verb may become a derived state verb by adding the resultative derivation. The logical structure is represented by subtracting the predicate COME ABOUT from the process verb. For example,

- (5) Process + Resultative = derived State  
eg., *break* (intransitive V) + Resultative = *be broken* (Adj)

A process verb may become a derived action verb by adding the causative derivation. The logical structure is represented by adding the predicate CAUSE to the process verb. For example,

- (6) Process + Causative = derived Action  
eg., *break* (intransitive V) + Causative = *break* (transitive V)  
*break* (transitive V) = CAUSE (BREAK)

An action verb may become a derived process verb by adding the decausative derivation. The

logical structure is represented by subtracting the predicate CAUSE from the action verb. For example,

- (7) Action + Decausative = derived Process  
 eg., *brush* (transitive V) + Decausative = *brush* (intransitive V)

The paradigm which links State, Process, and Action verbs is not the only system of derivations in a language. The derivations in an inflectional language are as widespread as the derivational endings provided for the verbal and adjectival systems, since both verbs and adjectives may occur as predicates.

#### 4 Derivation of Psych movement verbs

In English, Psych movement verbs have a derivational system of their own. As stated in the preceding sections, psych movement verbs are process verbs which take the Object as subject and the Experiencer as direct object. In English, each of the psych movement verbs has two derived adjectives. One is with the Experiencer as subject and the Object in a prepositional phrase; another takes the Object as subject and the Experiencer as indirect object. Take the basic verbs *amuse*, *bore*, *interest* as examples, their derived forms are given in Figure 1 below.

Figure 1

<u>Basic verb</u>	<u>O subject</u>	<u>E subject</u>
<i>amuse</i>	<i>be amusing</i> (derived Adj)	<i>be amused at</i> (derived Adj)
<i>bore</i>	<i>be boring</i> (derived Adj)	<i>be bored with</i> (derived Adj)
<i>interest</i>	<i>be interesting</i> (derived Adj)	<i>be interested in</i> (derived Adj)

The adjective which takes the Object as subject is derived from the verb with the *-ing* ending. This form is a true adjective, not a progressive form of the verb. The evidence can be seen by contrasting the derived adjective with the progressive form. The progressive forms of the verbs '*amuse*, *bore*, *interest*' take the Experiencer as direct object as in sentences (8a, 9a, 10a); the adjectives derived from the verbs such as '*be amusing to me*, *be boring to me*, *be interesting to me*' take the Experiencer as indirect object and may be modified by the intensifier *very* (Cook 1979, 1989) as in sentences (8b, 9b, 10b).

- (8) (a) The story / was amusing / me. (Progressive)  
       O           E  
       (b) The story / was **very** amusing / to me. (Adj)  
       O           E  
   (9) (a) The story / was boring / me. (Progressive)  
       O           E  
       (b) The story / was **very** boring / to me. (Adj)  
       O           E  
   (10) (a) The story / was interestng / me. (Progressive)  
       O           E  
       (b) The story / was **very** interesting / to me. (Adj)  
       O           E

The evidence that the predicate with the Experiencer as subject is a derived adjective, not a passive form of the verb can also be seen by contrasting the derived adjective form with the passive form of the verb from the examples listed below.

- (11) (a) Mary / was amused / by the story. (Passive)  
       E           O  
       (b) Mary / was very amused at / the story. (Adj)  
       E           Os  
   (12) (a) Mary / was bored / by the story. (Passive)  
       E           O  
       (b) Mary / was very bored with / the story. (Adj)  
       E           Os

The verb in its passive form takes the preposition *by* with a downgraded subject as it is shown in sentences (11a, 12a). However, the derived adjectives can co-occur with certain prepositions except *by* as in (11b, 12b), hence can not be considered as passive forms. They describe the state of the event.

From the examples (8 to 12), it is clearly seen that the *-ed* forms is a resultative predicate with the meaning 'state as a result of a process'; the *-ing* forms with the meaning 'quality of an object to induce a certain psychological experience'. Besides the psych movement verbs, many other derivational sets, which are independent from the inchoative and causative paradigms, can be found in languages.

#### 4.1 Sense analysis of psych movement verbs

The case frame reflects its syntactic structure, and every instance of the cases should defend

itself. That is, one case frame may represent more than one syntactic structure and reflects semantic variations. Different senses of a single verb may arise from its different syntactic distributions. The psych verbs associated with an entity undergoing certain kind of psychological process like cognition, emotion and sensation belongs to the Experiential semantic domain. Take the psych verb *amuse* as the example, it occurs in six types of distributions as in sentences (13 to 18) with the case frame (O, E) constructed in (13, 14), (E, O) in (15), (Os, E) in (17), (Os) in (16), and (E, Os) in (18). The psych movement occurs in the paired instances of (O, E) and (E, O), (Os, E) and (E, Os) but not in the case of (Os).

- (13) The story / amused / me. (V)  
       O           E  
 (14) The story / was amusing / me. (V, progressive)  
       O           E  
 (15) I / was amused / by the story. (V, passive)  
       E           O  
 (16) The story / was amusing. (Adj)  
       Os  
 (17) The story / was (very) amusing / to me. (Adj)  
       Os           E  
 (18) I / was amused at / the story. (Adj)  
       E           Os

One may ask the question 'How to capture the sense difference from the same case frame?' The answer lies in the issue of context. Obviously, the senses are consistent in the paired instances of (O, E) as in (13, 14) and (E, O) as in (15); (Os, E) as in (17) and (E, Os) as in (18). These are the processes that the psych movement undergoes. It is the psychological focus that motivates one to adopt the strategy of psych movement.

#### 4.2 Psychological focus

Psychological focus corresponds to the psychological notion of focus of attention (Bosch 1988). The sense of psychological focus can be distinguished from the senses of semantic focus and contrastive focus (Gundel 1999). If the attention of speech participants is assumed to be focused on a specific entity because of its salience at a given point in the discourse, the entity is in psychological focus. This sense of focus has been shown to correlate with various linguistic forms and properties, notably the appropriateness of unstressed personal pronouns and unstressed constituents in general. For example, the use of the personal pronoun represented by the italicized forms in (19) can be assumed to be in psychological focus.

(19) John looked pleasant. *He* was amused at the story, wasn't *he*?

## 5 Chinese as a non-inflectional language

The Chinese language is different from the English language primarily due to the nature of the two languages as non-inflectional versus inflectional. They differ not only in pronunciation and the written form but also in syntactic structure which includes the crucial aspects such as tense, predicate, and voice.

### 5.1 Tense

In English, verbs are inflected for tense. Besides, a verb may have different grammatical forms. For example, *wrote*, *writing*, *written* are three different grammatical forms based on one semantic unit (Saeed 1997) as what is shown in sentences (20 to 22) .

- (20) John *wrote* a book. (simple past tense)
- (21) John is *writing* a book. (present progressive)
- (22) The book is *written* in English. (past participle)

For the non-inflectional languages like Mandarin Chinese, the verbs neither have a derivational system nor are inflected for tense. The tense in Chinese is indicated by time adverbials in general such as *jin1tian1* 'today', *zuo2tian1* 'yesterday', *min2tian1* 'tomorrow'...etc with the base verb form intact. To indicate the past tense a particle *le5* is usually added after a verb such as *lai2le5* 'came'; and the auxiliary *jiang1yao4* 'will/shall'<sup>5</sup> tends to be added before the verb to indicate the future tense (Li and Thompston 1981; Newnham 1971; Wu 1992, 1999). These are illustrated in sentences (23 to 25).

- (23) *Ta1 jin1tian1 qu4 Taipei.* (present tense)  
He today go Taipei.  
'He goes to Taipei today.'
- (24) *Ta1 zuo2tian1 qu4 (le5) Taipei.* (past tense)  
He yesterday go particle Taipei.  
'He went to Taipei yesterday.'
- (25) *Ta1 min2tian1 jiang1yao4 qu4 Taipei.* (future tense)  
He tomorrow will go Taipei.

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<sup>5</sup> It has two short forms as *jiang1* and *yao4*, that is, besides the compound lexeme *jiang1yao4*, either part of the compound *jiang1* or *yao4* can be used independently. It depends on the situations in the context to decide which appropriate one to be used.

'He will go to Taipei tomorrow'

## 5.2 Predicate: verb and adjective

Chinese is a topic prominent language. Verbs and adjectives are not linked with the related morphological forms like the inflectional languages do. The decision of related parts of speech is made by syntactic distribution and semantic content of the word in question. The point is both syntactic and semantic in nature. For example, the Subject + Predicate structure in sentence (26) exhibits that the predicate *kuai4le4* 'happy' contributes more as an adjective rather than a verb from its syntactic and semantic evidence. This certain type of predicate in Chinese is sometimes (though not often) termed as stative verb by some writers (Newnham 1971). However to classify this certain type of predicate as stative verb is not syntactically and semantically sound, since verbs usually can not be modified by the intensifier *very*. However, adjectives tend to be modified by the intensifier *very*. For example, the predicate *kuai4le4* 'happy' in Chinese can always be modified by the intensifier *hen3* 'very' as *hen3 kuai4le4* 'very happy' (Li and Thompson 1981). In addition, the sentence (26) may also be transformed into another type of structure as in (27) by adding a copula *be* after subject to introduce an adjective with a particle *de5* following that adjective.

- (26) *Ta1 (hen3) kuai4le4*  
He (very) happy  
(27) *Ta1 shi4 kuai4le4 de5*  
He be happy particle

## 5.3 Active versus passive

### 5.3.1 English

In English, active sentences differ from passive sentences in four aspects. One is that the complement of the active verb surfaces as the subject in the corresponding passive construction. Secondly, the passive sentences generally require the auxiliary *be*. Thirdly, the lexical verb in passive is in the *n*-participle form. Finally, the subject of the active sentence may downgrade to the complement position in the corresponding passive construction in the form of *by*-phrase. In other words, the passive sentences may contain a *by*-phrase. The complement of *by* in the *by*-phrase plays essentially the same thematic role as the subject in

the corresponding active sentence. The four main properties which differentiate passive sentences from active sentences in English are illustrated in (28).

- (28) (a) John broke the window. (Active)  
(b) The window was broken by John. (Passive)

### 5.3.2 Chinese

In Chinese, four main properties differentiate passive sentences from their active counterparts. One is that passive sentences generally require a passive particle *bei4* with an optional complement which is the downgrade subject in the corresponding active construction. Another is that the lexical verb in passive sentence is the same as the one used in the corresponding active construction. Thirdly, the lexical verb typically takes a passive particle *bei4* preceding it with an optional complement (though need not) in between. That is, the phrase containing the particle *bei4* with the optional complement is generally followed by a verb. This *bei4*-phrase seems correspond to the English *by*-phrase, except that the particle *bei4* is an obligatory lexical item in the Chinese passive sentences. The fourth difference is that the expression that serves as the complement of an active verb surfaces as the subject in the corresponding passive construction. The differentiation between active sentences and their corresponding passive counterparts in Chinese are illustrated below.

- (29) (a) Active: *Lao3shi1 ma4 xuei2sheng1*.  
Teacher scolded student  
'The teacher scolded the student.'  
(b) Passive: *Xuei2sheng2 bei4 (lao3shi1) ma4*.  
Student by (teacher) scolded  
'The student was scolded (by the teacher).'

## 6 Evidence of psych movement predicate in Chinese

The psych movement verbs *amuse*, *bore*, and *interest* function as adjectives rather than verbs in Chinese with its idiosyncratic properties. Though, the unitary single part of speech of the lexical item simplifies the account to the related form speech of the predicate, it complicates the case role assignment to the direct object in the analysis of psych movement in Chinese. Even though the word order of the two languages is different at least in terms of psych movement predicate, their syntactic distributions are allocated systematically.

## 6.1 Psych verbs and their Chinese counterparts

## 6.1.1 Simple tense

In English, *amuse* is a psych verb, '*amuse me*' can be paraphrased as '*make me feel amused*' in Chinese. In the full expression '*The story amused me.*', in which the direct object *me* functions as objective subject in the Chinese counterpart as in

- (30) *Zhe4ge5 gu4shi5 / shi3 wo3 / gan3dao4 yu2kuai4*  
 This story / makes **me** / feel amused  
 O<S>

In the corresponding Chinese structure, a verb *shi3* 'make' is added after the subject '*The story*' and followed by the objective subject *wo3* 'me' with another predicative phrase *gan3dao4* 'feel' *yu2kuai4* 'amused'. The sentence contains an object which in turn functions as the subject of the following infinitival phrase is recognized as Exceptional Case Marking (ECM) structure by Chomsky (1995) and Radford (1997); the verb *shi3* 'make' in the Chinese counterpart is considered an ECM verb; and the argument *wo3* 'me' ECM complement. In the Chinese counterpart, the case role of the ECM complement *wo3* 'me' is externally checked from outside verbal phrase<sup>6</sup> and also by the following psych predicate phrase *gan3dao4 yu2kuai4* 'feel amuse'. This Chinese language specific structure also reflects in other psych movement predicates *bore* and *interest*. They are exemplified in (31 to 33). Psych verb phrase '*bore me*' can be paraphrased as '*make me feel bored*' in Chinese, and '*interest me*' as '*make me feel interest*'.

- (31) The story / amused / me. (V)  
 O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / yu2kuai4*  
 This story / makes **me** feel / glad  
 O E

- (32) The story / bored / me. (V)  
 O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / wu2liao2*  
 This story / makes **me** feel / bored  
 O E

<sup>6</sup> In English, it is the inflected auxiliary phrase (IP).

- (33) The story / interested / me. (V)  
O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / you3qu4*  
This story / makes **me** feel / interesting  
O E

### 6.1.2 Progressive

Mandarin Chinese has no clear border line about simple tense and progressive aspect. Basically, the term *shi3 wo3 gan3dao4* 'make me feel' is usually added in the simple active structure. One single Chinese statement may correspond to three different structures in English such as simple tense, progressive, and passive. The phenomenon is clearly shown in the comparative English-Chinese bilingual sentences below.

- (34) The story / was amusing / me. (V, progressive)  
O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / yu2kuai4*  
This story / makes **me** feel / glad  
O E

- (35) The story / was boring / me. (V, progressive)  
O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / wu2liao2*  
This story / makes **me** feel / bored  
O E

- (36) The story / was interesting / me. (V, progressive)  
O E  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / you3qu4*  
This story / makes **me** feel / interesting  
O E

### 6.1.3 Passive

Both English and Chinese have active and passive voice distinction. However, in terms of psych movement predicate, Chinese shows no distinction between active and passive as English does. Undergoing the process of transformation, active becomes passive. In the construction of case role analysis for the passive, the sentence is restored back to its underlying active structure, the resulted case frame tend to be the same as the active one (O, E) as what shown in sentences (34 and 37, 35 and 38).

(37) I / was amused by / the story. (V, passive)  
           E                  O  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / yu2kuai4*  
 This story / makes **me** feel / glad  
           O                  E

(38) I / was bored by / the story. (V, passive)  
           E                  O  
*Zhe4ge5 gu4shi5 / shi3 wo3 (gan3dao4) / wu2liao2*  
 This story / makes **me** feel / bored  
           O                  E

## 6.2 Derived adjectives and their Chinese counterparts

In English, one of the derived psych verbs such as '*amuse, bore, interest*' is with the *-ing* form, another is with the *-n* form. These two types of the derived psych verbs retain the quality as adjective. To this particular point, there is no derivation to the Chinese counterparts. In Chinese, psych predicates maintain the quality as adjective in all cases. The comparison of the *-ing* form with its syntactic distributions in the two languages are listed in 6.2.1 and 6.2.2; the *-n* form in 6.2.3.

It is clearly seen that psych movement phenomenon occurs in the instances listed in 6.2.2 with the *-ing* form and 6.2.3 with the *-n* form in the two languages.

### 6.2.1 *-ing* form

(39) The story / was amusing. (Adj)  
       Os  
       *Zhe4ge5 gu4shi5 / shi4 yu2kuai4de5*  
       This story / was amusing  
       Os

(40) The story / was boring. (Adj)  
       Os  
       *Zhe4ge5 gu4shi5 / shi4 wu2liao2de5*  
       This story / was boring  
       Os

(41) The story / was / interesting. (Adj)  
       Os  
       *Zhe4ge5 gu4shi5 / shi4 you3qu4de5*  
       This story / was interesting  
       Os

### 6.2.2 -ing form with *to* phrase

(42) The story / was (very) amusing / to me. (Adj)

Os E

*Zhe4ge5 gu4shi5 / dui4 wo3 ( lai2shuo1 ) / shi4 yu2kuai4de5*

This story / to me (to speak) / was amusing

Os E

(43) The story / was very boring / to me. (Adj)

Os E

*Zhe4ge5 gu4shi5 / dui4 wo3 ( lai2shuo1 ) / shi4 wu2liao2de5*

This story / to me (to speak) / was boring

Os E

(44) The story / was very interesting / to me. (Adj)

Os E

*Zhe4ge5 gu4shi5 / dui4 wo3 ( lai2shuo1 ) / shi4 you3qu4de5*

This story / to me (to speak) / was interesting

Os E

### 6.2.3 -n form

(45) I / was amused at / the story. (Adj)

E O

*Wo3 / dui4 zhe4ge5 gu4shi5 / gan3dao4 yu2kuai4*

I / to this story / feel amusing

E O

(46) I / was bored with / the story. (Adj)

E O

*Wo3 / dui4 zhe4ge5 gu4shi5 / gan3dao4 wu2liao2*

I / to this story / feel boring

E O

(47) I / was interested in / the story. (Adj)

E O

*Wo3 / dui4 zhe4ge5 gu4shi5 / gan3dao4 you3qu4*

I / to this story / feel interesting

## 6 Conclusion

Modern linguistics is descriptive, and human natural languages are used for communication with the concern primarily on cognition, sensation, and emotion. This is the impulse for the evolution of civilization and culture orientation. Undoubtedly, psychological predicates with

its specific semantic property in the domain of Experiencer play a critical and interesting role in the framework of sentence or text semantics. Case relations since its proposal by Fillmore in 1968 and presented in seven concrete models (Fillmore 1968, 1971; Chafe 1970; Anderson 1971; Gruber 1976 and Jackendoff 1972; Pike and Pike 1977; Cook 1979, 1989) elaborated in computational linguistics (Schank 1973; Winograd 1983; Harris 1985) are appropriate logical structure for the description of semantics in language processing.

The phenomenon of psych movement entailed by the psych predicates occurs not only in the inflectional languages like English but also in the non-inflectional languages like Chinese. In English, it is the psych verbs with their derivational adjectives that associate with the psych movement; in Chinese, it is purely the adjectives that entail the phenomenon. Predicative quality can not fully account for the psych movement phenomenon in sentences or texts particularly in Chinese based on the analysis to the psychological words *amuse*, *bore*, and *interest* with relation to the logical structure (case relations) conducted in this study. Rather, the integrity of the whole sentence or text should be taken into consideration to construct a complete semantic relation of psych movement phenomenon in language processing according to the language independency in nature. More psych predicates in the Experiential domain need to be added to the corpus to verify the findings discovered in this study as the future research.

## About the Author

Dr. Wu obtained her Ph.D degree in Linguistics from Georgetown University, Washington, DC, USA in 1992; and is an associate professor in the Graduate Institute and Department of Foreign Languages and Literature, National Cheng Kung University, Taiwan.

E-mail: pchw@mail.ncku.edu.tw

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