THE LINGUISTIC FRAME AND SEMANTIC ROLES: PLANT FIXED EXPRESSIONS IN CHINESE AND ENGLISH*

Shelley Ching-yu Hsieh and Elena Kolodkina**

Abstract: This study presents plant fixed expressions in Mandarin Chinese and in English. We present the compositionality of core meanings of *tea*, *melon*, and *apple* and propose that to understand PFEs needs the understanding of a linguistic plant frame. This study supports the assumption of cognitive grammar (Langacker 1987, 1991) through the analysis of plant fixed expressions, and resumes Pustejovsky's (1993, 1995) mechanism of type coercion from a syntactic coercion to a broader package-semantic operation.
Keywords: Cognitive grammar, plant fixed expressions, compositionality, frame semantics, mechanism of type coercion

Resumen: Este estudio presenta expresiones hechas de plantas en chino mandarín y en inglés. Presentamos la composicionalidad de los significados centrales de *té*, *melón* y *manzana* y proponemos que para entender dichas expresiones de plantas se necesita entender el marco lingüístico planta. Este estudio se apoya en los presupuestos de la gramática cognitiva (Langacker 1987, 1991) a través del análisis de expresiones hechas de plantas, y resume los mecanismos de Pustejovsky (1993, 1995) desde la coerción de tipo hasta una operación más amplia de paquete semántico.
Palabras clave: Gramática cognitiva, expresiones hechas de plantas, composicionalidad, marcos semánticos, mecanismos de coerción de tipo.

1. INTRODUCTION

The meaning of a complex expression is a function of the meaning of its parts and of the syntactic rules by which they are combined. This is the principle of compositionality (Hodges 2001, Bonnay 2005: 43). Compositionality is a universal characteristic of language (Brighton 2005: 13). Books were compiled for the purpose of clarifying this issue (e.g., Machery, Werning & Schurz 2005). Among linguists, the methodological status of compositionality in semantics has been intensively investigated (e.g., Partee 1984, Janssen

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1986, 1997). Little has been done on the compositionality of idiomatic expressions like plant fixed expressions. The present study examines this issue.

Fixed expressions are a fixed and commonly used language device. Plant fixed expressions are an integration of a biological organism and a human language. Through botany, such a language device expresses human minds. Langacker (1987, 1991) asserted that language in general is accurately likened to a biological organism. He assumed that language evokes other cognitive systems and must be portrayed as an integral facet of overall psychological organization. Plant fixed expressions play an important role in this overall integral organization. The vehicles are taken from a similar biological organism and have the capability of conveying the inner facet of another biological organism through a linguistic operation, just as animal expressions do (on animal expressions, see for example, Low 1988, Nesi 1995, Fontecha and Catalan 2003, Hsieh to appear).

The main bulk of the paper is organized in the following way: (1) introduction, (2) research framework, (3) the linguistic frames of *tea*, *melon*, and *apple*, (4) the association, underlying conceit, between plant vehicles and human sense and human knowledge, and (5) a conclusion.

2. RESEARCH FRAMEWORK

Mandarin Chinese (hereafter Chinese) refers to the official languages in Taiwan and in China.[1] *English* refers to the official languages in Great Britain and the United States. Most of our raw data are collected from *Academia Sinica Ancient Chinese Corpus*, *Academia Sinica Balanced Corpus of Mandarin Chinese*, *Oxford English Dictionary* (OED) and *Merriam-Webster On Line*. The spoken PFEs were observed and gathered from conversations with native speakers over the past three years. The raw data were then categorized according to vehicles (plant names) and compiled in the alphabetical order in EXCEL for analysis.

A fixed expression is traditionally defined as a string of words behaving as a unitary lexical item. Various terms are used to describe fixed expressions, such as freezes, binomials and frozen locutions (Pinker and Birdsong 1979, McCarthy 1990, Landsberg 1995, Moon 1998). According to Moon (1998: 2), who proposes a broader approach to fixed expressions, they include metaphors, similes, proverbs, sayings, frozen collocations, grammatically ill-formed collocations and routine formulae.

The present study examines the fixed expressions that contain at least a plant name in which this vehicle has a metaphorical connotation. For example, in *shu-da-chao-feng* 樹大招風'a big tree attracts the wind = a prestigious person is vulnerable to attacks', the *shu* 樹 'tree' metaphorically indicates 'a prestigious person'. In *as fresh as a daisy* 'very bright and cheerful', the *daisy*[2] denotes 'energy'.

In the essence of compositionality, Pustejovsky (1993, 1995) suggested a semantic operation that "converts an argument to the type which is expected by a predicate." The operation is applied to a syntactic unit to complete a semantic function of the utterance

[1] There are linguistic differences between both regions, through a large overlapping of the language variants, see for example, Qiu (1990), Yao (1992) and Tang (2001). So are British English and American English.

[2] Italicised letters show technical status.

with four semantic roles in a qualia structure (Lien 2000: 125): (1) a constitutive role, (2) a formal role, (3) a telic role, and (4) an agentive role, where the constitutive role designates part-whole relation, the formal role concerns what identifies the object in its pertained domain, the telic role indicates the function of the object, and the agentive role points out factors involved in the creation of the object.

As a matter of fact, Pustejovky's mechanism gives a more profound linguistic exposition than he has proposed. Lien (2000: 126) tickled out an application of type coercion in the hidden verb of *koa*^{n2} (*sia*^{2}) po^{3}-*ko*^{3} 趕(寫)報告 in Taiwanese. *Koa*^{n2} *sia*^{2} *po*^{3}-ko^{3} means 'to hurry with one's term paper' often with the verb *sia*^{2} 'write' missed. The missing verb coerces the noun (term paper) into its qualia structure in which that (1) the constitutive role has its subparts such as an introduction, the main body, a conclusion, and so on, (2) the formal role lies in being an integral part of fulfilling a semester course requirement, (3) the telic role (the purpose) of this term paper is to earn a credit, and (4) the agentive role is the student who is writing this term paper, but in another case, the coerced verb could be *gai*^{2} 改 'to score' instead of *sia*^{2} 寫 'to write', i.e., *koa*^{n2} *sia*^{2} *po*^{3}-*ko*^{3} 'hurry with scoring term paper', then the agentive role would be 'the professor'.

In terms of PFEs, Pustejovky's mechanism of type coercion is also in operation. If we take the constitutive role as an example, we will see that each plant vehicle, either parts of plant like *root* and *flower*, or the plant itself such as *grass*, is selected from nature. They are chosen ones in nature, a part-whole relation, to present fleeting thoughts of human minds (part) which in turn is a part-whole relation, viz., the constitutive role, in order to express human cognition and culture (whole). For instance, the *wood* expression *babes in the wood* 'inexperienced people in a difficulty' is expressed with wood, a natural botanic part and a constitutive role in nature. It points out this part of language speaker's fleeting thought, i.e. 'calling for experience in a difficult situation'. This study will delve into plant fixed expressions to reveal the purpose of the plant fixed expressions in human languages and to give a proposal for resuming Pustejovky's (1993, 1995) mechanism of type coercion.

The analysis of our data is based on Fillmore and Atkins' (1992) frame semantics. Frame semantics links to people's comprehension process, that is, how we understand meanings in context. Lexical meaning and grammatical characteristics "both with information about related words and with our general cultural knowledge about the world" (Goddard 1998: 69) work together in our comprehension process. The meaning of a word can be understood only against a background frame of experience, beliefs, or practices that "motivate the concept that the word encodes" (Fillmore and Atkins 1992). They give this set of verbs as an example: *buy*, *sell*, *charge*, *pay*, *cost,* and *spend*. To understand any of these verbs, we used to understand a complete 'commercial transaction frame':

> in which one person acquires control or possession of something from a second person, by agreement, as a result of surrendering to that person a sum of money. The needed background requires an understanding of property ownership, a money economy, implicit contract, and a great deal more. (Fillmore and Atkins 1992: 78)

In other words, this frame is a complex yet compact linguistic base for words such as *buy*, *sell*, and *charge* in the given society. People who do not have this linguistic frame in

mind will not understand the meaning of *buying* and *selling*. Tarzan, for example, would have such difficulty. Stated otherwise, by means of the compositionality of the concepts in the related words and the background knowledge of the society, we comprehend the words and expressions that we use in our daily life.

Likewise, to understand the vehicle of *apple*, *tea*, etc. in Chinese and English requires a complete 'linguistic frame' in speakers' minds.

3. THE LINGUISTIC FRAMES OF APPLE, MELON AND TEA

Some plant vehicles are popular in both English and Chinese, but some are popular only in one language. *Tea* is one of the both favored one; there are many *tea* fixed expressions in both languages. *Apple* and *melon* belong to the latter case. *Apple* ranks 17 (out of 171 plant vehicles) in our English corpus, whereas *melon* ranks 18 (out of 259 plant vehicles) in our Chinese corpus. However, they are rarely applied/found in the other corpus. This section presents the linguistic frames of *tea* in Chinese and English, *melon* in Chinese, and *apple* in English in order to show the compositionality of the concepts in plant vehicles.

3.1. Tea

An array of core meanings forms a semantic frame of each vehicle. We first propose the frame and then give examples. The linguistic frames of Chinese *cha* 茶 'tea' and English *tea* are given below:

> Chinese *cha* 茶 is living essentials, a snack, a foodstuff and a tip. It represents a betrothal and denotes a casual time. *Cha* is also a measurement unit.
>
> English *tea* is a light meal and a social gathering. *Tea* is very expensive and valuable but also stands for things of little value. *Tea* is the major interest, a chosen or a preferred task, a company. *Tea* is a caring attitude, especially to somebody in trouble. *Tea* is an old maid. *Tea* is also a measurement unit.

The linguistic frames of *cha* 'tea' in Chinese and *tea* in English are formed through the compositionality of the respective core meanings. The frames express speaker's multiplex concepts of *cha* and *tea*. They are rooted in the native speakers' minds, and are expressed in various *cha* (tea) and *tea* fixed expressions. We give one example for each concept in these two frames below:

Chinese *cha* 茶 is living essentials (*chai-mi-you-yan-jiang-cu-cha* 柴米油鹽醬醋茶 'firewood-rice-oil-salt-sauce-vinegar-tea = the seven necessities of daily life'), a snack (*zao-cha* 早茶 'early-tea = morning tea and dessert'), a foodstuff (*cu-cha-dan-fan* 粗茶淡飯 'coarse-tea-thin-rice = bad tea and rice; simple food and drink'), and a tip (*cha-shuei-qian* 茶水錢 'tea-water-money = tip for the hotel page'). It represents gifts for a betrothal (*guo-cha* 過茶 'pass-tea = give the gifts for betrothal', *he-cha* 喝茶 'drink-tea = to be betrothed to') and denotes a casual time (*cha-si-fan-xiang* 茶思飯想 'tea-long for-meal-think = think while drinking tea and having meal; think of someone or something all the time', *chi-hua-*

cha 吃花茶 'flower-tea = to get tea served by prostitutes; to wench'). *Cha* is also a measurement unit (*cha-chi* 茶匙 'tea spoon').

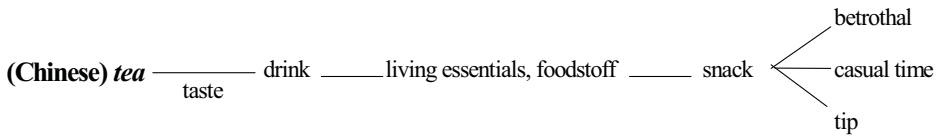

Fig. 1. The semantic development of Chinese *cha* 'tea'

Tea is a light meal, usually eaten in mid-afternoon (*afternoon tea*, *high tea*). It can also denote a substantial meal with tea (*meet tea*). It is also a hot drink made with a beef extract (*beef tea*). *Tea* is a social gathering held by people (*tea-party*, *tea-dance*, *tea ceremony*, *tea fight* 'a humorous name for a tea-party'). *Tea* is very expensive and valuable (*to go out for one's tea* 'to go on military operations which might result in the death'; *would not do for all the tea in China* 'nothing could persuade you to do something'). It can have quite the opposite connotations, standing for things of little value, bought on a regular basis (*given away with a pound of tea* 'given free with a non-expensive purchase'). *Tea* is the major interest (*one's tea*), chosen or preferred task (*one's cup of tea*), company (*one's cup of tea*). *Tea* is a caring attitude, especially to somebody in trouble (*tea and sympathy*). *Tea* is an old maid (*tea-bottle*) and marijuana (tea grouter, tea head 'habitual user of marijuana)'. *Tea* is also a measurement unit (*tea spoon*).

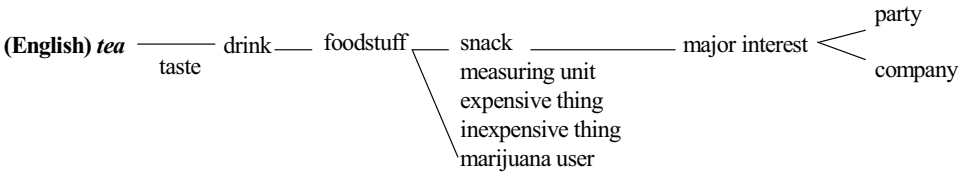

Fig. 2. The semantic development of English *tea*

In the above examples, both Chinese *cha* and English *tea* play a role as a part in a whole and represent the whole setting, such as being the drink in the morning, it is chosen to as the diction of *zao-cha* 早茶 'early-tea = morning tea and dessert'; being a drink in a engagement party or one of the betrothal gifts, the betrothal gift is named as *guo-cha* 過茶 'pass-tea = give gifts for betrothal'; so is the English *tea-party*, *tea and sympathy*, etc. The part-whole relation is an essential generating point of the vehicle *tea* in both languages.

English has more diverse meanings to form the linguistic frame of *tea* than Chinese where *tea* has for the most part to do with a foodstuff. Nevertheless, when we look into these core meanings carefully, we will see that they are almost all derived from the meaning 'drink'. The plant tea provides people a much-loved drink that is for long necessary at either casual social activities or at formal celebrations, such as in an engagement party (in

Chinese). In other words, *teas* in both Chinese and English are associated with the edibility/ usage of this plant. Sitting together and drinking tea also gives people time to talk and care each other, hence showing a caring attitude (in English).

Tea spoon is a further extension of the usage of this plant. Exactly because it is a very popular drink, the spoon that is used to measure the quality of tea was later used as a standard measuring unit for other foodstuff. *Teas* in Chinese and English possess the following concepts:

tea → Chinese *tea* : taste (drink)	tea → English *tea*: taste (drink)
isa (drink)	isa (drink)
usability (gifts)	

In Chinese the plant vehicle *tea* resulted from the taste of a botanical item tea, it is employed as a drink and as a gift. So is the vehicle *tea* in an English native speaker's mind, but tea as a gift is not expressed. Such associations between plants themselves, the plant vehicles and language speakers' background knowledge of the world determine the meaning of the expression. This will be discussed in detail in the next section.

3.2. Melon

The frame of Chinese *gua* 瓜 'melon' is given below:

> Chinese *gua* 瓜 is a common crop and a common thing. It means a head or a woman. *Gua* denotes a mature period, a specific period of time as well as a cause and a result.

Chinese *gua* 瓜 is a common crop (*lao-wang-mai-gua zi-mai-zi-kua* 老王賣瓜 自賣自誇 'old-Wang-sell-melon self-sell-self-boast = old Mr. Wang over-boasting about the melons he's selling; someone who exaggerates benefits or his own virtues') and a common thing (*guen-gua-lan-shou* 滾瓜爛熟 'roll-melon-soft through-ripe = having something at one's fingertips'). It means a head (*nao-dai-gua* 腦袋瓜 'brain-melon = head', *sha-gua* 傻瓜 'stupid-melon = a stupid fellow') or a woman (*gua-zi-chu-fen* 瓜字初分 'melon-word-at beginning-divide = a sixteen year old girl'). *Gua* denotes a mature period, a specific period of time (*ji-gua* 及瓜 'attain-melon = season of ripe melons, harvest; girls reaching the age of sixteen, reaching adulthood') as well as a cause and a result (*zhong-gua-de-gua zhong-dou-de-dou* 種瓜得瓜 種豆得豆 'plant-melon-obtain-melon plant-bean-obtain-bean = you plant melons, you get melons, sow beans and you get beans; As you sow, so will you reap').

The concepts that a Chinese speaker has in mind for *gua* is hence:

melon → Chinese *melon* : shape (ball-like)
isa (common crop)
agriculture (time of mature)
taste: sweet
quality: easy to be cut when ripened

melon → English *melon*: shape (ball-like)
size (large)

We see that melon, the botanical item, is adopted into Chinese as the plant vehicle *melon* whose concept in a Chinese speaker's mind is first its shape of being like a ball. Besides, its essence of being a common crop for a Chinese farmer, the time of its agriculture, its taste and quality are marked and documented in Chinese.

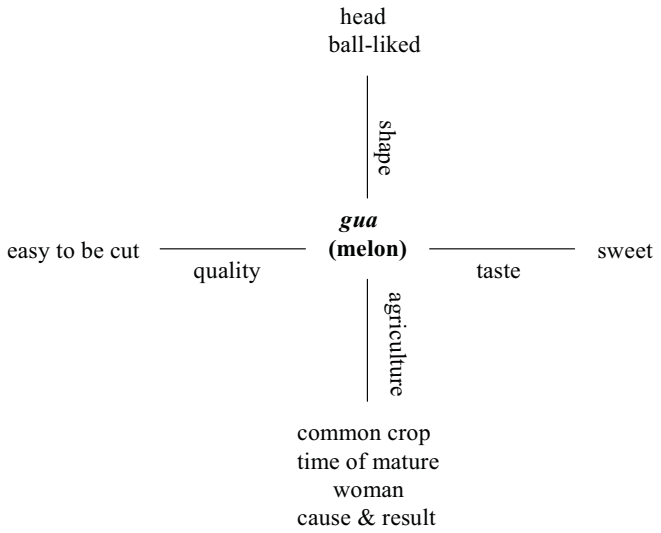

Fig. 3. The semantic development of Chinese *gua* 'melon'

PFEs with melon are not typical for English. *Melon dome* is a hemispherical dome having a circular plan and a ribbed vault. To *cut the melon* means 'to divide a surplus of profits available for distribution by stockholders'. *Melon* can also denote 'large breasts'. The concepts that an English speaker have in mind for *melon* are as shown above.

For Chinese speakers the shape, the taste of melon, and its being a common crop made *melon* a salient Chinese plant vehicle. For English speakers only the shape and the size of English *melon* are sufficient. Most melons are tropical or subtropical fruits; the geographical distribution gives a better chance for Chinese PFEs.

3.3. Apple

The frame of English *apple* is given below:

> English *apple* is any fruit or vegetable of a round shape. It is an object of a round shape. It is a healthy food. It is very precious or dear, but it incites conflicts. Apple is a typical American food. It denotes a person, a pupil, an offspring.

Apple is the typical name for fruit of a round shape (*apple of love* 'tomato', *apple of Peru* 'intensively poisonous tall tropical weed'). It denotes anything in the form of an apple (*Adam's apple* 'the front part of the neck that sticks out, especially in a man', *valley apple, road apple* 'dung'). English *apple* is something very good or dear (*to be apples* 'to be in good order and not worried', *apple of one's eye*). It is anything that incites quarrelling or a conflict (apple of discord). Apple is a healthy food (*an apple a day keeps a doctor away*). It is a typical American food. *Apple-pie* is regarded as characteristic of U.S. values (*to be as American as an apple pie). Apple* is a person (*the rotten apple injures its neighbors* 'a bad individual among many good ones spoils the group', *apples and oranges* 'people or things that don't go together'). It is an offspring (*the apple never falls far from the tree).* It is a pupil (*apple of my eye*). *Apple* is an informal name of New York (*Big Apple*).

The concepts that an English speaker has in mind for *apple* is hence:

melon → English *apple* : shape (ball-like)
value (precious)
snack (healthy, American)
person (dear)

Fig. 3 shows the semantic development of English *apple. Apple* fixed expressions are rare in Chinese. There is *ping-guo-lian* 蘋果臉 'apple face' to describe a woman with a face of rosy cheeks' that associates with the outer appearance of an apple. *Qing-ping-guo* 青蘋果 'green apple = one of first awakening of love; inexperienced person' where the taste of an unripe apple is connected.

Contrary to *melon*, English *apple* is much more productive than Chinese *apple*. Again, the geographical distribution determines this linguistic variation. English *apple* renders its shape, taste, and value to various PFEs. Each core meaning actually relies on the function or purpose of the plant or plant parts, and this function is associated, cast or matched to human society. This is a realization of mechanism of type coercion. Language is likened to a biological organism and is used to express our thoughts. We will elaborate this assumption in the last section of this paper.

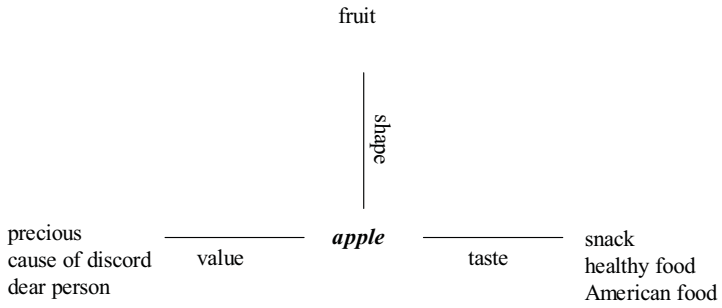

Fig. 4. The semantic development of English *apple*

4. THE UNDERLYING CONCEIT

As we see from the above discussion, certain associations between the PFEs, the plants and the human mind made certain PFEs come into being and express certain meanings, such as tea being the beloved drink and made *he-cha* 喝茶 'drink-tea = to be betrothed to' and *high tea* '(usually) a light meal in the late afternoon'. The association is the *underlying conceits* that link the real world and the expressions. They are a mixture of human culture and cognition. Lakoff and Turner (1989: 205-6) explain a proverb: *Ants on a millstone whichever way they walk, they go around with it* 'describes humans and their destinies' and assert that "the choice of ants and a millstone is by no means arbitrary." There is a certain correspondence or relation between an ant and a millstone to make this proverb meaningful: The virtual sizes of the huge millstone and the small ant, the motions of ants on the shape of the millstone, etc., all call out the meaning of the proverb. In other words, humans are like ants walking on a millstone: they can never escape destiny. The underlying conceit that joins the real world and the proverb is the size and the shape of the vehicles, viz., *ants* and *millstone*.

A range of PFEs in both Chinese and English envelops the underlying conceits of (a) the edibility of the plants and (b) customs or historical events. Plants are important suppliers of nourishment for people. The Chinese value comestibles in reality and often portrays this value in the language, e.g., *cu-cha-dan-fan* 粗茶淡飯 'coarse-tea-insipid-rice = bad tea and rice; simple food and drink' means metaphorically 'having a simple life or bearing hardships', because rice and tea are basic food and drink for the Chinese. One can be contented with bad tea and insipid rice, i.e., he or she is having a simple life. Or when the speaker cannot afford better food, he or she is bearing a hardship. *Chi-dou-fu* 吃豆腐 'eat-bean curd' infers 'to harass a girl' because *dou-fu* is soft which implies the soft skin of a girl or her quality of easily being troubled.

The English PFE *plum-in-the-mouth* means 'to have a (British) rich-sounding voice or affected accent' for the reason that people speak in a special way when having a plum in the mouth. It is a colloquial expression especially associated with the manner in which the British upper classes speak. The *apple-pie bed* is a bed which, as a practical joke, has been made with a sheet folded (like pie) so that the legs cannot stretch out.

As for those associated with peculiar customs or historical events, *san-zi* 桑梓 'mulberry-catalpa' alludes to 'childhood hometown' as mulberry and catalpa were planted beside houses in the old days. The leaves of mulberry were used for raising silkworm and the wood of the catalpa was for making family utensils. Later on, *san-zi* was used to refer to one's native village where one was born and brought up, even though mulberry and catalpa are not seen beside modern houses. Also in the old days, the cane was used as an implement of punishment at school. Although it is not used for this purpose any more, *teng-tiao* 藤條 (cane) is still used as an implication of punishment in Chinese. It is linked with school history. The English PFE *heart of oak* means 'this wonderful year'. It was a topical song written by Garrick in 1759 for a pantomime entailing the victories of Minden, Quiberon Bay, and Quebec. *Flower power* was the activity promoted by hippies in the 1960s and 1970s. They opposed war and encouraged people to love each other. The ideas were to change the world by means of peace and love and the vehicle *flower* was adopted.

Additionally, in Chinese, the underlying conceits that associate most vehicles and the meanings of expressions are the growth characteristics and cultivation of the plants, the smell and the taste, and outer features of plants:

First, growth characteristics and cultivation of the plants are encapsulated into many Chinese PFEs, as the examples in (1) show. Example (1a) portrays the tough vitality of grasses; if the roots of the grass are not all rid of, it grows again next spring. This is used to mean that one should resolve problems by starting from the fundamentals and to solve the problem effectively and truly. Example (1b) is used for the reason that melons grow on the ground, and when one bends down in a melon-patch, one may touch the ripened melons. Because plums grow on a tree, if someone lifts up his arms when he is under a plum tree, he will reach a luscious plum. Therefore, this PFE is used to warn people not to be found in a suspicious position. The underlying conceit implies the growing characteristics of melons and plums.

(1) growth characteristics and cultivation of the plants

a. *zhan-cao-bu-chu-gen chun-feng-chui-you-sheng* 斬草不除根 春風吹又生 'chop-grass-no-eradicate-root spring-wind-blow-again-grow'

b. *gua-tian-li-xia* 瓜田李下 (melon-patch-plum-under) means literally 'to do up the shoes in a melon-patch and to put on a hat under a plum tree'

(2) the smell and the taste of the plants

a. *ru-zhi-lan-zhi-shi jiu-er-bu-wen-qi-xiang* 入芝蘭之室 久而不聞其香 'enter the room long that has irises and orchids will not smell the fragrance = pervading uplifting character of a moral gentleman'

b. *zhong-gua-de-shuo-gua-tian* 種瓜的說瓜甜 'sell-melon-say-melon-sweet = to brag about one's own goodness'

c. *jiang-shi-lao-de-la* 薑是老的辣 'ginger-is-old-de-the spiciest = the more elderly with more experience do handle matters much better after all'

(3) outer features of plants

a. *nao-dai-gua* 腦袋瓜 'brain-bag-melon = a brain'

b. *guo-zi-pu* 菓子鋪 'fruit-shop = the appearance of someone who just got beaten up, and is red and swollen'

c. *pan-gen-cuo-jie* 盤根錯節 'coil-roots-wrong-(tree)knots = complicated matters intertwined amidst each other'

Second, the smell of plants and the taste of them have brought about many PFEs too, such as (2). The fragrance of irises and orchids and the tastes of a melon and a ginger are associated in the examples.

Third, outer features of plants draw people's attention. For instance, since the human brain has a round shape just like a melon, we therefore use (3a) *nao-dai-gua* in Chinese to mean a brain. Example (3b) *guo-zi-pu* describes the appearance of someone who just got beaten up and is red and swollen. The association is due to the various colors of the fruits that resemble the colors of the skin after being beaten up. The PFE in (3c) *pan-gen-cuo-jie* portrays a tree with twisting roots and intercrossing branches.

In English, most underlying conceits stem from the divisions of the plants, the usability of plants, or from Scripture or the classics. The divisions of the plants enjoy high productivity in English PFEs. For example, (4a) and (4b) use *stem* and *root*, and (4c) takes *leaf*. This category of underlying conceits reveals a specific perception of English speakers and will be elaborated later.

(4) divisions of plants

a. *from stem to stern* 'from the front to the back, especially of a ship'

b. *put down roots* 'begin to lead a settled life in a particular place'

c. *turn down a leaf* 'to cease for a time'

(5) the usability of plants

a. *dead wood* 'useless and unproductive person'

b. *seed-thought* 'fruitful or suggestive thought'

c. *hit the hay* 'go to bed'

d. *cork something up* 'not allow oneself to express one's anger, anxiety or sadness'

(6) Scripture and the classics

a. *manna from heaven* 'help that you get when you need it but are not expecting it'

b. *a grain of mustard seed* is 'a small thing capable of vast development'

c. *offering an olive branch* 'doing or saying something in order to show that you want to end a disagreement with someone.'

d. *sour grapes* 'the attitude shows that the speaker is angry because he has not got or achieved something that he wanted'

e. *pulling someone's chestnuts out of the fire* 'succeeding in a hazardous undertaking on behalf of or through the agency of another'

Secondly, the usability of plants plays an important role, for instance, wood is useful for construction or burning, therefore PFE (5a) *dead wood* is used. A piece of dead wood is as useless as an unproductive person. When thoughts are compared to seeds, the usability of a seed is highlighted – a seed gives life and produces crops, thus PFE (5b) *seed-thought*. The expression (5c) *hit the hay* means 'go to bed', because mattresses used to be stuffed with hay or straw, where a metonymic process is involved. To *cork something up* (5d) suggests 'not allow oneself to express one's negative emotion' for a cork is a short cylindrical piece of stopper that is put into the top of a bottle to close it which is metaphorically broadened to not to let off one's emotion.

Thirdly, Scripture and the classics give many PFEs, e.g., PFEs (6a) to (6c) are from Bible. *Manna* is written in Exodus 16:31 meaning the food that God granted to the Israelites when they wandered in the desert. A *grain of mustard seed* alludes to Matthew 13:31-2 "mustard seed … indeed is the least of all seeds, but when it is grown, it is the greatest among herbs." In Genesis 8:11, a dove brought an olive branch to Noah that shows that God's anger was assuaged and that the flood had abated, thus *offering an olive branch* means 'doing or saying something in order to show that you want to end a disagreement with someone.' Expression like *sour grapes* (6d) is cited from a famous Aesop's fable. The fox said it when he couldn't reach the high hanging grapes. *Pulling someone's chestnuts out of the fire* (6e) is quoted from the fable of a monkey that utilizes a cat's paw (or in some versions a dog's paw) to rake out roasting chestnuts from a fire.

We have sorted out the most important conceits in Chinese and in English, respectively. This is not to say that no English PFEs are linked with the growth characteristics or the odor of a plant, and no Chinese PFEs are associated with the usability of a plant. For example, the underlying conceit 'the smell and the taste of plants' is discussed under Chinese category, but there are also English PFEs associated with this conceit, such as *sour grapes*. However, the data we have collected so far demonstrate a much higher percentage of this conceit in Chinese than in English, i.e., 'the smell and the taste of plants' is a salient underlying conceit in Chinese and it is therefore classified in Chinese.

Moreover, as language contacts are more and more frequent and intensive, innovative expressions play an essential role in PFEs. They may interrupt the distribution of the conceits when the borrowing goes on. Many expressions in our corpora are either loan translation or phonetic translation from other languages, for example, bingo came to Chinese as a phonetic borrowing *bin-guo* 賓果 'guest-fruit = bingo (transliteration)'. The American Dowling paper is translated as *dao-ling-zhi* 道林紙 'path-forest-paper = a paper made from timber of the Dowling Company.' *Dao-lin* sounds similar to the English Dowling. As for the borrowed PFEs in English, the bound feet of Chinese women, in allusion to their Chinese alias *san-cun-jin-lian* 禁果 'one decimeter golden water-lilies', is known in English as *lily-footed*. The Yoga position, now introduced into English as *lotus seat*, has its origin in India.

Likewise, religion brought in many innovations. *Jin-guo* 禁果 'the forbidden fruit' is from Christianity. PFEs of this kind are increasing in number. Yet there are still a lot more

Buddhistic terms in Chinese than those from other religions at the present time, e.g., *hua-he-shang* 花和尚 'flower-monk = a monk who does not obey the Buddhistic regulations', *liu-gen-bu-jing* 六根不淨 'six-roots-not-clean = the six roots of sensations (Buddhism) are still in control, have not been rid of entirely', and *zi-shi-er-guo* 自食惡果 'self-eat-bad-fruits = you deserve what you got'.

A lot of Chinese plant expressions are coined with a group—two or more vehicles in an expression. Specific core meanings of the vehicles are highlighted through such collaboration of vehicles in an expression. At the same time, such collaboration yield specific culture implications, such as cultural customs and life philosophy. Let us take *cao* 'grass' as an example.

When *cao* 'grass' collocates with *hua* 'flower', the *cao* represents 'man' to contrast the feminine property of a flower and the connotation of the collocation render to romance or more often to pornography, for example, *xian-hua-ye-cao* ' 閒花野草 'idle-flower-wild-grass = prostitutes or females with inappropriate behavior', *hua-hua-cao-cao* 花花草草 'flower-flower-grass-grass = being dissolute and living easy', and *nian-hua-re-cao* 拈花惹草 'pick up-flower-induce-grass = have many love affair; to be promiscuous in sex relations'. When *cao* 'grass' and *gen* 'root' come together, the toughness of grass being growing everywhere and not being easy to get away is highlighted, as in *zhan-cao-chu-gen* 斬草除根 'chop-grass-eradicate-root = to rid of the source of the trouble'. Further more, the quality of 'grass' being-as-life-form is prominent when *cao* is juxtaposed with *mu* 'wood', for example, *yu-zai-shan-er-cao-mu-run* 玉在山而草木潤 'jade-at-mountain-and-grass-wood-moist = the jade stored within the mountains makes the plants rich and splendid; if one gentleman has good virtues, it will help to bring morality for the world'. Yet, a seeming feature of vegetation—emotionless, is imposed on the collocation like *ren-fei-cao-mu shei-neng-wu-qing* 人非草木 誰能無情 'people-are not-grass-wood-who-can be-without-sentiments = everyone has feelings and emotions' in which the emotions of human beings are paid tribute to.

We can put forward the following proposal that to understand PFEs requires the understanding of a linguistic plant frame:

> Speakers associate the appearances, growing characteristics, cultivation, smell, divisions of the plants, edibility, usability of the plants, or customs, historical events, and allusions of religious classics to express specific thoughts, cognition, and culture. Borrowings may introduce arbitrary expressions. Each plant vehicle has its core meaning. When two plant vehicles are collocated, specific salient features of the vehicles are highlighted.

5. CONCLUSION

This study examines the PFEs of the plant vehicles *tea* in Chinese and English, *melon* in Chinese, and *apple* in English for the purpose of revealing their meanings and frames in their respective languages. It then goes on to present the underlying conceits that link the botanical vehicles and human languages. We hope to have shown that plants are vivid and memorable and thus offer concrete image banks for languages to generate fixed expressions able to capture and compose mankind's fleeting moments into words.

As a matter of fact, the discussion about underlying conceits and core meanings of the favorite plant vehicles also suggests a linguistic feature —the holistic perspective in Chinese and individual mode of thinking in English. English vehicles provide more divisions of a plant such as a leaf, a root, a stem, etc. while division of a plant is not a crucial underlying conceit of Chinese. In terms of expressions with two plant vehicles, Chinese have a great number of such proverbs and sayings to express a meaning in cooperation, whereas there are only limited numbers of such expressions in our English corpus. The issue of the Chinese holistic mode of thinking and the English individual perspective has been concluded in detail in Hsieh and Chiu (2004). Though there certainly are other distinctions between Chinese and English PFEs, the present paper will bring to a closing from the viewpoint—the process and the purpose of using PFEs.

Each plant vehicle has its specific semantic frame that varies from language to language, yet the single linguistic plant frame proposed in the last section is the base of every plant vehicle frame. A linguistic plant frame is composed of speakers' background knowledge of the world, human cognition and culture. We produce and comprehend PFEs in our daily life through this primary/basic linguistic plant frame. On the other hand, language contacts and culture contacts bring in innovations (examples like *bin-guo* 賓果 'guest-fruit', which is a transliteration of the game 'bingo'). Phonetic borrowings and homonymic extensions are trendy nowadays in the globalization era and introduce more and more innovations into both Chinese and English.

Let us now recall the mechanism of type coercion proposed by Pustejovky (1993, 1995) to complete cognitive grammar in a specific aspect. As mentioned above, Pustejovky's qualia structure requires four semantic roles: a constitutive role, a formal role, a telic role, and an agentive role. The constitutive role designates part-whole relation, the formal role concerns what identifies the object in its pertained domain, the telic role indicates the function of the object, and the agentive role points out factors involved in the creation of the object.

Every individual plant vehicle is a chosen one from nature, a part-whole relation, to present fleeting thoughts of human minds (part) which in turn is a part-whole relation, viz., the constitutive role, in order to express human cognition and culture (whole). For example, *melon* is a chosen plant vehicle from the whole Chinese botanical setting/surrounding, a natural botanic part and a constitutive role in nature. *Guen-gua-lan-shou* 滾瓜爛熟' roll-melon-soft through-ripe' is produced to express this part of Chinese speaker's 'having something at one's fingertips' and play a part in speaker's whole scenario of human cognition.

We have identified core meanings for plant vehicles (the formal role). Each core meaning actually relies on the function or purpose of the plant or plant parts and this function is associated, cast or matched to human society (the telic role). For example, the core meaning 'favorite' of the English vehicle *apple*, a formal role, is identified. This core meaning 'favorite' is associated with 'apple' being an important fruit and a foodstuff. The telic role of the *apple* expression, say, *apple of the eye*, refers to a very important role in someone's life, usually the person who someone loves the most and is very important; a similar role as apples among other plants and fruits for the given people.

All of the constitutive role, formal role and telic role are activated by language speakers—human beings (the agentive role). In a word, language speakers utilize suitable vehicles from the natural world to express their cognition and culture acquired in the human world. The analysis of the four semantic roles makes it clear that the PFEs in both Chinese and English have the same ultimate function and purpose.

At this point, we may go on with Pustejovsky's approach from a syntactic coercion to a broader package-semantic operation. We see from the analysis of core meanings of frames that though the plant vehicles are taken to express different semantic roles, they still perform constitutive roles that each one takes its own responsibility in the scenario of human cognition, which visualized invisible human thoughts through plant vehicles. There is a cognition scenario in our minds that varies from language to language and from culture to culture, but the mechanism that is activated in them points to the same direction—simply to express speaker's cognition and culture.

To resume Langacker's (1987, 1991) cognitive grammar that language in general is accurately likened to a biological organism, we see that plant fixed expressions play an important role in this overall integral organization. Plant vehicles are taken from a similar biological organism, linked with language speaker's senses, such as the taste of tea, and the round shape of a melon or an apple, and world experience, such as agriculture characteristics of melons, and has the capability of uttering the inner facet of a more complex biological organism—human mind, through linguistic operation such as linguistic plant frame and type coercion, in the essence of/through compositionality.

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