

Chapter 1 Introduction

In the long tradition of research on Lexical Semantics, most scholars have attempted to study the behaviors of verbs (see Levin 1993, Tang 2000ab, Liu 2002 *inter alia*). Generally, few works concern the behaviors of adverbs or adjectives. To restore the missing pieces in lexical semantic research, this study focuses on various collocations of degree adverbs and their post-adverbial syntactic categories. It attempts to explore the syntactic and semantic properties in Mandarin degree predication and lastly proposes a new perspective based on Construction Grammar (Goldberg 1995).

1.1 The Issue: Degree Adverbs

Traditionally, it is assumed that the degree adverbs in Mandarin Chinese tend to occur before gradable adjectives or psych-verbs (cf. Zhu 1956, 1982, Lü 1980, Li and Thompson 1981, Tang 2000ab, Chui 2000a). However, by examining the collocations of two high-frequency¹ Mandarin degree adverbs (i.e., *hen* ‘very’ and *youdian* ‘a little’) with their post-adverbial elements in contemporary written and spoken corpus, we find that degree adverbs may take an unexpectedly diverse range of grammatical categories², including NP, AP, VP, ADVP, DP, or interrogative, as illustrated in examples 1-5.

¹ The classification of degree adverbs in this study is based on Lu and Ma (1999), Zhang (2000) and Zhang (2002). Moreover, it follows the method of Corpus linguistics (‘the high-frequency usage is significant in language’ in Biber et al. 1998). Hence, this research firstly tackles two high-frequency degree adverbs: one is the high degree adverb *hen*; the other is the minimal degree adverb *youdian*: the total numbers of them in Sinica Corpus are *hen* 12988 times and *youdian* 469 times; while in spoken conversation are *hen* 277 times and *youdian* 13 times, respectively.

² The abbreviations used in this thesis are as the following: NP: noun phrases; AP: adjective phrases; VP: verb phrases; DP: determiner phrases; ADVP: adverb phrases; ASP: aspect markers; CL: classifiers; DE: verbal suffix or marker for modifying phrases like genitive phrases, relative clauses, and noun complement clauses; SFP: sentence-final particles; and SIP: sentence-initial particles. Moreover, the representative collocations of the degree adverbs and grammatical categories demonstrated in this paper are underlined.

(1) Degree ADV+ NP

- a. 嘴唇很香腸
Zuichun hen xiangchang.
'The lips are very sausage-like.'
- b. “打女”形象很成龍
Danu xingxiang hen Chenglong.
'The image is very Jackie Chen-like.'

(2) Degree ADV+ AP

- a. 我相信他很藍/綠
Wo xiangxin ta hen lan/lu
'I believe he is very KMT/DPP-like.'
- b. 她的眼睛很瞎
Ta de yanjing henxia
'Her eyes have very poor eyesight.'

(3) Degree ADV+ VP

- a. 我很高興/生氣
Wo hen gaoxing/shengqi
'I am very happy/angry.'
- b. 我很了解/認識他
Wo hen liaojie/rencshi ta
'I understand/know him very well.'

(4) Degree-ADV+ Degree-ADV+ AP

- 李文秀很有點害怕/妒忌
Li Wenxiu hen youdian haipa/duji
'Li Wenxiu is quite sort of afraid/jealous.'

(5) Degree ADV+ DP/ Interrogative

- a. 場面很那個
Changmian hen nage
'The scene is very that (erotic).'
- b. 這首歌的歌詞很什麼...
Zhe shou ge de geci hen sheme
'The lyrics of this song are very kind of...'



This paper then attempts to explore and explicate the wide range of post-adverbial elements illustrated with prototypical examples and also proposes a new perspective of looking at degree-attribute predication. Distinct from previous works (cf. Zhu 1956, 1982, Lü 1980, Li and Thompson 1981, Tang 2000ab) which may list extra meanings or senses in dictionary format, an alternative approach called construction-based approach is adopted to provide a generalization to explain the various collocations of the [Degree-ADV+ X] sequence. The diverse collocations of the [Degree-ADV+ X] sequence are considered as a unique Form-Meaning pair, i.e., a construction, as defined in Goldberg (1995). The construction associates the form 'NP³ + [Degree-ADV + X]' with the meaning 'degree attribution of quality'. The

³ Most scholars (Chao 1968, Li and Thompson 1981, Tsai 2001, Hsin 2002, among many others) agree that the Chinese NP in the subject position has to be specific otherwise the sentence sounds odd (e.g.,

variable X refers to certain linguistic constituents (grammatical categories with inherent semantic contents) that can occur in this construction.

The demonstrated diversity of degree modification requires a reconsideration of the traditional view that takes the post-adverbial element as the *head* of a degree-attribute phrase. With the postulation of the [Degree-ADV+ X] construction, the overt marker, the degree adverb, is taken as the *constructional head* that signals or coerces degree evaluation referring to a ‘scalar-implicating quality’. In other words, the *evaluative scalar quality* is regarded as an inherent property of the construction itself, allowing the semantic value of X to be triggered in the construction. Eventually, this study argues that semantic representation of qualities should also include constructional entities as part of the lexicon⁴. In addition, to solve the potential ambiguity arising from the construction-coerced inference, a compositional approach termed Qualia Structure proposed in Pustejovsky (1995) is applied to delimit the possible range of coerced meaning. By integrating the application of constructional approach and qualia structure, the contextually or culturally-defined qualities can be construed in the semi-productive construction. The postulation of the Evaluative Degree Predication Construction may have a number of advantages over the lexical-rule approach (cf. Levin and Rapport 1996, Talmy 2003) without the cost of additional mechanisms or extra listed meanings in dictionary.

1.2 Theoretical Frameworks: Discourse, Cognition, Construction and Qualia Structure

A significant development in the study of degree adverbs is the shift from

**yigeren/youyigeren/zhangsan hen gaoxing* ‘*A person/someone/zhangsan is very happy’). Following these scholars, we take this null hypothesis ‘Mandarin Subject should be specific’ in our work.

⁴ Jackendoff (2002: 178) pinpoints that constructions turn out to be slightly unusual but perfectly respectable lexical items that combine with ordinary words according to ordinary procedures.

structural description (cf. Zhu 1956, 1982, Lü 1980, Tang 2000 ab) to a functional explanatory paradigm via observing naturally occurring data (see Chafe 1976, 1987, Chui 2000 ab, Cheng 2000, Paradis 2001). The two approaches mainly differ in their theoretical concerns and data selection. The former concerns the relations between syntax and semantics via examining some elicited data. In contrast, the latter attempts to account for the language phenomena by exploring discourse and corpora as well as human cognition. Despite the theoretical and methodological differences between these two approaches, they both aim to provide a fine-grained explanation for certain language phenomenon. With regard to degree adverbs in Mandarin, they all mention the obligatory status of degree adverbs in affirmative sentences, and mostly focus on the adverb *hen* ‘very’ (e.g., *ta * (hen) gaolai* ‘he is *(very) tall/short’)⁵.

In the functional paradigm, explanations are provided as to how amount of information flows influence the communicative process, how contexts implicate the interpretation across sentence boundaries, and how the mechanism of human cognition operates to decode languages. Some important issues relevant to our topic are introduced as follows: see Chafe 1987, Hopper 1987, Lakoff and Johnson 1980, Claudi and Heine 1986, Paradis 2001, etc.

⁵ Liu (2005:16) proposes that languages might differ from each other in the way(s) of making the comparison implied by gradable adjectives possible. For languages with grammatical tense, interaction between the grammatical tense and the predicate formed out of an unmodified gradable adjective gives a guarantee for making the comparison implied by gradable adjectives possible, but for languages without grammatical tense like Chinese, at least three strategies are adopted:

(i) constructing a specific syntactic structure where the contrastive reading is possible, for example, *zhe ke pingguo hong, na ke huang* ‘this apple is red’, but that one is yellow’ ;(ii) inserting a degree modifier for gradable adjectives, for instance, *zhe ke pingguo hen tian* ‘this apple is very sweet.’, and (iii) using a reduplicated adjective, which functions to boost or change the standard value of bare adjectives, as predicate, e.g., *zhe ke pingguo honghongde* ‘this apple is really red.’.

Although standing in Liu’s (2005) shoes, we make an extensive study of the [Degree+ X] construction from corpora data and indicate a significant difference from Liu’s proposal that the comparison is manifested by the holistic [Degree+ X] construction rather than the gradable adjective itself. In addition, we focus on study of the function of the second strategy of Liu’s (the relations of degree adverbs and their post-adverbial categories); as for the first and third strategy, readers can refer to Zhu (1956, 1982), Tang (1989, 2000ab), Zhang (2000), and Liu (2005).

According to Chafe (1976, 1987), information flows⁶ (old information vs. new information) can influence interlocutors' reciprocal understanding. That is, when interlocutors communicate with each other, they will undergo three different activation states (active, semi-active, and inactive concept). On the other hand, Hopper (1987) proposes that the shaping of grammar complies with the consistent functional demands in discourses. Discourse factors may override the semantic interpretation in daily conversation.

Lakoff and Johnson (1980: 5) claim that human beings can build a connection between cognition and language use via metaphor⁷. The essence of metaphor is to understand and experience abstract things in terms of concrete things. Hence, one can manipulate conceptualization with three kinds of metaphors: structural, orientational, and ontological metaphors. Claudi and Heine (1986) propose that motivation for utilizing conceptual metaphors is to serve communication in a quite elementary sense, to enrich the expressiveness of an utterance, and to conceal or obscure reality. In addition, on the survey of metaphorical usage in Ewe, it is suggested that some basic categories of conceptualization truly exist and the implicational correlation may be arranged as the schema: PERSON → OBJECT → SPACE → PROCESS → QUALITY (see Claudi and Heine 1986: 301). Paradis (2001) puts emphasis on the fuzzy zone of human cognition to examine the interactions between adjectives and adverbs. She argues that the acceptability of their correlations may shift through contextual modulation. In addition, the cognitive semantic analysis takes language as

⁶ Chafe (1987) mentions that information flow plays a critical role in communication: interlocutors may misunderstand each other under the lack of sufficient information flow. Chui (2005) further investigates that the relationship between Mandarin discourse and the shape of its grammar. On the basis of her findings via the quantitative-qualitative analysis of corpora data, she claims that a frequently observed phenomenon is a general tendency involved in structuring information flow which reflects how Chinese interlocutors manipulate given and new information.

⁷ Glucksberg (2003: 94): Can people ignore metaphor? The answer is 'No' (cf. Ahrens 1999; Su 2002ab). People cannot ignore metaphor, even when literal meanings make perfect sense in context. We drew this conclusion from a series of experiments in which people would perform optimally if they attend exclusively to literal meaning but ignored metaphorical ones.

an integral part of human cognition (showing a gradient area), but not an autonomous part independent from other cognitive functions.

When studying the relationship of the two neighboring elements, Construction Grammar⁸ (Goldberg 1995 and Jackendoff 1997a) provides the innovative perspective. This approach attempts to construe that a certain construction can endow a particular interpretation for its component parts. In other words, the main concern is that an elaborate construction should be able to economically predicate the coerced interpretation without burdening to list extra senses or rules in the lexicon. Moreover, to resolve the potential ambiguity arising from the construction-coerced information, especially properties of noun categories occurring in the X slot of the [Degree-ADV+X] sequence e.g., 嘴唇很香腸 *zuichun hen xiangchang* ‘the lips are very sausage-like’, 七年級很草莓 *qinianji hen caomei* ‘the Z-generation is very strawberry-like’ and 性格很狐狸 *xing-ge hen huli* ‘The personality is very fox-like’ etc., a compositional approach termed *qualia structure* in Pustejovsky (1995) is applied. With the specification of the four essential dimensions of a word’s interpretation: CONSTITUTIVE, FORMAL, TELIC and AGENTIVE in *qualia structure*, the interactions between nouns and degree adverbs can be properly explained.

Aiming to study the interrelationship between degree adverbs and their post-adverbial elements, this work adopts a construction-based approach (Goldberg 1995) to tackle the possible range of collocational patterns and constructional inferences associated with these patterns. It claims that collocational inferences may be derived from the unique construction as defined later in section 4.2. Moreover, when pragmatic factors (politeness in Levinson 1983 and pragmatic halos in Lasersohn

⁸ For detailed discussion and definition of construction (Goldberg 1995), please see Chapter four.

1999) are taken into consideration, semantic coercions may correlate with discourse and contextual needs. In the next chapters, I will first discuss the possible grammatical categories that co-occur with degree adverbs and provide a syntactic and semantic account for the degree construction and its neighboring elements.

1.3 Scope and Goal

Previous works about degree adverbs mainly discuss their correlations with predicates (stative predicate and psychological predicate) (cf. Zhu 1956, 1982 and Tang 2000ab). Recent works are concerned more about the *gradability* properties of predicates (see Paradis 2001, Kennedy and McNally 2002). To provide a unified explanation, Chui (2000a) examines the morphologization of the degree adverb *hen* from conversation data, and she claims that the significance of the morphological shift of *hen* is to fulfill communicative needs (*hen* taken as a clitic attached with its post-grammatical elements). However, previous studies are mainly based on elicited data which lack real communicative contexts or neglect productivity of novel expressions or have little in the way of conversation data. Consequently, some possibilities of grammatical categories accompanying with the degree adverbs might have been overlooked.

Hence, this paper focuses on discussing the post-nominal degree construction⁹, represented as ‘NP + [Degree-ADV + X]’, which functions to trigger degree predication of evaluative quality (semantic value). We redefine the degree adverbial construction as a form-meaning pair that is used for endowing quality attribution.

⁹ The post-verbal adverbial construction ‘V+ De+ Degree adverb’ (e.g., *lei de hen* ‘really tired’) and the pre-nominal construction (e.g., *yi duo hen hong de hua* ‘a really red flower’) can also denote high degree property. The two constructions are worthy of study (see Huang 1988, Lien 2001, Liu 2005); however, the present work is confined to the ‘NP + [Degree ADV + X]’ construction, and we will pay attention to this construction.

Lastly, some fundamental questions are answered with a systematic explanation: 1) what is the relationship between the degree construction and its neighboring elements; 2) what are the syntactic and semantic properties of this degree construction; 3) how this construction can economically predict the coerced interpretation without postulating extra senses or rules in dictionary format.

1.4 Outline of the Thesis

This study proceeds as follows: 1) Chapter one gives the introduction about this study; 2) Chapter two generally reviews some relevant observations about the relationships among the degree adverbial modifiers and post-adverbial elements in literatures; 3) Chapter three briefly introduces our sources of data collection and tackles the possible distribution of the collocations in the collected data; 4) in Chapter four, we argue that the constructional account may provide a suitable explanation for the possible categories occurring in the X slot of [Degree ADV+ X] construction; moreover, the qualia roles in qualia structure can assist to solve the potential ambiguity evoking from the construction-coerced meaning; 5) lastly, the conclusion on the basis of the proposed analysis is stated in Chapter five.

Chapter 2 Review of the Literature

This section briefly reviews earlier studies on the collocations of degree adverbs and post-adverbial categories (e.g., *hen* ‘very’ and NP, AP, DP, or ADVP etc.). Description-oriented and discourse-oriented works will be discussed first in section 2.1.

Lü (1980) accomplishes a significant study describing the possible variants of degree adverbs and their neighboring elements. Zhu (1956, 1982) and Tang (1989, 2000ab) further explore the collocations among degree adverbs and two grammatical categories, adjective predicates and psych-verbs. By contrast, Chui (2000a) and Cheng (2000) pay attention to the possibility of the collocations in the actual uses extracted from spoken conversation or corpus data.

Studies with Chinese degree adverbs will be introduced in section 2.1. Works with typological concern about English degree adverbs will be briefly introduced in section 2.2. Each section contains a short summary and comments of reviewed studies, and presents the unsettled questions that await a more detailed explanation. Section 2.3 concludes the literature review and pinpoints the direction of this study.

2.1 Major Works on Chinese Degree Adverbs

2.1.1 Descriptive works on Degree Adverbs: Lü, Zhu, Tang, Zhang

In most Chinese dictionaries and grammar references, there are abundant lists of degree adverbs and their following categories with a preliminary description. Three significant and pioneering studies (Lü 1980, Zhu 1956, 1982, Tang 1989, 2000ab) on Chinese degree adverbs mainly focus on *hen* ‘very’ or *you dian* ‘a little’ cases to observe how degree adverbs modify their following elements on syntactic level.

According to Lü (1980), Chinese degree adverbs may modify some co-occurring categories and render degree property to them. When modifying their following

elements, *hen* is used for specifying strong-degree attribution, while *youdian* is utilized for assigning minimal-degree attribution with pejorative evaluation. In his finding, some possible categories following degree adverbs, such as adjectives, psych-verbs, auxiliaries, demonstratives and pronouns, are listed individually in the dictionary.

As for Zhu (1956, 1982), he focuses the study on the relation between degree adverbs and two categories (adjective and psych-verb). The degree adverb, *hen*, is used to distinguish the murky boundaries between adjective and verb. In addition, some characteristics of *hen* are described: (A) *Hen* may mark degree and modify major gradable adjectives and minor verbs (e.g., psych-verbs and verb-object forms). (B) It cannot modify reduplicated adjectives which intrinsically encode a certain amount of quantity, and cannot collocate with non-gradable adjectives that logically attribute the property of truthness (e.g., **hen jiejiababa/weiweisuosuo* ‘very stuttering/coward’; **hen zhen/jia* ‘very true/false’).

The two studies mentioned above provide a basic description of the collocations with degree adverbs and they stimulate continuous discussion of the diverting behaviors between degree adverbs. Nevertheless, it is insufficient to provide a plausible account of the observed phenomena. They mostly draw attention on a pre-theoretical overview of the collocations in the lexicon intuitively without explicit explanation.

Similarly, Tang (1989, 2000ab) further differentiates the syntactic behaviors of *hen* with semantic explanation. The main concern is about the relation of *hen* between adjectives and some verbs. As a degree-adverb, *hen* has five semantic constraints:

- 1) It can render a comparison standard to its modified element, adjective, to license the adjective in the affirmative sentence: e.g., *ta *(hen) gao* ‘he is *(very) tall’ (1989: 24).

- 2) Complex forms of adjectives, including reduplication of monosyllabic and disyllabic adjectives, which implicitly encode degree intensification, are mutually excluded with degree adverbs (2000b: 214-215).
- 3) Some predicative adjectives, such as *gongli/sili/chuizhil/shuiping* ‘public/private/vertical/horizontal’, also do not take degree adverbs.
- 4) Certain verbs, e.g., *xiwang/xiangxin/zancheng/fandui* ‘hope/believe/approve/counter’, can co-occur with degree adverbs.
- 5) *Hen* can co-occur with the noun category as cases in *hen qiongyaol/baobei* ‘very romantic/valuable’ via metaphorical extension (2000a: 298).

In Tang’s studies (2000ab), he explores the adverbial functions of *hen* in a more detailed description. His comprehensive observation and analysis offer a clear picture of degree adverbs. However, there are still two unsettled questions needing further accounts: (A) The claim that degree adverbs are described as incompatible with reduplicative adjectives may be reasonable, but there might be a risk if the examination is based only on *hen* without observation on wider ranges of degree adverbs. In fact, the data collected from online archive Google show that degree adverb such as *youdian* can actually co-occur with reduplicative adjective (e.g., *youdian jiejiebabal/weiweisuosuo* ‘a little stuttering/coward’) owing to pragmatic reasons (see Levinson 1983, Lasersohn 1999, Zhang 2002). (B) The suggestion that some predicative adjectives cannot collocate with degree adverbs while others can seems to be a superficial description without a convincing account.

Further, with integration of previous works such as Lu and Ma (1999) and Zhang (2000), Zhang (2002) takes a step forward to provide a descriptive classification of degree adverbs. The degree adverbs are sub-categorized into three types, viz. 1) type 1: 更 (加) *geng (jia)* ‘more’ and 稍微 *shaowei* ‘slightly’ etc.; 2) type 2: 最 *zui* ‘most’ and 比較 *bijiao* ‘than’ etc.; 3) type 3: 很 *hen* ‘very’ and 有點

youdian ‘a little’ etc. on the basis of two thresholds: 量差 *liangcha* ‘quality distinction’ and 量級 *liangji* ‘quality gradability’. The criteria for distinguishing the representative members in each type of degree adverbs are shown in Table 1¹⁰:

Table 1: The criteria for distinguishing the representative members of degree adverbs

(Zhang 2002: 143)

Type	Relation	Comparison of quality distinction	Confirmation of quality gradability	Adaptability of collocation with comparative structure
1	更(加) <i>geng-(jia)</i> , 稍微 <i>shaowei</i> etc.	+	-	strong
2	最 <i>zui</i> , 比較 <i>bijiao</i> etc.	+	+	stronger
3	很 <i>hen</i> , 有點 <i>youdian</i> etc.	-	+	weak

Table 1 presents the primal characteristics of each type of the degree adverbs, as shown below:

(A) Degree adverbs in type 1 that can occur in the comparative structure of 比 *bi* ‘than’ mainly profile the quality distinction between comparer and comparee (e.g, 小李比小王更認真 *xiaoli bi xiaowang geng renzhen* ‘Mr. Li is more diligent than Mr. Wang.’; 他稍微有點後悔 *ta shaowei youdian houhui* ‘He is a little regretful.’).

(B) As for degree adverbs in type 2, they cannot occur in the comparative structure of

¹⁰ The symbol ‘+’ means applied, while ‘-’ not applied.

比 *bi* ‘than’. They function to confirm the relative gradability of degree members in certain range. To exemplify, 這幾個人中，小王比較能幹，小李最能幹 *zhe jige ren zhong, xiaowang bijiao nenggan, xiaoli zui nenggan* ‘Among these people, Mr. Wang is more capable, but Mr. Li is most capable.’

(C) On the other hand, degree adverbs in type 3 can directly confirm the quality gradability of certain comparative items. For instance, 小王成績很好 *xiaowang chengji hen hao* ‘Mr. Wang’s academic record is very good’; 這塊骨頭有點硬 *zhekuai gutou youdian ying* ‘This bone is a little stiff.’

In brief, Zhang’s (2002: 143-164) comprehensive study of degree adverbs includes two cogent arguments:

- 1) The degree expressions mainly include two aspects: 量差 *liangcha* ‘quality distinction’ and 量級 *liangji* ‘quality gradability’. The aim of comparison is to realize quality distinction that is objective, while the purpose of confirmation is to signalize quality gradability that is subjective. In addition, members of degree type that have definite quality distinction belong to the same level of quality gradability; while members of degree type that belong to the different level of quality gradability certainly comprise quality distinction.
- 2) The juxtaposition of degree adverbs is a kind of pragmatically overlapping usage rather than mutual modification of degree adverbs. Language facts show that the co-occurrence of degree adverbs belong to same or different types can be suitably explicated in pragmatics. The two groups of degree adverb juxtaposition are illustrated in (i-ii) (2002: 162-164).

(i) Synonymy juxtaposition of meaning of degree adverb

她還更加難受 *ta hai gengjia nanshou* ‘She is still more painful.’; 他稍微有

點後悔 *ta shaowei youdian houhui* ‘He is a little regretful.’; 這種說法太過誇張 *zhezhong shuofa tai guo kuazhang* ‘This kind of claim is too exaggerated.’

(ii) Antonymy juxtaposition of meaning of degree adverb

這塊骨頭有點太硬 *zhekuai gutou youdian tai ying* ‘This bone is a little too stiff.’; 他有點太過浪漫 *ta youdian tai guo langman* ‘He is a little too romantic.’

Although Zhang (2002) makes an effort to describe the characteristics of degree adverbs such as quality distinction, quality gradability, and synonymy/antonymy juxtaposition of meaning of degree adverb, the findings mostly focus on discussing the relations between adjectives, psych-verbs or degree adverbs. As for the collocations between degree adverbs and the post-adverbial categories such as nouns (common noun and proper noun), demonstrative and interrogative, this work does not tackle these phenomena. It leaves an interesting issue to be explored: how can degree adverbs (e.g., *hen* ‘very’ or *youdian* ‘a little’) collocate with the various post-adverbial categories?

2.1.2 Discourse-oriented Works on Degree Adverbs: Chui and Cheng

Recent studies put more emphases on the potential correlations of Mandarin degree adverbs and post-adverbial elements. Researchers have examined corpus and conversation data from the contextual or pragmatic levels that cross sentence boundaries. Two representative studies (Chui 2000a and Cheng 2000) concentrating on the possible post-adverbial categories by analyzing corpus and conversation data are shown below.

Chui (2000a) launches a preliminary study of the degree adverb *hen* by investigating its morphologization in discourse. In her work, a crucial point is

emphasized: the significance of semantic and morphosyntactic change of *hen* to fulfill communicative needs. Furthermore, a process of semantic shift of *hen* is from a free content word (with degree meaning) to a bound constituent (via cliticization and compounding). As a full-fledged degree adverb, *hen* has a complete lexical meaning and a distinct grammatical role. Semantically, it delineates the extent of gradation that is higher than average. On the syntactic level, it modifies a wide variety of grammatical categories as follows:

1) scalar predicates that include the adjective *congming* ‘intelligent’, the mental state *taoyan* ‘hate’ and the experiential *qianque* ‘lack’; 2) modalities that denote both ability and epistemic modality of possibility such as *hen neng jieshou* ‘very acceptable’; 3) compound adverbs such as *hen-shao* ‘very-be less; seldom’; 4) predicates that inherently cannot be calibrated in degree perspective but are regarded as scalar with co-occurrence of *hen* at the moment of speaking in context. Two instances are illustrated: one is the noun category that shows the state, encoding a certain quality such as *hen zhongguo* ‘very Chinese’; the other is the verbal phrase, presenting the certain situation of helping someone to solve a difficult problem like *hen bang ni* ‘help you a lot’.

As Cheng (2000) points out, degree adverbs such as *hen* ‘very’ or *geng* ‘more’ can collocate with auxiliary verbs (e.g., *keneng/hui/neng* ‘possibly/be likely to/be able to’ etc.), adopting a corpus-based account in analyzing Sinica corpus data. These auxiliary verbs show ability or epistemic meaning which is bound to be constrained when co-occurring with degree adverbs. Furthermore, she claims that corpus data objectively reflect the actual performances of human language use rather than subjectively describe the language phenomena based on biased personal intuition.

These two works in turn discuss various daily conversations or corpus data by considering the pragmatic factors. This avoids analyzing elicited data that lack real

communicative situations, which may lead to an incorrect direction to their ultimate goals. While working on the right track, their studies somehow have left out how to explicate the possible collocations with degree adverbs via a theoretical account. Chui (2000a) points out how communicative strategies play a significant role in determining the occurrence of *hen*. Nevertheless, the mechanism of communicative strategy functions in which situation needs to be further construed. As for Cheng (2000), she provides an overview distribution of degree adverbs and auxiliary verbs, but the descriptive distributions still beg for a detailed account. Both of these researches take the degree adverb *hen* to illustrate their crucial points disregarding other degree adverbs. This then raises the following fundamental questions: can behaviors of *hen* represent all degree adverbs; if not, why is only *hen* frequently demonstrated? Should other degree adverbs be taken into account?

2.2 Works on English Degree Adverbs

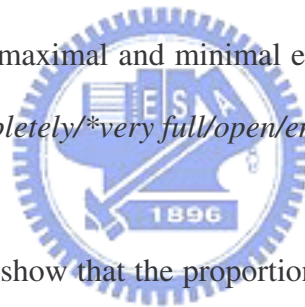
2.2.1 Scalar Properties of Degree Adverbs: Kennedy and McNally

Recently, some morphological, syntactic and semantic analyses of adjectives in Indo-European languages, especially English, have been proposed by western scholars (see Dixon 1982, Paradis 2001¹¹; inter alia). Following the observation of previous works, Kennedy and McNally (2002, 2005) discuss the asymmetric distributions of the co-occurrence between adverbs and adjectives. Meanwhile, they elaborate the previous observation and propose two crucial factors to distinguish the

¹¹ Dixon (1982) explores a wide cross-typological study and classifies different semantic types of adjectives according to the semantic field. Additionally, he proposes that *gradability* implies the existence of a scale in the semantic structure of the adjective and *markedness* is clearly related to relativity, but the relation is unidirectional: e.g., *old* is relative and unmarked; while *young* is relative but marked. On the other hand, Paradis (2001: 50) argues that scalar modifiers, such as *very*, *terribly*, and *fairly*, indicate a range on a scale of the gradable property expressed by the adjectives that they modify and are unbounded.

acceptability of the correlation. One is the major classificatory parameters to classify adjectives: a gradable¹² predicate is associated with the so-called open or closed scale and the applicability of the predicate in the standard of comparison is context-sensitive. The other is a typology of scale structures that logically consist of four types distinguished by the proportional modifiers such as *completely* and the standard boosting modifier *very*:

- (a) open scales which are formalized as intervals on a scale (e.g., * *completely/very tall/short*);
- (b) lower closed scales (e.g., ?? *completely wet/flat/dry*);
- (c) upper closed scales (e.g., *completely pure/accurate*; ?? *completely impure/inaccurate*);
- (d) closed scales which have maximal and minimal elements to objectively represent fixed standards (e.g., *completely/*very full/open/empty/closed*).



The above collocations show that the proportional modifier *completely* tends to co-occur with absolute gradable adjectives, while the boosting modifier *very* is inclined to accompany gradable adjectives. Moreover, adjectives that cannot co-occur with both *completely* and *very* without considering certain contexts are called non-gradable adjectives (e.g., # *completely/# very dead/alive*).

On the basis of analyzing the relation between adverb and gradable adjectives, Kennedy and McNally (2002) provide some crucial findings that the standard of comparison for gradable adjectives is contextually-driven and a scale structure logically includes four different types. Along the line of Kennedy and McNally (2002), this paper will demonstrate that the concept of *gradability* also influences the

¹² In Kennedy (1999), *gradability* is taken as an abstract representation of measurement into the ontology (degree qua intervals); while the concept of non-gradable denotes complete functions from individuals to the truth values in $\{0,1\}$.

interpretation of the collocations between degree adverbs and the following elements in Mandarin in Chapter 4.

2.3 Summary

Regarding their eventual aims, studies of degree adverbs and post-adverbial categories are basically divided into two types. One is the description-oriented studies with the goal of listing the distribution of the modifier *hen* from their intuitive data, but little attention on explanations (see Zhu 1956, 1982, Lü 1980, Tang 2000ab, Zhang 2002). The other is the function-oriented works that aim to explicate the actual daily uses of the degree adverb *hen* via discussing spoken conversation or corpus data (e.g., Chui 2000a and Cheng 2000). Although these studies work in the right track to analyze the real data, what is the mechanism of real communicative needs and pragmatic reasons, as they mentioned, still begs for further accounts. This conflicts with their ultimate goal to some extent. Furthermore, a detailed research on the relation between Mandarin gradable adjectives and comparison standard shows a coercive effect of collocations between degree adverbs and following categories (cf. Lasersohn 1999, Kennedy and McNally 2002, 2005). In sum, previous works are all based on an overview of language description, but the incorporation of discourse and pragmatic considerations that are crucial for the acceptability of degree adverbs should be explored and explained in general. Moreover, a plausible generalization to account for the diverse collocations of degree adverbs and grammatical categories in language (such as NP, AP, VP, ADVP, DP or Interrogative words) still needs further study.

Chapter 3 Databases and Initial Observations

Most of the previous studies focus on discussing elicited data and providing an overview description (Zhu 1956, 1982, Tang 2000ab, Zhang 2002), while few extensively take the discourse factor or corpus data into consideration in detail (Chui 2000a; Cheng 2000). This paper examines corpus data, spoken conversations and young generation expressions with respect to the interactions between syntax, semantics and pragmatics. Previous researchers mostly emphasize on the co-occurrence between degree adverbs and the two categories (stative predicate and psychological predicate). Nevertheless, a fundamental question should be answered first: except the two categories, are there any other categories co-occurring with degree-adverbs? If so, what are their properties and why can they do this? According to corpus data, we find a wide range of grammatical diversity following degree-adverbs. In this thesis, these collocations will be analyzed and explained with a constructional account.



3.1 The Database: Balanced Corpus and Spoken Conversation¹³

In order to effectively explore the elements co-occurring with Mandarin degree adverbs, three online resources, conversational data and novel expressions from the young generation (10 subjects who are from 14 to 25 years old) are used for the analysis in the main body of this study. One is the 5-million-word Sinica Corpus, which is largely composed of both Mandarin written and spoken samples in Taiwan (<http://www.sinica.edu.tw/SinicaCorpus/>). The other is the daily-updated online archive, Google (<http://www.google.com>), containing the latest information that

¹³ In cases in which the examples demonstrated in this work may be controversial, I checked with more than ten native speakers to see whether they would accept the questionable collocations. Hence, the methods of data collection and analysis are on the lines of Leech's (1991:74) statement that a combination of corpus and intuition is preferable to a choice corpus and intuition. Moreover, some examples have been modified for brevity and clarity.

includes various written texts. Another online archive, Udndata news database (<http://udndata.com/library/>), provides the latest news of five local newspapers (*Lianhebao/Jingjiribao/Minshengbao/Lianhewanbao/Xingbao*) in Taiwan. As for the spoken conversation, our data consist of 139 minutes of naturally occurring Mandarin conversation which is about three different types such as compliment, interview and storytelling. The novel expressions from the young generation are collected from ten teenagers in Hsinchu City. In this work, Sinica Corpus and conversational data are taken as the main data sources. On the other hand, Google, Udndata and the novel expressions from the young generation are the reference sources to reconfirm the interpretation of marginal collocations.

Acknowledging that the selection of degree adverbs is significant to our data analysis (cf. the concept of high-frequency usages in Biber et al. 1998), the total number of occurrences¹⁴ of certain degree adverbs¹⁵ in Sinica Corpus and spoken conversation are counted. The representative degree adverbs that have higher token both in Sinica Corpus and spoken conversation are singled out on the basis of high-frequency occurrence, and those adverbs will be investigated first in the following chapters: Chapter 4 studies the prototypical adverb *hen* that encodes strong-degree attribution and the non-prototypical adverb *youdian* that shows

¹⁴ The term ‘frequency’ refers to the number of occurrence in Sinica Corpus and conversation data. In Sinica Corpus, the total number of each adverb is 12988>5000/5000>2923>2750>1808>1051>469>445>355>153>171>70>9 (*hen, zui, geng, bijiao, feichang, zhen, shifen, youdian, yuelaiyue, youxie, gengjia, shaowei, youyidian, hao* ‘very, most, more, more, very, truly/really, very, really, a little, more...more, little, more, a little, a little, fairly’, respectively). On the other hand, that of each adverb in spoken conversation is 277>13/13>9>7>5/5/5>3/3/3/3>1>0/0 (*hen, youdian, zhen, youxie, youyidian, yuelaiyue, feichang, hao, shizai, zui, geng, bijiao, shaowei, shifen, gengjia* ‘very, a little, truly/really, little, a little, more...more, very, fairly, really, most, more, more, a little, very, more’, respectively). Among these degree adverbs (based on the classified criteria in Zhang (2002)), *hen* ‘very’ in type 3 is the most high-frequency one: the total number is 12988 in Sinica Corpus and occurs about 1.99 times/minute averagely in spoken conversation.

¹⁵ There is always a question as to how detailed such degree adverbs should be considered. To answer it, I will limit the discussion to salient degree adverbs and distinguish their differences since it is impossible to give a full compendium in the present. More analyses of collocations between other degree adverbs and their post-adverbial categories are left for future study.

minimal-degree attribution. Moreover, some crucial issues of them are cast out for further study.

3.1.1 Initial Observations of Degree Adverbs

This study starts with an observation of the possible [Degree ADV+ X] combinations, i.e., degree adverbs and the post-adverbial grammatical categories occurring in the X slot. The classifications of degree adverbs in this study are mainly on the basis of Zhang's (2002) study of degree adverbs. The number of occurrence of degree adverbs selected in both Sinica corpus and spoken conversations are represented as Table 2, below:

Table 2: The number of occurrence of representative degree adverbs in both Sinica corpus and spoken conversations

Type of Degree-ADV		Number	Sources of Data	
			Sinica Corpus (33183)	Spoken Conversation (339)
Type 1	更 <i>gengjia</i>	5000		3
	越來越 <i>yuelaiyue</i>	445		5
	更加 <i>gengjia</i>	171		0
	稍微 <i>shaowei</i>	153		1
Type 2	最 <i>zui</i>	5000		3
	比較 <i>bijiao</i>	2923		3
Type 3 (A)	很 <i>hen</i>	12988		277
	非常 <i>feichang</i>	2750		5
	十分 <i>shifen</i>	1051		0
	真 <i>zhen</i>	1808		13
	好 <i>hao</i>	9		5
Type 3 (B)	有點 <i>youdian</i>	469		13
	有些 <i>youxie</i>	355		9
	有一點 <i>youyidian</i>	70		7

There are three types of adverbs found in the corpus and spoken conversation and their characteristics are as follows, according to Zhang (2002):

1) Type 1: degree adverbs that can occur in the comparative structure of 比 *bi* ‘than’ mainly profile the quality distinction between comparer and comparee, 2) Type 2: degree adverbs which cannot occur in the comparative structure of 比 *bi* ‘than’ function to confirm the relative gradability of degree members in certain range, and 3) Type 3: degree adverbs can directly confirm the quality gradability of certain comparative items; this type can be further divided into two sub-groups based on the concept of relative degree: strong degree in Type (A) and minimal/weak degree in Type (B).

Moreover, Table 2 shows that degree adverb *hen* of Type 3 in both Sinica Corpus and spoken conversation is the most high-frequently occurring token in the three types of Degree-ADV among the fourteen degree adverbs. The total number of occurrence of *hen* is 12988 in Sinica Corpus and 277 in spoken conversation. On the other hand, the degree adverb *youdian* ‘a little’ denoting minimal/weak degree is the high-frequent one of Type B in Type 3: the total number of its occurrences is 469 in Sinica Corpus and 13 in spoken conversation. The tokens of high-frequency here are significant as the claim of Biber et al. (1998): high-frequent tokens have more various usages in language than low-frequency ones.

3.1.2 Distribution of Grammatical Categories Following Degree Adverbs

The prototypical degree adverb *hen* ‘very’ is commonly found in both Sinica corpus and spoken conversation as shown in Table 2. It is used as a representative case of degree adverb for illustration. Taking *hen* ‘very’ as the central case, a wide range of grammatical categories that follow the adverb are found. The possible

grammatical categories that can co-occur in the X slot include NP, AP, VP, ADVP, DP and interrogative, as shown in examples 1-5 below.

(1) [Degree ADV+ NP]

a. Common Noun

歌手蔡依琳的嘴唇很香腸

Geshou Caiyilin de zuichun hen xiangchang.

Singer Caiyilin DE lips very sausage

‘The lips of singer Yi-lin, Cai is very sausage-like (sexy).’

b. Proper Noun

吳綺莉“打女”形象很成龍

Wuqili danu xingxiang hen Chenglong.

Wuqili action actress image very chenglong

‘The image of Qi-li, Wu is very Jackie Chen-like (good at martial arts).’

(2) [Degree ADV+ AP]

a. Relative Adjective

在我遇到的計程車司機中，我相信他很藍/綠

Zai wo yudao de jichengche-siji zhong, wo xiangxin ta hen lan/lu

In I meet DE taxi-driver middle, I believe he very blue/green

‘Among the taxi drivers I have met, I believe he is very KMT/DPP-like.’

b. Absolute Gradable Adjective

她的眼睛很瞎/大嫂耳朵很聾/她的聲音很啞

Ta de yanjing henxia/Dasao erduo hen long/ Ta de shengyin hen ya.

She DE eyes very blind/ Sister-in-law ear very deaf/ Her DE voice very dumb

‘Her eyes have very poor eyesight./Sister-in-law has a severe problem in poor hearing./ Her voice is very hoarse.’

c. Non-Gradable Adjective

打是愛，罵是關心。這乍聽似乎很對/法律不外乎人情，這句話實在很錯

Da shi ai, ma shi guanxin. Zhe zha-ting sihu hen dui/ Falu buwaihu-renqing, zheju hua shizai hen cuo.

Hit is love, scold is care. This suddenly sound seems very right./ Law consider feeling of human, this sentence really very wrong

‘Hitting is love and scolding is care. This temporarily sounds very reasonable./This word, the Law is not out of favors, is indeed very unreasonable.’

d. Reduplicative Adjective

每天可以很悠悠哉哉的，在大街閒晃.../他甚至連說話都有點結結巴巴

Meitian keyi hen youyouzaizai de, zai dajie xianhuan.../Ta shenzhi lian shuhua dou youdian jiejiebaba.

Every day could very really-leisure DE, at street bludge/He even even talk all a little stammering

‘One can get his/her leisure to fool around on the street./He is even a little stammering when he talks.’

(3) [Degree ADV+ VP]

a. Psych-verb

我很高興/生氣

Wo hen gaoxing/shengqi.

I very happy/angry

‘I am very happy/angry.’

b. Cognitive verb

我很了解/認識他

Wo hen liaojie/rencshi ta.

I very understand/know he

‘I understand/know him very well.’

(4) [Degree-ADV [Degree-ADV+ AP]]

Degree Adverb

李文秀很有點害怕/妒忌

Li Wenxiu hen youdian haipa/duji

Li Wenxiu very a little fear/jealous

‘Li Wenxiu is quite sort of afraid/jealous.’

(5) [Degree ADV+ DP/ Interrogative]

a. Demonstrative

電影中有段感情戲，場面很那個.../感情戲它很這個...那個...該怎麼說呢?

Dianying-zhong you duan gan-qingxi, changmian hen nage/Gan-qingxi ta hen zhege...nage...gai zenme shuo ne?

In the movie have part romantic drama, the story very that/Romantic drama it very this that should how say SFP

‘There is an emotional scene in the movie, and the scene is very that (erotic).../How can I describe the emotional scene? It is very this...very that...’

b. Interrogative

很多人看幾米，覺得他很夢幻，很怎樣.../她聊著那個歌手唱的怎樣，這首歌的歌詞很什麼...

Henduo ren kan jimi, jue de ta hen meng huan, hen zenyang/Ta liao zhe nage geshou chang de zenyang, zhe shou ge de geci hen sheme.

Many people consider Jimi, feel he very dreamlike, very how/She chat ASP that singer sing DE how, this CL song DE lyrics very what

‘Many people consider Jimi is very dreamlike, very that sort of.../She chatted about that singer’s voice, the lyrics of this song were very kind of...’

As shown above, the diverse range of grammatical categories following *hen* include NP, AP, VP, ADVP, DP or Interrogative. The categories can be further divided into sub-types with different semantic meanings, morphological forms and syntactic forms:

(a) common noun (e.g., 香腸 *xiangchang* ‘sausage’) or proper noun (e.g., 成龍

Chenglong ‘Jackie Chen’) in NP type;

(b) relative gradable adjectives (e.g., 藍/綠 *lan/lu* ‘blue/green’), absolute gradable adjectives (e.g., 瞎 *xia* ‘blind’, 聾 *long* ‘deaf’, and 啞 *ya* ‘dumb’),

non-gradable adjectives (e.g., 對 *dui* ‘right’ and 錯 *cuo* ‘wrong’), and

reduplicative adjectives (e.g., 悠悠哉哉 *youyouzai* ‘fool around’ or 點結結巴巴 *jiejiebaba* ‘stammering’) in AP type;

(c) psychological verbs (e.g., 高興/生氣 *gaoxing/shengqi* ‘happy/angry’) or

cognitive verbs (e.g., 了解/認識 *liao jie/renshi* ‘understand/know’) in VP type;

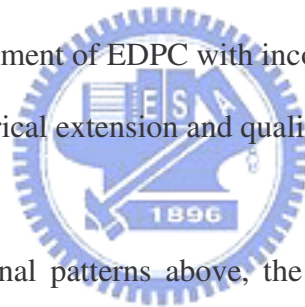
(d) degree adverbs in ADVP type (e.g., 有點害怕/妒忌 *youdian haipa/duji* ‘a little feared/jealous’);

(e) demonstratives in DP type (e.g., 那個 *nage* ‘that one’ and 這個 *zhege* ‘this one’)

and Interrogatives in type of Interrogative Word (e.g., 怎樣 *zenyang* ‘how’ and 什麼 *sheme* ‘what’).

With special attention to the collective data, the posterior element such as NP, AP, VP, ADVP, DP, Interrogative words intrinsically possess stative property

(semantic value or semantic content). In other words, they attribute various semantic values: (a) NP denotes attributions of type-referring and token-referring that are culturally or contextually-defined. (b) AP codes metaphorical or coercive (non)-human characteristics due to pragmatic reasons. (c) VP implies psychological state and cognition state. (d) [Adv1+Adv2+AP] indicates epistemic state as well as politeness effect (Levinson 1983). (e) DP expresses referring predicate but underspecificity as consequence of online processing (previous established quality retrieved from context) and Interrogative Words suggest vague reading that needs to be indirectly specified via co-occurring expressions (non-previous established quality in context). More supporting examples and analyses of the above categories (such as NP, AP, VP, ADVP, DP or Interrogative) will be demonstrated by considering the syntactic and semantic requirement of EDPC with incorporating construction grammar, schema of metaphorical extension and qualia roles of qualia structure in chapter 4.



Based on the distributional patterns above, the syntactic characteristics of the Mandarin degree adverb *hen* are discussed first and then its semantic properties in the next chapter (Chapter 4).

3.2 Summary

This chapter introduces our sources of database selected according to actual use in spoken conversation, Sinica data as well as samples retrieved from Google and Udndata. The goal of this study is to provide a new perspective (a possible generalization) on collocations between degree adverbs and possible post-adverbial categories. On the basis of the finding collocations, it is hoped that this study may provide a plausible explanation, regarding the interrelationship of syntax, semantics and pragmatics.

Chapter 4 Information beyond Compositionality:

Construction-based Account

4.1 The Approach of Construction Grammar

Recently, functional researchers have turned their attention to elucidate certain language phenomena that favor a constructional approach (see Goldberg 1995, 2003, Jackendoff 1997a, Liu 2005). It is also found that a constructional account can shed new light on the analysis of Chinese language phenomena (e.g. [GAN+ NP] in Liu 2005). This chapter will begin with introducing the concept of construction and then the advantages of the construction grammar and the significant role of related studies via construction-based account in the following sections.

In the sense of Construction Grammar (Goldberg 1995, Jackendoff 1997a, Liu 2005), a construction is considered as a form-meaning pair that exists independently of the individual words (components). As a basic form-meaning bearing unit, the syntactic configuration of a construction ‘contributes semantic content above and beyond what is contained in the constituent lexical items’ (Jackendoff 1997:553). Namely, a construction comprises a form-meaning association that behaves as a lexical item in language use. A lexicon includes a certain word knowledge or semantic meaning that is to be listed in dictionary and learned individually by human. Similarly, a construction requests that certain aspects of meaning should be also learnable (see Liu 2005).

Let us turn to the pioneering work of Construction Grammar of Goldberg (1995) with a legible definition and critical empirical examples in detail. This work argues that basic sentences of a language are instances of constructions, defined as form-meaning correspondences that exist independently of particular verbs. She presents the studies such as English ditransitive construction (e.g., *She baked him a cake*) and resultative construction (e.g., *He ate himself sick*; **He drank himself funny*)

to show that verbs with atypical argument structures may be readily explained from a constructional approach. Lastly she defines the meaning of construction as shown below (1995:4):

C is a CONSTRUCTION iff_{def} C is a form-meaning pair<F_i, S_i> such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions.

According to her definition, Construction Grammar can be summarized with the following main characteristics. Firstly, the appeal of Construction Grammar as a holistic unit and usage-based approach lies in the concept that constructions themselves inherently carry meaning and can assign meaning to an argument without stipulating an additional sense of argument. Within the construction, the lexical categories retain their inherent semantic interpretation, while being integrated with the meaning directly associated with the construction itself (cf. Levin and Rappaport 1990, Levin 1993, Levin and Rappaport 1996). Moreover, Construction Grammar regards the relations between semantics and pragmatics—constructions can manifest pragmatic information such as constituents, topicality and register as well as semantic interpretation. Both semantics and pragmatics are equal contributors to shape linguistic expressions. Secondly, Construction Grammar is a constraint-based, generative, non-derivational and monostratal theory of grammar integrating the cognitive and interaction foundations of language (Langcker 1987, 1990, 1991) rather than transformational approach (underlying syntactic or semantic forms are posited). It attempts to explicate not only the infinite number of usages that are acceptable for the grammar, but also other usages that are unacceptable or marginal.

On the basis of the characteristics of Construction Grammar, it is clear that it

differs from the lexical-rule based approach in lexical semantics significantly. For example, the methods of dealing with the English ditransitive construction and resultative construction are disparate. The former approach focuses on the nature of the foreground relations between verbs and constructions by viewing constructions and verbs as interrelated but independent. Namely, it is not necessary to posit an additional verb sense for each new syntactic configuration where the verb appears. On the other hand, the latter one represents relations only implicitly in the statement of the rule itself (different verb senses are related by generative lexical rules). Compared with the two approaches, it seems that a constructional approach may account for more language expressions in a more economic and sensible way which will be described in the following section.

4.1.1 The Merits of the Constructional Account

To prove that construction-based accounts in some sense are able to elucidate language expressions more economically and sensibly than traditional lexical semantics approaches do, let us begin with discussing what the advantages of construction-based accounts are. According to Goldberg (1995: 9-21), there are at least six advantages of constructional account to analyzing language expressions (e.g., ditransitive construction): (a) implausible verb senses are avoided (b) circularity is avoided (c) semantic parsimony (d) compositionality is preserved (e) easy for sentence processing (f) easier learning for child language acquisition.

First, it avoids the problem of positing implausible verb sense to account for examples such as *She baked him a cake*. To account for this case, a lexical semantics theory may suggest there should be a special sense of *bake* 'X INTENDS to CAUSE Y to HAVE Z': an agent, a theme, and an intended recipient. If an additional sense was involved, then it would follow that this verb is ambiguous between its basic sense

and its sense in the syntactic pattern. On the contrary, a constructional approach can deal with the problem with defining the ditransitive construction to be associated directly with agent, patient, and recipient roles, and then associate the class of verb of creation with the ditransitive construction without stipulating a specific sense of *bake* which is unique to this construction.

Second, a constructional approach requires that the issue of the interaction between the verb meaning and the constructional meaning can be addressed. It allows us to avoid the circularity of arguing that a verb is an *n*-ary predicate and “therefore” has *n* complements when and only when it has *n* complements. Take the transitive verb *kick* for example, the lexical semantics approach claims that *kick* has an *n*-argument sense based on the fact that *kick* occurs with *n* complement; simultaneously it is argued that *kick* occurs with *n* complements because it has an *n*-argument sense. Instead, the ternary relation, for example, is directly associated with the skeletal ditransitive construction. The verb, on the other hand, is associated with one or a few basic senses which must be integrated into the meaning of the construction rather than assuming a new sense every time a new syntactic configuration is encountered and then using that sense to account for the existence of the syntactic configuration.

Third, a constructional approach shows the characteristics of semantic parsimony. Lexical semantics suggests that there are two senses (*slide*₁: <agt, pat, goal_{animate}> and *slide*₂: <agt, pat, goal>) of the verb *slide* in the sentences *she slid Susan/* the door the present*. It is found in the double object construction, its sense is not the purely physical transfer sense of *slide* but rather a transfer of possession sense. Namely, this approach assumes that the semantics of the full expression is different whenever a verb occurs in a different construction. Nevertheless, in the constructional approach, these differences need not be attributed to different verb senses; they are

more parsimoniously attributed to the constructions themselves: the ditransitive construction constrains that the goal has to be animate directly to the construction.

In addition, the constructional approach preserves the concept of compositionality as lexical semantic approach does. It keeps this property in a weakened form: the meaning of an expression is the result of integrating the meaning of the lexical item into the meanings of constructions. In this way, it does not need to propose that the specifications of the main verb project the syntax and semantics of the clause. For instance, it can avoid taking verb *fought* in the example *Pat fought her way into the room* as both unergative (since it appears in the way construction) and unaccusative (since it functions as a directed motion verb).

Furthermore, certain psycholinguistic studies (Carlson and Tanenhaus 1988) indicate that misinterpreted lexical ambiguity creates a more marked processing load than the misinterpreted uses of the same verb. The longer reaction time of subjects is to decide the ambiguous interpretation of the verb *set* in examples *Bill set the alarm clock onto the shelf* and *Bill set the alarm clock for six*.

Finally, by recognizing syntactic constructions as meaningful in their own right, it is possible to allow for multiple syntactic frames to be used for children to acquire the verb's interpretation. Take the sentence *the ball floated into the cave* for example (Pinker 1989), it is proved that taking the union of the different elements of reading across different syntactic frames will lead to incorrect learning: the verb *float* implies a motion meaning which makes children incorrectly infer that it does not make sense that floating without moving to any places.

On the basis of considering the advantages of the construction account, many classic works adopt a constructional approach to account for certain language

phenomena (see Goldberg 1995, 2003¹⁶, Jackendoff 1997a, Su 2002b, Lai 2003, Biq 2004, Lien 2004, Liu 2005). In the following section, some renowned studies based on Construction Grammar to explore English [V+ TIME NP+ AWAY] collocation (e.g., twisting the night away) in Jackendoff (1997a) and Chinese [GAN+ NP] combination (e.g., 趕作業 *gan zuoye* ‘writing homework in a hurry’) (see Liu 2005) will be introduced¹⁷.

4.1.2 More Works Based on Constructional Account

This section establishes that many studies have proved that Construction Grammar has gradually developed into a mature approach. It is established with a formal architecture and representation via integration with cognitive and functional groundwork. The theory of construction orientation has aroused interest in not only English linguistics but also Chinese linguistics yielding various works such as Jackendoff 1997a, Su 2002b, Lai 2003, Biq 2004, Lien 2004, Liu 2005, after the pioneering study in Goldberg (1995). All these studies consider the whole of the construction can be compositionally derived from combining the pieces including the information coded in the construction (as a form-meaning pair). The spirit and key data of these works based on Construction Grammar are introduced

¹⁶ Goldberg (2003) further expounds tenets of constructionist approaches: constructions are understood to be learned on the basis of the input and general cognitive mechanisms; language-specific generalizations across constructions are captured via inheritance.

¹⁷ Linguistic issues based on Construction Grammar in Mandarin are gradually prevalent. Su (2002b) verifies the existence of Constructions via discussing certain Chinese idioms and idiomatic patterns: (i) *X-lai-X/Y-qu* as in *xiang-lai-xiang-qu* ‘to think over’, (ii) *bu-X-bu-Y* such as *bu-qu-bu-nao* ‘neither surrendering nor yielding’, and (iii) *bu-X-er-Y* in *bu-lao-er-huo* ‘to gain without working hard’, respectively. The multiple functions of Hakka LAU constructions in Lai (2003) claims that it is plausible to construe the functions if the LAU construction is considered as a form-meaning unit. With comprehensive investigation of the ‘V yi ge N’, Biq (2004) pinpoints that the significance of the collocation associations between co-occurring linguistic elements in forming constructions as well as meanings. Lien (2004) explores a synchronic study of a sixteenth century southern Min play *Li Jing Ji* in terms of a set of inherent and non-inherent ditransitive constructions as well as some related elaborated constructions such as (a) S-V-O1-khit4/too7+O2 such as *phah4 chhiu2-chi2 khit4 li* ‘have a ring made for you’ and (b) S-O1-V-khit4/too7+O2, illustrated in *chhinn5-gun5 theh8 khit4 i1* ‘give him money.’

respectively as follows.

Let us begin with the western scholar Jackendoff (1997a). Through analyzing the ‘time’-away construction, the [V+ TIME NP+ AWAY] sequence, (e.g., the sentence ‘*twisting the night away*’ means wasting someone’s time) by comparing resultative construction and way-construction with two approaches— lexical rule approach and constructional approach, he suggests that a constructional account of the ‘time’-away construction, represented as *V NP away*, is more suitable than the other without adding extra rules (the lexical rule approach treats ‘time’-away as a complex verb). For example, both sentences (a) *Fred drank the night away* and (b) *We slept the whole afternoon away* prove to have complex syntactic and semantic properties. Particularly, although the NP *the night* or *the whole afternoon* syntactically behaves like a direct object of the verbs (*drink* and *sleep*, separately), it is impossible for the verb *drink* or *sleep* to license *the night* or *the whole afternoon* essentially. On the other hand, in the construction, it is not necessary to say that *drink* is polysemous between ‘ingest fluid’ and ‘waste time ingesting fluid’: the verb *drink* always means ‘ingest fluid’ and the ‘waste time’ interpretation arises from the construction itself. Moreover, a further subtle semantic meaning in the construction is reflected in the verbs of such cases ‘?# Ivan worked/toiled/labored three (miserable) hours away’. These ironic examples mean that ‘there is an insinuation that the activity in question is heedless pleasure, or that the subject should have been doing something else, or both’ (Jackendoff 1997a: 538). To elucidate the complex set of syntactic and semantic properties of *V NP away*, he argues that *V NP away* is eligibly treated as a meaning-bearing construction based on Construction Grammar. The constructional analysis of ‘time-away’ claims that the direct object is licensed by the construction and it is the semantics of the construction that manifests the argument structure of the VP (*V NP away*): the NP is the object of the VP rather than the object of the verb.

Next, the Mandarin monument of [V+ NP] sequence on the basis of Construction Grammar is introduced. By means of scrutinizing the [GAN+ NP] case, Liu (2005) claims that the semi-fixed V-O pattern of [GAN+ NP] as a constructional unit can specify the unique semantic features associated with the pattern that goes beyond the semantics of its constituent items. She further proposes that there is a semi-filled Construction in the Mandarin lexicon in view of considering the language fact of [GAN+ NP] collocation (Liu 2005:322):

Construction with GAN

FORM: [GAN+ Inanimate NP]

MEANING: A temporally bounded event [to reach a Target State (associate the NP) through speeding up in an Activity (agent-control) with a Temporal Reference (contextually defined or world knowledge)]

SPECIFICATION on NP slot: Event-evoking NPs (an Activity Nominal or Time Reference that stands for a default activity/event)

EXAMPLES:

- 趕作業 *gan zuoye* ‘GAN- homework’ (NP-Nominal Activity)
ACTIVITY [writing the homework] by TIME [deadline]
- 趕三點半 *gan sandianban* ‘GAN-3:30 pm’ (NP-Time)
ACTIVITY [rushing to the bank] by TIME [3:30]

The constructional meaning as specified above is to express temporal or eventive processes. Namely, the construction endows specific meanings (denoting an emergent event) that are not directly derived from the lexical meaning of either the verb or the object NP. Take 趕作業 *gan zuoye* ‘doing homework in a hurry’ for instance. The interpretation is complicated: it means that to achieve a STATE by a certain TIME through engaging in an ACTIVITY. Namely, the underspecified activity

is ‘writing homework’, the goal is to work on the homework, and the time frame is the deadline for turning in the homework. Interestingly, it is the construction that carries salient information about the covert activity/goal/time interpretation that is not manifested from either the verb or the nominal itself.

However, the constructional approach also has a significant problem to be solved.

That is, the potential ambiguity regarding the role of the agent/actor arising from the

[GAN+ NP] construction still needs a further explanation to make it clear. To

exemplify, 趕比賽 *gan bisai* ‘GAN+ (ball) games’ has two possible semantic

meanings: ‘rush to finish playing games’ or ‘rush to finish watching games’. This

problem of potential ambiguity can be explained through the approach of Qualia

Structure proposed by Pustejovsky (1995). Given the four postulated Qualia roles

(such as CONSTITUTIVE, FORMAL, TELIC and AGENTIVE), the two distinct

interpretations can be distinguished by two different roles of the noun *bisai* ‘a game’:

different roles for 比賽 *bisai* ‘(ball) game’ are (a) [Agentive= playing] and (b)

[Telic= entertaining/watching]. The advantage with the qualia structure is that the

specification of qualia role can provide a convenient way to differentiate the two

possible readings of the same construction, profiling different meaning facets

regarding the nouns.

Lastly, Liu (2005) summarizes that while constructional specifications provide the necessary frame-related properties, the generative mechanism with qualia roles can help differentiate the possible roles associated with the NP. Hence, by combining the two complementary approaches (Construction Grammar and Qualia Structure), the study of [GAN+ NP] can account for and represent contextualized meaning and diverse interpretations associated with the partially-filled construction.

The studies mentioned above suggest that a constructional account, to some extent, is more efficient in explicating some distributional patterns of their data than

the traditional view of lexical-rule approach (cf. Levin and Rapport 1996, Talmy 2003). The constructional approach can be applied in accounting for a wider range of language phenomena: typological studies such as English and Mandarin.

Following the constructional paradigm mentioned above, the following sections will indicate that the correlations between degree adverbs and post-adverbial categories can be construed within the application of the theory of Construction Grammar as well as qualia structure (Pustejovsky 1995). The generative approach *qualia structure* that can be used to represent the extended semantic meanings inferred in the degree predicating construction. What follows is a brief introduction of the details of qualia structure.

4.1.3 Intergrating Further Semantic Extensions: Qualia Structure

Pustejovsky (1995) proposes a generative, multi-leveled approach to represent information in the lexicon. The four fundamental levels are Argument Structure, Event Structure, Inheritance Structure and Qualia Structure. Among the four levels, *qualia structure* is a structured representation that encodes the relational force of a lexical item such as a noun, a verb, etc. It specifies four essential dimensions of the meaning of a word (e.g., CONSTITUTIVE, FORMAL, TELIC and AGENTIVE) below (Pustejovsky 1995: 85-86):

- (a) CONSTITUTIVE: the relation between an object and its constituents, or proper parts such as material weight, parts and component elements.
- (b) FORMAL: that which distinguishes the object within a larger domain such as orientation, magnitude, shape, dimensionality, color and position.
- (c) TELIC: purpose and function of the object
- (d) AGENTIVE: factors involved in the object or “bringing an object about”.

According to Pustejovsky (1995: 87-88), qualia structures not only structure

knowledge of words, but also suggest interpretations of words in context. Take the English noun *book* for example. The qualia roles of *book* include four different aspects: its constitutive role as in ‘I read a book’, formal role in ‘This book is thick’, telic role in ‘I enjoy the book’ and agentive role in ‘The company publishes the book’. The different contextual meanings of *book* are supplied by information from the distinct dimensions of the complement NP. More specifically, the constitutive role of *book* (complex of information-bearing objects), its telic role (function for people to relax) and its agentive role (the information comes into being by authors) help project the appropriate meaning of the VP.

The analysis of *book* parallels the case of Mandarin collocations of degree adverbs and nouns. Through the specification of the relevant qualia role, information about the compatible semantic qualities can be projected to interpret the noun, as shown below:



Qualia Representation of [Degree ADV+ NP]

a. 七年級很草莓 *qinianji hen caomei* ‘The Z-generation is very strawberry-like.’

Strawberry [Constitutive role= essential component of fruit] and

[Formal role= soft, bright and fragile]

b. 他很馬英九 *ta hen Ma Yingjiu* ‘He is very Ma Yingjiu-like.’

Ma Yingjiu [Constitutive role= personality] and

[Formal role= handsome]

In examples (a-b), the combination meanings of Constitutive role and Formal role give rise to the stative quality to the common noun *strawberry* and proper noun *Ma Yingjiu*. Namely, the two qualia roles are the main source to predict the related interpretation of the compatible quality in the [Degree ADV+ NP] collocation. With

the pre-defined semantic qualities in the qualia roles, contextual/cultural meanings beyond the lexicon can be manifested through semantic coercion in the construction [Degree ADV+ NP] itself without avoiding adding extra senses in the lexicon.

Actually, it is not economical to list all the possibilities of the nominal usages in lexical items since we must have a super-dictionary to include the senses of nouns.

Through the mechanism of qualia structure (Pustejovsky 1995), the cooccurrence of degree adverbs and nouns is plausibly explained: the specified qualia roles with related properties may help select scalar-implicating qualities, as a result of constructional coercion. More discussion about the interaction of qualia structure and constructional inference will be presented in the following sections.

4.2 The Evaluative¹⁸ Degree Predication Construction

The observed collocations mentioned in Chapter 3 raise a question to be answered: why may various syntactic categories collocate with degree adverbs? To answer the question, it is proposed that the sequence of [Degree ADV+ X] is viewed as a unique construction, namely the form of *Evaluative Degree Predication Construction* (EDPC) associated with the semantic interpretation. The definition of EDPC is as follows:

(6) The Definition of EDPC: Form, Meaning and Function

Form: Degree ADV+ X

Meaning: Degree evaluation of scalar attribute or quality

Function: The degree adverb is taken as the *constructional head* that signals or coerces degree evaluation of a given attributive quality.

¹⁸ As Givon (1993:169) puts it, evaluative judgments made by speakers include desirability, preference, intent, ability, obligation or manipulation.

In EDPC, degree adverbs (such as 很/非常/十分/有點/真/越來越 *hen/feichang/shifen/youdian/zhen/yuelaiyue* ‘very/fairly/very/a little/really/more...more’ in Table 2) are treated as the *constructional head* that denotes or triggers a given value in the scalar comparison. On the other hand, the categories of X are NP, AP, VP, ADVP, DP and Interrogative coding intrinsic semantic contents by themselves (e.g., [Static Quality]). The dependent relation between degree adverbs and categories in the X slot is shown in (7):

(7) The Dependent Relation between Degree Adverbs and Categories in the X Slot is “If A, then B.”: degree adverbs (labeled as A) are the necessary and sufficient conditions of degree manifestation of grammatical categories (labeled as B).

For example, in the declarative sentences, 他*(很)高/矮 *ta hen gao/ai* ‘he is very tall/ short.’, and the cases in Table 2, the degree adverb *hen* ‘very’ is the necessary element. Without it, the sentences are odd. The collocations of degree adverbs and the following categories turn to the traditional question, “why do adjectives in Chinese declarative sentences have to take a degree adverb *hen* into a constructional premise? (see Zhu 1982, Tang 2000ab, Liu 2005, among many others)” Meanwhile, it raises a new issue, “why may NPs, VPs, ADVPs, DPs or Interrogative words all collocate with the degree adverb *hen* ?”


According to the definition of EDPC mentioned above in (6), the degree adverb is taken as the *constructional head* that can signal degree evaluation. That is, in this construction, the *constructional head* is indeed the core element, the most important element of this constituent: without the head the construction would simply not exist since it fails to trigger degree evaluation of a given attributive quality.

To account for the observed collocations in Table 2, this work follows two

crucial observations of evaluation as noted in Thompson (1996:65):

The concept of evaluation has two basic characteristics. (i) Evaluation is simply defined as the indication that the speaker considers something is good or bad on the basis of the good/bad scale. Certainly, there are many other scales of evaluation which can be established in different situations. (ii) The concept of evaluation does not have structure itself. Namely, it is parasitic on other structural elements.

The examples in Table 2 above indicate that taking the degree adverb and its post-adverbial as a degree construction is reasonable. Thus, in the remainder of this thesis, the focus is on this construction and its constraints. The four related questions of the construction will be tackled successively:

- 
- (a) What are the syntactic and semantic properties of the [Degree ADV+ X] Construction?
 - (b) How do the profiled properties in evaluative process interact with each other: the interrelations among semantic value, scale, gradability, degree and comparison (*covert comparative standard*)?
 - (c) What are the characteristics of the specificity of the subject NP and the referentiality of categories in the X slot?
 - (d) What are the categories that can occur in the X slot: content words or function words?

In what follows, the syntactic and semantic properties of the [Degree ADV+ X] Construction will be set forth first and then the other three related questions, respectively. After clarifying these questions, we will severally present the associative

properties of degree adverbs (namely, *hen*¹⁹ and *youdian*).

4.2.1 Syntactic and Semantic Properties of the [Degree ADV+ X]

Construction

This section discusses the syntactic distribution and semantic interpretation of the [Degree ADV+X] sequence. A semi-fixed ADVP collocation ([Degree ADV+X]) is taken as a construction, following the approach of Construction Grammar in Goldberg (1995). The construction can allow specifying the elaborate semantic interpretation ‘*degree of evaluative quality*’ itself that is not directly derived from combination of its constituent elements. Further, it can be represented via the definition with examples illustrated in (8) and Figure 1 below:

(8) The Definition of EDPC: Form, Meaning, Function and Example

Form: Degree ADV+ X

Meaning: Degree evaluation of scalar attribute or quality

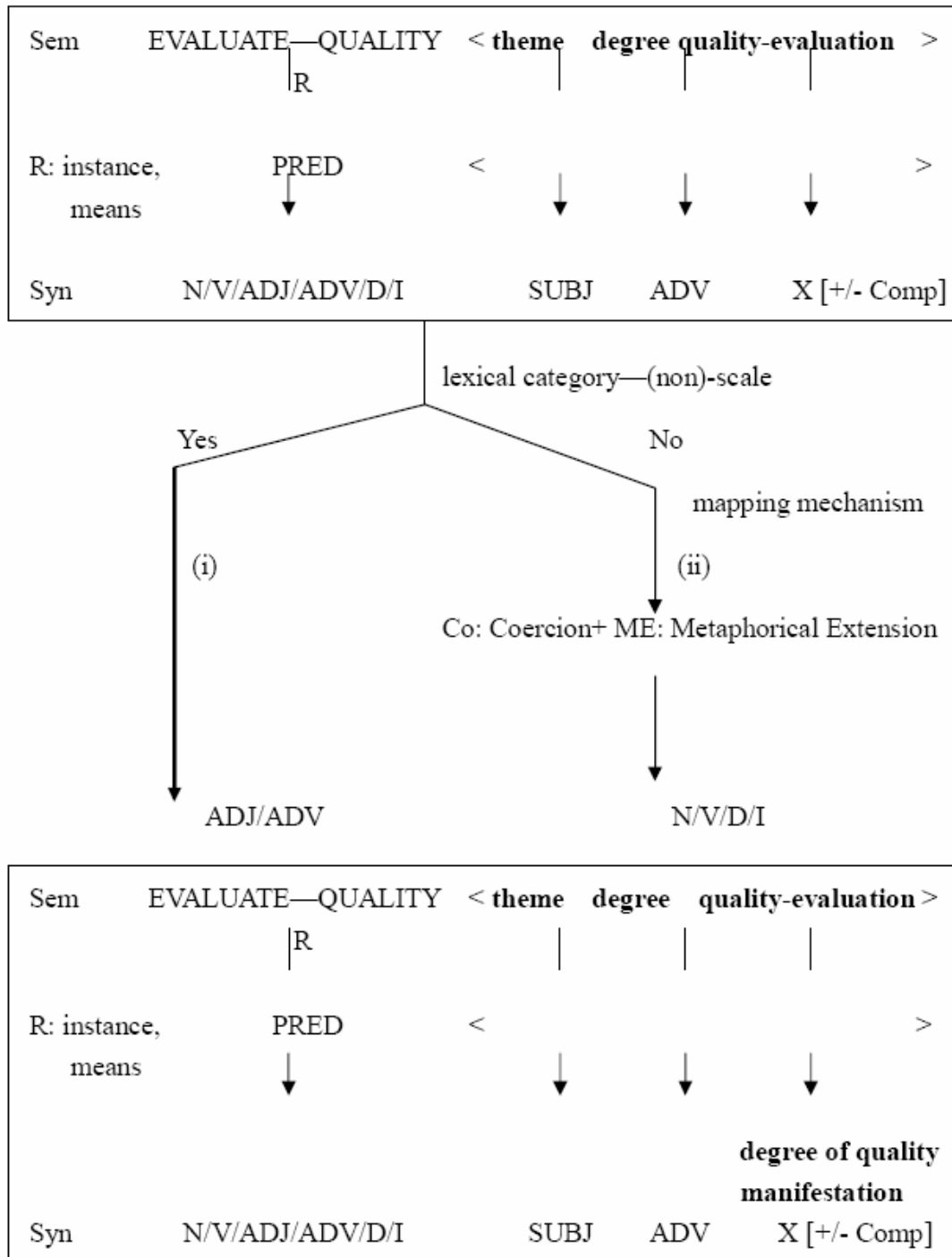
Function: The degree adverb is taken as the *constructional head* that signals or coerces degree evaluation of a given attributive quality.

Example: (a) Possible Degree ADV: *hen*, *youdian* etc.

(b) Possible X: NP, AP, VP, ADVP, DP, Interrogative

¹⁹ According to Li and Thompson (1981:340), the degree of unstressed adverb *hen* is bleached and loses its semantic meaning when it collocates with an adjectival verb in spoken Mandarin. Smith (1991:375) points out that although the degree adverb *hen* means *very* in certain contexts, when it collocates with adjectival predicates, it simply marks the construction (e.g., *Mali hen gao* ‘Mali is tall.’). Lien (p.c.): the degree adverb *hen* seems to have two basic functions: (i) intensification (ii) grammatical function (just for syntactic reason) and its representative paradigm is *Hen (constant) + X (variable)*. However, this study is slightly different from theirs. It pinpoints that degree adverb *hen* is an obligatory element in evaluative degree predicate construction for both of its syntactic and semantic consideration.

Figure 1: The Evaluative Degree Predication Construction²⁰ (EDPC)



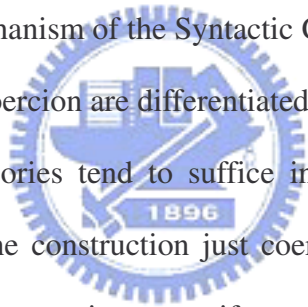
In this figure, the Evaluative Degree Predication Construction can be applied to

²⁰ In this figure, the abbreviations Sem, Syn, R, N, V, ADJ, ADV, D, I, SUBJ, X, Comp, Co and ME represent Semantic, Syntactic, Relation, Noun phrase, Verb phrase, Adjective phrase, Adverb phrase, Demonstrative, Interrogative words, Subject, X slot, Complement, Coercion and Metaphorical Extension, respectively. The profiled semantic role is represented in boldface. PRED (representing predicate) is a variable that is filled by the grammatical category when a particular category is integrated into the construction.

arguments that potentially undergo a process of the evaluative state or cognitive state since this construction renders a comparison standard to license degree of quality to its argument. This provides sufficient information in a simplex sentence. That is to say, theoretically, those categories that can occur in the construction can realize degree of evaluative quality via the coercive effect of the construction (the construction can assign/coerce degree to the X category). There are two-fold methods for these categories successfully manifested in EDPC (degree of quality realization): If it is a scalar category, then it can freely collocate with a degree adverb; if not, it should undergo a mapping mechanism via the aid of degree coercion with metaphorical extension. The criteria of coercion are suggested as (9).

(9) The Degree Coercive Mechanism of the Syntactic Categories in EDPC

Two different criteria of coercion are differentiated:

- 
- (a) Lexically scalar categories tend to suffice in the construction without any coercion operation. The construction just coerces or provides a comparative environment for these categories to manifest stative qualities.
 - (b) Lexically non-scalar categories and lexically potential (conceivably) scalar categories are inclined to occur in the construction while being coerced by the construction. The construction triggers or activates the related stative qualities and makes them specified.

The requirement of the coercive mechanism is illustrated as follows:

Lexically scalar categories (e.g., ADJPs or ADVPs, illustrated as 很高 *hen gao* ‘very tall’ or 很有點害怕 *hen youdian haipa* ‘be quite sort of feared’) denote covert degrees themselves. They tend to be compatible in the construction without any coercion except in cases of non-gradable or absolute gradable categories (for example,

眼睛很瞎 *yanjing henxia* ‘very poor eyesight’ and 笑容很假 *xiaorong hen jia* ‘the smile is very insincere’ in Figure 1). On the other hand, lexically non-scalar categories (e.g., NPs or VPs as in 嘴唇很香腸 *zuichun hen xiangchang* ‘very sausage-like (sexy)’ or 這樣的顏色很跳 *zheyangde yanse hen tiao* ‘the color is very bright’ except such psychological verbs as 很高興 *hen gaoxing* ‘very happy’) and lexically potentially and conceivably scalar categories (e.g., DPs as in 場面很那個 *changmian hen nage* ‘the scene is very that (erotic)’ or Interrogative words such as 代表很怎樣 *daibiao hen zenyang* ‘the representative is very how) are inclined to undergo coercive effect accompanied with a metaphorical extension.

The degree coercive mechanism makes lexically non-scalar categories and lexically potential scalar categories have scalar meanings. This explains why the various syntactic categories can occur in the construction. More elaborate analyses will be shown in section 4.3. Through this section, we have pointed out the definition of EDPC and the coercive mechanism. In the following sub-section, the profiled intrinsic properties in EDPC and their interactions are discussed.

4.2.2 Some Profiled Properties in EDPC: Value, Scale, Gradability, Degree and Comparison

In exploring EDPC, the intrinsic properties (e.g., semantic value, scale, degree, gradability and comparison) profiled in this construction are pointed out. The term “degree evaluation” implies a default evaluative mechanism that operates on the profiled properties.

To propose a suitable treatment of the semantic properties associated with various syntactic categories in the X slot of EDPC, we first explain the profiled properties in the construction ‘[Degree-Adv+ X]’. Building on previous works (Sapir 1944, Bolinger 1972, Smith 1991, Kennedy and McNally 2002, 2005, Kennedy 2004,

Beavers 2004, Liu 2005), this work assumes that degree adverbs can inherently encode some obligatory scale of comparison. Namely, these degree adverbs taken as overt makers of scalar comparison can provide enough information for hearers to naturally interpret what speaker say (cf. the second strategy of making a comparison in Liu 2005). The characteristics of evaluative properties profiled in this evaluative construction are defined in the sense of Sapir (1944), Bolinger (1972), Kennedy and McNally (2002, 2005), Beavers (2004), and Liu (2005), as illustrated in (10) below.

(10) The Characteristics of Evaluative Properties Profiled in EDPC

(a) *Semantic value*:

Features of entities that are stative qualities (e.g., 高/矮 *gao/ai* ‘tall/short’
[Stative Quality])

(b) *Scale*:

Particularly, the scale may be fully closed (has minimum and maximum values e.g., 滿/空 *man/kong* ‘full/empty’), partly closed (has only a minimum or a maximum value rather than both values e.g., 直/純淨 *zhi/chunjing* ‘straight/pure’), or fully open (has no minimum or maximum value e.g., 高/矮 *gao/ai* ‘tall/short’).

(c) *Gradability*:

A gradable property is a basis for ordering the objects in its domain. It can be sub-dividability of a scale, be it a binary or multi-valued scale. Durativity ensures gradability of the scale and punctuality ensures non-gradability. To exemplify, intuitively 死 *si* ‘dead’ just delineates a point on a non-gradable scale (people are dead or not dead). 高 *gao* ‘tall’ describes a point on a gradable scale: there may be many degrees of tallness measuring up to the attribute *tall*.

(d) *Degree*:

An abstract representation of measurement that is taken as an interval on a scale denoting measurement values (e.g., 很 *hen* ‘very’ or 有點 *youdian* ‘a little’)

(e) The *standard of comparison*:

A particular use of a gradable property that is evaluated: it may be contextually-dependent (e.g., 高/矮 *gao/ai* ‘tall/short’) or be determined without reference to the context (e.g., 滿/空 *man/kong* ‘full/empty’).

Furthermore, the interrelations of profiled properties provide the following theoretical denotations, as shown in (11a-b), respectively.

(11) The Interrelations of Evaluative Properties Profiled in EDPC

(a) *Entailment*: Semantic value → Scale → Gradability → Degree → Comparison

This entailment schema indicates that a category that has intrinsic semantic features (e.g., 高/矮 *gao/ai* ‘tall/short’) can manifest the degree of semantic features in the comparison of something or somebody evaluated in the mental state.

(b) *Implication*: Semantic value ← Scale ← Gradability ← Degree ← Comparison

The reverse implication schema signifies that an evaluative construction (‘[Degree-Adv+ X]’ construction) is built on a mental comparison that implies a degree interval on a gradable scale with a given value (scalar implicating quality).

To explain how the concepts of (10) and (11) really function in language, most scholars (Zhu 1982, Tang 2000ab, Kennedy and McNally 2002, 2005, Liu 2005) focus on the relationship of degree adverbs and adjectives with psychological predicates via a presupposed idea of scalar compatibility as specified in the lexicon. For example, adjectival scales and psychological scales have three crucial parameters.

Each of them must be specified in the lexical entry of a particular gradable adjective: (a) A set of DEGREES represents measurement values; (b) A DIMENSION indicates the kind of measurement such as cost, speed, volume, love, hate and so forth; and (c) An ORDERING RELATION denotes a polarity scale representation (e.g., tall/ short, empty/ full, like/ dislike etc.). Unlike the findings of previous scholars, the data in the corpora used in this study show that the cognitive mechanism of the above three crucial parameters can be manifested in various collocations of degree adverbs and their post-adverbial categories (NP, AP, VP, ADVP, DP and Interrogative). The language facts remind us to reconsider if the traditional analyses are convincing enough.

To answer the raised question, we propose taking the construction as a holistic unit, including degree adverbs and the post-adverbial categories. The construction can signal degree evaluation of a given attributive on the basis of an explicit or implicit comparison. In other words, this degree construction itself can endow or trigger relatively new information (a comparative standard or scalar implicating quality) to its internal elements (categories in the X slot): *semantic value* [Stative Quality], *scale* [Abstract Interval Structure], *degree* [Certain Degree], *gradability* [Sub-dividability on A Scale] and *comparison* [Covert Comparative Standard]. To exemplify²¹, not only examples such as 他很[高/高興] *ta hen [gao/gaoxing]* ‘he is very tall/ happy’ are legitimate, but also cases as in 他很[草莓/有點害怕/那個/怎樣] *ta hen [caomeil/youdian haipa/ nage/ zenyang]* ‘he is very fragile (colorful)/ a little afraid/ that (contextually-dependent meaning)/ what (contextually-dependent meaning)’ are acceptable.

Before we close this sub-section, a significant comparison of two evaluative

²¹ The specific argumentation of the relations between degree construction and cognitive mechanisms will be demonstrated in section 4.3.

constructions is shown: what is the difference between [NP Degree- ADV+ X] construction (e.g., 他很高 *ta hen gao* ‘He is very tall’) and [NP ADJ] construction (e.g., 他高 *ta gao* ‘He tall’)?

In an evaluative situation, how much information do speakers and hearers need when they communicate with each other (cf. Liu 2005). The sufficient information of comparison will influence the acceptability of evaluative sentences. Consider the examples: (a) 他很高 *ta hen gao* ‘He is very tall’; (b) ?他高 *ta gao* ‘He tall’; (c) 他高，妳矮 *ta gao, ni ai* ‘He is tall, but you are short’. In example (a), the degree adverb *hen* ‘very’ in the [NP Degree ADV+ X] sequence is taken as an overt marker. This overt marker of scalar comparison, an abstract measurement in mental state, provides enough information for evaluation: hearers can naturally interpret what speakers say. On the contrary, the sentence (b) is marginal without any certain context since the comparative standard for the norm of tallness is not explicit for speaker/hearer to evaluate the degree property of tallness. The real interpretation of tallness is contextually-driven. According to Chafe (1987), our minds contain very large amounts of knowledge or information and only a very small amount of this information can be focused. In other words, when we communicate with each other, we will undergo three different activation states (active, semi-active, and inactive concept). Given in a scene of classroom, evaluators can automatically have a schema in mind, triggering a cluster of interrelated information such as classmates, teachers, and characteristics of being tall/short/fat/thin of persons in the classroom. Hence, with this presupposition (as old information), the sentence as in (b) is acceptable in that speakers or hearers may obviously recognize the degree of tallness of the man, which is compared with the height of the people in the classroom. On the other hand, contexts such as the contrastive environment in example (c) providing sufficient background information of the norm of tallness can also make the evaluative sentence

acceptable. Moreover, the norm of adjective quality is culturally or contextually dependent, as the contrastive examples (d and e) shown: (d) 在台灣，他的身高很高 (183 cm) *zai taiwan, ta de shengao hen gao* ‘In Taiwan, his height is very tall’; (e) 美國職業籃球選手身高很高 (200 cm) *mei guo zhiye lanqiu xuanshou shengao hen gao* ‘The NBA players in America are very tall’. With comparing the two norms of tallness, the criterion of tallness is different from culture to culture. In Taiwan, a man who is 183 cm tall is considered ‘very tall’ in most situations. However, when compared with the height of the national basketball players in America, this height cannot be counted as ‘very high’ since the height of players in the NBA is generally higher than 200 cm. The same height (183 cm) in America is not taken as ‘very tall’. This comparative standard is constructed on the basis of socially cognitive judgment.

Next, we will take a step forward to show that all possible elements of X are capable of denoting a quality as activated by the construction. In addition, the denoted value is the asserted new information while the subject NP is usually taken as the given information and also has some restrictions on semantic referentiality.

4.2.3 Specificity of the Subject NP and Referentiality in the X Slot

The specificity of subject and referentiality of categories play a special role respectively in carrying out the interpersonal function in evaluative processes (Thompson 1996). To understand their roles, this section further discusses the meanings expressed by the subject NP and referential categories in the X slot.

In the traditional view, the subject is the entity of which something is predicted in the rest of the clause. This is a powerful insight applied in most approaches to grammatical description (Thompson 1996: 44). That is, the subject is often the given information and the rest of the clause is the new information. Examine the following examples (12) and (13).

(12) a. 有一個人/那個人/小群/他很高/高興

You-yige-ren/nage-ren/Xiaoqun/ta hen gao/gaoxing

Someone/ that man/Xiaoqun/he very tall/happy.

‘Someone/that man/Xiaoqun/he is very tall/happy.’

b. *一個人/一些人很高/高興

Yige-ren/yixie-ren hen gao/gaoxing

A man/ some people very tall/happy

(13) a. 他很草莓/成龍

Ta hen caomei/Chenglong

He very strawberry/Chenglong

‘He is very strawberry-like/Chenglong-like.’

b. *他很一個/一些/許多草莓/成龍

Ta hen yi-ge/yi-xie/xuduo caomei/Chenglong

He very one-CL/some/many strawberry/Chenglong

Works of Chao (1968), Li and Thompson (1981), Tsai (2001), Hsin (2002), among many others insightfully point out that the Chinese NPs in the subject position have to be specific. Examples of (12a), *you yige ren/nage ren/ta/xiaoqun hen gao/gaoxing* ‘someone/ that person/ he/ Xiaoqun is very tall/ happy,’ meet the requirement and they are grammatical. On the contrary, the cases of (12b) *yige ren/yixie ren hen gao/gaoxing* ‘*A person/ some people is/ are very tall/ happy’ sound odd since the subject NP in the cases are non-specific which violates the specificity condition of the subject NP. Following these scholars, we assume that Mandarin specific subject should provide the given information. On the other hand, the new information of *hen caomei/chenglong* ‘very strawberry-like/Chenglong-like’ in the examples of (13a) is the

related quality that should be manifested through construction coercion, metaphorical extension and qualia role. In addition, the cases in (13b) of *hen* plus nouns can only refer to type-referring (e.g. common noun 草莓 *caomei* ‘strawberry’) or token-referring (such as proper noun 成龍 *Chenglong* ‘Chenglong’) reading within a test of quantification such as *yige* ‘one’, *yixie* ‘some’ and *xuduo* ‘many’.

From the above examples, it is suggested that evaluation can only be done when the compared parties are specific and referential: the type-specific quality/value is normally derived from type-referring noun; the token quality/value is generally derived from definite, specific and referring NPs such as proper nouns or NPs with specific referents.

The following section will tackle the unsettled question: what are the categories that can occur in the X slot: content words or function words?

4.2.4 Collocations in the [Degree ADV+X] Construction: Content Words or Function Words

According to the data of the corpora, including Sinica Corpus, Spoken conversation, online archives, Google and udndata.com, various lexical categories, such as NP, ADJP, VP, ADVP, DP and interrogative words, can occur in the X slot in the [Degree ADV +X] construction.

Adopting the category classifications in Zhu (1982:39-40) and Zhang (2000:8-30), the major types of Chinese lexical categories²² are classified into two sub-groups: content

²² Although the criteria of classification of categories between Chinese and English are a little different, the divided types are approximately similar. Givon (1993) indicates that lexical categories are sub-classified into two types (content words and function words) with three types of criteria: (a) semantic criteria (semantic features), (b) morphological criteria (bound morphemes) and (c) syntactic criteria (the typical landing position of words). In the lexical word classes, nouns, verbs, adjectives and adverbs are the four major members of content words. On the other hand, the other minor categories are function words such as prepositions, inter-clausal connectives, pronouns, determiners, quantifiers, numerals, ordinals, auxiliaries, and interjections. Moreover, demonstrative considered as DP such as 那個/這個 *nage/zhege* ‘that one/this one’ and interrogative words such as 怎樣/什麼 *zenyang/sheme* ‘how/what’ are further classified in two sub-groups of content words: 體詞 *tici* and 謂詞 *weici*,

words (實詞 *shici*) and function words (虛詞 *xuci*). The distinguishing criteria are that those categories that are not able to be completely listed in the dictionary and denote certain semantic meanings (for example, entity, action, quality etc.) are called content words (such as nouns, verbs, adjectives and adverbs) and the others that are finite and just for grammatical function are termed as function words.

Through a careful examination of the data (collected from Sinica corpus²³ and spoken transcriptions), it is found that content words are the preferred candidates while function words are in general disfavored ones by default. In other words, NPs, ADJPs, VPs, ADVPs, DPs and interrogative words that intrinsically have semantic content themselves are inclined to occur in the construction, while function words tend not to be in the construction, as Table 3 and examples (14-15) illustrated, respectively, below.

Table 3: Frequency of [Hen + X] in Sinica corpus and spoken conversation

Syntactic Category with <i>Hen</i>		Frequency		Sources of Data	
				Sinica Corpus	Spoken Conversation
				1000	277
Content Words	NP	41	4.1 %	28	10.12 %
	AP	766	76.6 %	183	66.06 %
	VP	183	18.3 %	62	22.38 %
	ADVP	6	0.6 %	0	0 %
	DP	4	0.4 %	2	0.72 %
	Interrogative	0	0 %	2	0.72 %
Function Words	PP	0	0 %	0	0 %
	Connective	0	0 %	0	0 %
	Interject	0	0 %	0	0 %

respectively.

²³ With the help of the computer programming written by programmer *Jia-yan Jian*, we can randomly sort 1000 collocations of degree adverb *hen* ‘very’ and grammatical categories from the total number of occurrence in Sinica Corpus (12988 times). This thesis mostly focuses on analyzing the phenomena of the 1000 tokens.

(14) **Content Words: NP, AP, VP, ADVP, DP and Interrogative Word**

(A) [Degree ADV+ NP]

a. Common Noun

歌手蔡依琳的嘴唇很香腸

Geshou Caiyilin de zuichun hen xiangchang.

Singer Caiyilin DE lips very sausage

'The lips of singer Yi-lin, Cai are very sausage-like (sexy).'

b. Proper Noun

吳綺莉“打女”形象很成龍

Wuqili danu xingxiang hen Chenglong.

Wuqili action actress image very chenglong

'The image of Qi-li, Wu is very Jackie Chen-like (good at martial arts).'

(B) [Degree ADV+ AP]

a. Relative Adjective

在我遇到的計程車司機中，我相信他很藍/綠

Zai wo yudao de jichengche-siji zhong, wo xiangxin ta hen lan/lu

In I meet DE taxi-driver middle, I believe he very blue/green

'Among the taxi drivers I have met, I believe he is very KMT/DPP-like.'

b. Absolute Gradable Adjective

她的眼睛很瞎/大嫂耳朵很聾/她的聲音很啞

Ta de yanjing henxia/Dasao erduo hen long/ Ta de shengyin hen ya.

She DE eyes very blind/ Sister-in-law ear very deaf/ Her DE voice very dumb

'Her eyes have very poor eyesight./Sister-in-law has a severe problem in poor hearing./ Her voice is very hoarse.'

c. Non-Gradable Adjective

打是愛，罵是關心。這乍聽似乎很對/法律不外乎人情，這句話實在很錯

Da shi ai, ma shi guanxin. Zhe zha-ting sihu hen dui/ Falu buwaihu-renqing, zheju hua shizai hen cuo.

Hit is love, scold is care. This suddenly sound seems very right./ Law consider feeling of human, this sentence really very wrong

'Hitting is love and scolding is care. This temporarily sounds very reasonable./This word, the Law is not out of favors, is indeed very unreasonable.'

d. Reduplicative Adjective

每天可以很悠悠哉哉的，在大街閒晃.../他甚至連說話都有點結結巴巴

Meitian keyi hen youyouzaizai de, zai dajie xianhuan.../Ta shenzhi lian shuhua

dou youdian jiejiababa.

Every day could very really-leisure DE, at street bludge/He even even talk all a little stammering

‘One can get his/her leisure to fool around on the street./He is even a little stammering when he talks.’ all a little stammering

‘One can get his/ her leisure to fool around on the street./ He is even a little stammering when he talks.’

(C) [Degree ADV+ VP]

a. Psych-verb

我很高興/生氣

Wo hen gaoxing/shengqi.

I very happy/angry

‘I am very happy/angry.’

b. Cognitive verb

我很了解/認識他

Wo hen liaojie/rencshi ta.

I very understand/know he

‘I understand/know him verywell.’

(D) [Degree-ADV [Degree-ADV+ AP]]: Degree Adverb

Degree Adverb

李文秀很有點害怕/妒忌

Li Wenxiu hen youdian haipa/duji

Li Wenxiu very a little fear/ jealous

‘Li Wenxiu is quite sort of afraid/ jealous.’

(E) [Degree-ADV [Degree-ADV+ AP]]

a. Demonstrative

電影中有段感情戲，場面很那個.../感情戲它很這個...那個...該怎麼說呢？

Dianying-zhong you duan gan-qingxi, changmian hen nage/Gan-qingxi ta hen zhege...nage...gai zenme shuo ne?

In the movie have part romantic drama, the story very that/Romantic drama it very this that should how say SFP

‘There is an emotional scene in the movie, and the scene is very that (erotic).../How can I describe the emotional scene? It is very this...very that...’

b. Interrogative

很多人看幾米，覺得他很夢幻，很怎樣.../她聊著那個歌手唱的怎樣，這首歌的歌詞很什麼...

Henduo ren kan jimi, jue de ta hen menghuan, hen zenyang/Ta liao zhe nage geshou chang de zenyang, zhe shou ge de geci hen sheme.

Many people consider Jimi, feel he very dreamlike, very how/She chat ASP that singer sing DE how, this CL song DE lyrics very what

‘Many people consider Jimi is very dreamlike, very that sort of.../She

chatted about that singer's voice. The lyrics of this song were very kind of...'

(15) **Function Words: PP, Inter-clausal Connectives and Interjection**

(A) PP

- | | |
|-----------------------------|-------------------------|
| a. *我很對/向你抱歉 | a' 我對/向你抱歉 |
| Wo hen du/ xiang ni baoqian | Wo du/ xiang ni baoqian |
| I very for/ to you sorry | I for/to you sorry |

(B)

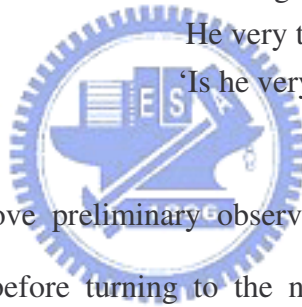
'I am sorry for you.'

Inter-clausal Connectives

- | | |
|-------------------------------|------------------------------|
| b. *你很和/與我不同 | b' 你 和/與 我 不同 |
| (C) Ni hen han/ yu wo butong | Ni hen han/ yu wo butong |
| You very and/ and I different | You and/ and I different |
| | 'You are different from me.' |

Interjection

- | | |
|------------------|------------------------------|
| c. *他很吧!/嗎? | c' 他很高/矮吧!/嗎? |
| Ta hen ba/ ma | Ta hen gao/ ai ba/ ma |
| He very SFP/ SFP | He very tall/ short SFP/ SFP |
| | 'Is he very tall/ short?' |



On the basis of the above preliminary observation, we should consider two fundamental questions first before turning to the next section: (i) Why are there asymmetric collocations between a degree adverb and its post-adverbial categories? That is, some categories (in example 14 with the frequency of 100% in both Sinica Corpus and spoken transcriptions) are compatible in the construction while others (in example 15 with the frequency of 0% in both Sinica corpus and spoken transcriptions) are not. (ii) What are the roles that the lexical categories play in the construction?

The fundamental background information of the semantic meanings of lexical categories pave a way to explain why the content words, such as NPs, ADJPs, VPs, ADVPs, DPs and interrogative words, work in the construction but the function words do not. Categories that bear inherent semantic interpretation tend to occur in the EDPC since they can be coerced to manifest associative degree meanings. Further

detailed discussions of these categories are in the next section “syntactic categories in the X slot”. We will indicate that the content words are inclined to be compatible in the construction since their intrinsic semantic meanings, such as semantic values, can be activated. This viewpoint echoes Goldberg’s (1995) view of coercion. According to the concept of coercion in Goldberg (1995:159), coercion functions²⁴ only when a construction requires a particular interpretation that is not independently coded by particular lexical items. To that extent, the occurring lexical items can be coerced by the construction to have a different related interpretation and the entire expression is judged grammatically. Namely, the categories that can be coerced can preserve their original meaning and inherit extra related constructional meaning. Take the sentence ‘She baked him a cake’ for example. It is the construction that coerces the meaning of successful transfer rather than the verb itself. With this view, the function words--PPs, inter-clausal connectives and interjections cannot occur in the same post-adverbial position (the X slot) in that they do not have a semantic value for the construction to trigger degree evaluation of a given quality. That is, the null semantic elements that do not encode intrinsic semantic meanings are impossible to be coerced. This violates the semantic requirement of the construction and they are ruled out in this construction by default.

In Section 4.3, the data in the corpus including the possible grammatical categories (such as NP, AP, VP, ADVP, DP or interrogative) in EDPC will be analyzed

²⁴ As Jackendoff (1997b: 51-53) states, the concept of coercion can be schematized: simple composition would produce a function-argument structure $F(X)$, where F is the function expressed by the syntactic head and X is the argument designated by the syntactic complement. Consider examples (i) The light flashed until dawn and (ii) Bill kept crossing the street. In cases such as (i) and (ii), X (flash or cross) does not operate as an appropriate argument for F . Thus the process of composition inserts a “coercing function” G to create instead the structure $F(G(X))$, where X is an expedient argument for G , and $G(X)$ is a suitable argument for F . Hence, the coercive schema of examples (i and ii) is shown as:

(i) Repetition

Interpret VP as [REPETITION OF VP].

(ii) Accomplishment-to-process

Interpret VP as [PROCESSUAL SUBEVENT OF VP].

individually. We will firstly demonstrate this [Degree ADV+ X] form with such prototypical case as *hen* according to the criterion of high-frequency.

4.3 Syntactic Categories in the X Slot

This section shows the various collocations of degree adverbs and the categories in the X slot. Several grammatical categories such as NPs, APs, VPs, ADVPs, DPs (or interrogatives) are illustrated severally in this section as occurring in the X slot.

4.3.1 X as NP²⁵

Let us begin with the grammatical category, NP, since the noun category seems to be the most significant category. As Bosch *et al.* (1976) and Tsao and Jiang (1999) claim, the noun category is one of the most important categories in language, compared with the adjective and verbal categories etc. Children acquire nouns in the earliest stage of language acquisition since they can reflect the living environment and cognitive development of human beings. Assuming this, Tsao and Jiang (1999) further suggest that nouns in the Chinese lexicon are classified into three hierarchical levels as in (16), in the sense of Bosch *et al.* (1976):

(16) Three Hierarchical Levels of Nouns in Lexicon

Nouns in lexicon contain three hierarchical levels: (i) the super-ordinate level, (ii) the basic level, and (iii) the sub-ordinate level.

For example, the nouns such as 食物/人類 *shiwulrenlei* ‘food/humans’ are taken as the super-ordinate level, 香腸/成龍 *xiangchang/chenglong* ‘sausage/Jacky Chen’ the basic level and 台灣香腸/動作派演員 *Taiwan xiangchang/dongzuopai yanyuan*

²⁵ In Sections 4.3, 4.4 and 4.5, the relevant expressions in examples are underlined.

‘Taiwanese sausage/martial actor’ the sub-ordinate level. Among the three levels, nouns in the basic-level category are used often since they are easier to be conceived or comprehended by children.

In this section, we will show that the data in corpora support Tsao and Jiang’s observation (1999) -- most of the NPs in the X slot are in the basic-level categories. The frequencies of nouns taken as the basic-level categories are 100% (41/41) in Sinica Corpus and 100% (28/28) in spoken transcriptions, as tokens in Table 3 show. The data also indicate that the stative qualities of NPs are specified in the construction. According to the data in the corpora, there are two kinds of basic-level NPs that are culturally or contextually defined: one is common nouns (such as 香腸 *xiangchang* ‘sausage’ and 火 *huo* ‘fire’) and the other is proper nouns as in (成龍 *Chenglong* ‘Chenglong’ and 誠品 *Chengpin* ‘Eslite’). To explain the sequence of degree adverbs collocating with NPs, we argue that the nouns can inherit the coercive scalar quality from the construction via utilizing conceptual metaphors²⁶ and metaphorical extensions (Claudi and Heine 1986: 301). Moreover, the highlighted scalar qualities of nouns can be predicted from the qualia roles in qualia structure (Pustejovsky 1995: 85-88):

(17) The Implication Relations of Conceptual Metaphors

The implicational relation is unidirectional. The direction ‘PERSON→ OBJECT→ SPACE→ PROCESS→ QUALITY’ is possible, while the possibility

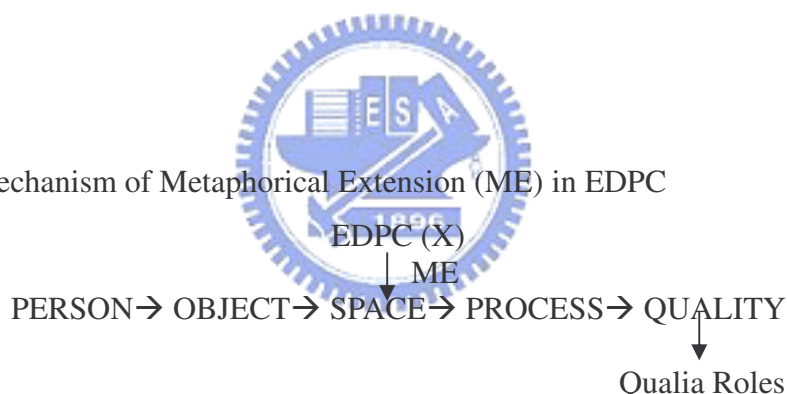
²⁶ Glucksberg (2003: 96) advocates that the major characteristics about metaphor comprehension are as follows:

- (i) There is no priority of the literal. We apprehend metaphorical meanings as quickly and as automatically as we apprehend literal meanings.
- (ii) We understand metaphors exactly as they are intended, as categorical assertions. When I say that ‘my job is a jail’, in a sense I mean it literally. I do not mean that my job is merely like a jail, but that it actually is a member of the category of situations that are unpleasant, confining and difficult to escape from.
- (iii) With continued use, once novel metaphors become conventionalized, and their metaphorical senses enter into our dictionaries.

of opposite direction is ruled out (*‘QUALITY→ PROCESS→ SPACE→ OBJECT →PERSON’) since it is hard for humans to use abstract properties to describe concrete entities.

The rightmost category of conceptualization **QUALITY** can be derived from the concrete **OBJECT or PERSON** through metaphorical extension²⁷. Following Claudi and Heine (1986: 301), we will show that this avoids the unnecessary addition of attributive senses for the non-adjectival category within a degree construction since the related semantic meaning can be coerced by the construction. The revisited mechanism of metaphorical extension operating in the construction is shown in (18a) and the highlighted qualities of nouns profiled from the qualia roles are shown in (18b).

(18a) The Mechanism of Metaphorical Extension (ME) in EDCP



(18b) The Highlighted Qualities of Nouns Profiled from the Qualia Roles

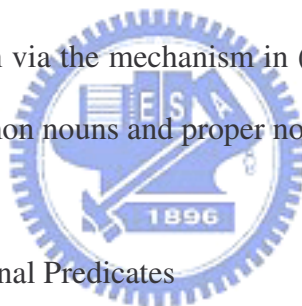
The specific quality may refer to:

- a) [Constitutive role= the relation of the essential constituents of an object]
- b) [Formal role= the superficial characteristics of an object]

²⁷ Tang (2000a: 298) also uses metaphorical extensions to account for collocations between degree adverbs *hen* and noun, given in *hen qiongyaol/baobei* ‘very romantic/valuable’. The view of metaphorical extensions is reminiscent of many others in the literature (Lakoff 1987, Tang 2000a, Chui 2000a, Su 2002a, Kövecses 2003). However, our analysis differs from them: we take the implicational relation to apply for the metaphorical extensions of the collocation between the degree adverb and the noun category. In addition, the highlighted qualities of nouns are profiled from the qualia roles (see the argumentation in Section 4.3.1 X as NP).

As the mechanism of ME in (18a) shows, the topmost acronym EDPC (labeled as evaluative degree predication construction) can trigger the metaphorical extensions (ME). The category of conceptualization **QUALITY** can be derived from the concrete **OBJECT or PERSON** through metaphorical extensions. On the other hand, with the pre-defined semantic qualities in the qualia roles, contextual/cultural qualities beyond the lexicon are profiled from Constitutive role and Formal roles. In other words, EDPC provides an environment to activate the operation of ME where the culturally or contextually defined quality is manifested and qualia roles help resolve the potential ambiguities arising from constructional coercion: the highlighted and related qualities are projected in the end.

To explicate the coercive effect in this construction, let us demonstrate how the basic-level categories function via the mechanism in (18 a-b). Consider the following examples (19) and (20), common nouns and proper nouns, respectively.



(19) Common Nouns as Nominal Predicates

- a. 歌手蔡依琳的嘴唇*(很)香腸/ b. 王力宏的人氣*(很)火

Geshou Cai Yilin de zuichun hen xiangchang/Wang Lihong de renqi hen huo

Singer Cai Yilin DE lips very sausage/Wang Lihong DE popularity very fire

‘The lips of singer Yi-lin Cai are very sausage-like (sexy)./Lihong Wang is very popular.’

- c. 歌手蔡依琳的嘴唇很*一個/那個香腸/ d. 王力宏的人氣很*一個/那個火

Geshou Cai Yilin de zuichun hen yige/nage xiangchang/Wanglihong de renqi

hen yige/nage huo

Singer Cai Yilin DE lips very a/that sausage/Wanglihong DE publicity very

a/that fire

(20) Proper Nouns as Nominal Predicates

- a. 吳綺莉“打女”形象*(很)成龍/ b. 二手書店*(很)誠品

Wu Qili danu xingxiang hen Chenglong/Ershou shudian hen Chengpin

Wu Qili action actress image very chenglong/Second-hand bookstore very name of bookstore

‘The image of Qi-li Wu is very Jackie Chen-like (good at martial arts)./The second-hand bookstore is very Eslite-like (gorgeous).’

- c. 吳綺莉“打女”形象很*一個/那個成龍/ d. 二手書店很*一個/那個誠品

Wu Qili danu xingxiang hen yige/nage Chenglong/Ershou shudian hen yige/nage Chengpin

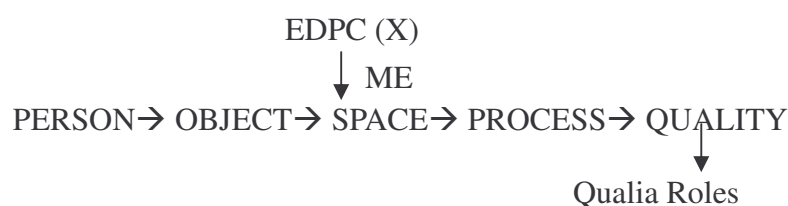
Wu Qili action actress image very a/that chenglong/Second-hand bookstore very a/that name of bookstore

The above examples (19a-b) and (20a-b) show that without the degree adverb *hen* ‘very’ they sound odd. In addition, infixing a classifier or a demonstrative between the degree adverb *hen* ‘very’ and nouns makes the sentences unacceptable, as in examples (19c-d) and (20c-d). Examples (19) and (20) reflect the role of the degree adverb *hen* ‘very’ and the semantic constraints of nouns in the X slot.

We propose that the degree adverb *hen* ‘very’ is taken as the *constructional head*. It can help the construction signal or coerce degree evaluation meanings, as mentioned in (8) “the definition of EDPC”. Moreover, the nouns in the X slot should have type-referring or token referring meanings. The proposals can explain why the nouns in subject position and nouns in the X slot are mutually associated. At the first sight, lips, popularity, the image and the bookstore do not seem to have the mappings onto sausages, fire, Jackie Chen and Eslite, respectively. It is hard for people to interpret the meaning literally. To understand the interrelation, people should use a

cognitive way, metaphorical extension, to decode the real semantic interpretation (cf. Xing 2001, Yang and Li 2004). Through the coercive mechanism mentioned in (18), the construction triggers the coercion and then the coercion activates the metaphorical extension. The function of metaphorical extension manifests the compatible roles as in (21).

(21) The Associative Relation of Culturally or Contextually-defined Quality in EDPC



After the mutual operations of EDPC, ME and qualia roles, the highlighted qualities can be derived from a **PERSON** or an **OBJECT**: The thickness of lips like sausage is sexy²⁸ or tumid ([Formal role= thick]). The degree of popularity like the blazing situation of fire is popular ([Formal role= blazing]). The martial image like actor Chenglong is skillful ([Constitutive role= characteristics of martial arts]). The decoration of the bookstore like Eslite (bookstore) is gorgeous ([Formal role= gorgeous] and [Constitutive role= characteristics of decoration]).

Nouns such as sausages, fire, the image and the bookstore can be integrated into EDPC because they are coerced to have compatible roles with profiling qualities: degree of lusciousness, degree of popularity, degree of martiality, and degree of gorgeousness, respectively. In this way, people (as being the fans of singers, actors etc.) can interpret the culturally or contextually-defined meanings as the English translations shown in (19) and (20): very sausage-like (sexy), very popular, very

²⁸ The interpretation of the actual quality of thickness of lips is contextually-driven: fans of the singer *Yi-lin Cai* consider this kind of thickness of lips to be sexy, while ordinary people (not her fans) think they are thick with a pejorative manner.

Jackie Chen-like (good at martial arts) and very Eslite-like (gorgeous). Under the constructional account, the grammatical category retains its inherent semantic interpretation, while being integrated with the meaning directly associated with EDPC (cf. Goldberg 1995:188).

More novel expressions taken as supporting evidences indicate that the specific qualities of the noun categories are culturally or contextually-defined, given in (22) and (23). The extended/relational qualities (gradable values) coerced in EDPC are conventionalized as representations of metaphorical extensions: QUALITY is an OBJECT (such as 草莓 *caomei* ‘strawberry’ or 狐狸 *huli* ‘fox’ in 22a-b); QUALITY is a PERSON (such as 馬英九 *Ma Yingjiu* ‘Ma Yingjiu’ in 23a); QUALITY is a SPACE (such as 台灣 *Taiwan* ‘Taiwan’ in 23b)

Again, the cognitive and cultural perception mechanisms in (18a-b) are applied to interpret the associative meaning in the construction. The metaphorical qualities in nouns such as names of food/animals/persons/nations are illustrated below:



(22) Names of Food with Culturally Perceived Features

- a. 七年級很草莓²⁹/風格確實很芭樂

Qinianji hen caomei/fengge qeshi hen bale

The Z-generation very strawberry/style indeed very guava

‘The Z-generation is very strawberry-like (fragile)./The style is indeed very

²⁹ Some Mandarin native speakers consider if the inanimate nouns, such as 椅子/桌子 *yizi/zhuozi* ‘chair/table’, replace the subject position by the animate noun 七年級 *qinianji* ‘the Z-generation’, the sentences are unacceptable, as shown in example (i). However, we argue that example (i) is still acceptable in certain context as example (ii) illustrated:

(i) ?這張椅子/桌子很草莓 *zhe zhang yizi/zhuozi hen caomei* ‘This chair/table is very fragile.’

(ii) 這張椅子/桌子很草莓，我輕輕一壓就壞了 *zhe zhang yizi/zhuozi hen caomei, wo qingqing yi ya jiu huai le* ‘This chair/table is very fragile. I just pressed it slightly and it was broken.’

According to the proposal of pragmatic halos in Lasersohn (1999), the pragmatic halos are counted as the pragmatic context that can associate with any expression in languages. Hence, in the certain scenario, the example (i) can be taken as acceptable and interpretable.

guava-like (uncreative).’

(22) Names of Animals with Culturally Perceived Features

b. 性格很狐狸/網路很烏龜

Xing-ge hen huli/wanglu hen wugui

Personality very fox/ Net very turtle

‘The personality is very fox-like (dodgy)/The Internet is very turtle-like (slow).’

(23) Names of Persons with Culturally Perceived Features

a. 他很馬英九/陳水扁

Ta hen Ma Yingjiu/Chen Shuibian

He very Ma Yingjiu/Chen Shuibian

‘He is very Ma, Yingjiu-like (handsome)/Chen, Shuibian-like (cunning)’

(23) Names of Nations with Culturally Perceived Features

b. 他的穿著很台（灣）/美國

Tade chuanzhuo hen Tai (wan)/Meiguo

His wearing very Taiwan/America

‘His dress style is very Taiwanese (unfashionable)/American (fashionable).’

In example (22), the flabby characteristics of young persons is like the surface of strawberries -- fragile ([Formal role= soft]); the style of songs is like the common look of guava -- uncreative ([Formal role= unattractive]); the personality of someone is like the characteristics of fox -- dodgy ([Constitutive role= characteristics of intellection]); the speed of Net like the motion of turtle is slow ([Formal role= slow]).

On the other hand, in example (23), the guy with the similar appearance of Ma Yingjiu’s is handsome ([Formal role= handsome]); someone with the similar characteristics of Chen Shuibian is cunning ([Constitutive role= characteristics of

intellection]); the dress style like the local style in Taiwan is unfashionable ([Formal role= unfashionable]); that of the America style is fashionable ([Formal role= fashionable]).

The motivation of the various [Hen+ NP] collocations is the pragmatic reason in the sense of Lakoff and Johnson (1980) and Levinson (1983): Metaphor is not merely a linguistic phenomenon, but more fundamentally, a conceptual and experiential process that structures our world. Human cognitive processing is largely metaphorical in that people tend to use marked usages to express vivid (prototypical) images/concepts of physical objects. The explicit expressions and the inferred qualities of objects are illustrated as Table 4 (combination of examples 22 and 23):

Table 4: The explicit expressions and the inferred qualities of objects

Marked expressions	Inferred qualities
很草莓/芭樂 <i>hen caomei/bale</i> 'very strawberry/guava-like'	fragile/uncreative
很狐狸/烏龜 <i>hen hulil/wugui</i> 'very fox/turtle-like'	dodgy/slow
很馬英九/陳水扁 <i>hen Ma Yingjiu/Chen Shuibian</i> 'very MaYingjiu/Chen Shuibian-like'	handsome/cunning
很台(灣)/美國 <i>hen Tai (wan)/Meiguo</i> 'very Taiwanese/American like'	unfashionable/fashionable

All of the proper nouns of token-referring and common nouns of type-referring in Table 4 denote some transferred meanings via metaphorical extensions (schematized as PERSON → OBJECT → QUALITY: QUALITY is an OBJECT; QUALITY is a PERSON; QUALITY is a SPACE) with highlighted qualities projected from qualia

roles (Formal role and Constitutive role). The degrees of fragileness, creation, dodginess and slowness in example (22) and the degrees of being handsome/smart/unfashionable/fashionable as shown in (23) are manifested in the evaluative degree predicate construction, respectively.

On the basis of the above observation, the transferred meanings of common nouns such as *xiangchang* ‘sausage’ and *huo* ‘fire’ and proper nouns such as *Chenglong* ‘Jackie Chen’ and *Chengpin* ‘Eslite Books’ are created when metaphorical strategies are applied: QUALITY is an OBJECT and QUALITY is a PERSON. The semantic transfers in NPs contain the use of objects *xiangchang* and *huo* and person/institution *Chenglong* and *Chengpin* to denote concrete nouns, human beings or institutions as vehicles to express qualities of concrete nouns, human beings or institutions, respectively. With a metaphorical extension (the use of concrete nouns to refer to abstract properties), the common nouns and proper nouns are viewed as nominal predicates that are coerced to have scalar implicating properties from constructional coercions and the salient qualities are extracted from the qualai roles. Therefore, the extra posited meanings in dictionary format are not economic and unnecessary.

To put it in another way, the occurrence of degree adverbs and nominal predicates should coexist: *hen* provides a scope of modification and the modifier NP is contained to saturate this scope (cf. Tang 1989:24). The occurrence of the degree adverb *hen* renders certain background information of comparative standard³⁰ to nominal predicates to manifest the scalar implicating qualities. Without it, the examples in (19-23) are ruled out due to insufficient background information.

³⁰ According to Li and Thompson (1981), they provide the concept of a comparative construction phrase that signals that the dimension along which the two items are being compared must be capable of being qualified or measured. In other words, the phrase must be the one of which we can ask, “To what extent?”

According to Chafe (1987), when interlocutors communicate with each other, they will undergo three different activation states (active, semi-active, and inactive concept). However, only a very small amount of the information can be focused. Declarative sentences (as in 19-23) without adequate background information are unacceptable in that interlocutors may not recognize the degree of nominal predicates without the degree evaluation of a given attributive signaled by the construction. Furthermore, the selective effect of the basic-level category of nouns is illustrated as in (19-23). Namely, speakers are inclined to use the basic-level categories along with the metaphoric concepts when they are in the evaluative processes.

4.3.2 X as AP

Most previous works (Zhu 1982, Tang 2000ab, Liu 2005) have comprehensively studied the relation between the degree adverb *hen* ‘very’ and adjectives. They insightfully propose that the relation indicates an asymmetric phenomenon between gradable adjectives (e.g., 高 *gao* ‘tall’ and 矮 *ai* ‘short’) and non-gradable adjectives (真 *zhen* ‘true’, 假 *jia* ‘false’, 對 *dui* ‘right’ and 錯 *cuo* ‘wrong’). That is, mostly the degree adverb *hen* ‘very’ can occur with gradable adjectives rather than with non-gradable adjectives since relative ones have scalar semantic features. The scalar qualities allow relative gradable adjectives to have vague meanings occurring with *hen* ‘very’.

Unlike the previous studies, this section shows that the collocations of *hen* ‘very’ and its following adjectives are abundant. According to Kennedy and McNally (2002), there are three types of adjectives on the distinct criteria ‘whether they can co-occur with degree adverbs (e.g., very) or proportional adverbs (e.g., completely)’: relative gradable adjectives, absolute gradable adjectives and non-gradable adjectives.

Following their classification of adjectives, we argue how these three types of

adjectives (gradable adjectives, absolute gradable adjectives and non-gradable adjectives) interact with *hen* ‘very’ through the mechanism of metaphorical extension triggered by the construction separately. The relative gradable adjectives³¹ are color-terms undergoing metaphorical extensions (e.g., 藍/綠/橘/紅 *lan/lul/ju/hong* ‘blue/green/orange/red’) given in (24), fixed expressions with adverbial anchors in (25) and the possessive marker *you* plus referential concrete/abstract noun in (26). The absolute gradable adjectives are damage of health situation such as 瞎 *xia* ‘blind’, 聾 *long* ‘deaf’ and 啞 *ya* ‘dumb’ in (27). As for non-gradable adjectives, the qualities of logical judgment such as 真 *zhen* ‘true’, 假 *jia* ‘false’, 對 *dui* ‘right’ and 錯 *cuo* ‘wrong’ are illustrated in (28).

(24) Relative Gradable Sense: Metaphorical Senses Coerced by the Construction

- a. 在我遇到的計程車司機中，我相信他很藍/綠/橘/紅
 Zai wo yudao de jichengche-siji zhong, wo xiangxin ta hen lan/lu/ju/hong
 In I meet DE taxi-driver middle, I believe he very blue/green/orange/red
 ‘Among the taxi drivers I have met, I believe he is very
 KMT/DPP/PFP/PRC-like.’
- b. 黑社會/政治/社會很黑
 Heishehui/zhengzhi/shehui hen hei
 Underworld/politics/society very black
 ‘The underworld/ politics/ society is very black-like/ dark (dishonorable).’

Consider the example in (24). Although color terms are inherently gradable, the interpretations of them are different from generally relative gradable adjectives such as 高 *gao* ‘tall’ and 矮 *ai* ‘short’. Here, in the degree predicate construction, the degree of political commitment and that of party affiliation are coerced to specify

³¹ Neeleman et al. (2004: 27) indicate that adjectives (and other gradable expressions) are themselves scalar and hence need not be combined with an expression that turns them into a scale. Naturally, gradable adjectives may co-occur with selectors (degree adverbs) that modify the scale in various ways. That is, it is redundant for the construction to coerce extra quality since AP itself has intrinsic quality to suffice the requirement of the construction.

culturally or contextually-defined qualities. The color terms are used metaphorically to refer to political stands in (24a) and extrinsic situations. That is, colors such as blue, green, orange and red individually reflect the dirver’s affection of political stands: they are cultural/contextual symbols for KMT, DPP, PFP and PRC, respectively. On the other hand, the color, black, reflects the essence of evil existing in situations of underworld/politics/society in (24b).

The second sub-type of relative gradable adjectives is the fixed expression taken as adjectival complement with an adverbial anchor, as (25) illustrates.

(25) Fixed Expressions with Adverbial Anchors

- a. 這個問題很難處理/ b. 你的鬍子很好玩

Zhe ge wenti hen nan chuli/ Nide huzi hen haowan

This problem very hard deal with/Your beard very fun

‘It is very hard to deal with the problem./ Your beard is very funny,’

- c. 他很不甘心 / d. 這種比較是很沒必要的

Ta hen buganxin/ Zhezhong bijiao shi hen mei biyaode

He very discontent/ This kind comparison is very not necessary

‘He is very discontent./It is quite unnecessary to compare in this way.’

The fixed expressions with adverbial anchors such as 難 *nan* ‘difficult’, 好 *hao* ‘good’, 不 *bu* ‘not’ or 沒 *mei* ‘not’ are lexically considered as gradable predicates. The gradable property allows these expressions to be compatible in this construction.

The third sub-type is the expression including possessive marker *you* plus referential concrete/abstract nouns, as shown in (26).

(26) Possessive Marker *You* Plus Referential Concrete/Abstract Noun

- a. 我的屁股很有肉/b. 我從來不覺得自己很有女人味

Wo de pigu hen you rou/Wo cong lai bu jue de zi ji hen you nurenwei
My DE hip very have flesh/I never not feel self very have feminized
'My hip is very fat./I never think that I am very feminine'

The examples in (26) show that syntactically the form is a possessive verb *you* 'have' taking a referential concrete noun 肉 *rou* 'flesh' or a referential abstract noun 女人味 *nurenwei* 'feminized'. Semantically, the whole phrases denote gradable properties. In this construction, the degrees of fatness and femininity are spelled out.

Next, the absolute gradable adjectives in (27) are discussed below.

Examples (27a) are treated as conceptualized degrees of disability on eyes, ears, and vocal cords. On the other hand, the example in (27b) is metaphorically extended.

(27) Absolute Gradable Senses Shifted to Relative Gradable Senses

- a. 她的眼睛很瞎/大嫂耳朵很聾/她的聲音很啞

Ta de yanjing henxia/Dasao erduo hen long/ Ta de shengyin hen ya
She DE eyes very blind/ Sister-in-law ear very deaf/ Her DE voice very dumb

'Her eyes have very poor eyesight./The sister-in-law has severe problem in poor hearing./ Her voice is very hoarse.'

- b. 周說蔡打電話說他被拍到很瞎

Zhou shuo Cai da-dianhua shuo ta bei paidao hen xia
Zhou say Cai call say he BEI shoot very blind

'Zhou said that Cai calls him to tell that he was very lousy to be taken a shot.'

Although Kennedy and McNally (2002) states that the absolute gradable adjectives tend to co-occur with proportional modifiers such as *completely*, the data in (27) indicate that the absolute gradable adjectives can also co-occur with the degree adverb *hen* 'very'. The absolute gradable senses are shifted to the relative gradable senses

under the coercion triggered by the degree construction. The examples in (27a) show that the physical impairments of eyes, ears, and vocal cords are coerced from an absolute to a relative concept: the eyesight can be very poor; the hearing very poor and the voice very hoarse. They are taken as degree of eyesight, hearing and voice. On the other hand, the interpretation of the example 很瞎 *hen xia* ‘very blind’ in (27b) is metaphorically extended to get degree a of stupidity. The metaphorical representation is that Intelligence is eyesight (THE QUALITY OF INTELLIGENCE IS THE DAMAGE OF EYESIGHT): the physical attribute (poor degree of eyesight) reflects the mental attribute (low degree of intelligence).

Lastly, the examples in (28) illustrate cases where the lexically non-gradable adjectives (such as 真 *zhen* ‘true’, 假 *jia* ‘false’, 對 *dui* ‘right’ and 錯 *cuo* ‘wrong’) are coerced to have relative meanings that are associative with the original meaning of non-gradable adjectives.



(28) Non-gradable Senses Shifted to Gradable Senses

- a. 圖中每一樣都很真實，樹很真，天鵝很真.../b. 負面新聞多後，大眾卻批她笑容很假.../

Tu zhong mei-yiyang dou hen zhenshi, shu hen zhen, tian-e hen zhen/

Fumian xinwen duo hou, dazhong que pi ta xiaorong hen jia

Picture middle everything all very true , tree very true, swan very true/

negative news many after, people although criticize her smile very fake

‘Everything in the picture is very real, the tree is very true, and the swan is very real./After she received much negative news, people criticize her smile is very insincere.’

- c. 打是愛，罵是關心。這乍聽似乎很對/d. 法律不外乎人情，這句話實在很錯

Da shi ai, ma shi guanxin. Zhe zha-ting sihu hen dui/ Falu buwaihu-renqing,

zheju hua shizai hen cuo.

Hit is love, scold is care. This suddenly sound seems very right./ Law consider feeling of human, this sentence really very wrong

‘Hitting is love and scolding is care. This temporarily sounds very reasonable./This word, the Law is not out of favors, is indeed very unreasonable’

The non-gradable³² meaning is shifted to possess gradable meaning, given in (28) such as 真 *zhen* ‘true’, 假 *jia* ‘false’, 對 *dui* ‘right’ and 錯 *cuo* ‘wrong’ Take examples (28) for instance, logically, the proposition of being true/false/right/wrong cannot be at the state of being more true/false/right/wrong, Something is true or false. Something is right or wrong. There must be no vagueness. Nevertheless, if the situations exist, there should be metaphorical extensions triggered in the construction (e.g., **OBJECT**→**QUALITY**). Certain compatible semantic qualities are coerced.

The non-gradable concept of truth value is shifted from object to abstract evaluative attribution: the interpretation of fixed semantic contents of concrete objects such as 樹/天鵝/笑容/話 *shu/tiane/xiaorong/hua* ‘tree/swan/smile/word’ are metaphorically extended to denote degrees of the flexibility of qualities, meaning very real/insincere/ reasonable/unreasonable, is under sense extension through pragmatics³³.

Before closing this sub-section, an interesting language phenomenon of the co-occurrence between the degree adverb *hen* ‘very’ and the reduplicated adjective

³² Likewise, Paradis (2001: 58) discusses the issue of English non-gradable meaning.

Even non-gradable adjectives may be coerced into a gradable reading. It is possible to perceive the non-gradable adjective *Swedish* as a gradable and scalar in expressions such as ‘That woman is very Swedish’. This example clearly shows that the content part and the schematic domain collaborate in an intimate and sophisticated manner in contributing to our conceptualization of the various adjectives.

³³Chui (2000b: 177) suggests that *dui* evolves a pragmatic function of agreement, as a result of conventionalizing the conversational implication that the commitment to truthfulness infers agreeing to the content. Take the adjective *dui* in *zhe zha ting sihu hen dui* ‘this seems to be very right’ for example, ‘*dui*’ here is coerced to mean ‘reasonable or agreement’ instead of ‘truth-value’. It is taken as a pragmatic marker functioning as ‘agreement’ denoting a state of affairs, which indicates that the speaker agrees with someone’s utterances, words, or attitudes. What the evaluator tries to do is strengthen or emphasize the possibility of the utterances.

悠悠哉哉 *youyouzaizai* ‘very careless’ is presented as in (29).

(29) Semantically High Degree: Reduplicated Adjective

每天可以很悠悠哉哉的，在大街閒晃...

Meitian keyi hen youyouzaizai de, zai dajie xianhuan...

Every day could very really-leisure DE, at street bludge

‘One can get his/her leisure to fool around on the street.’

The reduplicative form in (29) is considered to be unacceptable in previous studies (Zhu 1982, Tang 2000b: 214-215). Namely, a reduplicative form implicitly denoting certain degree intensification is mutually excluded with any degree adverb. However, corpora show that the occurrences of reduplicative forms and degree adverbs may be a scale of tendency³⁴ rather than discrete borderline: it is sometimes used in daily life to report the strong degree of careless attitude. The language facts echo the theory of pragmatic halos in Lasersohn’s (1999). This approach provides a schema for determining how much deviation from what is actually true still counts as ‘close enough to’ to the truth in any context to be an acceptable range of semantic deviation. Namely, the pragmatic halos counted as the pragmatic context can associate with any expression in languages: a set of denotation of the same type as its actual denotation that differs only in some respect that is pragmatically ignorable in the context. In this way, any value of an expression α in the pragmatic halo is taken as acceptable and informative approximation even if this leads to a proposition that is strictly speaking false. Hence, in the example 悠悠哉哉 *youyouzaizai* ‘really leisure’ of (29), we can maintain the claim that the occurrence of reduplicative form and degree adverb is less preferred by default in the ordinary case: a reduplicative

³⁴ This finding may be the critical distinction to discriminate degree adverbs such as *hen* and *youdian* (see section 4.4).

form implicitly denoting certain degree intensification does not need a extra degree marker to provide a comparison standard. However, the pragmatic halo including properties that are true of the object (the living manner of someone) is just a little less than *youyouzaizai* ‘really leisure’. And how much less is contextually-dependent.

In brief, the kinds of APs in [Degree ADV+ X] are productive on the syntactic level. The interpretations of these APs in the X slot are scalar concept in human cognition rather than discrete concept when they occur in EDPC. As Paradis (2001) argues, languages are taken to be an integral part of human cognition, not autonomously independent ones from cognitive functions. Hence, adjectives occurring on a scalar structure are fully gradable and denote certain scalar implicating properties such as merit and personality, etc.

4.3.3 X as VP

The various verb types and verbal predication that collocate with *hen* ‘very’ are tackled. The types of VPs are sub-classified into two major groups with regard to grammatical and semantic reasons. They are (a) the group based on the grammatical classification: morphological forms such as VP with a causative marker in (31a), VP as a verb plus an object in (31b) and VP as a RVC form in (31c); (b) the group with the semantic consideration, including stative, activity, accomplishment and achievement verbs, as shown in (32). The data in the corpora indicate that verb phrases tend to occur with degree adverb *hen* ‘very’ are often semantically stative (cf. Smith 1991, 1994) such as psych-verbs or cognitive verbs as in (30). These kinds of verbs are the most preferred candidates that can occur with the degree adverb *hen* ‘very’. On the contrary, activity, accomplishment and achievement verbs are the less

preferred ones that can do so³⁵. However, as long as the events of activity, accomplishment and achievement verbs are capable of being evaluated along a given scale, be it sative or frequency qualities (such as brightness, easiness, and frequency in 32), they can occur in the construction.

Let us discuss psych-verbs and cognitive verbs in (30) first and then the group based on the grammatical classification and the group with the semantic consideration later.

(30) Psych-Verbs and Cognitive Verbs

- | | |
|--|--|
| <p>a. <u>我很高興/生氣</u>
 Wo hen gaoxing /shengqi.
 I very happy/angry
 ‘I am very happy/angry.’</p> | <p>b. <u>我很了解/認識(他)</u>
 Wo hen liaojie/renshi ta
 I very understand/know he
 ‘I understand/know him very well.’</p> |
|--|--|

As the examples in (30) show, the psych-verbs 高興/生氣 *gaoxing/shengqi* ‘happy/angry’ and cognitive verbs 了解/認識 *liaojie/renshi* ‘understand/know’ denote gradable states lexically. Their scalar qualities make them harmonious with the degree construction. Meanwhile, the degree construction allows a comparative standard for them to manifest the degrees of happiness, agreeeness, comprehension and acquaintance. That is to say, the states of emotion and cognition show scalar properties during the evaluative processes.

Next, more variously morphological forms are introduced as follows. Consider the examples in (31): that psychological predicates can be manifested as variously morphological forms such as VP with a causative marker in (31a), VP as a verb plus an object in (31b) and VP as a RVC form in (31c).

³⁵ There are no such expressions in Sinica Corpus and spoken conversation. The data demonstrated here are extraxted from the online Google archives: these sorts of usages are seldom when compared with the semantically stative events.

(31a) VPs with Causative Markers

我很令/使/讓/叫媽媽擔心

Wo hen ling/shi/rang/jiao mama danxin

I very let/make/let/cause mother worry

‘I made my mother worry about me very much.’

The example in (31a) illustrates that verbal predication with causative marker, such as *ling*, *shi*, *rang* and *jiao* ‘order, make, let and make’ respectively, can reflect gradability³⁶ ‘degree of attribution’. According to Chang (2004: 5-7), the verb phrases anchored with causative markers such as *ling*, *rang*, *jiao* are usually modified by degree adverbs such as *hen*. In these cases, the verb phrases are transferred to emphasize referring durable attribution in specific contexts. Examples (31a) show the degree of how worried the mother is.

In example (31b), VPs are formed as verbs taking referring objects.



(31b) VPs as Lexicalized VO Form

她很講義氣/他很給(你)面子

Ta hen jiang yiqi/ Ta hen gei ni mianzi

She very concern the sense of honor/He very give you face

‘She is concerned about the sense of honor very much./ He respects you very much.’

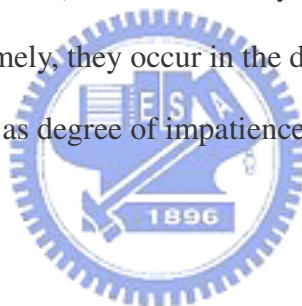
The examples (31b) show that the two constituents (verb and object) form a phrasal expression where the internal relationship between the constituents may be lexicalized.

In terms of their grammatical function, the examples 講義氣 *jiangyiqi* ‘be concerned

³⁶ According to the paradigm in Sapir (1944: 94), all quantifiables and all quantificates involve the concept of grading in four degree of explicitness. That is, every quantifiable entity, whether existence (say house) or occurrence (say run) or quality of existence (say red) or quality of occurrence (say gracefully), is intrinsically gradable. However, this study shows that Mandarin EDPC is to license evaluative quality rather than evaluative quantity as Sapir claims. For instance, in the sentence *tade zhongyaoxing zengjia le henduo* ‘Its importance increases very much’, quality (the degree of importance) can be measured.

about the sense of honor’ and 給(你)面子 *geimianzi* ‘respect someone very much’ are taken as VP syntactically but semantically they both denote stative predicate meanings. They can occur in the degree construction to specify degree of the sense of honor and degree of respect. Moreover, the nouns 義氣 *yiqi* ‘sense of honor’ and 面子 *mianzi* ‘face’ are the obligatory objects/complements which can denote a type-referring meaning. Without the occurrences with the verb, the coercive effect of the evaluative construction does not work. That is, no degree meanings are brought out.

Similarly, the examples in (31c) 看不下去 *kanbuxiaqu* ‘impatient’ and 談得來 *tandelai* ‘can communicate well’ are taken as VPs syntactically (verbs accompanied with resultative states) but semantically the verbal phrases can denote stative predicate meaning. Namely, they occur in the degree construction to spell out degree of scalar qualities such as degree of impatience and degree of communicative interaction.



(31c) VPs in RVC Form

	<p>那個...我很看不下去 / 他和我很談得來</p> <p>Nage...Wo hen kanbuxiaqu / Ta han wo hen tandelai</p> <p>That...I very impatient/He and I very communicate well</p> <p>‘I cannot bear that very much./He and I communicate very well.’</p>
--	--

In (32a), the data indicates that activity, accomplishment and achievement verbs are less preferred to co-occur with the degree adverb *hen* ‘very’. These kinds of collocations usually sound odd. However, the data retrieved from Google show as long as the events of activity, accomplishment and achievement verbs are capable of being evaluated along a given scale, be it stative or frequency qualities (such as brightness, easiness, and frequency as in (32b-d)), they have chances to occur in the

construction.

(32) Activity, Accomplishment and Achievement Verb Types

- a. *很[吃/完成/出現]³⁷
hen chi/wancheng/chuxian
very eat/finish/appear
- b. 蛋糕很好吃/論文很難完成/仇恨很難消失
Dangao hen haochi/lunwen hen nan wancheng/chouhen hen nan xiaoshi
Cake very delicious/thesis very difficult finish/hate very difficult vanish
'The cake is delicious./The thesis is hard to accomplish./Hate is hard to vanish.'
- c. 顏色很跳/個人形象很破壞/打擊很出現
Yanse hen tiao/geren xingxiang hen pohuai/daji hen chuxian
Color very jump/ individual image very destroy/batting very appear
'The color is very cool./The personal image is destroyed a lot./The batting average is very high.'
- d. 這樣的要求很死/這種上課方式很活
Zheyangde yaoqiu hen si/zhezhong shangke fangshi hen huo
This kind of require very dead/ This kind of teach method very alive
'This kind of requirement is very inflexible./ This kind of teaching method is very flexible.'

The degree-adverb construction tends to disfavor any post-adverbial categories that are lexically non-stative features. For example, activity (吃/跳 *chitiao* 'eat/jump'), accomplishment (完成/破壞 *wancheng/pohuai* 'finish/destroy') or achievement (出現/消失/死/活 *chuxian/xiaoshi/si/huo* 'appear/disappear/dead/alive') are rarely found with a degree adverb. The evaluative construction requires the category in the X slot to have stative features. In this way, the scale-implicative attributes are triggered.

³⁷ Edelman and Christiansen (2003:60): Grammaticality judgments "are inherently unreliable because of their unavoidable meta-cognitive overtones, because grammaticality is better described as a graded quantity, and for a host of other reasons." Thus, we use the asterisk (*) to mark the collocation that the majority of our subjects find odd or unacceptable. As for the expression of question marks (?), it means that speakers differ in their acceptability judgments of collocations of [Degree-ADV+ X] given in a certain context.

Another reason why the verbs such as activity, accomplishment or achievement are ruled out in occurrence with degree adverb *hen* ‘very’ is that these dynamic situation types are interpreted as a fixed reference via physical standard rather than interpreted as free reference through personal evaluation (showing scalar implicative quality). Therefore, they do not have vague property and are ruled out with the scalar modifier *hen* denoting vague degree of attribution. In contrast, the acceptability of (32b) is greatly improved if we insert a degree adverb, such as *hao* and *nan*, between the degree adverb *hen* and the modified predicate. By doing so, they can be constructed as phrases that lexically denote gradability. The degrees of being delicious, being hard and being vanished are being evaluated and signaled in the construction. As for examples (32 c-d), they are coerced to have scalar qualities when evaluated along a given scale: The degree of brightness, the degree of damage, the degree of frequency, the degree of requirement, and the degree of flexibility of teaching method.



4.3.4 X as ADVP

This section indicates an interesting language phenomenon-- the occurrence of two juxtaposed degree adverbs is possible due to pragmatic reasons (cf. Levinson 1983, Lasersohn 1999, Zhang 2002). The example in (33) such as 很有點害怕/妒忌 *hen youdian haipa/duji* ‘quite sort of afraid/jealous’ show this point, but not the cases in (34).

(33) Adverbial compound with epistemic marking

李文秀很有點害怕/妒忌

Li Wenxiu *hen youdian haipa/duji*

Li Wenxiu very a little afraid/jealous

‘Wenxiu Li is quite sort of afraid/jealous.’

- (34) *她很比昨天的她進步
 Ta hen bi zuotian de ta jinbu
 She very than yesterday DE she improve

The juxtapositions³⁸ of more than one degree adverb are illustrated in (33). As the example in (33) show, *hen* and *youdian* are juxtaposed stems from a canonical usage of *youdian*. This collocation is regarded to be unacceptable in previous researches (see Zhu 1982; Tang 2000), but exist in data of the corpora. The data in the corpora indicate that *hen* seems not to collocate with another comparative standard, represented as *bi*-clausal construction³⁹, shown in (34). The occurrence of two juxtaposed degree adverb (e.g., [Degree-ADV [Degree-ADV+ AP]]) found in corpora can be viewed as an adverbial compound with an epistemic marking, which can be conceptualized as the following schematized scale structure, as in figure 2:

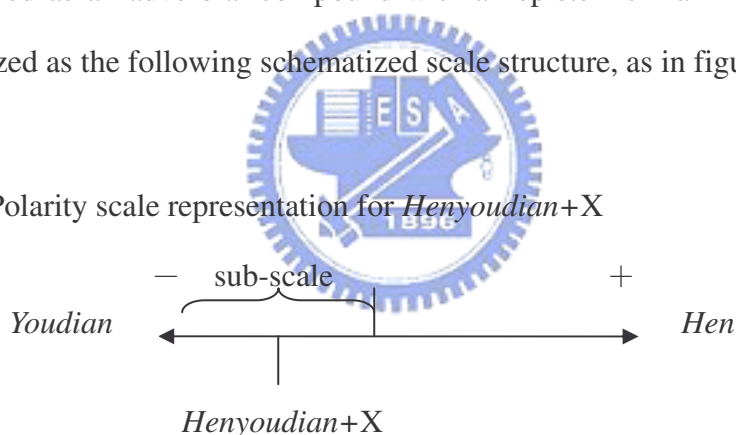


Figure 2: Polarity scale representation for *Henyoudian+X*

In the figure, *hen* and *youdian* show polarity scalar distribution: *hen* tends to denote strong-degree attribution while *youdian* denotes a minimal degree. *Henyoudian* is

³⁸ Zhang (2002) points out that certain degree adverbs can co-occur in certain context for pragmatic reasons, for example, *shaowei youdian qichuan* ‘a little asthmatic’ and *youdian tai ying le* ‘a little too hard’ etc.

³⁹ The data analyzed here are utterances of adult users. In the experimental study of acquisition of *bi*-utterance in pre-school children (48 subjects), Hsieh (2003: 46) illustrates the possible co-occurrence of degree adverb *hen* and *bi*-utterance as follows:

(i) Nide bing bi wode hen da.
 Your cookie than mine very big
 ‘Your cookie is very bigger than mine.’

There remains an unsettled question why adults and children take different methods to express the comparative standard of comparer and comparee. However, this interesting phenomenon is not the main concern in this study, so we leave it for future research.

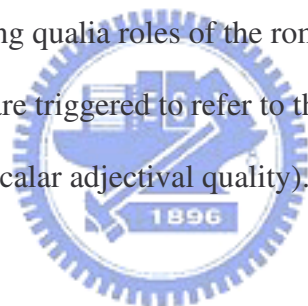
inclined to range over the subscale and is interpreted as a middle degree that is mixed with minimal degree of *youdian* ‘a little’ and strong degree of *hen* ‘very’. In other words, as a scale can be further divided into subclasses, the additional adverbial phrase signals a subscale. Examples (33) show that *henyoudian haipa* ‘quite sort of afraid’ and *henyoudian duji* ‘quite sort of jealous’ tend to skew to the meaning of the embedded phrase (the second degree adverb *youdian* ‘a little’ plus adjective) adding parts of the meaning of the first degree adverb *hen* ‘very’. The competing effect of the two degree adverbs causes a middle-degree expression manifested in a subscale semantically. This middle-degree expression may be used for pragmatic reason⁴⁰: evaluating something/someone too implicitly or explicitly is against politeness (Levinson 1983). This juxtaposition of *hen* and *youdian* is a new finding that is not discussed in Zhang’s study (2002). As the unacceptable examples in (34) illustrate, there are two comparative standards within an evaluative sentence: *henbi* ‘very than’. The two comparative standards in an evaluative sentence may make the speaker confused about choosing which standard to be compared. That is, in an evaluative sentence, one comparative standard specified by *hen* is enough to provide necessary background information for interlocutors to evaluate (cf. Chafe 1987). Another possible explanation of the unacceptability in (34) is as Liu (2005) suggests: the unacceptability arises from the incompatible interaction between the definite standard value of comparison and the indefinite standard value of comparison. That is, the conflict between the two different standards of the comparison: one is the specific (or definite) standard value of the comparison provided by the phrase *bi-zuotian deta* ‘than she was yesterday’ and the other is the contextually-sensitive (or indefinite) standard value of the comparison determined by the interaction between *hen* ‘very’.

⁴⁰ Zhang (2002) states that certain degree adverbs can co-occur in certain context for pragmatic reasons. For example, 稍微有點氣喘 *shaowei youdian qichuan* ‘a little asthmatic’ and 有點太硬了 *youdian tai ying le* ‘a little too hard’ etc.

Hence, an extra degree adverb would be redundant.

4.3.5 X as DP and Interrogative Words

The degree predicate [Degree ADV +X] construction allows the occurrence of demonstratives⁴¹ (e.g., 那個 *nage* ‘that one’ and 這個 *zhege* ‘this one’ as in (35)) and interrogatives (e.g., 怎樣 *zenyang* ‘how’ and 什麼 *sheme* ‘what’ in (36)) in the X slot. These two syntactic categories (functioning as anaphors or pro-forms) are able to refer contextually to quality when they are in EDPC. In other words, the superficially syntactic category of non-degree can be coerced into semantically degree elements with regard to its anaphoric function: the profiling qualities of 那個 *nage* ‘that one’, 這個 *zhege*, ‘this one’, 怎樣 *zenyang* ‘how’ and 什麼 ‘what’ *sheme* can be extracted from their referring qualia roles of the romantic drama, the painter and the lyrics, respectively. They are triggered to refer to the contextually-defined qualities (usually pointing to scalar adjectival quality).



(35) Demonstratives refer to Previous Established Quality

- a. 電影中有段感情戲，場面很那個.../b. 感情戲它很這個...那個...該怎麼說呢

Dianying-zhong you duan gan-qingxi, changmian hen nage/Gan-qingxi ta hen zhege...nage...gai zenme shuo ne?

In the movie have part romantic drama, the story very that/ Romantic drama it very this that should how say SFP

‘There is an emotional scene in the movie, and the scene is very that (erotic).../How can I describe the romantic drama? It is very this...very that...’

The above examples in (35) show the possible candidates of demonstratives occurring

⁴¹ Quirk et al (1985 : 265-268) claim that the definite article ‘*the*’ is used to mark the phrase that it introduces as definite ‘referring to something which can be identified uniquely in the contextual or general knowledge shared by speaker and hearer’.

in the degree construction are *nage* ‘that one’ and *zhege* ‘this one’.

According to Huang (1999: 88), two distinct characteristics of *nage* ‘that one’ and *zhege* ‘this one’ are the following. A more local (or less global) retrieval difficulty is marked by *nage* if the target of retrieval is the more familiar lexical item. An entirely predictable use implies that *nage* is a marker for definite determiner. On the other hand, *zhege* functions as a pause marker for local syntactic planning or for general lexical search.

Let us turn to the examples in (35). When the categories are used within the construction, a given attributive quality is retrieved from context. Examples in (35) illustrate this point. For each case in (35), there is certain prior information that evoke the attribution of *nage* ‘that one’ or *zhege* ‘this one’. Namely, the quality of *nage* ‘that one’ or *zhege* ‘this one’ is a scale-quality that is contextually defined. The prior information in (35a-b) is *ganqingxi* ‘romantic drama’ ([Constitutive role= characteristics of romantic drama]) entailing something erotic and *zhege* ‘this one’ indicating something known but cannot recall online processing. On the basis of the prior information, the previous established quality can help interlocutors retrospect the attribution of demonstratives.

Interrogative words *zenyang* ‘how’ and *sheme* ‘what’, illustrated in examples (36), show the referential underspecificity of *zenyang* ‘how’ and *shime* ‘what’.

(36) Interrogatives Refer to Non-previous Established Quality

- a. 很多人看幾米，覺得他很夢幻，很怎樣.../b. 她聊著那個歌手唱的怎樣，這首歌的歌詞很什麼...

Henduo ren kan jimi, jue de ta hen menghuan, hen zenyang/Ta liao zhe nage geshou chang de zenyang, zhe shou ge de geci hen sheme.

Many people consider Jimi, feel he very dreamlike, very how/She chat ASP that singer sing DE how, this CL song DE lyrics very what

‘Many people consider Jimi is very dreamlike, very that sort of.../She chatted about that singer’s voice, and the lyrics of this song were very kind of...’

- c. M: 我覺得並沒有說代表很怎樣.\..當然你也不是說很無情...
wo juede bing-meiyou shuo daibiao hen zenyang. Dangran ni ye bushi shuo
hen wu qing shuo...
I think not say the representative very how.\.Certainly you also not say very
heartless
‘I think that the representative is not very how. Of course, you are not very
heartless, either.’

Interrogative words *zenyang* ‘how’ and *sheme* ‘what’, as in (36a-b), show non-previously established quality: they may refer to a quality that interlocutors cannot recover at that moment. Although the qualities of *zenyang* ‘how’ and *sheme* ‘what’ are intended underspecificity, the associative qualities can be sought in the preceding or coming information. That is to say, in the examples (36a-c), the possible highlighted qualities may be implied from the constitutive roles of the nouns: 幾米 ([Constitutive role= characteristics of painting styles]), 歌詞 ([Constitutive role= characteristics of lyrics]) and 代表 ([Constitutive role= personalities]). Moreover, the repetitive expression 我覺得 *wo juede* ‘I feel/I think’ (as in 36c) denotes a strong subjective evaluation that may reintroduce the indefinite attribution. The vagueness of *zenyang* ‘how’ can also be expressed by the co-occurring or following elements (e.g., 無情 *wuqing* ‘heartless’).

Throughout sections 4.2 and 4.3, we have been arguing that the degree construction mentioned above may provide a necessary factor in signaling degree evaluation of a given scalar quality: the coercive mechanism of the construction can trigger metaphorical extension. Furthermore, qualia roles such as Formal role and Constitutive role can help the construction ([Degree ADV+ X]) choose the highlighted qualities of nouns, demonstratives and interrogatives. The characteristics

of the degree construction and the representative grammatical categories (in Table 5) occurring in the construction, are summarized, respectively, below⁴²:

- 1) The construction can signal or coerce degree evaluation of a given attributive quality (shown as in figure 1). However, the properties of post-adverbial categories should have intrinsically semantic contents (such as [Static Qualities]) themselves firstly, since the degrees of semantic features should be activated in the construction.
- 2) Some kind of comparative standard is inferred to be licensed in the construction. Hence, as long as the grammatical categories are capable of being evaluated along a given scale, they can occur in the construction theoretically.

Table 5: The possible X (NP, AP, VP, ADVP, DP and Interrogative) occurring in the [Degree ADV+ X] construction

	Types	Examples
NP	(a) Common N (b) Proper N	(a)嘴唇很香腸 (b)形象很成龍
AP	(a)Relative Adj (b)Absolute Adj (c)Non-Gradable Adj (d) Reduplicative Adj	(a)他很藍/綠/橘/紅(b)眼睛很瞎/ 耳朵很聾/聲音很啞(c)這乍聽似 乎很對/這句話實在很錯(d)每天 可以很悠悠哉哉
VP	(a) Grammatical types: VPs as lexicalized VO sequence (b) Semantic types: Activity, Accomplishment and Achievement Verbs (less preferred, but possible)	(a) 她很講義氣/他很給(你)面子 (b) 顏色很跳/論文很難完成/打擊 很出現

⁴² The proposal of restrictions in the construction partly supports the work in Liu (2005). He explains why the English degree adverb *very* is optional in the sentence, *this girl is (very) beautiful*, but obligatory in Chinese sentence *zhe ge nuhai hen piaoliang* ‘this girl is very beautiful’. He claims that the degree adverb takes over the job which the English grammatical tense does, meaning that it interacts with the scale structure and the standard value of gradable adjectives to make the comparison possible. Hence, the degree adverb thereby is obligatory for Chinese sentence.

ADVP	[Degree-ADV+ AP]	李文秀很有點害怕/妒忌
DP	Demonstrative	電影中有段感情戲，場面很那個.../感情戲它很這個...那個...該怎麼說呢?
Inter	Interrogative	他很夢幻，很怎樣.../這首歌的歌詞很什麼...

4.4 Degree Adverbs in the [Degree ADV+ X] Construction

The frequency of some degree adverbs in both the Sinica corpus and spoken conversations are represented in Table 2 based on the Zhang (2002)'s classification of degree adverbs, repeated below:

Table 2: The number of occurrence of representative degree adverbs in both Sinica corpus and spoken conversations

Type of Degree-ADV		Number	Sources of Data	
			Sinica Corpus (33183)	Spoken Conversation (339)
Type 1	更 <i>gengjia</i>	5000		3
	越來越 <i>yuelaiyue</i>	445		5
	更加 <i>gengjia</i>	171		0
	稍微 <i>shaowei</i>	153		1
Type 2	最 <i>zui</i>	5000		3
	比較 <i>bijiao</i>	2923		3
Type 3 (A)	很 <i>hen</i>	12988		277
	非常 <i>feichang</i>	2750		5
	十分 <i>shifen</i>	1051		0
	真 <i>zhen</i>	1808		13
	好 <i>hao</i>	9		5
Type 3 (B)	有點 <i>youdian</i>	469		13
	有些 <i>youxie</i>	355		9
	有一點 <i>youyidian</i>	70		7

From Table 2, the data in both the Sinica Corpus and spoken transcriptions indicate that the degree adverb *hen* ‘very’ is of the highest frequency in Type 3 (A) and the degree adverb *youdian* ‘a little’ appears with the another highest one in Type 3 (B).

This section turns to discuss the contrastive pair of the strong degree adverb of *hen* ‘very’ and the minimal degree adverb *youdian* ‘a little’. The distinctive distributions between *youdian* and *hen* in the [Degree ADV+ X] construction are illustrated with typical examples collected from corpora. The degree adverb *youdian* in the [Degree ADV+ X] sub-construction is postulated with the minimal degree attribute. It tends to denote a minimal-degree attribute with pejorative evaluation as in examples (37-38) and can occur with reduplicative adjectives of negative meanings, given in (39). The occurrence of *youdian* in the [Degree ADV+ X] construction is used as a euphemism for a negative evaluation, illustrated as in (37-39)

(37) Minimal Degree with Pejorative Attributes

- a. 嗯，就是有點樣板啦！/b. 啊！真有點嚇人哪！

En, jiushi youdian yangban la /A! zhen youdian xiaren na.

SIP, that is a little example-like SFP /SIP! really a little frightening SFP

‘Umm, it is a little old-fashioned! / Ah! ‘It is really scary.’

- c. 這件事令人對教育還真的有點心涼呢！

Zhe-jian shi ling-ren dui jiaoyu hai zhende youdian xinliang ne!

This-CL thing make people for education still really a little disappointed SFP

‘This thing makes people really feel a little disappointed about education.’

The negative interpretation arises from the co-occurrence of *youdian* in [Degree ADV+ X] construction and interjections (such as the sentence- final particles 啦 *la*, 哪 *na* 呢 *ne* in (37a-c)) around its immediate neighborhood. The interjections immediately following the [Degree ADV+ X] sequence render a negative interpretation of speaker’s stance toward something evaluated. Then the occurrence of *youdian* in the [Degree ADV+ X] construction manifests the degrees of being

old-fashioned, scary and disappointed. The adverb *youdian* here is used to tone down the degree of negative evaluation.

Moreover, when the third party is being evaluated, *youdian* can be used by the current speaker to indicate a less negative evaluation since the prior speaker's evaluation is too negative. Consider the conversation in (38). Interlocutor A uses *youdian* to tone down the evaluation of interlocutor B to be less negative (degree of laziness), which is perhaps out of politeness requirement (Levinson 1983).

(38) B: 這個學生我知道他的...行為不是很好 A: 有點懶散,...什麼事情都迷迷糊糊 B: 你看那個題目都很好考...他也都考不過...

Zhege xuesheng wo zhidao tade, xingwei bushi hen hao. Youdian lansan, sheme shiqing dou mimihuhu o. Ni kan nage timu dou hen haokao...Ta ye dou kao bu guo.

This student I know his, behavior isn't very good. A little lazy, what thing all hazed SFP. You look that question all very easy-to-answer...He also all not pass 'B: I know this student's behavior is not very good. A: He is a little lazy and besots everything. B: Look! The question in the test is very easy...He still cannot pass the test...'

In what follows, the collocations of degree adverb *youdian* and reduplicative adjectives of negative meanings rather than positive meanings, such as 結結巴巴 *jiejiebaba* 'stammering', 慌慌張張 *huanghuangzhangzhang* 'panic', 零零落落 *linglingluoluo* 'scattered', 恍恍惚惚 *huanghuanghuhu* 'faintly', 馬馬虎虎 *mamahuhu* 'careless', 歪歪斜斜 *waiwaixiexie* 'slovenly', and 扭扭捏捏 *niuniunienie* 'uneasy', are discussed in examples (39 a-g).

(39) Minimal Degree with reduplicative adjectives

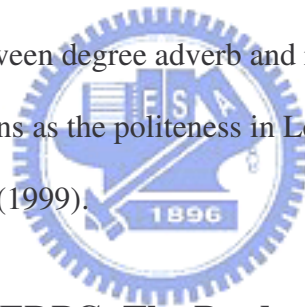
a. 他甚至連說話都有點結結巴巴...

Ta shenzhi lian shuhua dou youdian jiejiebaba
He even even talk all a little stammering

- ‘He is even a little stammering when he talks.’
- b. 他的酒意也消退了，甚至還有點慌慌張張...
- Tade jiuyi ye xiao tui le, shenzhi hai youdian huanghuangzhangzhang
His sense of drunk also disappear, even still a little hurry-scurry
‘When his drunkenness is gone, he is even a little panicky.’
- c. 他上前合唱，雖然有點零零落落的...
- Ta shangqian hechang, suiran youdian linglingluoluode
He come forward sing in chorus, although a little scattered
‘He tries out for chorus, even though his voice is a little poor.’
- d. 他和她擦身而過，簡直有點恍恍惚惚
- Ta han ta cashenerguo, jianzhi youdian huanghuanghuhu
He and she come across, simply a little askew
‘When he passes by her, he even feels a little faintly.’
- e. 這種女性，個性上可能有點馬馬虎虎
- Zhe zhong nuxing, gexingshang keneng youdian mamahuhu
This kind female, personality maybe a little careless
‘As for this kind of female, her personality may be a little careless.’
- f. 他的字還不怎麼整齊，有點歪歪斜斜的
- Tade zi hai bu zenme zhengqi, youdian waiwaixiexie de.
His word still not somehow tidy, a little wriggled DE
‘His handwriting is not quite neat and even a little slovenly.’
- g. 宋楚瑜的光火顯現他對合併還有點扭扭捏捏
- Songchuyu de guanghuo xianxian ta dui hebing hai youdian niuniunienie
Songchuyu DE rage show he for union still a little uneasy
‘James Soong’s rage indicates that he is still kind of uneasy about the union.’

Interestingly, the totally reduplicative adjectives (represented as AABB form), which are usually considered unacceptable with degree modification, are actually found to co-occur with degree adverbs when we observe a large amount of data extracted from the online archive *Google*, as shown in (39). The reason may be that semantically *youdian* is usually used as a hedge, for pragmatic reasons (Levinson 1983, Lasersohn 1999), to express indirect negative meaning. It may dilute the degree of negative judgment of totally reduplicative adjectives, which intrinsically denote degree of intensification (such as degree of being *stammering*, *panicky*, *scattered*, *faintly*,

careless, slovenly and uneasy in examples 39, respectively). This marked usage of using *youdian* to tone down the degree of negation is a distinctive feature from *hen* in the [Degree ADV+ X] construction, which seldom co-occur with reduplicative adjectives. It is inclined to occur with some adverbs expressing strong subjectivity such as 甚至 *shenzhi* ‘even’, 雖然 *suiran* ‘although’, 簡直 *jianzhi* ‘simply’, 可能 *keneng* ‘maybe’ and 還 *hai* ‘still’ in (39) when they collocate with reduplicative adjectives (Traugott 1989, Paradis 2003). However, these adverbs in examples (39a-g) tend not to co-occur with the degree adverb *hen* ‘very’; that is, the collocations of these adverbs and *hen* ‘very’ sound odd. Unlike Tang’s claim (2000b: 214-215), the acceptance of occurrence between degree adverb and reduplicative adjective should be redefined as a scale of tendency rather than an absolute distinctive criterion. The vagueness of occurrences between degree adverb and reduplicative adjective may result from the pragmatic reasons as the politeness in Levinson (1983) and the pragmatic halos in Lasersohn (1999).



4.5 Predictive Power of EDPC: The Productivity of Novel

Expressions

The naturally occurring data render the supporting evidence that the [Degree ADV+ X] construction is so productive in daily uses (novel expressions are created by young generation) that it takes significant status in modern language. Creative usages are coerced to inherit semantic features from the construction when used in a certain scenario (conversation between interlocutors). In the scenario, the contextual interpretation bears out when pragmatic and communicative strategies are taken into consideration. The examples of X as NP (common nouns and proper nouns) given in (19-23), of X as AP (color terms) in (24) above and of the novel expressions of alphabets (e.g, A, GB and GY) in (40) can show the predictive power of EDPC: the

construction can signal degree evaluation of a given attributive quality. Hence, the categories occurring in the construction can be manifested with degree of contextually or culturally-defined qualities as long as they are capable of being evaluated along a given scale.

(40) a. 這部電影的情節很 A (片)

Zhe bu dianying de qingjie hen A pian

This CL movie De plot very adult video

‘The plot of this movie is very pornographic.’

b. 他的分析很 GB，有很多樹狀結構

Ta De Fenxi hen GB, you hen duo shuzhuang jiegou

He De analysis vey GB, has very many tree structure

‘His analysis is very formal: there are many tree structures in it.’

c. 這間店的店員很 GY，服務態度很差

Zhe jian dian de dianyuan hen GY, fuwu taidu hen cha

This CL shop De salesclerk very GY, service manner very bad

‘The salesclerk in this shop is vey disgusting. His/her service manners are very bad.’

The above examples show that the letter word or acronyms of A, GB and GY are coerced to have contextually or culturally-defined qualities by the construction. These examples are the newly created senses arising from the semantic extension of the existing usages. The letter word or acronyms represent different referring expressions (the borrowing usages) separately: *A* refers to the erotic films ([Constitutive role= characteristics of erotic films]), *GB* refers to the formal syntax theory ([Constitutive role= characteristics of formal syntax theory]) and *GY* refers to the assonance of

Taiwanese taboo words ([Constitutive role= characteristics of Taiwanese taboo words]). With the mechanism of metaphorical extension and qualia roles in the construction, the degree of being pornographic, the degree of being formal of analysis and degree of disgusting of someone are coerced.

To indicate that the novel expressions are potentially productive, more representative novel expressions with metaphorical extensions and highlighted qualia roles are extracted from the online *Google* archives, illustrated in Table 6.

Table 6: The representative novel expressions interpreted with metaphorical extensions and highlighted qualia roles in *Google*

NP Types	Examples	Culturally/Contextually-defined Metaphorical Extensions and Qualia Roles	Qualities:
Food	西瓜/香蕉/櫻桃	1) Metaphorical Extensions: a. QUALITY is an OBJECT b. QUALITY is a SPACE c. QUALITY is a PERSON 2) Inferred Qualities Based on Qualia Roles: a. [Constitutive role= internal component of the NP type: characteristics, personality etc.] b. [Formal role= external characteristics of the NP type: appearance, shape, color etc.]	
Animal	鴛鴦/豬/鳥		
People	豬哥/大哥/小弟		
City	新竹/基隆/加州		
Weather	陽光/陰天		
Horoscope	雙魚/金牛/天蠍		
Artifact	PC/NB		
Taboo	機車/屌		
Natural object	龜毛/木/石頭		
Academic subject	語言學/文學		
Body part	白目/豬頭		
Borrowing usage	水/土/花		
Language	中文/英文/日文		
Color	白/黃/紫(色)		

Table 6 shows that the novel expressions of noun types in the collocation of [Hen+ NP] are abundant: types of nouns may be food, animal, people, city, weather, horoscope, artifact, taboo, natural object, academic subject, body part, borrowing usage, language and color. These novel expressions of usages in young generation

indicate that the scalar implicating qualities of the noun categories are culturally or contextually-defined: the extended/relational qualities (gradable values) coerced in EDPC are conventionalized as the representations of metaphorical extensions (e.g., QUALITY is an OBJECT; QUALITY is a SPACE; QUALITY is a PERSON) and qualia roles (e.g., [Constitutive role] and [Formal role]).

Before closing this section, a significant language fact needs to be pointed out: although the noun category has scalar-implicating qualities, it is still different from the adjectival category. The syntactic behaviors of these two categories are distinct. Take the ‘X-not-X question’ test for the nouns and adjectives as an example in (41).

(41) a. ?他豬不豬/龜毛不龜毛?

Ta zhu bu zhu/guimao bu guimao

He pig not pig/turtle hair not turtle hair

b. 妳弟弟笨不笨/挑剔不挑剔?

Ni didi ben bu ben/tiao ti bu tiao ti

Your brother stupid not stupid/picky not picky

‘Is your brother stupid/picky?’

Example (41a) shows that nouns such as 豬/龜毛 *zhu/guimao* ‘pig/ turtle’ sound odd when used in ‘X-not-X question’ test, while adjectives such as 笨/挑剔 *ben/tiao* ‘stupid/picky’ is acceptable in (41b). This language phenomenon indicates that although both nouns and adjectives may denote scalar qualities, they are still different categories: nouns cannot be completely converted into adjectives hitherto in daily usages.

4.6 Summary

Whether the predicate [Degree ADV+ X] construction is interpreted as strong or weak/minimal attribution, an evaluative scale is implied. In such case, this construction means ‘higher degree of attribution than the norm’ or it is even used to indicate lower degree of attribution with negation (pejorative meaning). The high occurrence frequency of *hen* the data of the corpora (12988 times) and spoken conversation (1.99 times/minute) is due to the fact that speakers opt for vague rather than absolute or specific evaluative comments in social interaction. In addition, abstract concepts such as gradability on the scalar structure, mechanism of metaphorical extension and quaila roles of words are utilized so generally that possible categories occurring in the X slot of the [Degree ADV +X] construction are abundant in corpora and spoken conversation.



Chapter 5 Conclusion

5.1 Summary

The intention of this study is to explore how degree adverbs (i.e., *hen* ‘very’ and *youdian* ‘a little’) co-occur with their possible post-adverbial elements in language uses via analyzing a great number of corpora and conversation data. An unexpectedly diverse range of grammatical categories occurring in the X slot of [Degree ADV+ X] construction is found. The candidates of X can be NP, AP, VP, ADVP, DP or Interrogative, which is indeed confirmed by the corpus and spoken conversation. As a tentative study on degree adverbs with constructional account (based on the work of Goldberg 1995), this study, nevertheless, has the following implications:

1) A reconsideration of degree modification is needed. With the manipulation of the conceptual schema (e.g., metaphorical extension or gradability of scalar quality) and *qualia roles* in qualia structure, the collocations of degree adverbs with various grammatical categories in daily uses are more diverse than what is traditionally thought. The premise is that as long as the grammatical categories (inherently have semantic contents) are capable of being evaluated along a given scale, they can occur in the construction theoretically.

2) The coercive semantic interpretation can be specified in the postulation of EDPC, which has a number of merits over the lexical-rule approach: (a) It may avoid the unnecessary addition of attributive senses for nominal predicate (e.g., novel expressions). (b) It may allow creative sense extensions of relative gradable adjectives (e.g. color terms) and certain contextually-defined lexically non-gradable adjectives. (c) It may account for the various verbal predications. (d) It may explicate the juxtaposition of more than one degree adverb (e.g., [Degree-ADV [Degree-ADV+ AP]] (cf. Zhang 2002)). (e) It may solve the problem that demonstratives and

interrogatives are also used with a degree modifier to recall a given attributive quality extracted from contexts.

3) Languages are flexible. The correlations between degree adverbs and post-adverbial elements depend on their semantic compatibility. This indicates that interrelationship between syntax, semantics, pragmatics and human cognition are impartible: the semantic coercions are possible in the [Degree ADV+ X] construction. Corpora and conversation data can make this study work in the right direction.

4) A systematic approach, namely constructional account, once adopted, can be applied to the ARCHI-CONSTRUCTION of degree adverb (in the sense of Jackendoff 1997a) represented as *hen* ‘very’ and the related [Degree ADV+ X] sub-constructions such as the minimal degree construction (e.g., *youdian*) or degree adverbs shown in Table 2.

Ultimately, the constructional coercions discussed in this work call for a new perspective when exploring semantic representation of Mandarin degree adverbs and the post-adverbial categories: (i) the semantic representation of scalar implicating qualities should also include constructional entities as part of lexical items (see Goldberg 1995, Jackendoff 1997a, 2002, Liu 2005); (ii) the mutual applications of constructional approach and qualia structure may help to resolve the potential ambiguity (the contextually or culturally-defined information) arising from the construction.

5.2 Further Research

In order to understand the acceptable meaning of declarative sentences, one has to consider all the relevant information of the whole construction via a holistic integration of the internal elements in declarative sentences. During the exploration of

Mandarin *Evaluative Degree Predication Construction*, illustrated as the [Hen/Youdian+ X] construction etc., respectively, we find that there are still some unsettled questions needing to be further studied. Hence, five demanding tasks may be proposed for a follow-up research hereafter:

1) To continue with a constructional approach to the characteristics of the collocation of [Degree ADV+ X]: the related [Degree ADV+ X] sub-constructions such as the related degree adverbs mentioned in Table 2 are requirable. Take [YUELAIYUE/ ZHEN + X] sub-constructions for example. The [YUELAIYUE+ X] sub-construction highlights the presupposed event and causation with temporal conjunctive makers or causative conjunctive markers (e.g, 隨著 *suizhe* ‘since’ or 因為 *yinwei* ‘because’), while the [ZHEN+ X] sub-construction shows degree of epistemic marking via co-occurring with the bi-clausal expression (e.g, 真比 *zhen bi* ‘really than’), dirty words (e.g, 真他媽的 *zhentamade* ‘Fucking damn!’) and sentential interjections (e.g, 真是丟人哪 *zhen diurenna* ‘How humiliated it is!’).

2) To further study the asymmetry of acceptability in the co-occurrence of the degree adverbs (e.g., 很), negation marker (e.g., 不 *bu* ‘not’) and negative adjectives: the co-occurrence 很 [醜 / 生氣 / 嫉妒] *hen [chou/shengqi/jidu]* ‘very ugly/angry/envious’ are acceptable, while the co-occurrence ?很不 [醜 / 生氣 / 嫉妒] *hen bu [chou/shengqi/jidu]* ‘not very ugly/angry/envious’ sound odd.

3) To conduct a detailed analysis of EDPC with on-line reaction time experiments and fMRI experiments in a scientific method (cf. Miller 1990, Gong and Ahrens 2004), such as metaphor, metaphorical extension, coercion of categories and retrieval of qualia roles on the degree predication construction (cf. Lakoff and Johnson 1980, 1987; Su 2002ab).

4) To extensively examine whether the alternative approach, *qualia structure* proposed by Pustejovsky (1995: 76 and 85), can be applied to disambiguate the sense

distinction of each lexical categories (e.g., nouns, adjectives, verbs, etc.).

5) To do typological analyses and grammaticalizations of EDPC in Mandarin and English, and if possible provide a universal grammar and generalization of EDPC (see Goldberg 2004, Chomsky 2005, Pinker and Jackendoff 2005).

The ultimate goal of these further researches can provide stronger evidences to show that constructional inferences in semantic representation can account for the various collocations of degree adverbs and their post-adverbial categories in a plausible way.



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Website Resources

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Google. www.google.com

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Jiaoyubu Chongbian Guoyu Cidian Xiudingban. [http://140.111.1.22/mandr/clc/dict/
dict/?open](http://140.111.1.22/mandr/clc/dict/dict/?open)



Appendix A: List of Figures

Figure 1: The Evaluative Degree Predication Construction (EDPC)

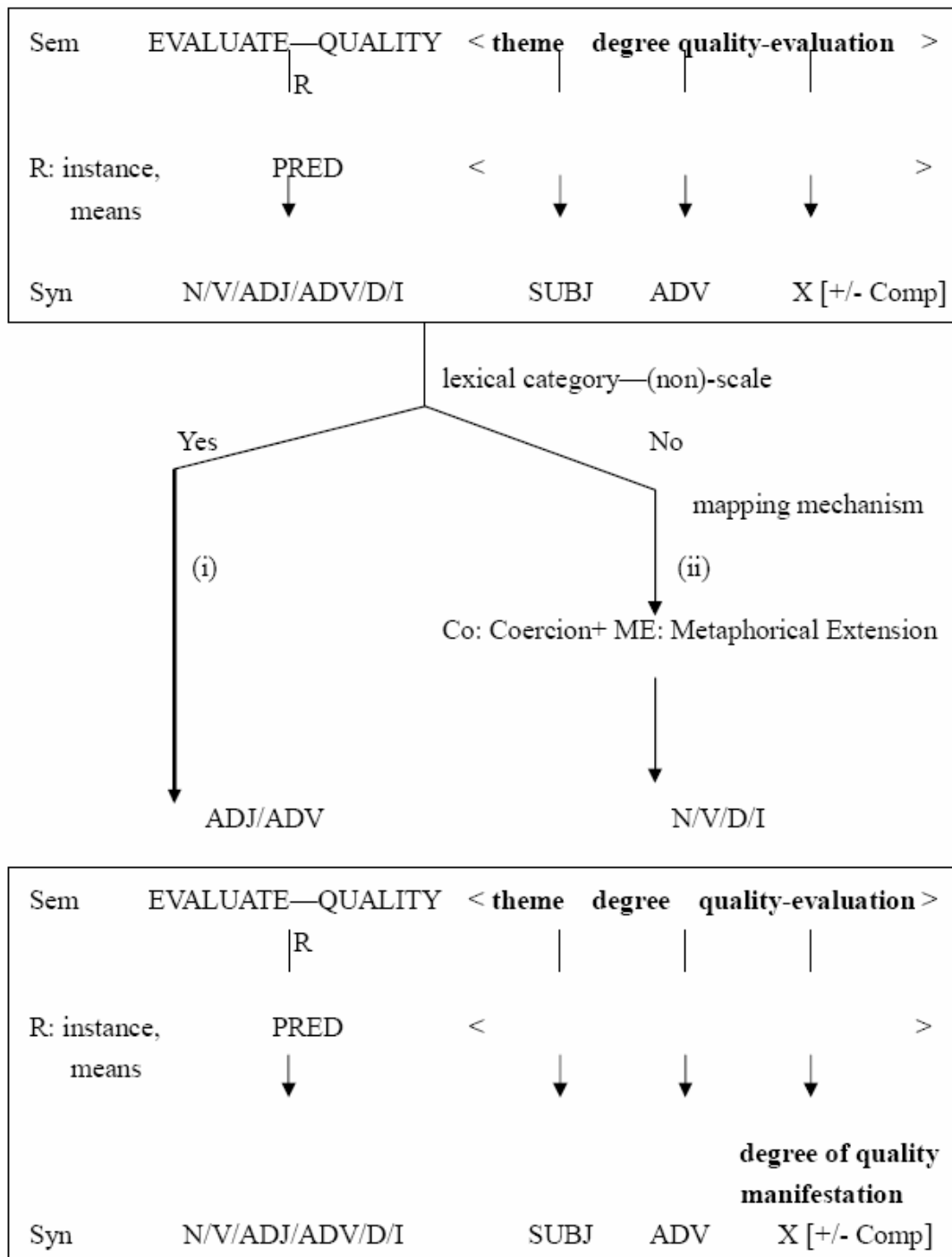
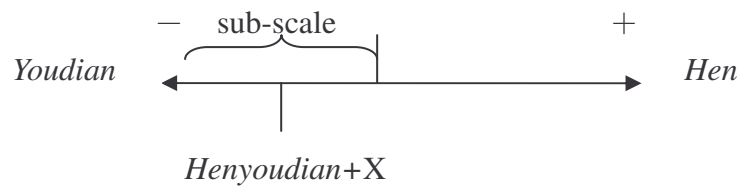


Figure 2: Polarity scale representation for *Henyouodian+X*



Appendix B: List of Tables

Table 1: The criteria for distinguishing the representative members of degree adverbs

(Zhang 2002: 143)

Type	Relation	Comparison of quality distinction	Confirmation of quality gradability	Adaptability of collocation with comparative structure
1	更(加) <i>geng-(jia)</i> , 稍微 <i>shaowei</i> etc.	+	-	strong
2	最 <i>zui</i> , 比較 <i>bijiao</i> etc.	+	+	stronger
3	很 <i>hen</i> , 有點 <i>youdian</i> etc.	-	+	weak

Table 2: The number of occurrence of representative degree adverbs in both Sinica corpus and spoken conversations

Type of Degree-ADV		Number	Sources of Data	
			Sinica Corpus (33183)	Spoken Conversation (339)
Type1	更 <i>gengjia</i>		5000	3
	越來越 <i>yuelaiyue</i>		445	5
	更加 <i>gengjia</i>		171	0
	稍微 <i>shaowei</i>		153	1
Type 2	最 <i>zui</i>		5000	3
	比較 <i>bijiao</i>		2923	3
Type 3 (A)	很 <i>hen</i>		12988	277
	非常 <i>feichang</i>		2750	5
	十分 <i>shifen</i>		1051	0
	真 <i>zhen</i>		1808	13
	好 <i>hao</i>		9	5
Type 3 (B)	有點 <i>youdian</i>		469	13
	有些 <i>youxie</i>		355	9
	有一點 <i>youyidian</i>		70	7

Table 3: Frequency of [Hen + X] in Sinica corpus and spoken conversation

Syntactic Category with <i>Hen</i>		Frequency		Sources of Data	
				Sinica Corpus	Spoken Conversation
				1000	277
Content Words	NP	41	4.1 %	28	10.12 %
	AP	766	76.6 %	183	66.06 %
	VP	183	18.3 %	62	22.38 %
	ADVP	6	0.6 %	0	0 %
	DP	4	0.4 %	2	0.72 %
	Interrogative	0	0 %	2	0.72 %
Function Words	PP	0	0 %	0	0 %
	Connective	0	0 %	0	0 %
	Interject	0	0 %	0	0 %

Table 4: The explicit expressions and the inferred qualities of objects

Marked expressions	Inferred qualities
很草莓/芭樂 <i>hen caomeil/bale</i> 'very strawberry/guava-like'	fragile/uncreative
很狐狸/烏龜 <i>hen hulil/wugui</i> 'very fox/turtle-like'	dodgy/slow
很馬英九/陳水扁 <i>hen Ma Yingjiu/Chen Shuibian</i> 'very MaYingjiu/Chen Shuibian-like'	handsome/cunning
很台(灣)/美國 <i>hen Tai (wan)/Meiguo</i> 'very Taiwanese/American like'	unfashionable/fashionable

Table 5: The possible X (NP, AP, VP, ADVP, DP and Interrogative) occurring in the [Degree ADV+ X] construction

	Types	Examples
NP	(a) Common N (b) Proper N	(a)嘴唇 <u>很香腸</u> (b)形象 <u>很成龍</u>
AP	(a)Relative Adj (b)Absolute Adj (c)Non-Gradable Adj (d) Reduplicative Adj	(a)他 <u>很藍/綠/橘/紅</u> (b)眼睛 <u>很瞎</u> / 耳朵 <u>很聾</u> /聲音 <u>很啞</u> (c)這乍聽似 乎 <u>很對</u> /這句話實在 <u>很錯</u> (d)每天 可以 <u>很悠悠哉哉</u>
VP	(a) Grammatical types: VPs as lexicalized VO sequence (b) Semantic types: Activity, Accomplishment and Achievement Verbs (less preferred, but possible)	(c) 她 <u>很講義氣</u> /他 <u>很給(你)面子</u> (d) 顏色 <u>很跳</u> /論文 <u>很難完成</u> /打擊 <u>很出現</u>
ADVP	[Degree-ADV+ AP]	李文秀 <u>很有點害怕/妒忌</u>
DP	Demonstrative	電影中有段 <u>感情戲</u> ，場面 <u>很那</u> <u>個...</u> / <u>感情戲</u> 它 <u>很這個...那個...</u> 該 怎麼說呢?
Inter	Interrogative	他很 <u>夢幻</u> ， <u>很怎樣...</u> /這首歌的歌 詞 <u>很什麼...</u>

Table 6: The representative novel expressions interpreted with metaphorical extensions and highlighted qualia roles in *Google*

NP Types	Examples	Culturally/Contextually-defined Qualities: Metaphorical Extensions and Qualia Roles
Food	西瓜/香蕉/櫻桃	1) Metaphorical Extensions: a. QUALITY is an OBJECT b. QUALITY is a SPACE c. QUALITY is a PERSON 2) Inferred Qualities Based on Qualia Roles: a. [Constitutive role= internal component of the NP type: characteristics, personality etc.] b. [Formal role= external characteristics of the NP type: appearance, shape, color etc.]
Animal	駝鳥/豬/鳥	
People	豬哥/大哥/小弟	
City	新竹/基隆/加州	
Weather	陽光/陰天	
Horoscope	雙魚/金牛/天蠍	
Artifact	PC/NB	
Taboo	機車/屌	
Natural object	龜毛/木/石頭	
Academic subject	語言學/文學	
Body part	白目/豬頭	
Borrowing usage	水/土/花	
Language	中文/英文/日文	
Color	白/黃/紫(色)	

