

# The Interaction and De-Categorization of Word Meaning Categories—The Radical Stage of Word Meaning Evolution\*

Rong Zeng

School of Foreign Languages, Southwest University of Political Science and Law, Chongqing, China

**Abstract**—This paper employs the framework of "dynamic categorization" from cognitive linguistics to examine a more radical phase of word meaning derivation. Specifically, it investigates the interaction between word meaning categories and de-categorization in order to elucidate the principles governing word meaning derivation. Through a comprehensive analysis of extensive Chinese and English corpora, our findings indicate that the interaction between word meaning categories primarily is manifested in two forms: (1) expansion between adjacent categories; (2) expansion between analogous categories. The expansion between adjacent categories encompasses linguistic, conceptual, and factual expansions, whereas expansion between analogous categories involves both objective and psychological similarities. Such interaction between word meaning categories may result in partial grammaticalization, antonymization, and polysemy. De-categorization, on the other hand, is primarily achieved through word conversion, grammaticalization, and subjectivization. These processes contribute to the evolution of word meaning beyond conventional clustering models, transitioning from concrete to abstract and from literal to figurative interpretations.

**Index Terms**—dynamic categorization, interaction/spanning, de-categorization

## I. INTRODUCTION

Since 1984, the concept of "dynamic categorization" emerged with Hopper and Thompson's introduction of "de-categorization". Subsequently, scholars such as Taylor (1989), Lakoff (1987), Liu (2008), Wen and Zeng (2018), Zeng and Wen (2019), Zeng (2020), Wu and Zhan (2022), and Wei and Zhao (2024) explored dynamic categorization of word meaning from various perspectives. This theory significantly contributes to understanding the rules governing word meaning derivation, facilitating the analysis and prediction of its developmental trends. While scholars recognize the close relationship between the evolution of word meaning and the dynamic development of lexical categories, few have systematically expounded upon the theory of dynamic categorization. Wen and Zeng (2018) provided the first systematic definition: due to the dynamic nature of categories and the objective construction of meaning, semantic categories undergo a dynamic development driven by working mechanism such as metaphor, metonymy, and prominence. This development includes: (I) gradual change within the category itself; (II) the interaction/spanning between two categories; and (III) de-categorization. Gradual changes within categories mark the initial phase of lexical derivation, involving partial deprivation, attenuation, expansion, shrinkage, generalization, or specification of word meanings. Interaction and spanning between lexical categories and de-categorization denote the radical stage of word meaning evolution. This paper will illustrate the behaviors and rules governing dynamic categorization of word meaning through the analysis of numerous examples in discourse.

## II. INTERACTION/SPANNING BETWEEN ADJACENT OR SIMILAR CATEGORIES

Interaction or spanning between categories can be categorized into interactions or spanning between similar categories and those between adjacent categories.

Expansion between adjacent categories occurs within the same domain matrix, whereas expansion between similar categories involves conceptual expansion across two different domain matrices. This means that individuals leverage known and familiar conceptual content to understand unfamiliar or unknown semantic categories. For instance, the symbol "head," originally used to denote a part of the human body, now encompasses a range of new conceptual categories such as "the head of the mountain," "the head of the parade," and "head of a company," emphasizing the attribute of "top or forefront" from the source domain. As a result, two entities belonging to distinct conceptual categories become linked due to similarities in their attributes.

### A. Interaction/Spanning Between Adjacent Categories

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Adjacent categories primarily denote categories that are closely related to each other. Expansion between adjacent categories entails conceptual broadening within the same domain matrix, involving different entities. The cognitive perspective on adjacency was initially introduced by Lakoff and Johnson (1980), who posited that metonymy is rooted in physical or causal connections. This definition encompasses adjacency within language, reality, and conceptual frameworks.

*(a). Adjacency in Language: Co-Occurrence and Adjacency in Language Structure as Well as Sharing of Word Meanings*

The linguistic adjacency of categories is primarily observed through their proximity and co-occurrence within the language structure. The most prevalent instances of adjacency between language categories occur in horizontal combinations and constructions. We mainly discuss expansion between adjacent categories in constructions.

Constructions represent fundamental components of a language system, encapsulating significant facets of human experience. Goldberg (1995) defined a construction as follows: "C is a construction when and only when C is a form-meaning pair <Fi, Si>, and some aspects or the meaning Si of the form Fi cannot be strictly predicted from the constituents of C or other existing constructions" (p. 78). This definition underscores two critical points: constructions consist of paired forms and meanings, and the meaning of a construction cannot always be deduced from its individual components. Within constructional grammar, a wide array of constructions exist. Fillmore (1988) categorized idioms into substantive idioms, such as the fixed Chinese idiom "一日三秋" (a day seems as long as three years), and formal idioms. Formal idioms are partially open, allowing for temporary supplementation of certain content, exemplified by constructions like "V 来 V 去" (V to and fro).

Form and meaning represent the fundamental elements of any construction. For instance, consider the verb-object construction of "送 (send) + object" in Chinese. The core meaning of the verb-object form of "送" is defined by its constructional form, specifically involving relocating someone or something or altering possessive relationships. While the core meaning of this construction remains relatively stable, the meanings of its components undergo dynamic development. This construction functions as a formal idiom, allowing for temporary fillers in its parts. These temporarily filled components, along with their neighboring constructional element "送," interact and span across adjacent categories. In the verb-object construction of "送," the change in the immediately adjacent object results in a corresponding change in meaning. There are two primary types of "送 + object" constructions: "送" + noun object and "送" + verb object, with the former being more typical.

(1) "送" + noun object

a. 过几天我亲自送她回学校。

I will accompany her on her way back to school in a few days.

b. 雪中送炭。

Offer charcoal in snowy weather.

c. 我晚上给你送书过来, 我已经全部看完了。

I will return the book to you this evening because I've already finished it.

d. 明天你也要去送亲吗?

Are you going to escort the bride tomorrow too?

e. 很多老百姓都自发地来为海瑞送葬。

Lots of people spontaneously attended Hai Rui's funeral.

In example (1)a, where the person "她" (her) is the object, "送" signifies accompanying someone to a destination. In example (1)b, with "炭" (charcoal) as the object, "送" means to give as a gift. Example(1)c, where "书" (book) is the object, "送" implies returning something. In example (1) d, with "亲" (wedding) as the object, "送" denotes escorting the bride. Example (1)e uses "送" to mean conveying a deceased person for burial. From example (1)a to (1)e, "送" consistently interacts with the noun object in adjacent categories. The word meaning of "送" in examples (1)a to (1)c is the most typical, as the subsequent object is directly affected. With different fillers in examples (1)d and (1)e, the constructional or purposive meaning of "送" is transformed, showing varied interpretations of the verb. Nevertheless, these examples still fall within the typical semantic categories of "送".

(2) "送" + verb object

a. 明天我们将送别克劳恩。

We will see Klein off tomorrow.

b. 我们会尽快送呈函件至上级汇报事情进展。

We will submit the letter to the superiors to let them know how things are going.

c. 因为犯了严重的错误, 他被学校送遣回国。

He was repatriated home due to a severe mistake he had made.

d. 这些财产已送还原主。

The property has been returned to the original owner.

e. 我把手放在它奔走的前方，待它爬进我的掌心后，轻轻地把它送归到地板上。

I put my hand in front of where it is running towards, and laid it down gently on the floor.

The meaning of "送" in constructions like "送" + verb undergoes more significant changes compared to "送" + noun. As the filler shifts from a typical noun to a verb, "送" interacts closely with the adjacent component in examples from (2)a to (2)e, leading to semantic expansion. The lexical scope of "送" has broadened, no longer strictly indicating "accompanying someone" or "giving". Instead, it functions as a light verb closely aligned in meaning with the verb it precedes. For instance, "送别" equates to "别" (say goodbye); "送呈" translates to "呈" (submit); "送遣" means "遣" (repatriate); "送还" means "还" (return); "送归" means "归" (give back). In these cases, "送" serves to intensify the verb's meaning.

Linguistic adjacency involves syntactic co-occurrence within horizontal combinations and constructions. Syntactic position and the shift in combinatorial function primarily drive lexical grammaticalization. Thus, the broadening and spanning of categories through linguistic adjacency can result in the partial grammaticalization of word meanings. This phenomenon applies not only to individual categories but also informs the analysis of dynamic categorization within compound categories, which will be explored further in a separate article.

### (b). *Expansion Between Conceptual Adjacent Categories*

Cognitive linguists, based on the Idealized Cognitive Model (ICM), categorize adjacency into two types: (1) adjacency between the whole and their parts; and (2) adjacency among parts within the same ICM. This adjacency serves as the foundation for metonymy, which plays a significant role in the interaction and spanning between adjacent lexical categories.

#### 1. *Adjacency Between the Whole and Its Parts*

Wen and Ye (2006) categorized the adjacency between wholes and their parts into several systematic categories: thing models, constitution models, scale models, complex event models, category-attribute models, among others.

Initially, in thing models, adjacency between the whole and its parts is manifested through the relationship between the entirety of the thing and its individual components. For example,

(3) Eating peanuts is of great benefit to human health.

In example (3), "peanuts" specifically denotes the edible part—the peanut kernel within peanuts. This semantic transformation of "peanut" relies on the conceptual relationship between the whole thing and its parts. Through metonymy, the term "peanuts" undergoes the spanning of adjacent categories in meaning.

Secondly, the adjacency between the whole and the parts in constitution models is reflected as:

Adjacency between entity and its materials,

(4) I smell skunk. (skunk is metonymized to its odor)

In this sentence, "skunk" refers to the odor typically associated with skunks. This semantic extension arises directly from the adjacency between the entity and its defining characteristics.

Adjacency between entity and its traits,

(5) She is a snow white.

"Snow white" in the sentence does not refer to the real Snow White, but describes a girl who is very beautiful, equivalent to "she is very beautiful". The spanning of the meaning is just based on the adjacency of entity and its traits.

Thirdly, within scale models, adjacency between the whole and its parts is represented by the relationship between the scale itself and its upper limit. For example,

(6) How old are you?

In this context, "old" does not imply "aged" but specifically denotes age itself, positioned at the uppermost point of the age scale. The extension of its meaning depends on the relationship between the scale and its highest value.

Fourthly, in complex event models, the relationship between the entirety and its components is exemplified by the connection between a fragment of an event and the entire event itself. For example,

(7) Mother is cooking potatoes.

The term "cooking potatoes" in this context denotes a specific intermediate stage within the broader process of cooking. It serves to represent the entire cooking event. The extension of its meaning depends on the proximity and relationship between a partial event and the complete event.

Fifthly, the adjacency between the whole and its parts embodied in the category-attribute models includes the adjacency between attributes and genus. For example,

(8) The black is always striving for their civil rights.

In this sentence, "the black" does not signify color but rather refers to the Black human race. Here, the racial attribute is employed to denote the category, and its significance stems from the relationship between attributes and category.

Proximity of typical and generic species,

(9) If only I were a sparrow.

The meaning of this sentence is "If only I were a bird." In this context, "sparrow" does not specifically denote the bird species but rather represents a generic bird. It symbolizes the desire for freedom akin to that of any bird. The

extension of meaning relies on the relationship between attributes and category.

## 2. *The Adjacency Between Parts*

The adjacency between parts is framed within the Idealized Cognitive Model (ICM). It can occur in various cognitive models such as behavior, perceptual, enabling, product, control, collateral, container, location, and modification models. Due to space constraints, we will specifically analyze two prevalent models in dynamic lexical categorization: behavior models and action models.

To begin with, we examine the adjacency among components in behavior models, encompassing various elements such as participants, entities, actions, tools, outcomes, and others. This adjacency among components represents the adjacency between parts within the Idealized Cognitive Model (ICM). Some of the typical adjacency in the behavior models includes:

The relationship between the tool and the action facilitates dynamic categorization of the tool nouns into the verb category.

(10) He knifed the meat in the dinner.

The connection between behavior and action facilitates the dynamic contextualization of behavior terms into action terms.

(11) Then he opened a restaurant, authored a book, and landed his own radio show.

The relationship between the result and the action allows for the dynamic contextualization of result terms into action terms.

(12) They had landscaped their property with trees, shrubs, and lawns.

The adjacency between manner and behavior allows the dynamic categorization of manner words into action words.

(13) She slipped out of bed and tiptoed to the window.

From the examples above, it is evident that within behavior models, the adjacency between parts facilitates metonymic interactions where nouns shift to verbs and verbs are nominalized. Despite identical word forms, their grammatical classes differ. Beyond these instances, Wen and Ye propose a total of 19 types of adjacencies in behavior models, including purposes linked to actions and tools associated with behaviors, among others, which we won't detail here.

Next, let's take a look at the adjacency between parts in role models. According to Langacker (1991), "semantic roles are conceptual structures rooted in everyday experience, forming a network of interconnected prototypes through interaction with the objective world" (p. 78). These conceptual elements constitute a complex network of adjacencies. In behavior models, our focus is on how the same word can fulfill various semantic roles through inter-category adjacency, whereas in the role models, we explore how different words can fulfill the same semantic role through inter-category adjacency. Thus, adjacency between components in behavior models underpins conceptual metonymy, while in role models, it facilitates syntactic metaphors. Wen and Wu (2007) explain that within the action ICM, comprised of verbs, various semantic roles exhibit conceptual adjacency with each other, allowing for the substitution of subject-object positions by prominent semantic roles through cognitive mechanisms such as metonymy for expressive purposes. Here are some examples.

缠脚(object)——缠纱布(tool)

wrapping feet - wrapping gauze

吃饭(object)——吃馆子(premise)

eat - eat in the restaurant

打扫房间(object)——打扫卫生(result)

cleaning the room - cleaning the house (result)

Semantic role transformation arises from the interaction between adjacent role categories involving verb objects. This transformation affects verb-object constructions in two primary ways, as outlined by Zeng (2018): (1) altering the meaning of the entire verb-object structure, and (2) inducing a gradual, conservative shift in the meanings of verbs within verb-object constructions, either within a category or through interaction across categories.

### (c). *Expansion Between Adjacent Categories in Reality*

In both English and Chinese, numerous words include two opposite meanings, referred to as "fanxunci" in Chinese. Take verbs, for instance. The English verb "marry" denotes both "to enter into marriage with a woman" and "to enter into marriage with a man," while "lease" signifies both "to rent out" and "to hire." Similarly, in Chinese, the verb "jie" can signify both "to borrow" and "to lend," while "jia" can denote both "to buy" and "to sell." This phenomenon of words possessing contradictory meanings illustrates the interaction and spanning of adjacent semantic categories in real-life behaviors and events.

Wang (2005) introduced the ECM (Event-domain Cognitive Model), a cognitive analysis method proposed to address the aforementioned phenomenon (refer to Figure 1). In everyday life, an event category typically consists of two primary elements: action and entity. Actions encompass various specific sub-categories labeled A1, A2...An in the diagram, while entities encompass diverse categories such as people, objects, tools, and other entities, labeled B1, B2...Bn in the diagram. These action and entity categories within the same event are adjacent and interdependent,

capable of forming a cohesive whole through organic integration. When the same word is used to express adjacency between subcategories of actions or entities within a real event, it may exhibit two opposite meanings.

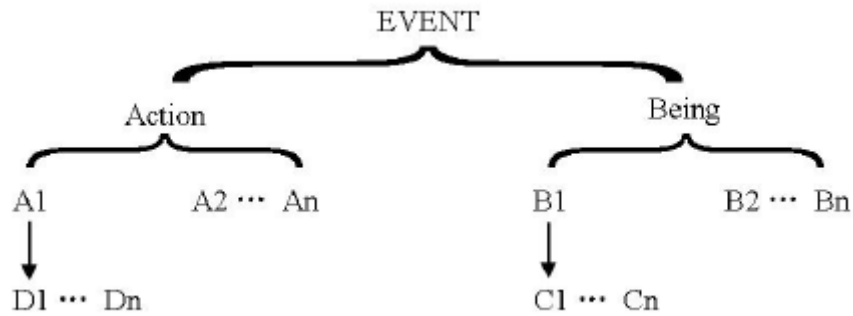


Figure 1. Basic Event Domain Wang Yin (2005)

Consider the verb "marry" as an example. The event of "marrying" comprises both an action and participants. The action of "marrying" involves a range of sub-categories such as proposing, wedding, and marrying a spouse, while the participants encompass roles like bride, groom, best man, bridesmaid, wedding accessories, and reception details. These components are closely interconnected, exhibiting both opposition and cohesion. According to the spreading activation model theory, the retrieval of lexical information relies on conventional associations; thus, mentioning one element (A) prompts a conscious linkage to another (B) due to their inherent relationship. Consequently, emphasizing "marry wife" within the event inevitably invokes its closest counterpart, "marry husband," within the behavioral context. This linguistic phenomenon, where a single word embodies the adjacency, results in the emergence of antonymous meanings within the term "marry".

An action inherently involves a commencement and conclusion, a stimulus and outcome, an agent and recipient. When a word or phrase is employed to signify this proximate relationship and emphasize it cognitively, it can result in the phenomenon of a word possessing two contradictory meanings. As demonstrated by the examples above, numerous antonymous terms, particularly verbs, often utilize the same word to denote the proximity between action or entity categories within real-world events. This underscores the interaction and spanning between adjacent categories manifested in actual actions or entities.

*B. Expansion Between Similar Categories*

The expansion across analogous categories originates from conceptual developments within distinct domain matrices. Here, the constructor leverages familiar conceptual content to describe unfamiliar or new categories of meaning. Categories encompass both physical and cognitive attributes: the former includes temporal and spatial dimensions, the physical form and color of the object, and the manner of its movement—attributes perceivable through sight, sound, or touch.

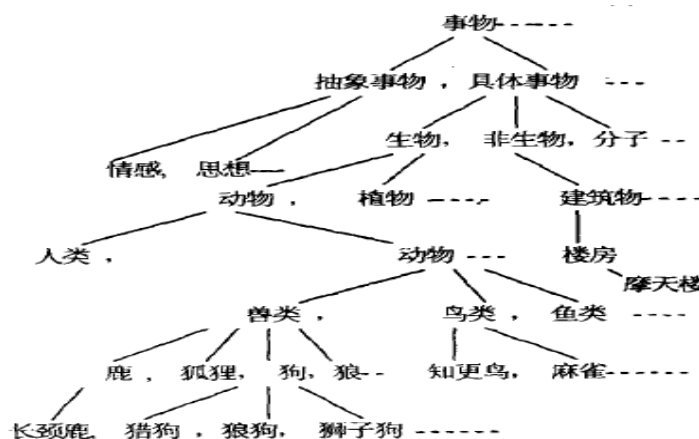


Figure 2. Genus Category Relationship (Li Zuowen & Liu Changqing, 2003)

Chesterman (1998) distinguishes between two types of similarity: "similarity-as-trigger" (p. 7), which is an objective judgment formed by a cognitive subject based on physical resemblance, and "similarity-as-attribution" (p. 7), which involves subjective attribution of similar attributes to two entities during cognitive processing. Chesterman (1998) categorizes the expansion across similar categories into two main types: (1) expansion between objectively similar categories, and (2) expansion between mentally similar categories.

(a). *Expansion Between Objective Similar Categories*

In the objective realm, categories do not exist independently but are universally interconnected. This interconnectedness is evident in both the commonalities between similar categories and the relationships between different categories. Objective similarity between categories denotes the fundamental or generic resemblance between two entities. Based on the degree of physical similarity, categories can be classified into sensory-similar and attribute-similar categories.

1. *Expansion Between Sensory Similar Categories*

A sensory-similar category denotes a tangible resemblance between two categories, characterized by perceptible similarities that can be observed visually or felt physically. Referring to Figure 2, such categories involve entities that traverse relatively few nodes in the diagram, sharing similarities in form, color, time, space, and other perceptual attributes. In ancient Chinese, there are many words and phrases describing beautiful women, such as,

(14)

a. 脸若银盘，眼似水杏，唇不点而红，眉不画而翠。(A Dream in Red Mansions, Qing Dynasty)

a. Her face is like a silver plate, eyes like big and round apricots, lips being naturally red without the need for lipstick, eyebrows shining black without penciling.

b. 芙蓉如面柳如眉，对此如何不泪垂。(Song of Everlasting Regret Qing Dynasty)

b. Finding that the hibiscus looks like Yuhuan's face and the willow her eyebrows, I cannot but shed tears.

c. 余告之曰：“其形也，翩若惊鸿，婉若游龙。”(Ode to the Goddess of the Luo River the Three Kingdoms Period)

c. I said: "Her figure is as lightsome as the flying goose and as graceful as the swimming dragon."

In Examples (14)a and (14)b, descriptions depict the appearance of a beautiful woman. In (14)a, the comparison likens the girl's face to a silver plate, emphasizing similarities in shape and color, and her eyes to apricots, focusing on their size and condition. Example (14)b compares the girl's face to a hibiscus, noting the similarity in color and temperament, and her eyebrows to willow leaves, highlighting similarities in length and shape. Example (14)c from Cao Zhi's "Ode to the Goddess of the Luo River" portrays the goddess of the Luo River whose graceful movement resembles that of a "stunning goose" and "swimming dragon," conveying a light and elegant posture. These examples illustrate intuitive similarities observable to the naked eye. Here's another example:

(15) 手如柔荑，肤如凝脂。(Shuo Ren, Wei Feng, The Book of Songs)

Hands are as tender as catkins, skin as smooth as gelatin.

Example (15) continues to depict beautiful women in ancient Chinese culture. "Catkin" refers to the initial leaf buds of a plant, likened to hands for their cleanliness and tenderness; "gelatin" denotes solidified oil, resembling skin for its whiteness and delicacy. These similarities are perceptible: Cleanliness and pure whiteness are visible. Softness and delicacy are also tangible. Such direct resemblances form the foundation for metaphorical mappings that animate a woman's beauty through her face, eyes, eyebrows, hands, complexion, and posture interacting with physical or botanical categories.

2. *Expansion Between Characteristic Similar Categories*

Characteristic similarities imply that despite apparent surface differences between two categories, they share intrinsic similarities. For instance, we employ the following example to depict a young boy.

(16) 他就是个猴崽子，鬼精!

He is a little monkey!

On the surface, a young boy appears vastly different from a little monkey, as one belongs to the human category and the other to the animal category, differing greatly in form and appearance. However, they share essential similarities: youthfulness, mischievousness, and intelligence. The metaphor draws parallels between the liveliness and cleverness of the "little boy" and emphasizes the mischievous and agile nature of the "little monkey." This metaphor is rooted in their shared characteristics.

The inherent similarity between categories, whether sensory or essential, exists naturally and requires no deliberate construction; it only needs to be highlighted within the contextual stimulus. When categories interact or spanning with objective similarity, they can enhance and amplify certain word meanings. Such dynamically constructed meanings often endure due to their widespread acceptance.

(b). *Expansion Between Psychologically Similar Categories*

Psychologically similar categories are constructed artificially, requiring cognitive effort and processing to establish similarity beyond conventional cognitive salience. These categories encompass functional, conceptual, and contingent similarities.

1. *Expansion Between Functionally Similar Categories*

A functionally similar category is intentionally imagined and constructed through cognitive effort, even when no objective similarity exists between the two categories initially.

To illustrate, consider a metaphor commonly used in English.

## (17) IDEAS ARE PLANTS.

- a. Many ideas are beginning to sprout in our mind.
- b. Those ideas are flourishing.
- c. All ideas flag because of his opposition.

"Ideas" belong to the cognitive realm, involving human thought processes, whereas "plants" are classified within the biological domain, representing actual botanical entities. Despite their distinct nature, they can be analogously linked due to functional similarities through cognitive processes and conceptual synthesis. Firstly, plants sprout from seeds; human ideas originate from the mind; both of them are a process of emergence from nothingness. Secondly, plants flourish under favorable weather or natural conditions, paralleling how supported human ideas can develop from something to something more substantive. Thirdly, adverse conditions cause plants to wither, similarly, opposing or suppressing factors can cause human ideas to fade away. This functional resemblance underpins the ability of "ideas" and "plants" to span both cognitive and material categories, facilitating the semantic extension of "ideas" from the cognitive domain to the material domain.

2. *Expansion Between Conceptually Similar Categories*

The conceptual similarity between categories is manifested primarily in two ways. Firstly, these categories are not physically similar but are rooted in our bodily experiences, translating into psychological perceptions—a more abstract form of similarity. Many directional and ontological metaphors leverage this resemblance, predominantly found in traditional metaphorical expressions. For example:

## (18) HEALTH AND LIFE ARE UP; SICKNESS AND DEATH ARE DOWN

- a. He is at the peak of health.
- b. He is in top shape.
- c. He fell ill. He is sinking fast.
- d. He came down with flu.

Health is metaphorically associated with upward movement, while sickness is linked to downward movement. These metaphors do not reflect a physical similarity in sensory or essential terms. Rather, individuals construct a conceptual link between them in their mental perceptions, which is grounded in physical experiences but appears abstract. Good health typically correlates with positive moods, leading people to stand and move more, thereby positioning their bodies and emotions in an upward direction. Conversely, sickness often accompanies negative emotions and physical discomfort, causing individuals to involuntarily stoop due to pain or confinement to bed, resulting in a downward orientation of body and emotions.

Conceptual similarity is also manifested in another aspect: individuals utilize existing words to articulate new concepts and perceived connections. Human perception involves transitioning from the general to the specific. While human thought is boundless, language is inherently limited. Drawing on the principles of linguistic economy and precision, people discern similarities among things through cognition. Simultaneously, they employ the finite symbols of language to denote diverse phenomena and complex relationships. This produces the expansion and spanning of lexical categories, therefore leading to the phenomenon of polysemy. For example:

- (19) a. He bumped into his head on the low beams.  
 b. They are still having to live on very low incomes.  
 c. She refused to promote Colin above the low rank of 'legal adviser.'  
 d. A school would not accept low-quality work from any student.  
 e. We are all very tired and morale is low.

"Low" retains its primary spatial meaning in sentence (19) a, specifically denoting a vertical dimension. From (19) b to (19) e, various abstract meanings are derived from this spatial orientation within the category of linguistic economy and conceptual similarity principles: quantity, status, level, and emotion.

3. *Expansion Between Contingently Similar Categories*

Contingent similarity describes the circumstance where two categories may or may not exhibit similarity in developmental changes. This phenomenon is particularly prevalent in novel metaphors. However, this similarity is not guaranteed to endure and may diminish as the categories evolve further or the context shifts. For example,

## (20) 你曾对我说，相逢是首歌。眼睛是春天的海，青春是绿色的河。

You once said to me that meeting is a song. The eyes are the sea of spring; the youth is a green river.

In essence, there is no inherent connection between "meeting" and "song". Yet, in poetic expression, the reunion of old friends can evoke cheerfulness. Similarly, listening to songs often brings relaxation and enjoyment. Thus, through cognitive processing, two initially disparate categories find a coincidental similarity. This accidental alignment enables interaction between previously unrelated lexical categories, imparting a sense of novelty and poetic resonance to human experience.

From the analysis of analogous categories in this section, it becomes evident that similarities between categories may either be inherent or artificially constructed. Regardless of the type of similarity-based interaction or spanning between categories, cognitive prominence is essential. Objective similarities between categories necessitate sufficient cognitive prominence, whereas psychologically similar categories demand extensive cognitive processing and construction. This

is due to the multifaceted nature of some categories, where relationships are not readily apparent, thus requiring creative thinking to discern similarities among complex phenomena.

Word meaning experiences the interaction and spanning between categories but no grammaticalization between categories. When categories share mental similarities or are adjacent, the ongoing dynamic categorization involves interaction within the same clustering model. Such interaction or spanning between adjacent and similar categories can lead to generalization and, in some cases, the gradual abstraction of word meanings.

### III. DE-CATEGORIZATION: TRANSFERRING BEYOND THE SAME CLUSTER MODEL

During category mutation, categories gradually disengage their original characteristics and undergo de-categorization, reflecting the dynamic evolution of categories. Liu and Liu (2005) point out that lexical de-categorization primarily occurs through word conversion, grammaticalization, and subjectivization processes.

#### A. Word Conversion

Word conversion is a prevalent linguistic phenomenon that exemplifies lexical de-categorization. Word conversion in both Chinese and English primarily is manifested in two ways. First, through flexible word usage, often achieved through novel metaphor or metonymy, which is transient and episodic. Second, certain words, used extensively over time, evolve into fixed multi-category terms. This phenomenon is particularly evident in the transformation of adjectives into verbs in Chinese. For example:

(21) a. 春风又绿江南岸，明月何时照我还？(Berthing the Boat to Guazhou, Song Dynasty)

The spring breeze greens the fields of the south of the Yangtze River, when will the bright moon shine on my return to my home under the Bell Mountain?

b. 高处已应闻滴血，山榴一夜几枝红。(The Complete Tang Poems, Sui-Tang dynasty Five Dynasties)

From high places one could hear the chirping of cuckoo, plenty of azaleas turned red overnight.

c. 老吾老以及人之老，幼吾幼以及人之幼。(Mencius - King Liang Hui, the Warring States Period)

Support the elders as they are your parents and raise the children as they are your own kids.

For rhetorical effect, adjectives such as "green," "red," "old," and "young," used to describe colors or age in these poems, cease to modify nouns and instead function as predicate verbs, imparting a fresh perspective to readers.

The process of converting nouns into verbs is not exclusive to Chinese. For instance,

(22) a. Did you book a seat on the plane?

b. Please hand me the book.

c. He headed for the bus stop.

Through metonymy, nouns can be transformed into verbs by emphasizing prominent features or functions, thereby using attributes of nouns to denote actions or behaviors, enhancing the vividness and novelty of our linguistic expressions. This form of lexical de-categorization, driven by rhetorical aims, may initially be incidental or temporary but, upon recognition and acceptance, becomes widely adopted and integrated into language use. In the semantic examples above, all converted words are based on abstraction and generalization of word meanings. Moreover, once converted, these words lose their original syntactic and morphological distributional features and undergo a shift in grammatical category.

Both Chinese and English exhibit numerous instances where nouns are de-categorized to acquire verbal meanings.

Word conversion represents a significant aspect of lexical de-categorization (Zeng & Wen, 2018). Most of the instances of word conversion we have listed pertain to de-categorization within the realm of lexical categories, with grammaticalization being relatively uncommon. However, certain words, particularly verbs or nouns, exhibit more distinct patterns in their conversion.

#### B. Grammaticalization

Grammaticalization is a linguistic process wherein an autonomous word evolves into a grammatical element, allowing lexical items and structures to enter a linguistic context and acquire specific grammatical functions. Once grammaticalization occurs, these elements or structures often continue to develop additional grammatical roles.

If a lexical word changes its syntactic role or its combinatory function with other words, it typically initiates lexical grammaticalization. Many function words in Chinese originate from verbs or adjectives. Verbs typically function as predicates in the "subject-verb-object" (SVO) structure to denote real actions, their typical syntactic role. When a verb transitions from a primary to a secondary status, its grammatical position becomes fixed, leading to a gradual abstraction of its meaning and eventual de-categorization from lexical to grammatical status. Therefore, changes in syntactic position play a crucial role in driving the grammaticalization of a word.

Let's consider the Chinese word "将" ("jiāng") as an example. In contemporary Chinese, "将" functions as a dynamic auxiliary or preposition, having undergone grammaticalization from its origins as a verb. Originally meaning "to carry" or "to lead," "将" has since been de-categorized: "carry" evolved into a dynamic auxiliary, while "lead" became de-categorized into the preposition "dispose".

The evolution of "将" from its verb form "carry" to a dynamic auxiliary began with its appearance in serial verb

constructions. During the Wei, Jin, Northern, and Southern Dynasties period, "将" started to be employed in serial verb constructions and commonly appeared in structures such as "verb + 将 + tendency complement," where "将" indicated the action of "carry" or "lead." Let's take a look at the following examples.

(23) a. 见一老妇，挟将飞见北斗君。(You Mi Lu)

Seeing an old woman, she carried (him/me) and flew to meet the Lord of the Big Dipper.

b. 忽有白蛇，长三尺，腾入舟中……索而将还，置诸房内。(the Collecting Record of Wang Zinian, the Eastern Jin Dynasty)

A three-foot-long white snake suddenly emerged, slithered into the boat……lingered briefly, then carried it and eventually placed it inside the room.

c. 收将白雪丽，夺尽碧云妍。(Jiang Lou Ye Yin Yuan Jiu Lv Shi Cheng San Shi Yun, Tang Dynasty)

Gathering up the pristine beauty of white snow, surpassing and absorbing the radiant charm of azure clouds.

d. 骑将猎向南山口，城南狐兔不夏有。(Wei Jie Du Chi Zhou Ma Ge, Tang Dynasty)

I ride on the steed at the end of the South Mountain Pass, hunting all the foxes and rabbits in the south of the city.

The lexical structure of the verb "将" has evolved from "carry" to a dynamic auxiliary. In this structure, the word meanings of "将" are as follows:

(24)

(a) V + “将” + tendency complement (“将”: verb, to carry)

(b) V + object + “将” (“将”: in the second verb position, the verb is weakened)

(c) V + “将” + object (“将”: indicates the situation after the action is completed and the result of the action)

(d) V1 + “将” + V2 (“将”: dynamic auxiliary)

Changes in both syntactic position and combinatory function can lead to the de-categorization of word meanings. According to Ma (2003), in modern Chinese, monosyllabic prepositions are almost invariably de-categorized from verbs. The lexical structure of “将” from the verb “lead” to a preposition indicating disposition is:

(25)

(a) lead: “将” + N1 (receive/give) + V2 (run) + N2 (premises) (“将”: verb, lead)

(b) Disposition 1: “将” + N1 (suffer/receive) + V2 (kill/send) + N2 (premises) (“将”: begin to transform to preposition)

(c) Disposition 2: “将” + N1 (suffer/receive) + V2 (kill) + N2 (compound N1) (“将”: transform to preposition)

(d) Disposition 3: “将” + N1 (suffer/suffer) + V2 (operation) + N2 (person, different N1) (“将”: preposition meaning is very clear)

(e) Disposition 4: “将” + N1 (suffer/administer) + V2 (as) + N2 (person, same as N1) (“将”: preposition meaning is very clear)

In (25)a, N1 acts as the recipient of "将" and the performer of V2; in (25)b, (25)c, and (25)d, N1 serves as the recipient of both "将" and V2. In (a) and (b), N2 denotes a place, while in (25)c, it is a compound pronoun, and in (25)d, it denotes the recipient. In (25)e, N2 denotes the same entity as N1. Despite similar syntactic positions or lexical structures, varying combinatory functions can lead to the de-categorization of word meanings.

The grammaticalization of "将" from the verb "carry" to a dynamic auxiliary, and from the verb "lead" to a dispositional preposition, illustrates that changes in syntactic position or combinatory function are pivotal in lexical decontextualization. However, grammaticalization is not instantaneous but rather a gradual process. Some words undergo de-categorization through this process, particularly synthetic ones, which may experience partial grammaticalization before full integration. Partial grammaticalization occurs during expansion between adjacent categories, whereas de-categorization is achieved through complete grammaticalization (subjectivization).

### C. Subjectivization

Language not only conveys propositional meaning but also reflects the emotions and attitudes of the speaker. The transition from objectivity to subjectivity in linguistic forms also involves the process of de-categorization. Consider the English word "while" as an example: originally a noun denoting a period of time, "while" frequently appears in constructions like "Prep./V. + a + while" or "worth + one's + while". For example,

(26) They walked on in silence for a while.

(27) Don't kill me! keep me for a show; you'll find it worth your while.

In the intermediate stage of its usage, the positioning of "while" within sentences evolves beyond its initial confinement to structures such as "Prep./V. + a + while" or "worth + one's + while". Instead, it increasingly serves to join two shorter sentences. During this phase, the word meaning of "while" undergoes grammaticalization, resulting in a gradual attenuation of its noun-like characteristics while emphasizing its role as a conjunction. As a consequence, "while" transitions from its noun form to function primarily as a conjunction, indicating simultaneous actions or events, and acquiring both linking and discourse functions in the process. The examples are as followings:

(28) While she was watching the TV, I cleaned up the floor.

(29) You were not safe while you held a lot of money.

In examples (28) and (29), "while" signifies "when ...", a transition marking its gradual reclassification as a temporal conjunction. However, even in these instances, "while" exhibits subjectivity due to strong contrasts between concurrent events. In example (28), "while" conveys dissatisfaction, whereas in (29) it suggests a slight sense of worry. Thus, "while" already displays some degree of subjectivity. In contemporary usage, "while" continues its grammatical evolution from a temporal to a concessive conjunction, now implying "however". Consequently, its textual role diminishes while its discourse function becomes prominent. For example,

(30) Most digital camera owners are male, while women prefer film.

In example (30), the speaker expresses subjective surprise at the stark contrast between two concurrent events, giving rise to a concessive meaning. This subjective interpretation by the speaker, influenced by personal experience, imbues the discourse with subjectivity. Consequently, "while" acquires an abstract concessive meaning, evolving further to exist "although", which reflects a subjective perception of the relationship between the clauses:

(31) While I can understand what you say, I can't forgive what you have done.

The subjectivization of "while" significantly influences its evolution from being categorized as a noun to functioning as both a temporal and concessive conjunction. "While" shifts from an objective to a subjective meaning, transitioning its role from a discourse function to a speech function.

A single word typically encompasses multiple senses. As illustrated in Figure 3, during the process of sense de-categorization, this typically occurs within one of the word's semantic positions. De-categorization often results in a secondary or altered sense of the word, which is generally distinct or separate from its original semantic position. However, the other semantic positions of the word retain their functionality and do not diminish with the emergence of new or altered meanings.

Word conversion, grammaticalization, and subjectivization represent distinct methods of de-categorization, yet they are interconnected processes of linguistic evolution. Among these approaches to sense de-categorization, word conversion primarily focuses on altering the sense within a lexical category. In contrast, grammaticalization and subjectivization are more radical forms of word conversion. These processes involve not only shifting lexical and grammatical categories but also signify a progression from concrete to abstract word meanings and from lexical to grammatical functions. Grammaticalization, to some extent, serves as the foundation for subjectivization, representing a deeper level of grammatical evolution and de-categorization.

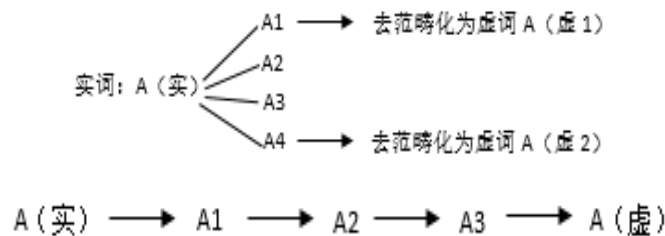


Figure 3. De-Categorization of Notional Words

#### IV. CONCLUSION

This paper explores the profound stages of word meaning evolution, specifically the interaction between word meaning categories and de-categorization, utilizing examples from both Chinese and English. Through a comprehensive analysis of numerous examples, we elucidate the specific manifestations and evolutionary principles governing the dynamic categorization of word meanings during these stages.

The interaction between word meaning categories is manifested primarily in two ways: (1) expansion between adjacent categories, and (2) expansion between similar categories. Expansion between adjacent categories involves linguistic or conceptual adjacency, as well as adjacency in reality. Linguistically, this can result in the partial grammaticalization of word meanings. Conceptually, it may abstract word meanings or even transfer or alter certain constructs. In reality, adjacency can give rise to words with contrasting meanings. Expansion of similar categories occurs through objectively or psychologically similar categories. Objectively similar categories share inherent resemblances and evolve without necessitating special constructions. However, these meanings may cease to exist when contextual factors change.

Although there is interaction and spanning of meanings between categories, it represents a form of partial de-categorization of word meaning in a strict sense. At this stage, dynamic categorization occurs within the same clustering model due to psychological similarity or adjacency between categories. Interaction and spanning between adjacent and similar categories can lead to generalization and abstraction of word meaning. De-categorization goes through three primary processes: word conversion, grammaticalization, and subjectivization. Among these, subjectivization represents the most radical form of dynamic categorization of word meaning, facilitating the evolution

of word meanings beyond the confines of the same clustering model—moving from concrete to abstract and from real to grammatical domains. Thus, word meaning categories undergo processes of gradual evolution within the category, interaction between categories, and de-categorization. The evolution of word meaning ranges from gradual changes—such as expansion or contraction (through deprivation, attenuation, generalization, or specification)—to more radical processes like partial grammaticalization, abstraction (including antonymization and polysemy), and full grammaticalization of word meanings.

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**Rong Zeng** was born in Luzhou, China in 1980. She received her Ph.D. degree in linguistics from Southwest University, China in 2018.

She currently serves as an associate professor in the School of Foreign Languages at Southwest University of Political Science and Law, located in Chongqing, China. Her research interests encompass cognitive linguistics and translation.

Dr. Zeng is a member of the Chongqing Foreign Language Association.