World Journal of Educational Research
ISSN 2375-9771 (Print) ISSN 2333-5998 (Online)
Vol. 13, No. 3, 2026
www.scholink.org/ojs/index.php/wjer

Original Paper

A Syntactic Analysis of the "X de" Construction: A Study of Word Class Licensing Mechanisms from the Perspective of Cognitive Grammar

Wang Yuzhen[1]

[1] Yanan University, Yan'an City, Shaanxi Province, China

Received: April 29, 2026 Accepted: May 22, 2026 Online Published: June 1, 2026

doi:10.22158/wjer.v13n3p43 URL: http://dx.doi.org/10.22158/wjer.v13n3p43

Abstract

The "X de" construction is a typical nominal de-construction in Modern Chinese. Nouns, verbs, and adjectives—by virtue of their respective conceptual natures as entities, processes, and properties—can provide a stable categorization base for the de-construction, thus forming legitimate referential expressions. In contrast, numerals, as pure quantity operators, and classifiers, as dependent bounding/landmark units, both lack independent conceptual autonomy and therefore cannot serve as X. This distributional difference reflects a deep selectional restriction imposed by the "X de" construction on the conceptual essence of word classes. It can be given a unified explanation in terms of the correspondence between syntactic well-formedness and conceptual autonomy.

Keywords

"X de" construction, Cognitive Grammar, base–profile, categorization, referential function

Modern Chinese lacks morphological inflections and exhibits considerable syntactic flexibility, often relying on function words to convey grammatical meanings. Among these, the de-construction is a highly frequent and grammatically crucial syntactic structure. The "X de" construction, as a nominal structure, can independently refer to things and serve as subjects, objects, and other syntactic constituents. For a long time, grammatical studies of this construction have largely focused on the nature of de—whether it is an attributive marker, a nominalization marker, a syntactic component, or a pragmatic element. In contrast, how the word-class properties of X itself affect the well-formedness of "X de" has not yet received systematic theoretical treatment.

In the IPA transcription for the structure "X de", it is written as "X"/tə/. One basic fact is that not all word classes can freely enter the "X de" construction. Nouns, verbs, adjectives, and pronouns can fill the X position, yielding well-formed expressions like /wo^{214}tə/ (mine), /xʊŋ^{35} tə/(red one). Numerals classifiers cannot occur alone in this construction, as the ill-formed /əɻ/ de show. Behind this selectional restriction there must be a unified grammatical or cognitive principle.

From the perspective of Cognitive Grammar, aiming to provide a unified explanation for the licensing and restrictions on this grammatical phenomenon.

1. Theoretical Framework

1.1 The Cognitive Essence of "X de"

Within the framework of Cognitive Grammar, the "X de" construction is fundamentally a referential construction, whose operating mechanism can be characterized in terms of the base–profile relationship. The function of de is to perform a "thing-ization" operation on a relation or property, projecting it as an abstract thing that can be referred to. This thing is the profile highlighted by the construction, while the conceptual content expressed by X serves as the base that provides the basis for categorization. Specifically:

Profile: The abstract thing that the construction ultimately highlights and refers to, i.e., the referential target of the whole "X de" expression.

Base: The conceptual domain supplied by X, which provides identifiable properties, relations, or features for that thing.

Take /xuŋ^{35} tə/-- ‘red (one)’ as an example: X, /xuŋ^{35}/-- ‘red’, provides the color property domain as the base; /tə/--thing-izes this property, so that the whole construction profiles “an entity that has the property of being red,” i.e., the profile. For /tʂ^{h}i^{55} tə/-- ‘things to eat/eater’, the X, /tʂ^{h}i^{55} / ‘eat’, provides the action process domain as the base; /tə/ extracts a participant involved in the action (prototypically the patient) and thing-izes it to constitute the profile.

Thus, the cognitive prerequisite for the well-formedness of "X de" is that X must be able to provide an autonomous conceptual content that can be used for categorization. If the conceptual nature of a word class cannot meet this condition, it cannot legitimately fill the X slot.

1.2 The Principle of Conceptual Autonomy

This paper proposes "conceptual autonomy" as the basic criterion for judging whether X can enter the "X de" construction. An element possesses conceptual autonomy if:

First, it can independently activate a complete, intelligible conceptual domain without relying on the semantic supplementation of other elements.

Second, the information contained in that conceptual domain is sufficient to support the attribution of a property or the classification of a relation for a thing.

Different word classes exhibit systematic differences in conceptual autonomy. Nouns designate an entity domain, verbs a process domain, and adjectives a property domain; all these domains have inherent completeness and autonomy. Numerals express an abstract quantity value and do not inherently relate to any entity or property; classifiers express a dependent bounding/landmark function whose conceptual content can only be understood on the basis of a noun. This difference is the cognitive source of the word-class selectional restrictions in the "X de" construction.

2. Nouns as X: The Conceptual Base of Possession and Property

When X is a noun, "X de" constitutes the most stable and most frequent type of de-construction in Modern Chinese. Nouns designate the entity domain and possess the highest degree of conceptual autonomy, providing the most solid categorization base for the de-construction.

2.1 Semantic Types

The conceptual content of a nominal X can form four types of bases:

(i) Possessive base. X refers to an entity, and de thing-izes the possessive relationship between that entity and some thing. In “/uo^{214} tə ʂu^{55}/”--‘my book’, /uo^{214}/--‘I/me’ is an independently identifiable entity that provides a definite conceptual basis for the ownership of /ʂu^{55}/‘book’; when the head noun is omitted, /uo^{214}/ de ‘mine’ profiles “things that belong to me.” This is the core semantic type of nominal "X de".

(ii) Property base. X expresses a property concept such as material, place of origin, or source, and de projects this property onto the thing. For example, /mu^{51} t^{h}ou/de --‘wooden one’, with the material domain and the place-of-origin domain as bases, respectively, refer to “things made of that material” or “things produced in that place.” Unlike the possessive base, the property base expresses a classificatory restriction rather than an ownership relation.

(iii) Spatio-temporal base. X denotes a temporal or spatial concept, and "X de" refers to an entity associated with that time or place. /tɕin^{55} t^{h}iɛn^{55}tə/--‘today’s’ and /tʂ^{h}uɑŋ^{55h}wɛi^{51}tə/-- ‘outside the window’ take the temporal domain and the spatial domain as bases to refer to “matters of today” and “things outside the window.”

(iv) Content base. X denotes an abstract domain or topic, and "X de" refers to content or properties related to that domain. /li^{51} ʂʅ^{214}/ de ‘historical ones / of history’ and /in^{55}yɛ^{51}/ de means ‘musical ones / of music’ refer to “matters pertaining to history” or “things inherent in music.”

2.2 Syntactic Functions

Nominal "X de" has two main syntactic distributions. The first is the attributive function, where it modifies a head noun to form a modifier–head construction, e.g., /xaɪ^{35}ʦʅ^{0}tə ɕiɑʊ^{51}liɛn^{214}/--‘the child’s smile’. Here, de serves as an attributive marker and X provides restrictive information about the head. The second is a nominalization function, where the head is omitted and the construction independently serves as subject or object, e.g., /uo^{214}tə^{55}tsai^{214}tʂwo^{55}ʂɑŋ/‘mine is on the table’.In this case, the whole "X de" construction has completed the shift from modifier to referential expression and becomes an independent nominal constituent.

2.3 Analysis of Conceptual Autonomy

The fundamental reason why nouns can serve as the most typical X in "X de" lies in their conceptual nature. Nouns correspond to the cognitive notion of a “thing” and possess an independent, complete, and directly activatable cognitive representation. Whether they are human-referring or object-referring, concrete or abstract, nouns occupy a stable conceptual node in the cognitive system. When they enter "X de", this conceptual node directly serves as the base, providing the categorization basis for the profiled referent. The semantics is highly stable and the least ambiguous, which is a direct syntactic reflection of the conceptual autonomy of nouns.

3. Verbs as X: Process Domain and Participant Extraction

When X is a verb, "X de" exhibits a set of semantic mechanisms that are sharply different from those of nominal "X de". Verbs designate the process domain and are inherently predicative; they cannot directly refer to things. The function of de is to extract a participant from the process domain and thing-ize it, thereby completing a functional shift from “predicating an action” to “referring to an entity.”

3.1 Referential Types and Valence Extraction

The referents of verbal "X de" are essentially participant roles in the semantic valence of the verb X. Depending on which semantic role is extracted, the following types can be distinguished:

(i) Patient extraction. This is the most common reading of verbal "X de", referring to the undergoer that the action affects or acts upon. /ʈʂ^{h}/de refers to “things that are eaten”;/mai^{51}/ de refers to “things that are bought”; yòng de refers to “things that are used.” Here de extracts the patient role from the verb’s valence structure.

(ii) Agent extraction. This refers to the entity that performs the action. /fu^{51} tsə^{35}/de refers to “people who are in charge.” In this case de extracts the agent role. It should be noted that not all verbal "X de" can freely extract an agent. Agent extraction is rather natural for one-place verbs (intransitive verbs); for two-place verbs (transitive verbs), the unmarked interpretation of "X de" preferentially extracts the patient, and the agent reading requires strong contextual support.

(iii) Instrument extraction. This refers to the instrument used to carry out the action./ɕiɛ^{214}/de can mean “the pen used for writing.” The extraction of the instrument role is also subject to the semantic selection restrictions of the verb itself: only verbs that inherently implicate a specific instrument allow a natural and highly frequent instrument reading for their "X de".

(iv) Result extraction. This refers to the product resulting from the action. /xua^{51}/ de refers to “paintings that have been painted”; /ɕiɛ^{214}/ de (in a different sense from above) refers to “the written text.” Result extraction applies only to verbs that incorporate the meaning of “creating” or “producing.”

(v) Manner extraction. This refers to the state or manner in which the action is performed. /k^{h}an^{51} tə iɑŋ^{51} tsə/-- ‘the manner of looking’ can be condensed into kàn de, meaning “the way (or expression) of looking.” Manner extraction is relatively less independent and often requires stronger contextual support.

3.2 Grammatical Meaning

The core grammatical meaning of verbal "X de" is transferred reference. Verbs are predicative; their conceptual content constitutes a process frame that includes participants, temporal progression, and a resultant state. The introduction of de extracts a particular participant profile from this process frame and makes it the referential target of the entire construction. This operation is essentially a combination of “de-processualization” and “participant highlighting.”

At the same time, verbal "X de" possesses a nominalizing meaning. With the addition of de, the whole structure acquires nominality: it can serve as subject or object and can be modified by demonstrative-classifier phrases. This indicates that "X de" has undergone a syntactic categorial shift from predicative to nominal.

Regarding referential properties, verbal "X de" is usually generic, referring to a class of things. For instance, chī de by default denotes “all things that are edible.” In specific contexts, when "X de" is modified by a demonstrative-classifier phrase or occurs in a particular syntactic position, it can shift to a definite reading; e.g., the chī de in Wǒ yào chī de ‘I want things to eat (the food available in context)’ refers to food that is available in the given situation.

3.3 Polysemy and Context-dependence

In contrast to the highly stable semantics of nominal "X de", verbal "X de" displays significant polysemy and context-dependence. The same "X de" can simultaneously accommodate patient, agent, instrument and other readings. For example, /k^han^{51}/ de can refer to “the person who looks” (agent), “the book that is read” (patient), or “the glasses used for looking” (instrument). This polysemy is not a defect; it is an inevitable consequence of the fact that the de-construction simultaneously pushes multiple potential participants in the process frame into the set of possible referents. The specific interpretation is jointly filtered by context, encyclopedic knowledge, and principles of relevance.

From the perspective of conceptual autonomy, the reason verbs can serve as X is that their semantic structure contains rich participant information and relational networks. Although verbs themselves do not directly refer to entities, they provide a valence frame from which extraction can be made. De exploits exactly this conceptual richness of the process frame to accomplish the thing-ization of a participant through a profiling operation. Therefore, the conceptual autonomy of verbs lies not in their ability to independently refer to things, but in their ability to provide a sufficiently stable and rich conceptual frame for de to operate on.

4. Adjectives as X: Direct Thing-ization of the Property Domain

When X is an adjective, adjectives designate the property domain and themselves describe a quality or state. Properties are attached to entities and cannot exist independently. However, de precisely endows a property with an independent referential status—it directly thing-izes the property, turning it into an object that can be independently referred to.

4.1 Semantic Types

The semantics of adjectival "X de" can be divided into three types, depending on the class of the adjective and the context:

(i) Property description reading. This is the core meaning of adjectival "X de". X provides a description of the property of the head noun or the referent, and the whole "X de" expresses “an entity that has property X.” For instance, /pʰiau^{51} liaŋ^{35} tə/-- ‘beautiful one’, and /tsʰuŋ^{55} miŋ^{35} tə/--‘smart one’ refer to people or things that possess the properties of beauty, and intelligence, respectively.

(ii) Classificatory and contrastive reading. When adjectives form oppositions, "X de" functions to classify and identify entities. For example, dà de ‘big one’ contrasts with xiǎo de ‘small one’, xīn de ‘new one’ with jiù de ‘old one’, and guì de ‘expensive one’ with piányi de ‘cheap one’. In this case, "X de" not only describes a property but also partitions the category of things using that property as a criterion.

(iii) Subjective evaluation reading. Some adjectives carry a clear emotional attitude of the speaker, and "X de" conveys a subjective evaluation while referring to an entity. For example, /tɕiŋ^{55} tsʰai^{214} tə/--‘splendid one’, the referential targets of these "X de" may be indeterminate, but the evaluative force is definite.

4.2 Syntactic Functions

Adjectival "X de" is syntactically highly active. The attributive function is its primary syntactic role, as in /mei^{214} li^{51} tə fəŋ^{55} tɕiŋ^{214}/--‘beautiful scenery’, where X modifies the head noun via de. In specific contexts, after the head noun is omitted, "X de" can independently function as subject or object, achieving full nominalization, as in "/xuŋ^{35} tə ɕiaŋ^{51} xuo^{214} , fən^{214} tə ɕiaŋ^{51} ɕia^{35} ,pai^{35} tə ɕiaŋ^{51} ɕyɛ^{214}/"--‘the red ones are like fire, the pink ones like rosy clouds, and the white ones like snow’. Occasionally, it can also be used as an independent utterance, as in “/ni^{214} na^{35} xuŋ^{35} tə xai^{35} ʂi^{51} ly^{51} tə/.” “/xuŋ^{35} tə/”--Which do you want? The red one or the green one?’ ‘The red one.’ Some "X de" formed from state adjectives can also directly serve as a predicate, describing the state of the subject, e.g.,/i^{55}fu^{55}ʂou^{51}ʂou^{51}tə/‘The clothes are thin’. This predicative use carries strong descriptive and colloquial flavors and represents a syntactic behavior semi-independent of the nominalizing function.

4.3 The Manifestation of Gradability in "X de"

A key feature that distinguishes adjectives from nouns and verbs is gradability. This feature is also preserved in the "X de" construction. State adjectives (e.g., the reduplicated form /kan^{55} kan^{55} tɕiŋ^{51} tɕiŋ^{51}/-- ‘spotlessly clean’, the modifier-head form /ɕyɛ^{214} pai^{35}/--‘snow-white’) inherently contain a fixed degree value; their "X de" naturally carries this intensified degree meaning, resulting in more vivid and specific semantics. Property adjectives (e.g., /xuŋ^{35}/ ‘red’, /ta^{51}/‘big’) have an open scale of degree, and the degree meaning of their "X de" is neutral, requiring degree adverbs to be specified (/xən^{214} xuŋ^{35} tə/-- ‘very red one’).

It is worth noting that because state-adjective "X de" already embeds degree information, it can no longer be modified by degree adverbs. This is a systematic combinatorial difference from property-adjective "X de" and is a projection of the sub-classification within adjectives into the de-construction.

4.4 Analysis of Conceptual Autonomy

The conceptual autonomy of adjectives lies between that of nouns and that of verbs. On the one hand, properties cannot exist independently of entities, which makes adjectives conceptually less autonomous than nouns. On the other hand, a property constitutes an inherently complete conceptual domain; people can independently understand and identify property concepts such as /kan^{55} tɕiŋ^{51}/--‘clean’ without simultaneously specifying the entity to which the property attaches. This makes adjectives conceptually more autonomous than those word classes that depend on other elements to complete conceptual integration.

It is precisely this in-between conceptual property that enables adjectives to freely enter the "X de" construction: the property domain they provide is autonomous enough to serve as a base supporting the thing-ization operation of de; and the result of this operation—independently referring to a property as a thing—exactly fills the conceptual gap that a property cannot exist independently. From a cognitive perspective, adjectival "X de" is a grammatical means by which language reifies properties, enabling humans to cognitively manipulate properties as if they were entities.

5. Numerals and Classifiers as X: Systematic Exclusion Due to Conceptual Non-autonomy

In sharp contrast to nouns, verbs, and adjectives, neither numerals nor classifiers can independently enter the "X de" construction. Forms such as /i^{55}tə/ 、/pən^{214}tə/are syntactically ill-formed and semantically uninterpretable. This exclusion is not an accidental property of individual lexical items but a systematic restriction stemming from the conceptual nature of numerals and classifiers.

5.1 Conceptual Analysis of Numerals

In Cognitive Grammar, numerals are abstract operational elements in the “quantity domain” whose function is to perform counting or measuring operations on things or processes. The core conceptual content of a numeral is an abstract quantity value, e.g., number"/i^{55}/"corresponds to the quantity value “1”. This quantity value in itself does not correspond to any entity, property, or relation.

The conceptual incompleteness of numerals is manifested in the fact that a quantity value is only conceptually complete when it is applied to an object being quantified. An isolated /san^{55}/ --‘three’ is floating in the air; it merely presents a quantity parameter without providing the category to which this parameter attaches. /san^{55}/can answer the question “how many?” but not the question “what?”. The "X de" construction requires X to supply a conceptual content that can be used to categorize a thing, yet the quantity information provided by sān cannot constitute a comprehensible categorization basis. People cannot identify or classify any thing on the basis of “three”. Therefore, /san^{55}/ de cannot receive a stable referential interpretation cognitively and is syntactically ill-formed.

5.2 Conceptual Analysis of Classifiers

The situation with classifiers is similar to that of numerals but more complex. The core function of classifiers is to provide an individuating or measuring landmark for the things referred to by nouns. Individual classifiers (e.g./pən^{214}/ , /tʰiɑʊ/, /tʂʅ^{55}/) function to partition non-countable concepts into countable individual units by grasping features such as shape and type; measure classifiers (e.g./tɕin^{55}/‘catty’, /ʂəŋ^{55}/‘liter’) provide standard scales of measurement.

No matter what kind, classifiers are conceptually dependent in nature. The conceptual content of a classifier can only be fully activated when it combines with a noun. The meaning of tiáo only becomes concrete when combined with nouns such as /y^{35}/--'fish', /ʂəŋ tsʅ/--‘rope’, or /lu^{51}/--‘road’; detached from such nouns, tiáo is merely an abstract landmark frame without independent conceptual content. This dependence prevents classifiers from independently providing a base for the de-construction. If one asks what /kə/ de really refers to, no one can give an answer. A classifier in itself does not provide a property, describe a relation, or express a process; it only provides a formal frame for counting other concepts.

5.3 Contrast and Unified Explanation

Numerals and classifiers are similar in their conceptual incompleteness, but the specific layer of deficiency differs. The problem with numerals is that they have conceptual content (the quantity value), but this content is too abstract to be directly used for the categorization of things. The problem with classifiers is that their conceptual frame requires the filling of a noun to generate an active cognitive representation; without a noun, they do not even constitute a complete conceptual unit.

This difference also explains the incompatibility between the “Numeral-Classifier-Noun” construction and the "X de" construction. /i^{55} kɤ^{51}/ can refer independently because the numeral–classifier combination itself already constitutes a complete counting operation, and its referent can be recovered from the context; but /i^{55}tə/ and /kɤ^{51} tə/are both impossible because what de requires is not a counting operation but the categorization of a property or relation. Classifiers can enhance their autonomy by combining with numerals or demonstratives (/tʂɤ^{51}kɤ^{51}/--‘this one’ can refer independently, /i^{55} kɤ^{51}/ and ‘one’ can do so as well), but they cannot gain autonomy by combining with de, because de does not provide an entity concept but merely performs a conceptual operation.

From the unified perspective of Cognitive Grammar, the fundamental reason why numerals and classifiers cannot serve as X in "X de" is that neither can provide a conceptual base usable for categorization. Numerals are pure quantity operators that encode no information about the properties or relations of things; classifiers are dependent landmarks whose conceptual frame is incomplete and must be filled by nouns. Neither meets the basic requirement of conceptual autonomy imposed by the "X de" construction; consequently, they cannot form legitimate referential constructions at the cognitive level and are systematically ill-formed at the syntactic level.

6. Conclusion

Adopting the theoretical perspective of Cognitive Grammar and using the base–profile relationship and the principle of conceptual autonomy as core analytical tools, this study has systematically investigated the behavior of five word classes—nouns, verbs, adjectives, numerals, and classifiers—in the "X de" construction. The basic conclusions can be summarized as the following three points.

First, the well-formedness of "X de" depends on the conceptual autonomy of X. "X de" is a categorizing referential construction, and X must provide a conceptual domain that can be used for attributive restriction or relational classification. This constitutes a deep selectional restriction imposed by the "X de" construction on word classes.

Second, nouns, verbs, and adjectives can enter "X de" because their respective conceptual natures—entity domain, process domain, property domain—all possess inherent autonomy and stability, thus providing an effective base for the referential operation of de. Nouns provide a possessive or property base, verbs provide a process frame to support participant extraction, and adjectives provide a property domain that can be directly thing-ized.

Reference

Croft, W. (2001). *Radical Construction Grammar: Syntactic Theory in Typological Perspective*. Oxford: Oxford University Press.

Guo, R. (2002). *A Study of Word Classes in Modern Chinese*. Beijing: The Commercial Press.

Langacker, R. W. (1987). *Foundations of Cognitive Grammar* (Vol. 1). Theoretical Prerequisites. Stanford: Stanford University Press, 1987.

Lu, J. M. (2005). *A Course in Modern Chinese Grammar Research*. Beijing: Peking University Press.

Shen, J. X. (1999). Transferred Designation and Metonymy. *Contemporary Linguistics*, *1999*(1).

Shen, J. X. (2006). *Cognitive and Chinese Grammar Studies*. Beijing: The Commercial Press.

Shen, Y. (2005). *Fifteen Lectures on General Linguistics*. Beijing: Peking University Press.

Yuan, Y. L. (2010). *A Cognitive Study of Chinese Word Classes and Fuzzy Classification*. Shanghai: Shanghai Education Press.

Zhang, B. (2010). A Descriptive Grammar of Modern Chinese. Beijing: The Commercial Press.

Zhang, B. J., & Fang, M. (1996). *Studies in Chinese Functional Grammar*. Nanchang: Jiangxi Education Press.

Zhu, D. X. (1961). On “de”. *Zhongguo Yuwen*, *1961*(12).

Zhu, D. X. (1982). *Grammar Lectures*. Beijing: The Commercial Press.