

# Lexical Diffusion and Grammaticalization: The Case of Tibetan *slob sbyong byed*<sup>1</sup>

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**Abstract** Lexicalization and grammaticalization are two of the most important processes in linguistic change (Laurel and Traugott, 2005<sup>[1]</sup>; Hopper and Traugott, 2003<sup>[2]</sup>). Spoken Standard Tibetan (SST) offers an example of both these processes applying sequentially to the phrase *slob sbyong byed*, ‘to study; to learn.’ This phrase is an instance of a full verb *byed* becoming a light verb (grammaticalization) after compounding (lexicalization). In Tibetan, three light verbs: *byed*, *rgyag* and *gtong* compete lexically. This lexical competition can be treated under the Lexical Diffusion Theory proposed by Wang (1969<sup>[3]</sup>; 1979<sup>[4]</sup>).

**Keywords** Historical Linguistics, Lexicalization, Grammaticalization, Lexical Diffusion Theory

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## 1. Grammaticalization, Analogy, and Lexical Diffusion

Grammaticalization is a process in which “lexical items and constructions come in certain linguistic contexts to serve grammatical functions and, once grammaticalized, continue to develop new grammatical functions” (Hopper & Traugott 2003, 231-3)<sup>[2]</sup>. This is usually attributed to cognitive factors, which play an important role in all changes in components of grammar. The primary cognitive motivators of change are usually said to be analogy and reanalysis (Milroy 1992:172)<sup>[5]</sup>. According to Murray (1996:252)<sup>[6]</sup>, “Analogy reflects the preference of speakers for regular patterns over irregular ones. It typically involves the extension or generalization of a regularity on the basis of the inference that if elements are alike in some respects, they should be alike in others as well.”

Another important concept in the cognitive view of lexicalization and grammaticalization is the idea of “constructions.” Bybee (2006:716)<sup>[7]</sup> defines these as “partially schematic, conventionalized sequences of

morphemes with a direct semantic representation.” Thus, grammaticalization is the creation of a new grammatical morpheme and a new construction out of an old construction.

Constructional change is usually related to frequency. An existing lexical item becomes more frequent, sometimes changes in various ways, and becomes a new construction.

According to Bybee (2006:717)<sup>[7]</sup>, constructions arise and change over time due to exemplar representations and exemplar clusters. Exemplar representations “allow specific information about instances of use to be retained in representation” and also “provide a natural way to allow frequency of use to determine the strength of exemplars.” Exemplar clusters “are organized in terms of members that are more or less central to the category, rather than in terms of categorical features.”

This leads Bybee to emphasize the effects of repetition or frequency on constructions. In her view, low repetition leads to “conventionalization only” (such as idioms), while high repetition “can lead to the establishment of a new construction with its own categories,” and extreme high frequency leads to “the grammaticization of the new construction, the creation of grammatical morphemes, and changes in constituency.”

The effects of repetition thus promote one construction changing to another through exemplar representation. But how do the representations change? This paper adopts a mechanism previous limited to phonetic and lexical change: lexical diffusion theory. Scholars have debated the Lexical Diffusion Theory from a variety of perspectives (Milroy 1992<sup>[5]</sup>, Murray 1996<sup>[6]</sup>, Bybee 2002<sup>[8]</sup>, Bybee 2010<sup>[9]</sup>, Kiparsky 2008<sup>[10]</sup>). The basic concept, as proposed by Wang (1979)<sup>[4]</sup> is that changes in sound systems proceed word by word. Labov (1981:296)<sup>[11]</sup> found that there were two types of sound change, one of which he agreed was a type of lexical diffusion. Kiparsky (2008)<sup>[10]</sup> however argued that lexical diffusion was similar to lexical analogy in ‘every respect.’ The table below (from Kiparsky 2008:4)<sup>[10]</sup> illustrates how lexical analogy and lexical diffusion are rules, generalized and spreading out item by item.

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**Table 1.** lexical analogy and lexical diffusion

	Sound change	Borrowing	Lexical analogy	Lexical diffusion
Generality	across-the-board	item by item	context by context, item by item	context by context, item by item
Gradience	gradient	quantal	quantal	quantal
Origin	endogenous	contact	endogenous	endogenous
Rate	rapid	rapid	slow	slow
Effect on:				
rule system	new rules	no change	rules generalized	rules generalized
sounds/phonemes	new inventory	peripheral	no change	no change
vocabulary	no change	new words	no change	no change

This paper focuses on the following issues:

- (i) The morphological function of the Tibetan light verb *byed*, and its use in constructions such as *slob sbyong byed* 'to study'<sup>ii</sup>.
- (ii) The historical development of *byed* from its original function as a volitional verb modulating the main predicate of a clause.
- (iii) The similarity between grammaticalisation and lexical diffusion.
- (iv) The problem of 'residue' in grammatical change.

light verb *gnan* is appended to the verb for one which lacks a lexical honorific equivalent. Since there is a strategy to mark honorific verb by adding an honorific light verb, it provides an internal motive for verb-verb compounds and construction.

Trisyllabic light verb constructions are typical verbal compounds in SST, composed of a disyllabic noun (or adjective) and a final light verb (Jäschke 1883<sup>[12]</sup>; Wolfenden 1929<sup>[19]</sup>; Goldstaid 2001<sup>[20]</sup>; Vokurková 2008<sup>[21]</sup>; Simon & Hill 2015<sup>[18]</sup>; Zhao et al. 2016<sup>[22]</sup>).

**Table 2.** Examples of light verbs

ID	Light Verb	Occurrence Number	ID	Light Verb	Occurrence Number
1	ཐུང་།	1027	2	རྒྱལ་།	569
3	ལྷ་།	134	4	བཞུག་།	111
5	ཤོད་།	109	6	བཞུག་།	84
7	ལེན་།	70	8	ལེན་།	61
9	རྒྱལ་།	49	10	བཞུག་།	46

Light verbs have evolved from volitional verbs (Jäschke 1883:50)<sup>[12]</sup>. Taking *gtong*, *byed*, and *rgyag* as examples, Table 2 above is adopted from Zhao et al. (2016:139)<sup>[22]</sup>. As the database shows that *byed* (as 1027 tokens) and *rgyag* (as 569 tokens) are the most frequently used according to the word-occurrence.

## 2. Light Verb Constructions in Tibetan

### 2.1. Light Verbs

Light verb construction is composed by two verbs, the major verb is the main semantic and grammatical vehicle and the other is minor in semantic and grammatical. The function of light verbs is to modulate the event predication of a main predicator in the clause. Different light verbs will do so in different ways and some of the semantic contributions are quite subtle. A light verb is thus sometimes described as having more 'semantic content', than auxiliary verbs. Specifically, Tibetan adds the light verb *byed* to provide an active sense (Jäschke 1883:43)<sup>[12]</sup>.

A light verb construction (Butt 1993<sup>[13]</sup>, Bickel and Nichols 2001<sup>[14]</sup>, Santos 2008<sup>[15]</sup>, Seiss 2009<sup>[16]</sup>, Butt 2010<sup>[17]</sup>) modulates a given event predication, but does not supply its own event. For example, it may provide additional information about event details such as what, who, or how the event occurs. It does not function as tense or aspect do, to situate a given event with respect to speech or reference time, but can add syntactic information, such as passive voice about an event.

Most verbs in Lhasa Tibetan are multisyllabic forms composed of a predicative noun and a light verb. Thus Simon and Hill (2015: 387-388)<sup>[18]</sup> find that honorific verbs are constructed with the honorific counterpart of the predicative noun and the honorific form of the light verb. The honorific

### 2.2. Tibetan *slob sbyong byed* as a Light Verb Construction

In SST, *slob sbyong byed* means 'to study'. There are several meanings in Tibetan for the word *slob-pa*; its primary meanings are 'to learn' or 'to teach' and its main nominal meaning is 'lesson'. The form *sbyong* also means 'to learn.' It may seem unnecessary to combine these three forms to provide a compound with a meaning which the components already express. Why combine *lob(-pa)* 'to learn/teach', plus *sbyong(-ba)* 'to learn', plus *byed (-pa)* 'to cause' to create a compound which is synonymous to both its components, *slob* and *sbyong*? But this is what Tibetan does. In the examples below, Jäschke (1881:587)<sup>[23]</sup> and Zhang (1993:2999)<sup>[24]</sup> both list 1 to 3; 4 comes from Goldstein (2001:199)<sup>[20]</sup>.

ii. For the sake of convenience, this paper adopts the Wylie transcription system for SST.

1.	<i>slob grwa</i>	‘school’, ‘school-house’, ‘school-room’	14.	<i>yo bseng byed</i>	‘to correct’
2.	<i>slob gnyer (-ba)</i>	‘student’, ‘scholar’	15.	<i>yid smon byed</i>	‘to admire’
3.	<i>slob dpon</i>	‘teacher’, ‘instructor’, ‘master’	16.	<i>lag len byed</i>	‘to practice’
4.	<i>slob sbyong byas</i>	‘to learn’	17.	<i>gshags bcon byed</i>	‘to have an operate’

Jäschke (1881:405)<sup>[23]</sup> explains the word *sbyong (-ba)* as ‘to exercise, to practice; to study’. Zhang (1993: 2026-7)<sup>[24]</sup> states that *sbyong (-ba)* is a transitive verb meaning ‘to learn, to practice, to imitate’, items 5 and 6 are from Zhang (1993: 2027)<sup>[24]</sup>. Vokurková (2008:301)<sup>[21]</sup> states *sbyong* using as a main verb also :

5.	<i>yu ge sbyong ba</i>	‘to practice to write’
6.	<i>sbe ga sbyong ba</i>	‘to practice to wrestle’
7.	<i>rgya skad sbyangs ‘dod</i>	‘want to learn Chinese’

The form *byed(-pa)* is also typically a transitive verb in Written Tibetan. According to Jäschke (1881:378)<sup>[23]</sup>, in most contexts, *byed(-pa)* means ‘To make, to fabricate, to cause, to effect.’ Inflected forms for *byed* include ‘to cause (present)’, *byas* ‘to cause (past)’ and *bya* ‘to cause (future).’

8.	<i>byed(-pa)</i>	‘1. To make, to fabricate, to cause, to effect; 2. to say, to call; 3. to go away, to disappear’
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### 2.3. Light Verb Construction

The morpheme *byed* occurs in many compounds and phrases in SST. The examples below (9-22) come from Yu (1983).<sup>[24]</sup>

9.	<i>slob sbyong byed</i>	‘to study’
10.	<i>sems khur byed</i>	‘to concern’
11.	<i>gzab gzab byed</i>	‘to be careful; carefully’
12.	<i>ngo rgol byed</i>	‘to object’
13.	<i>gra sgrig byed</i>	‘to prepare’

14.	<i>yo bseng byed</i>	‘to correct’
15.	<i>yid smon byed</i>	‘to admire’
16.	<i>lag len byed</i>	‘to practice’
17.	<i>gshags bcon byed</i>	‘to have an operate’
18.	<i>nan dah byed</i>	‘to work hard’
19.	<i>mphong chung byed</i>	‘to despise’
20.	<i>lta rtog byed</i>	‘to take care of’
21.	<i>kha rtsod byed</i>	‘to quarrel’
22.	<i>khag khag byed</i>	‘to depart’

In these examples, the first two syllables are nominal compounds which become verb phrases by adding *byed* as the last syllable. This demonstrates that *byed* is a productive morpheme, expressing an active, causative meaning (Jäschke 1883:43)<sup>[12]</sup>. It is inflected for tense, including *byed* ‘to cause (present),’ *byas* ‘to cause (past),’ and *bya* ‘to cause (future).’ The most common forms are *byed* or *byas*. Its use in tense modulation, but relative lack of lexical content mark *byed* as a typical light verb.

In fact in most of these constructs, both the first two elements are also independent verbs. For example, in *slob sbyong byed* ‘to study’, both *slob* and *sbyong* are verbs. When combined together, they still function as a verbal construction. Through lexicalization, we can see the logic behind this process.

### 2.4. From Volitional Verb to Light Verb

The use and function of *byed* in Old Tibetan (OT), however, differs from what we found above. OT *byed* is still a transitive and volitional verb, according to Li and Coblin (1996)<sup>[26]</sup>. There are several different morphological forms of *byed(-pa)* in OT:

			II, S L 14 / N L 57 VII, W L 30 / E L 29 VIII, L 22 IX, L 41.43 XII, L 2
23	<i>byed(-pa)</i>	<i>to make, to produce,</i>	
		<i>'to keep making'</i> <i>The continuing form of byed-pa</i>	II, S L 7 VII, W L 9.17.19 / E L 15 XIII, L 2
24	<i>byed byed (-pa)</i>		
		<i>'made, to be, caused to be,</i> <i>(The perfect tense of byed-pa)</i>	I, W L 8.67.69 / E L 31.70 II, E L 16 / S L 4.41.60.72.74 VI, L 56.57 VII, L 5.6.8.13.15.16.17.38.51 / E L 14 VIII, L 33 IX, L 44
25	<i>byas</i>		
		<i>to make, to cause'</i>	I, W L 20.45.46 / E L 30 VI, L 19 VII, W L 13.25.25-26 / E L 32.39 IX, L 42
26	<i>bya(-ba)</i>		

OT *byed* in example 23 is a true volitional verb because two morphological forms of the verb are found everywhere. *Byas* in example 25 is a perfect form and *bya (-ba)* in 26 is a causal or future form. *Byed-byed* (here *byed-byed-pa*) in 24 is a duplicate form with the meaning of continuing or repeating. This indicates that *byed* was a transitive verb at least from 763 A.D. ~ 822 A.D. Light verbs are typically idiomatic, frozen forms that do not have complex paradigms. Since we find *byed* has does, it was not yet a light verb in this period.

Two important steles from this period both include a full range of paradigmatic forms for *byed*: the 'XUE BEI' and the 'TANG FAN HUI MENG BEI':

Table 3. Morphological forms of *byed* in 'XUE BEI' and 'TANG FAN HUI MENG BEI'

'XUE BEI' *byed*

S7 byedbyed pa las / glo ba rings  
S14 byed(5) pa las / klu khong gis / vbal  
N57 dmav bar byedpa zhig yod na / bkavnon bla

'XUE BEI' *byas*

E16 dgu byas so ///  
S4glo ba nye bavi(1) rje blas byas pha(2)  
S60 su rgya dangthab mo chenpho byaste / bod gyis(32) g-yul  
S72 [gra]ba gta[m yun tu](39) snyand(40) par byaste / klu khong glo  
S74 ba byas so /

'XUE BEI' *bya* (no instances)

'TANG FAN HUI MENG BEI' *byed* (no instances)

'TANG FAN HUI MENG BEI' *byas*

W8 lha myi kun [gyis] shes(7) shing dpang byas(8)  
W67 gtsigs(78)vdi bzhin du ma byas(79) sam  
W69 pa la sdig cing // lan du ku dku sgyu(81) ci byaskyang  
E31 do va dag(65) gi tshe(66) // dmag stongs kyis phanthogs par byas pa dang//  
phantshun  
E70 .....byas(132)so // gtsigs khrims(133) rdo ringsla bris ...(134)

'TANG FAN HUI MENG BEI' *bya*

W20 skyid par bya ba la ni dgongs pa gcig(26)/  
W45 bya // tseng shu hywan(51) du bod dangphrad pa  
W46 yan cad ni bod kyis(52) phu dud bya ste//  
E30 dag mgulgyis(62) kyang // gnyen bavi[ch]ab(63) gangdu bya ba // thugs brel  
che nas(64)

In ‘XUE BEI’ and ‘TANG FAN HUI MENG BEI’, the function and use of *byed* is thus a full verb. Since *byed* behaves like a normal transitive verb here, there is no lexical freezing at all. We found no examples of morphological freezing or lexical synonyms. This means that the grammatical and lexical changes occurred later, sometime in the period that separates ‘XUE BEI’ and ‘TANG FAN HUI MENG BEI’ from Modern Tibetan.

### 3. Grammaticalization and Lexical Diffusion

#### 3.1. Idiomaticization and Opaqueness in Compounds

Brinton and Traugott (2005: 49)<sup>[27]</sup> found that combinations in an earlier stage may have resulted from extensive phonological reduction and semantical opaqueness, while in recent stages it may be more transparent semantically and morphologically. Since we do not see much opaqueness, these terms may be considered “idioms.”

Though it is difficult to define idiomaticization, Brinton and Traugott (2005:55)<sup>[27]</sup> mention three features:

**Table 4.** Brinton/Traugott features of idiomaticization

- (a) Semantic opacity or noncompositionality
- (b) Grammatical deficiency
- (c) Lack of substitutability

Idiomaticization is associated with routinization and simplification. Of course it is very difficult to deduce the

meaning of an idiom. Even the synonymous lexical items can never be substituted. Nor does an idiom allow the characteristic syntactic variability and meanings found in free combinations. This means that no grammatical variations are allowed, such as positive to passive, affirmative sentence to negative sentence, or topical transitions. However, the idiom itself was just frozen.

We believe that there must have been two-step process in the formation of compounds such as *slob sbyong byed*. The first is compounding, and the second is light-verb attaching. At the beginning, *slob* combined with the synonymous *sbyong* to form a compound word. This is also frequent in Chinese, for example, where phrases such as 將 + 軍 ‘an admiral’, 司 + 令 ‘a commander’, 統 + 帥 ‘a commander’, all once functioned as separate verbs, but later compounded and came to be nouns as eventually. This is similar to the case of Tibetan using the synonyms *slob sbyong* as a noun. The change of categories in compound forms is called “eccentric.” Zhang (1993: 3000)<sup>[24]</sup> provided the following two examples. *Byed-pa* in the final position of the sentences are the verb, then *slob sbyong* are the noun.

The second step is to use *byed-pa* in the final position to be a light verb. This is comparable to the formation of honorifics where the main verb honorifics add a light verb (see section 2.1, p.3-4). Just as a main construction gets honorific feature through expanding a light verb with honorifics, a main construction gets the causative feature by expanding a light verb with the causative.

Then the meanings of example 23 & 24 are somehow different from the exactly meaning of *byed-(pa)* as a real and main verb in example 8, there are the causative feature left only.

23.	ནིན་	མཚན་	ཀུན་	དུ་	སློབ་	སློབ་	ལ་	བཙོན་	འགྲུས་	བྱེད་	པ་
	nyin	mtshan	Kun	hu	slob	sbyong	la	btson	'grus	byed	pa

‘to keep studying hard day and night’

24.	དཀའ་	སྤྱད་	ཀྱིས་	སློབ་	སློབ་	བྱེད་	པ་
	dka'	spyad	Kyis	slob	sbyong	byed	pa

‘to study hard and with effort’

### 3.2. Trisyllabic Light Verb Constructions in SST

In SST, “verb - verb” compounds are frequent. They may be divided into two types, based on their function: nominals (type 1), and verbals (type 2). Instances of type 1 compounds previously mentioned include (25b) *rogs skyor byed* 'to support', and (26b) *snyeg rdeg byed* 'to hit'. Thus, *rogs* 'to be a friend' plus *skyor*, 'to support', became *rogs skyor* 'help' as in example 25a, and adding *byed* turns *rogs skyor* into a verb as in 25b.

In example 26b, *snyeg* 'to promote' plus *rdeg* 'to harm' became *snyeg rdeg* 'hit' as in 26a. This process was repeated when *byed* turned *snyeg rdeg* into a verb. Note that *gtong* has the same function as *byed*, in that it also turns *snyeg rdeg* into a verb of the same meaning, as shown in example 26c. This means that two different light verbs, *byed* in 26b, and *gtong* in 26c, perform equivalent functions and form synonymous compounds, despite their original differences.

The pairs *byed* in 26b and *gtong* in 26c, and *rgyag* in 27b and *byed* in 27c demonstrates how these three different light verbs have the same function. All three verbs: *byed*, *gtong*, *rgyag*, when occurring in the final position mark the construction as verbal with a causative sense, with no significant differences between them.

25a.	<i>rogs skyor</i>	'help'
25b.	<i>rogs skyor byed</i>	'to support'
26a.	<i>snyeg rdeg</i>	'hit'
26b.	<i>snyeg rdeg byed</i>	'to hit'
26c.	<i>snyeg rdeg gtong</i>	'to hit'
27a.	<i>kha snon</i>	'addition'
27b.	<i>kha snon rgyag</i>	'to add'
27c.	<i>kha snon byed</i>	'to add'

Examples 26bc and 27bc have the same derivational-like function, i.e., *gtong* has the same function as *byed*, and changes a nominal compound into a verb. As we see, 26a changes into 26b and 26c, and 27a changes into 27b and 27c. Examples b and c of the pairs are equal. Since this is a kind of light verb attachment, both examples 26bc and 27bc show that the three verbs, *rgyag*, *byed* and *gtong* have the same function: changing nominal forms into verbal constructions.

**Table 5.** *byed*, *rgyag* and *gtong*

བྱེད་པ་	<i>byed-pa</i>	'to make, to fabricate' or 'to cause, to effect'
རྒྱལ་པ་	<i>rgyag-pa</i>	'to throw, to cast, to fling'
གཏོང་པ་	<i>gtong-pa</i>	'to let go, to dismiss'

In Written Tibetan, *rgyag*, *byed* and *gtong* are distinct transitive verbs. According to Jäschke (1881:378)<sup>[23]</sup>, *byed-pa* means 'to make, to fabricate' or 'to cause, to effect', *rgyag-pa* means 'to throw, to cast, to fling' (1881:106) and *gtong-pa* means 'to let go, to dismiss' (1881:208).

The use of verb-verb compounds to form compounds is also common in Chinese, such as 幫 + 助 'to help', 動 + 搖 'to be faltered'. Here, the two elements combine to form a verb. We can also see the 'Noun + Noun', 'Adj. + Adj.', and even 'Hand + Modifier' forms. Take 28 for example, type 2 in Mandarin Chinese 幫助 may be structurally defined as a noun at times.

#### 28. 我給了他一點幫助

'I give him a bit of help.'

The distribution of nominal 幫助 'help' is limited; it serves as a verb under most conditions. In addition, there are many nominals compounds composed of verbal elements in Tibetan. However, they are used as a noun when combined together anyway. The pairs in 29 to 35 serve as examples:

29a.	<i>bkag sdom</i>	'forbidden'
29b.	<i>bkag sdom byed</i>	'to forbid'
30a.	<i>bkod sgig</i>	'arrangement'
30b.	<i>bkod sgrig byed</i>	'to arrange'
31a.	<i>rkun tshang</i>	'resort of thieves'
31b.	<i>rkun tshang byed</i>	'to harbor a criminal'
32a.	<i>lkog mthun</i>	'collusion'
32b.	<i>lkog mthun byed</i>	'to collude with'
33a.	<i>kun sphyod ther</i>	'rectification'
33b.	<i>kun sphyod ther byed</i>	'to rectify'
34a.	<i>krog krog</i>	'showing off'
34b.	<i>krog krog byed</i>	'to show off'
35a.	<i>diar sbyong</i>	'vegetarian diet'
35b.	<i>dkar skyong byed</i>	'to be a vegetarian'

In these examples, the a-word in pairs 29~35 is a noun; in contrast, the b-word is in each case a verb formed by attaching the light verb *byed*. All the a-words are nominal compounds, while all the b-words are verbalized phrases.

### 3.3. Grammaticalization and Verbal Synonymy

Let us discuss the grammaticalization process seen in the case of *byed*. The process of attaching a light verb marks a

phrase are verbal, or a verbal form of a noun. This is a grammatical issue.

21. *kha rtsod byed* 'to quarrel'  
 36. *ngo rgol byed* 'to object'

In example 21, we saw that *rtsod* means 'to quarrel'. However, when the two elements, *kha* 'mouth' and *rtsod* 'to quarrel' are compounded, the resulting *kha rtsod* is a nominal compound. When *byed* is compounded with *kha rtsod*, the result is again verbal phrase. This means that *kha rtsod* is more predominate rather than *rtsod*. As to as example 21, *rgol* from example 36 means 'to dispose, to object'. There is no need to mention *ngo* 'face' again. However it is used again, and the compound output is considered as a noun. Moreover, the light verb attaching of *byed* makes *ngo rgol* a verb phrase.

Most of the languages in the world use reduplication to add stress. Take South Min (a dialect of Chinese) for example, *ang21 ang24* 'redder' imply a greater degree of red than a single character and the syllable *ang24* 'red'. The most interesting thing is that they are duplicated three times in South Min, therefore *ang2 ang21 ang24* implies the greatest degree, or 'the reddest'. Of course when the reduplications are applied, tone-sandy takes place as well, just as when all two or three syllable words are combined. Examples 22, 34b and 37 are three cases of reduplication.

22. *khag khag byed* 'to depart'  
 34b. *krog krog byed* 'to show off'  
 37. *gzab gzab byed* 'to treat with much care'

Reduplication happens often in Tibetan. In the case of 22, *khag* is a noun which means 'part, division, section'. The reduplicated form *khag khag* 'distinct' is found in Zhang (1993)<sup>[24]</sup> but not in Jäschke (1881)<sup>[23]</sup>. Then the *byed* is attached to *khag khag* in the end to output a verb *khag khag byed* 'to depart'. In example 37, *gzab-pa* means 'to treat well', and originally *gzab gzab byed pa* means 'to treat somebody complaisantly'. In the compound form, the meaning becomes 'to treat with much care'.

In the case of 34b, *krog* does not appear in Jäschke (1881)<sup>[23]</sup>, but the reduplicated form *krog krog* does in Zhang (1993:40)<sup>[24]</sup> with the meaning 'have one's nose in the air'. Interestingly, it may also have another meaning: 'the sound of knocking the wood as a bird'. If a verb is needed, *gtong*, not *byed*, must be used, as in example 38 in Zhang<sup>[24]</sup>.

- 38 *sgo la krog krog gtong ba* 'to knock the door with the sound just like a bird does'

This important hint shows the distinction between *byed* and *gtong*. They are different verbs indeed, and the development of identical or some kind of merging must have taken place recently. In written Tibetan, *rgyag*, *byed* and

*gtong* are all different transitive verbs. Please review Table 5 in section 3.2.

However the development of identical or merged light verbs must have taken place recently. In particular, *byed-pa* used to be an agent which was able to set up an action, since *byed-pa* was the performer or instrument in these contexts. This is called 'the instrument case' in Jäschke (1881:378)<sup>[23]</sup> and Zhang (1993:1893)<sup>[24]</sup>. At the time, *byed-pa* was used as a case marker in the past.

Within the scope of this study, we do not see much difference between two of these three, but the processes by which these three forms were attached to form verbal compound are well worth examining.

### 3.4. From Lexical Diffusion to Grammatical Change

Grammaticalization usually refers to the change whereby lexical items and constructions to serve grammatical function and continue to develop new grammatical function, as stated in Hopper (2003). A lexical item brings much semantical meaning, while a grammatical one carries less semantical meaning but more grammatical information. However, light verbs have a dual function, both semantic and grammatical. They are more likely syntactically in which verbal features such as causative or honorific are needed to express. From this point of view, the *byed* attaching is taken to express a grammatical event.

Brinton and Traugott (2005)<sup>[27]</sup> discuss several approaches to lexicon survey. One of those is to claim individual lexical items are the language-particular representations of many components. But it is waiting for examination yet. Such as how many units there are in the lexicon, how many the combinatorial possibilities they allow, or if there are concrete and relational concepts proposed by Sapir or not.

Somehow the causative component of three light verbs *byed*, *rgyag*, and *gtong* are recognized. And there is a tendency to change all these three light verbs the same grammatical function and semantics meaning.

39. *khrel gad byed* 'to sneer at, to laugh at'  
*khrel gad rgyag*  
 40. *gad 'phyid byed* 'to clean up'  
*gad 'phyid rgyag*  
 41. *grogs po byed* 'to make friend (with)'  
*grogs po gtong*  
 42. *mngag rdzong byed* 'to dispatch'  
*mngag rdzong gtong*

Since there are no more semantical and grammatical differences in these cases, they are synonyms. Wang (1969<sup>[3]</sup>, 1979<sup>[4]</sup>) proposed a theory of lexicon diffusion. The lexicon diffusion theory argues that sound change is phonetically abrupt and lexically gradual, which is the opposite of sound change of the neogrammarian type. The main assumption of lexicon diffusion theory is that not all lexicon items are affected by a sound change at the same time. Instead, change advances gradually, item by item. Since change occurs morpheme by morpheme, item by item, or step by step, if we take a look at the middle of the change process, we find something similar to the model provided by Wang (1979:362)<sup>[4]iii</sup>.

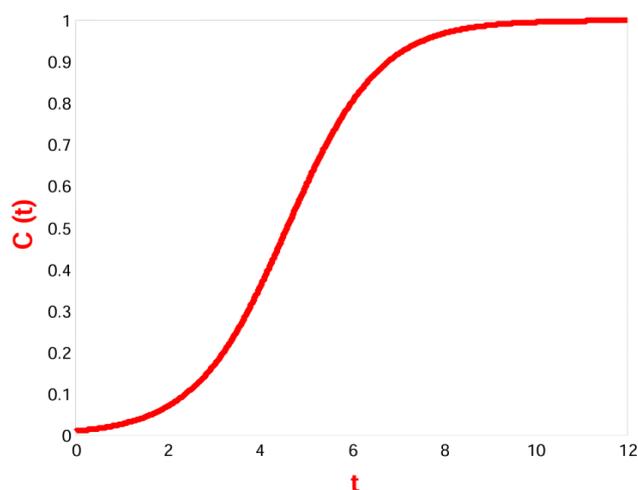
**Table 6.** The competing of unchanged variety ( $W_x$ ) and changed variety ( $\bar{W}_x$ )

Stages	u	v	c
Words			
$W_1$			$\bar{W}_1$
$W_2$		$W_2 \sim \bar{W}_2$	
$W_3$		$W_3 \sim \bar{W}_3$	
$W_4$	$W_4$		
$W_5$	$W_5$		

Table 6 is an earlier model of lexicon diffusion which illustrates all following studies; it is a paradigm. We see lexical items  $W_1$  to  $W_n$  which are processing change. In stage 1:  $W_1$  is already effected and replaced. In stage 2, the varieties  $W_2 \sim \bar{W}_2$  and  $W_3 \sim \bar{W}_3$  compete. Then, in stage 3, old varieties still exist.

Attention should be given to stage 2: the pairs of competing varieties. In this definition, the *byed* of Tibetan struggles with the others, *rgyag* and *gtong*. The three light verbs compete with others to the same grammatical function, and this is why we see the pairs of synonyms (see examples 39 ~42). Thence, the contour of competing varieties will be like Table 7 as following, because of lexicon items' analogy.

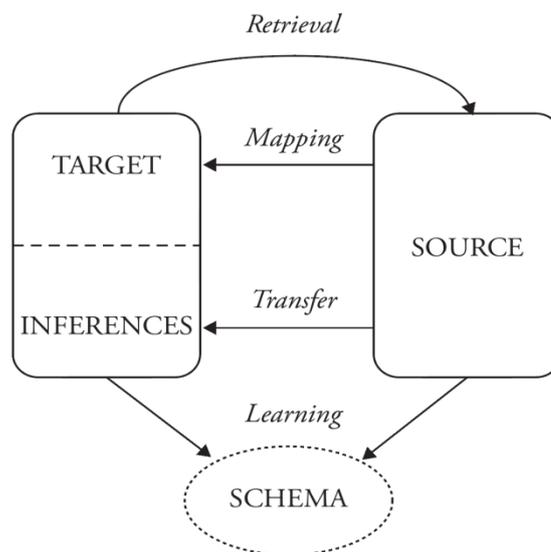
**Table 7.** Lexicon diffusion, as proposed by Wang (1969)<sup>[3]</sup>



iii. Note that all the changed varieties are underlining ( $\bar{W}_x$ ) in following discussion.

Analogy and Reanalysis are two type structure changes of language. By contrast to reanalysis, analogy is overt, and it is usually through analogy that reanalysis can be detected only (see Jäschke 1883<sup>[12]</sup>; Wolfenden 1929<sup>[19]</sup>; Goldstaid 2001<sup>[20]</sup>; Brinton and Traugott 2005<sup>[27]</sup>; Vokurková 2008<sup>[21]</sup>; Simon & Hill 2015<sup>[18]</sup>; Zhao et al. 2016<sup>[22]</sup>; Wang 1977<sup>[27]</sup>; Labov 1981<sup>[11]</sup>; Milroy 1992<sup>[5]</sup>; Murray 1996<sup>[6]</sup>; Bybee 2002<sup>[8]</sup>, 2010<sup>[9]</sup>; Kiparsky 2008<sup>[10]</sup>; Bickel and Nichols 2001<sup>[28]</sup>; Matsumoto. 2003<sup>[29]</sup>).

**Table 8.** Major components of analogical reasoning



However, analogies are often used in everyday problem solving and creative cognition. Analogy is the generalization of a structure to a better-understood one. People may use some legal precedents which base on past cases to help decide a new case. Table 8 by Holyoak (2012: 236)<sup>[30]</sup> shows that major components of analogical reasoning.

It is so-called analogical reasoning, by using a retrieval cue of known source to reason and establish a set of systematic correspondences to apply to any targets which map the relationship. Analogical reasoning explains how people create lots of constructions with which are never used and why languages are productive as well as universal.

20. *lta rtog byed* 'to take care of'

#### 4. Residue between Lexicalization and Grammaticalization

If we come back and focus on the *byed* construction as Huang (2014)<sup>[31]</sup> proposes, we notice that some of them are already verbs before adding another verb. And then after adding the *byed*, the semantics and syntactical functions do not even changed.

Such as in example 20, *lta rtog*, of *lta rtog byed* in Zhang (1993:1081) <sup>[24]</sup> is originally a verb. As Zhang shows, there are two objects which appear with *lta rtog*. The first one is

*phru gur lta rtog* 'to take care of child' and the other is *nad par lia rtog* 'to take care of patient'. And even more, the traditional Tibetan case maker LA may proceed in the environment of *lta rtog*, such as in *rgyal la lta rtog tang* 'to keep watch on something'.

When *byed* attaches to *lta rtog*, it focuses on the agent and the action of the promoter. In this way, the real semantical and syntactical function of *byed* just fades bit by bit. Then *byed* finally turns into a light verb. It is evident that this is a grammaticalization process. This following process applies to example 20 and it explains what happens.

**Table 9.** Grammaticalization process of *byed*

A + byed = B

A (Verb) + byed = B (Verb)



Ax + byed = Bx (Verb)  
[+causative]

It interested us when the example is put into this development and the theory of Brinton and Traugott (2005)<sup>[27]</sup>. Furthermore, from the scope of the lexicon diffusion proposed by Wang (1969<sup>[3]</sup>, 1979<sup>[4]</sup>) just explains the diachronic development and of *byed*, *rgyag* and *gtong*.

In the beginning, *byed*, *rgyag* and *gtong* were different full verbs. As the change occurred, *byed*, *rgyag* and *gtong* show as light verbs. Recently the development of merge into light verbs took place. Hence, the *byed*, *rgyag* and *gtong* light verbs serve as identical one in the following examples.

- |      |                         |                   |
|------|-------------------------|-------------------|
| 43a. | <i>sgul skyod rgyag</i> | 'to move, to act' |
| 43b. | <i>sgul skyod gtong</i> | 'to shake'        |
| 43c. | <i>sgul skyod byed</i>  | 'to budge'        |

In example 43, lexicons are semantically similar but they all differ with each other. *sgul skyod* with the *rgyag* means 'to move, to act' in 43a, and *sgul skyod* with the *gtong* means 'to shake' in 43b. Finally, *sgul skyod* with the *byed* means 'to budge' in 43c.

- |      |                          |                                       |
|------|--------------------------|---------------------------------------|
| 44a. | <i>rgyab bshad rgyag</i> | 'to discuss someone behind him / her' |
| 44b. | <i>rgyab bshad gtong</i> | 'to discuss someone behind him / her' |
| 44c. | <i>rgyab bshad byed</i>  | 'to discuss someone behind him / her' |

However, we see that the three light verbs have the same semantical meaning and grammatical function. The set from example 44 is the same as the set from example 43, with the *byed*, *rgyag* and *gtong* light verbs.

In Spoken Standard Tibetan, *byed*, *rgyag* and *gtong* still differ. However, once a grammatical development triggers, the *byed*, *rgyag* s and *gtonges* compete and merge to serve the same kind of grammatical function. In example 43, it is a beginning of grammatical change for *byed*, *rgyag* and *gtong* being almost synonyms, and then they finally merged to turn into to real synonyms.

**Table 10.** The merging tendency of the *byed*, *rgyag* and *gtong* light verbs in Spoken Standard Tibetan

*sgul skyod rgyag = sgul skyod gtong = sgul skyod byed ?*



*sgul skyod rgyag = sgul skyod gtong = sgul skyod byed*

## 5. Conclusions

This paper discusses two processes, lexicalization and grammaticalization. By looking at the case of *slob sbyong byed*, 'to study, to learn', the formation of *byed* is distinguished between Old / Written Tibetan and Spoken Standard Tibetan. At the first, lexical formation (compounds) involved, and then grammaticalization began. Spoken Standard Tibetan's *slob sbyong byed* 'to study, to learn' is a typical example of expanding a light verb after compounding.

In Written Tibetan originally, *slob* 'to learn, to teach' and *sbyong* 'to imitate, learn, teach' were both verbs. However, in Spoken Standard Tibetan, these two verbs have evidently been compounded, becoming a parallel compound and are used as a noun. In Tibetan, the verb *byed* has strong actor meanings of 'doing, making, engaging (vt.) and 'can do; tool; and work for' according to Zhang (1993:1893) <sup>[24]</sup>. Eventually *byed* which expresses an action, is also appended and turned into a verbal element. In Tibetan, the formative process of *slob sbyong byed* 'to learn' is quite dramatic and yet highly representative.

Dictionary-meaning, *byed*, *rgyag* and *gtong* still differ. However, once a grammatical development is triggered, the light verbs (*byed*, *rgyag* and *gtong*) begin competing and merge to form the same kind of grammatical function. In the beginning the *byed*, *rgyag* and *gtong* light verbs were near synonyms. Finally, they merged and turned to the real synonyms.

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