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Final Paper
5/16/2014

Syntactic Reanalysis and the Grammaticalization of Cantonese Coverbs

1. Introduction

The phenomenon of grammaticalization in Chinese has reportedly been observed as early as the late 13th to early 14th centuries by Yuan Dynasty scholar Zhou Boqi, who noted that *xuzi* 'empty (function) words' in the language of his time were often *shizi* 'solid (content) words' in Classical Chinese[1] (Zheng & Mai 1964, Shi 2002). The study of 'empty words' was further elaborated up through the 18th century and best exemplified by Yan Renlin's *Xuzi shuo* in 1710, which classified and documented the usage of over a hundred *xuzi*. Modern theoretical scholarship on grammaticalization in Chinese languages, however, only started relatively recently, notably by the pioneering work of Li and Thompson (1974a, 1974b, 1976) on serial verb constructions and word order change, and later by Sun Chaofen (1996) on the grammaticalization of certain verbs in the context of syntactic change.

The most common source of function words observed by these scholars and subsequent researchers on grammaticalization in Chinese languages have been overwhelmingly verbs, whose grammaticalized functions vary from prepositions to aspect markers, evidentials, valence adjusting operators, and sentential modifiers, among others. In this short paper I explore the syntactic conditions for the grammaticalization of a group of preposition/applicative-like function words in Cantonese, known as "coverbs" (Matthews & Yip 1994, Francis & Matthews 2006a, 2006b[2]). I propose that these coverbs developed from the first verb of a series of two conjoined clauses, where the two events must have been reanalyzed as one event with sub-events or sub-relations. The details of this proposal will be discussed after some key data is first presented.

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[1] The period of Classical Chinese—referring to a repertoire of written language representing Old Chinese—spans from around 5th century BCE to 2nd century CE. Modern Sinitic languages are thought to have split off during the Late Middle Chinese period, circa 1000 CE.

[2] Matthews & Yip and Francis & Matthews are hereafter referred to as M&Y and F&M, respectively.

2. Coverbs

Cantonese coverbs indicate relations between the main verb event and an extra participant, including instrument, location, and beneficiary, among others (F&M 2006a). The Cantonese coverb construction involves the surface word order of **[S V1 O1 V2 (O2)]**, where V2 is the main verb and V1 is the coverb, as illustrated in (1a-c) with the coverb phrase underlined:

(1) a. ngo [jung^{V1} baa dou^{O1}] [cit-zo^{V2} go-go daangou^{O2}] [3]
1sg use/with CL knife cut-PERF that-CL cake
'I cut that cake with a knife.'

b. nei [deoi^{V1} keoi^{O1}] [zou^{V2}-zo di matje^{O2}] aa?
2sg treat/toward 3sg do-PERF CL.PL what FP
'What (things) did you do to him?'

c. ngo [gan^{V1} Wong lousi^{O1}] [hok^{V2}-gan siutaikam^{O2}]
1sg follow/from Wong teacher learn-PROG violin
'I'm learning to play the violin from Mrs. Wong.'

The main verb phrase in (1a-c), [V2 O2] (*cit-zo go-go daangou* 'cut that cake' for (1a)), describes the main event in the sentence, whereas the coverb phrase, [V1 O1] (*jung baa dou* 'use/with a knife'), modifies the event with respect to its relation to a third argument (*baa dou* 'a knife'). The coverb construction here, which also occurs in Mandarin, has been likened to prepositional phrases. Ernst (2002), for example, calls coverb phrases "participant prepositional phrases." Some Mandarin researchers have also directly argued that coverbs are prepositions (e.g., Huang 1982, McCawley 1992, Li 1990, Zhang 1990), owing to the fact that (i) the coverb does not introduce some secondary or separate event, and (ii) the coverb object (O1) cannot be extracted, just as prepositional objects in many languages cannot. In Cantonese, as in Mandarin, extraction of O1 is impossible. In the case of Cantonese, relativization (2), topicalization (3), and passivization (4) of O1 are all ungrammatical:

[3] All Cantonese data is transcribed in the Jyutping system. The following abbreviations are used in this paper:
1,2,3 = person, ACC = accusative, ADVZR = adverbializer, BEN = benefactive, CL= classifier, COMPL = completive, DAT = dative, DUR = durative, EXP = experiential, FM = focus marker, FP = final particle, NEG = negation, NOM = nominative, PASS = passive, PERF = perfective, pl/PL = plural, POSS = possessive, PROG = progressive, REL = relativizer, sg = singular.

(2) *[ngo bong^{V1} ___$_i$ zou^{V2}-zo je]$_{RC}$ go-go jan$_i$ (relativization)
1sg help/for ___ do-PERF things that-CL person
Intended: 'The person that I did things for' (cf. (4) in F&M 2006a)

(3) *keoi$_i$, [ngo bong^{V1} ___$_i$ zou^{V2}-zo ni-di je] (topicalization)
3sg 1sg help/for ___ do-PERF this-CL.PL thing (cf. (2))
Intended: 'Him, I did these things for.'

(4) *keoi$_i$ bei ngo bong^{V1} ___$_i$ zou^{V2}-zo ni-di je (passivization)
3sg PASS 1sg help/for ___ do-PERF this-CL thing (cf. (2))
Intended: 'He was done these things for by me.'

F&M (2006a) argue, however, that coverbs should be categorized as a subclass of verbs since they exhibit several verbal properties, notably:

(5) a. Many coverbs have a counterpart function as a single-predicate verb (*as alluded to in the English glosses for V1 in (1-4), where both a verbal and a prepositional translation is provided*)
b. Verbal marking (such as aspect and modality) can appear on coverbs (V1)
c. Coverbs (V1) can be used with negation and V-not-V question formation.

3. Control verbs

Briefly ignoring (5a) for now, I have argued in Leung (2014; unpublished manuscript [my MA paper]) that situations in which (5b,c) occur are in fact reflective of a control verb function of V1 rather than a coverb function. For a counterargument of (5b), for example, in (6a,b) below the perfect marker on V2 (6a) vs. on V1 (6b) yield rather different semantic interpretations, despite the fact that they have the same basic surface structure of [S V1 O1 V2 O2]:

(6) a. ngo **bong**^{V1} keoi zou^{V2}-**<u>zo</u>** gungfo (cf. (45') in Leung 2014)
1sg **for/help** 3sg do-**PERF** homework (coverb)
'I did his homework for him.'

(#daanhai di gungfo taai naan, zou-m-saai
but CL.pl homework too difficult, do-NEG-all
'…but the homework was too difficult, I couldn't get them all done.')

b. ngo$_i$ **bong**^{V1}-**<u>zo</u>** keoi$_j$ PRO$_{*i/j}$ zou^{V2} gungfo
1sg **for/help**-**PERF** 3sg do homework (object control verb)
'I helped him do his homework.'
??? 'It was for him that I did the homework.'

(√ daanhai di gungfo taai naan, zou-m-saai
but CL.pl homework too difficult, do-NEG-all
√ '...but the homework was too difficult, he couldn't get them all done.')

Note that the (6a) coverbal reading cannot be interpreted for (6b) either (indicated with ???), given that, as seen in the parenthesized text, one can cancel the entailment that the homework has been completed in (6b), but not in (6a). That is, the perfect marker *zo* renders the verb it marks telic, and therefore if the verbal marker attached to V1 in (6b) actually still applied to V2 *zou* 'do' as the main verb, then one should expect the parenthetical addition to be contradictory, contrary to the fact. Thus in (6b), V1 must be the main verb in—which I argue to be a control verb requiring a clausal complement. The same analysis can be applied to the supposed verbal property (5c) of coverbs; I defer to Leung (2014) for specific data and further arguments in this regard in order to avoid veering too far away from the purpose of this paper, but will reiterate that the thrust of the argument is that when V1 exhibits verb-like properties, it is a control verb, but when it doesn't, it may be interpreted as either a coverb or control verb, despite the two functions sharing the same basic surface word order of [S V1 O1 V2 (O2)].

4. Coverbs and their single-predicate verb and control verb counterparts

Having shown at least one example of a coverb that has a control verb counterpart, we may return to (5a) where F&M (2006a) note that many coverbs can also be used as a verb in a single-predicate sentence. Not all coverbs have a single-predicate verbal counterpart, however, or a control verb counterpart. Table (7) below lists some of the most common coverbs (gathered from M&Y 1994 and F&M 2006a in particular), along with their single-predicate verb and control verb counterparts (or lack thereof) that I have observed (cf. (57) in Leung 2014):

(7)	**Coverb meaning**	**Single-predicate verb meaning**	**Control verb meaning**
a. *ging*	via (usually physical movement)	(in compound *ginggwo*: to traverse, pass by/through)	NONE
b. *jau*	from (physical origin)	NONE (ARCHAIC[4]: to come from, originate)	NONE
c. *bong*	for (the benefit of, in place of) (benefactive)	to help	to help someone do something
d. *gan*	with, from, following	to follow	the follow somebody doing something
e. *pui*	with, accompanying	to accompany	to accompany somebody doing something
f. *tung*	with (comitative)	NONE (ARCHAIC: to gather/be together)	to be with somebody doing something
g. *deoi*	to, towards	to face (with manner adverb or secondary predicate: to treat somebody a certain way)	to do something to somebody
h. *doi*	in place of	to replace, represent (but usually in compound *doi-tai,* see *tai* below)	to substitute/ represent somebody in doing something
i. *hai*	at/in/on, etc.	to be at/in/on	to be in/at/on a location doing something
j. *hoeng*	toward	NONE (ARCHAIC: to face toward)	to face a certain direction doing something
k. *jung*	with (instrumental)	to use	to use something doing something
l. *tai*	in place of	to substitute (but usually in compound *doi-tai,* see *doi* above)	to substitute somebody in doing something
m. *wai*	for the sake of	NONE (ARCHAIC: to do; to act/serve as)	to do something for the sake of someone
n. *wan*	with (instrumental)	to look for	to get something/somebody to do something
o. *ziu*	according to, following	NONE (ARCHAIC: to shine)	to do something according to something

[4] Archaic verbal meanings are obtained from the historical Kangxi Dictionary (Zhang & Chen 1716).

In most cases, a semantic relationship between the single-predicate verbal meanings and the coverb meanings is intuitively obvious. For example, the action of helping (7c. *bong*) entails that the person being helped is benefitted, hence the beneficial coverbal meaning. Using (7k. *jung*) something for another activity also readily entails that the object being used is an instrument. On the other hand, the semantic shift from "to shine" (7o. *ziu*) to coverbal "according to" seems to be more of a leap, though it is conceivable that illumination showing a physical path for movement can be metaphorically extended to indicate a guide for some action.

As mentioned above, however, not all coverbs have a synchronic single-predicate verbal counterpart (7b,f,j,m,o). In this regard, the forms seen in (7) can be divided into three categories:

(8)

No single-predicate verbal function	**'Restricted' or non-canonical use as a single-predicate verb**	**Has single-predicate verbal function**
hoeng, jau, tung, wai, ziu	*deoi, doi, ging, tai*	*bong, gan, hai, jung, pui, wan*

The 'restricted' category in the middle column requires a little explanation. For *doi* 'replace/in place of' (7h), *ging* 'via' (7a), and *tai* 'substitute/in place of' (7l), they either cannot or are marginally used as single-predicate verbs, unless they are in lexicalized compounds: *doitai* 'to replace, to substitute' for *doi* and *tai* (essentially a compound of the two), and *ginggwo*[5] 'to traverse, to pass by/through' for *ging*. For *deoi*, as a single-predicate verb it simply means 'to face', but as a verb requiring a secondary predicate or manner adverb it means 'to treat (someone a certain way)'; one can imagine the latter use being metaphorically extended from the former.

The 15 forms surveyed in (7) are more or less evenly divided between the three categories in (8), suggesting that each form has a different history of grammaticalization. That is, while all seem to have developed a coverb function, some have maintained a single-predicate verb function while others have lost or may be in the process of losing their single-predicate verb function.

[5] The earliest record of *ging* refers to the fiber/thread with which one wove fabric, and *gwo* as a verb means 'to cross.'

With regards to control verb functions, on the other hand (last column in (7)), only two forms—*ging* 'via' and *jau* 'from'—lack them. The single-predicate verb functions for these two are also missing (unless in compound *ginggwo* for *ging*). The coverb functions for *ging* and *jau* are arguably categorically different from the other coverbs in that they only denote path, and at least *jau* is known to be one of the oldest coverbs in Chinese, whose coverbal/prepositional use, 'from', already dates back to the earliest records of Classical Chinese (see Rouzer 2007, for example) . If we look at the three different functions across the 15 forms and their meanings, we see that the control verb meaning is in some cases closer to the single-predicate verb meaning and in others closer to the coverb meaning.

A clear example of the former was already partially illustrated in (6) with *bong* (7c). The single-predicate and control verb meanings of *bong* are both essentially 'to help'; the only difference between the two is that one takes an additional clausal complement describing the activity that is helped. The benefactive coverbal meaning of *bong*, however, may be used in a sentence where no actual helping is involved (although the event might be construed as being helpful in some way to a third party, the action of the main verb is not assistance).

A clear case of the coverb and control verb meanings being more closely related to each other (than either is to the single-predicate verb meaning) is *wai* (7m), with the coverb meaning of 'for sake of' and the control verb meaning of 'to do something for the sake of someone', and where no single-predicate verbal function exists synchronically. The other two forms with this same situation are comitative *tung* 'with / to be with somebody doing something' (7f) and *ziu* 'according to / to do something according to something' (7o).

5. Grammaticalization

If we are to suggest that the three different functions are a case of polygrammaticalization, at least three major pathways seem possible:

(9) a. single-predicate verb > control verb > coverb
b. single-predicate verb > coverb > control verb
c. single-predicate verb > coverb, control verb

Paths (9a,b) are both linear, while in (9c) one function is the source of both new functions. It is also very possible that not all 15 forms followed the same pathways. Regardless, there should be little controversy in claiming the single-predicate verbal function to be the source for the other two. I suggest that the syntactic environment of the source to be a biclausal sentence where the single-predicate verb is in the first clause of [S V1 O1], and [V2 (O2)] is a second clause with a dropped or implicit subject coindexed with S (or O1 or both for the object and split control developments, explained later), and there may also have been a conjunction between the two clauses at an earlier stage. The growing optional use of the conjunction *er* in Classical Chinese, for example, has been quite convincingly illustrated to be the source of the V1-$V2_{resultative}$ compound found in modern Chinese languages, where the two verbs were originally separated by the conjunction (Shi 2002). The difference, in this case, is there is an intervening O1 between the two verbs. Interestingly, the conjunction *er—ji* in Modern Cantonese—in fact survives today and can still be found in expressions involving *wai* 'for the sake of; do something for the sake of someone' (7m), for example. This usage is considered somewhat archaic and bookish but nonetheless exists synchronically:

(10) keoi wai^{V1}-zo ngo (ji) sei^{V2}
3sg do_for_sake_of-PERF 1sg CONJ die
'He died for my sake.'

The omission of the conjunction in (10) is also possible. If the omission of the conjunction is what leads to reanalysis of V1 and of the syntactic structure, then it seems that the progression from a single-predicate verb in a sentence with conjoined clauses, to a control verb with a clausal complement, is a reasonable state of affairs. Using Barðdal's (2014) Construction Grammar–inspired model (based on Sandal 2011: 82), I characterize this change from single-predicate verb to control verb as follows, using sentence (10) as example:

(11) Single-predicate verb > control verb (V1)

Semantics	Action 1 (Relation) Action 2	<agent patient> <experiencer>
e.g.	*wai…* (*ji*) *sei…*	<Person1 Person2> ('and') <Person1>
Syntax	V1 (CONJ) V2	subject$_i$ object pro$_i$

↓

Semantics	Action 1 (- Action 2)	<agent patient <experiencer>>
e.g.	*wai … (sei…)*	<Person1 Person2 <Person1>>
Syntax	V1 (- V2)	subject$_i$ object PRO$_i$

The second clause headed by V2 is essentially reanalyzed as an argument of V1, with the gradual disuse of the conjunction facilitating the reanalysis. Note that pre-reanalysis, pro-drop is assumed in the second clause, whereas post-reanalysis, a silent base-generated PRO is assumed in its place. We can visualize (11) in another way below, in (12):

(12) [S$_i$ V1 O1] (*ji*) [pro$_i$ V2] → [S$_i$ V1 O1 [PRO$_i$ V2]]
V1(agent, patient) + V2 (experiencer) → V1(agent, patient, event^{V2})

Previously the single-predicate V1 selected two arguments only; in the reanalyzed control verb function, it selects three arguments, the additional one being clausal. Note that PRO is not necessarily always coindexed with the subject of V1, however. While *wai* has a subject control function, *bong* 'to help someone do something' is object control (as we saw in (6b)), and *pui* 'to accompany somebody doing something' and *tung* 'to be with somebody doing something' are split control (subject + object control). Sentence (13) illustrates the split control usage of *tung*:

(13) [ngo$_i$]$_{SUBJ}$ tung^{V1}-zo [keoi$_j$]$_{OBJ}$ [PRO$_{i+j}$ heoi^{V2} Feizau]$_{EVENT}$ (split control V1)
1sg with-PERF 3sg go Africa
'I went to Africa with him.'
(more literally, 'I was with him going to Africa.')

The fact that PRO may be coindexed with the object instead of or in addition to the subject of V1 poses a problem for a relatively straightforward hypothesized change between a coverb function and a control verb function, especially for *bong* (7c), *pui* (7e), and *tung* (7f). The reason is that the coverb structure is monoclausal where V2 is the main (and only) verb, versus the control verb structure which is biclausal and V1 is the main verb. If grammaticalization progressed from coverb to control verb, the addition of an extra participant (PRO) not identical to the subject, *plus* the switch of the main verb from V2 to the preposition-like V1, seems to be too many steps all at once. The reverse scenario, where the coverb function came from the control verb function, would also take (the reverse case of) these two steps at the very least. For one, in the control verb construction, reanalyzing V2—which is in the subordinate clause—as a matrix verb seems somewhat unlikely as a matter of inference. I therefore suggest that the most likely route of grammaticalization of coverbs is from single-predicate verbs (alongside single-predicate verb > control verb). Using sentence (14) as an example, a model for this change would look like (15) and (16):

(14) a. ngo bong^{V1} keoi$_i$, (pro$_i$) zou^{V2} gungfo (cf. (6a))
1sg help 3sg do homework (note: hypothesized source)
'I help him. He does homework.' (V1 = single predicate verb)

b. ngo bong^{V1} keoi zou^{V2} gungfo
1sg BEN 3sg do homework
'I did his homework for him.' (V1 = coverb)

(15) Single-predicate verb > coverb (V1)

Semantics	Action 1 Action 2	<agent patient> <agent patient>
e.g.	*bong…* *zou…*	<helper helpee> <doer doee>
Syntax	V1 V2	subject object 1_i pro_i object 2

↓

Semantics	Action 2 (extra participant relation)	<agent	patient>	benefactee
e.g.	*zou … (bong…)*	<doer	doee>	benefactee
Syntax	V2 (- V1)	subject	direct object 2	oblique object 1

(16) [S V1 $O1_i$] [pro_i V2 O2]
→ [S_i V1 O1] [pro_i V2 O2] *(binding of pro switches from O1 to S)*
→ [S [V1 O1]$_{adjunct}$ V2 O1]

V1(agent^1, patient^1) + V2 (agent^2, patient^2)
→ V1(agent^1, patient^1) + V2 (agent^1, patient^2) *(V2 agent now = V1 agent)*
→ V2(agent^1, patient^2) + patient^1

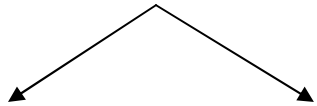
Since *pro* is silent, loss of interpretation that the subject of V2 (*bong* in this example) is O1, and reanalysis of the subject of V2 as being the same as that of V1 (illustrated in the intermediate step in (16)), are both plausible courses of events. Subsequent reanalysis of V1 as an event-modifier of V2—that of the function of relating an extra participant—becomes possible as a result as well.

From a semantic point of view of *the syntax*, the two grammaticalization processes of *single-predicate verb (biclausal) construction > coverb construction* and *single-predicate verb (biclausal) construction > control verb construction* would be figuratively two sides of the same coin. In the former, [V1 O1] is reanalyzed as a modifier of V2, whereas in the latter [V2 O2] is reanalyzed as a modifier of V1. Both result from the collapse of two juxtaposed clauses, or two events, into one matrix clause/event. It is also the syntactic reanalysis which facilitates the semantic change from the lexical verb to coverb and to control verb (although the control verb

differs primarily only in increased valency). To summarize, I am suggesting a syntactically-motivated polygrammaticalization of the single-predicate verb in biclausal sentences below, as an instantiation and elaboration of (9c):

(17)

[S V1 O1] [*pro* V2 O2]
(**V1** (and V2) **= single-predicate verb**)



[S [V1 O1]$_{adjunct}$ V2 O2]	[S V1 O1 [PRO V2 O2]$_{clausal\ argument\ of\ V1}$]
(**V1 = coverb**	(**V1 = control verb**
V2 = main verb)	V2 = embedded verb)

6. Final Remarks

What I have proposed so far—although preliminary and in crucial need of supporting data from a diachronic corpus—is at least a first step and may act as a null hypothesis with which to sort out the historical facts and conditions of these (co)verbs and the syntactic constructions in which they are found. Also missing here is an theory of the probable pragmatic inferences that may have led to the actual semantic changes from verb > coverb, not just the syntactic changes.

As alluded to earlier, not all coverb and control verb functions may necessarily have followed the same respective paths proposed. The differences between the 15 forms in (7)—with regards to the synchronic presence/absence of a single-predicate function and to the different types of control verb functions (i.e., subject vs. object vs. split control)—speak to the non-homogeneity of these (co)verbs as lexical categories. What they do have in common, however, is the syntactic structures from which the different functions arise. That is not to say that the lexical categorization of the three different (co)verbal functions is unwarranted. Rather, it is to say that the syntactic structures in a sense share "more weight" in the semantic interpretation of these (co)verbs than is merely given by their individual lexical semantics, and play a more vital role in Chinese grammar than some less isolating languages may. In the absence of phonological reduction (as grammaticalized function words in many languages undergo, especially in less isolating languages), syntactic parsing becomes more crucial to the content-vs.-function

interpretations of the (co)verbs in question. As we saw in the differential coverb and control verb readings (if my analysis is correct), similar surface structures can be deceiving and must not be taken for granted to represent the same underlying structure or meaning. In other words, syntactic change may be a more prominent driver of general grammatical change in isolating languages. This may be expected given the greater reliance on syntactic structure (in the absence of morphology, for example) for processing and interpretation.

References

Barðdal, Jóhanna. 2014 (to appear). 'Syntax and syntactic reconstruction' in Bowern, Claire & Bethwyn Evans (Eds.), *The Routledge Handbook of Historical Linguistics*, Routledge.

Ernst, Thomas. 2002. *The Syntax of Adjuncts.* Cambridge University Press.

Francis, Elaine J. and Stephen Matthews. 2006a. 'Categoriality and Object Extraction in Cantonese Serial Verb Constructions', *Natural Language & Linguistic Theory* **24**, 751-801.

Francis, Elaine J. and Stephen Matthews. 2006b. 'On Serial Verb Constructions in Cantonese.' In Aikhenvald, Alexandra Y. and R.M.W. Dixon (Eds), *Serial Verb Constructions: A Cross-Linguistic Typology,* 69-86, Oxford University Press.

Huang, C.T. James. 1982. *Logical Relations in Chinese and the Theory of Grammar,* Ph.D. dissertation, MIT.

Leung, Herman H. 2014. 'Cantonese Coverbs: A Syntactic Reanalysis.' MA qualifying paper, University of California, Berkeley. (Unpublished manuscript.)

Li, Charles and Sandra A. Thompson. 1974a. 'Historical change of word order: a case study of Chinese and its implications,' in Anderson, John M. & Charles Jones (Eds), *Historical linguistics 1: Syntax, Morphology, Internal and Comparative Reconstruction,* 200-217, John Benjamins.

Li, Charles and Sandra A. Thompson. 1974b. 'An explanation of word order change SVO > SOV. *Foundations of Language* **12.2**, 201-214.

Li, Charles and Sandra A. Thompson. 1976. 'Development of the causative in Mandarin Chinese: interaction of diachronic process in syntax,' in Shibatani, Masayashi (Ed.), *The Grammar of Causative Constructions (Syntax and Semantics Vol. 6)*, 477-492, New York: Academic Press.

Li, Yen-hui Audrey. 1990. *Order and Constituency in Mandarin Chinese.* Dordrecht: Kluwer.

McCawley, James D. 1992. 'Justifying Part-of-speech Assignments in Mandarin Chinese,' *Journal of Chinese Linguistics* **20**: 213-245.

Matthews, Stephen and Virginia Yip. 1994. *Cantonese: A Comprehensive Grammar.* Routledge.

Rouzer, Paul. 2007. *A New Practical Primer of Literary Chinese.* Harvard East Asian Monographs (Book 276). Cambridge, MA: Harvard University Asia Center.

Sandal, Catrine. 2011. *Akkusative subject og antikausativitet i norrønt* [Accusative Subject and Anticausativity in Old Norse]. MA Thesis, University of Bergen.

Shi, Yuzhi. 2002. *The Establishment of Modern Chinese Grammar: The formation of the resultative construction and its effects.* John Benjamins.

Sun, Chaofen. 1996. *Word-order Change and Grammaticalization in the History of Chinese*. Stanford University Press.

Van Urk, Coppe. 2013. 'Visser's Generalizations: The Syntax of Control and the Passive,' *Linguistic Inquiry **44**.1*, 168-178.

Xu, Dan. 2006. *Typological Change in Chinese Syntax*. Oxford University Press.

Yan, Renlin. 1710. *Xuzi shuo* [Treatise on functional words].

Zhang, Shi. 1990. 'Correlations Between the Double Object Construction and Preposition Stranding,' *Linguistic Inquiry* **21**, 312-316.

Zhang, Yushu and Tingjing Chen (Eds). 1716. 康熙字典 [*Kangxi Dictionary*]. Japan: Tongwen Bookstore version.

Zheng, Dian and Mai Meiqiao. 1964. *Guhanyu yufaxue ziliao huibian* [A collection of materials on Old Chinese grammar]. Beijing: Zhonghua shuju.