

In: *Sixth North American Conference on Chinese Linguistics. NACCL-6*. Edited by Jose Camacho and Lina Choueiri. 1995. Los Angeles: Graduate Students in Linguistics (GSIL), USC. Volume II. Pp. 49-74.

(Note: Pagination may not match the original publication due to reformatting, etc.)

## **FROM NOUNS TO VERBS: VERBALIZATION IN CHINESE DIALECTS AND EAST ASIAN LANGUAGES\***

Marjorie K.M. Chan and James H-Y. Tai  
The Ohio State University

### **1. INTRODUCTION**

The central objective of this paper is to investigate how nouns denoting concrete objects can surface as transitive verbs in East Asian languages. Our motivation for embarking on this project lies in our desire to understand better the nature of symbolization in human language. The conventional and dominant view of linguistic symbolization holds that grammar is an arbitrary, autonomous, self-contained formal system that humans use to interpret and communicate about the real world. If the conventional view is valid, we should expect that nouns denoting concrete objects can freely surface as verbs denoting actions. Modern English, with an abundance of denominal verbs (Clark and Clark 1979), appears to fulfill this expectation fairly well. In contrast, East Asian languages – Chinese, Japanese, and Korean – show a paucity of such cases, suggesting that the grammar of human language is neither entirely arbitrary nor entirely autonomous. Rather, it seems that grammar can be shaped and constrained by the structure of the physical world as perceived by human beings. Therefore, the relative paucity of denominal verbs in East Asian languages provides an interesting realm of inquiry to determine to what extent, and in what ways, the grammar of a language can reflect humans' conceptualization of the physical world.

In this paper, we focus on three Chinese dialects that we have familiarity with – namely, Mandarin, Cantonese, and Taiwanese – and give a more limited discussion on Japanese and Korean for comparative purposes. To restrict the scope of the investigation, excluded are the *hua*-suffixation in Chinese, the *suru* construction in Japanese, and the *hata* construction in Korean. The main reason for exclusion is that these constructions

are distinct from the rest of the indigenous verbal system in these languages. Typically, they are verbal expressions borrowed from, or are influenced by, foreign ones. For example, 機械化 *jixiehua* 'to mechanize' from 機械 *jixie* 'machine' in Chinese is patterned after the *-ize* suffixation in English; *denwa o suru* 'to telephone' (*denwa* 'telephone') in Japanese uses the *suru* construction, which creates verbal expressions from nouns denoting concepts borrowed from foreign sources (originally Chinese and later extended to Western civilizations); *mangchi-cil hata* 'to hammer' (*mangchi* 'a hammer') in Korean uses the *hata* construction to build a verbal expression not indigenous to the language. Although these constructions are excluded here, nevertheless they constitute an important part of verbalization in these languages and merit a separate, full treatment in the future.

## 2. CRITERIA FOR DENOMINAL VERBS IN CHINESE

For the purpose of this study, we have laid out the following set of criteria to delimit the range of denominal verbs to investigate.

1. The verbs have corresponding nouns that are homophonous (or nearly homophonous). These verbs are treated as derivable from their corresponding nouns through the process of conversion or zero derivation (cf. Lyons (1977, 523) and Sanders (1988)). This does not necessarily mean that all such verbs are, in fact, historically derived from their corresponding source nouns. We are using this derivational process as a way of relating these noun-verb pairs and as a heuristic principle to identify putative denominal verbs in Chinese. The present approach is no different from most synchronic studies of modern English morphology.[1]

2. The corresponding noun, treated here as the source noun, must refer to palpable (i.e., visible or tangible) entities (e.g., English: water/to water, bottle/to bottle).

3. The activity denoted by the denominal verb must involve the use of the object denoted by the source noun in a non-metaphorical, concrete sense. Thus, excluded are such words as: 本 *ben*, which means 'root (of a plant)', with the extended meaning of 'to be based upon'; 帶 *dai* 'girdle, belt', extended to mean 'to carry, to bring'; 跟 *gen* 'heel', extended to mean 'to follow'; and 油條 *youtiao* 'deep-fried twisted dough sticks', extended metaphorically to mean 'to be slick'.

4. The denominal verb and the source noun must have identical form, except for

difference in tone, and in some rare cases, aspiration or vowel quality. Furthermore, the denominal verb must be monosyllabic. Excluded, therefore, are such verb compounds as

目送 *musong* 'to gaze after' involving the noun 目 *mu* 'eye', and 齒及 *chiji* 'to mention' involving the noun, 齒 *chi* 'tooth'. While the denominal verb must be monosyllabic, the source noun may be monosyllabic and identical with the verb (e.g. 冰 *bing* 'to ice' / 冰 *bing* 'ice'), or it may be suffixed (e.g., 鋸 *ju* 'to saw' / 鋸子 *juzi* 'a saw'), or it may serve as the head of a nominal compound (e.g., 銬 *kao* in 手銬 *shoukao* 'handcuff', 門 *shuan* in 門門 *menshuan* 'door latch').

### 3. MANDARIN CASE

#### 3.1. Corpus

Based on the criteria in section 2 above, we have identified the following four lists of putative denominal verbs in Mandarin, with their corresponding source nouns. The data in Lists A through D are transcribed using Pinyin romanization. List A below consists of homophonous noun-verb pairs.

#### A. HOMOPHONOUS NOUN-VERB PAIRS

	NOUN		VERB
1.	磅 <i>bang</i> <sup>4</sup> 'a scale (that weighs in avoirdupois)' (from 磅 'pound (lb.)' (Eng.))		磅 <i>bang</i> <sup>4</sup> 'to weigh'
2.	包 <i>bao</i> <sup>1</sup> 'a pack, package'		包 <i>bao</i> <sup>1</sup> 'to pack/wrap up'
3.	鉋 <i>bao</i> <sup>4</sup> 'a plane'		鉋 <i>bao</i> <sup>4</sup> 'to plane (wood)' (包)
4.	抱 <i>bao</i> <sup>4</sup> 'an armful (of s.t.)'[2]		抱 <i>bao</i> <sup>4</sup> 'to embrace'
5.	鞍 <i>bei</i> <sup>4</sup> 'a saddle'		[ ]* <i>bei</i> <sup>4</sup> 'to saddle and bridle' (* 革 radical + 背)
6.	鑿 <i>ben</i> <sup>1</sup> 'an adze'		鑿 <i>ben</i> <sup>1</sup> 'to adze'
7.	畚 <i>ben</i> <sup>3</sup> 'a scoop'		畚 <i>ben</i> <sup>3</sup> 'to scoop'
8.	鞭 <i>bian</i> <sup>1</sup> 'a whip'		鞭 <i>bian</i> <sup>1</sup> 'to whip'
9.	濱 <i>bin</i> <sup>1</sup> 'bank, shore'		濱 <i>bin</i> <sup>1</sup> 'to border on (sea)'
10.	冰 <i>bing</i> <sup>1</sup> 'ice'		冰 <i>bing</i> <sup>1</sup> 'to put on ice, freeze'

## A. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

	NOUN		VERB
11.	擦 ca <sup>1</sup> 'a brush, eraser'	擦	ca <sup>1</sup> 'to erase, scrub'
12.	側 ce <sup>4</sup> 'side'	側	ce <sup>4</sup> 'to lean to one side'
13.	叉 cha <sup>1</sup> 'a fork'	叉	cha <sup>1</sup> 'to fork'
14.	鏟 chan <sup>3</sup> 'a shovel'	鏟	chan <sup>3</sup> 'to shovel' (剷)
15.	襯 chen <sup>4</sup> 'a lining'	襯	chen <sup>4</sup> 'to line'
16.	鋤 chu <sup>2</sup> 'a hoe'	鋤	chu <sup>2</sup> 'to hoe'
17.	串 chuan <sup>4</sup> 'a string (of s.t.)'	串	chuan <sup>4</sup> 'to string together'
18.	錘 chui <sup>2</sup> 'a hammer'	錘	chui <sup>2</sup> 'to hammer' (捶)
19.	刺 ci <sup>4</sup> 'a splinter, thorn'	刺	ci <sup>4</sup> 'to stab, to pierce' (刺)
20.	銼 cuo <sup>4</sup> 'a file'	銼	cuo <sup>4</sup> 'to file' (剉)
21.	滴 di <sup>1</sup> 'a drip, a drop (of s.t.)'	滴	di <sup>1</sup> 'to drip'
22.	點 dian <sup>3</sup> 'a dot'	點	dian <sup>3</sup> 'to dot, put a dot on'
23.	墊 dian <sup>4</sup> 'a cushion'	墊	dian <sup>4</sup> 'to cushion'
24.	疊 die <sup>2</sup> 'a stack/pile (of s.t.)'	疊	die <sup>2</sup> 'to stack/pile'
25.	頂 ding <sup>3</sup> 'top of the head'	頂	ding <sup>3</sup> 'to carry on the head'
26.	毒 du <sup>2</sup> 'poison'	毒	du <sup>2</sup> 'to poison'
27.	堆 dui <sup>1</sup> 'a mound, a pile (of s.t.)'	堆	dui <sup>1</sup> 'to pile up'
28.	垛 duo <sup>4</sup> 'a stack (of s.t.)'	垛	duo <sup>4</sup> 'to stack'
29.	粉 fen <sup>3</sup> 'powder'	粉	fen <sup>3</sup> 'to white-powder'
30.	糞 fen <sup>4</sup> 'manure'	糞	fen <sup>4</sup> 'to put manure (s.pl.)'
31.	蓋 gai <sup>4</sup> 'a lid'	蓋	gai <sup>4</sup> 'to cover with a lid'
32.	鯁 geng <sup>3</sup> 'fishbone'	鯁	geng <sup>3</sup> 'to choke on fishbone'
33.	鉤 gou <sup>1</sup> 'a hook'	鉤	gou <sup>1</sup> 'to hook'
34.	糊 hu <sup>2</sup> 'paste'	糊	hu <sup>2</sup> 'to paste'
35.	畫 hua <sup>4</sup> 'a drawing, painting'	畫	hua <sup>4</sup> 'to draw, paint'
36.	劃 hua <sup>4</sup> 'a stroke' (畫)	劃	hua <sup>4</sup> 'to form a stroke' (畫)
37.	夾 jia <sup>1</sup> 'a clip'	夾	jia <sup>1</sup> 'to clip'
38.	架 jia <sup>4</sup> 'a shelf, frame, prop'	架	jia <sup>4</sup> 'to prop, to build a framework to support'
39.	醬 jiang <sup>4</sup> 'a thick soy bean sauce'	醬	jiang <sup>4</sup> 'to pickle w. soy bean sauce'
40.	膠 jiao <sup>1</sup> 'glue'	膠	jiao <sup>1</sup> 'to glue'

## A. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

NOUN		VERB	
41.	窖 jiao <sup>4</sup> 'cellar'	窖 jiao <sup>4</sup> 'to store in a cellar'	
42.	卷 juan <sup>3</sup> 'a roll (of s.t.)'	捲 juan <sup>3</sup> 'to roll up'	
43.	鋸 ju <sup>4</sup> 'a saw'	鋸 ju <sup>4</sup> 'to saw'	
44.	炕 kang <sup>4</sup> 'a heatable brick bed'	炕 kang <sup>4</sup> 'to bake or dry on a kang'	
45.	銬 kao <sup>4</sup> 'handcuffs'	銬 kao <sup>4</sup> 'to handcuff'	
46.	釦 kou <sup>4</sup> 'a button'	扣 kou <sup>4</sup> 'to button'	
47.	胯 kua <sup>4</sup> 'groin'	跨 kua <sup>4</sup> 'to stride, bestride'	
48.	捆 kun <sup>3</sup> 'a bundle (of s.t.)'	捆 kun <sup>3</sup> 'to bundle'	
49.	犁 li <sup>2</sup> 'a plow'	犁 li <sup>2</sup> 'to plow'	
50.	礱 long <sup>2</sup> 'a rice huller'	礱 long <sup>2</sup> 'to hull rice'	
51.	面 mian <sup>4</sup> 'face'	面 mian <sup>4</sup> 'to face'	
52.	奶 nai <sup>3</sup> 'breast'	奶 nai <sup>3</sup> 'to breast-feed'	
53.	攔 nang <sup>3</sup> 'a dagger'	攔 nang <sup>3</sup> 'to stab'	
54.	碾 nian <sup>3</sup> 'a roller (for grains)'	碾 nian <sup>3</sup> 'to grind or husk w. a roller'	
55.	尿 niao <sup>4</sup> 'urine'	尿 niao <sup>4</sup> 'to urinate'	
56.	鑷 nie <sup>4</sup> 'tweezers'	鑷 nie <sup>4</sup> 'to pick up s.t. w. tweezers'	
57.	耙 pa <sup>2</sup> 'a rake, harrow'	耙 pa <sup>2</sup> 'to rake, harrow'	
58.	拍 pai <sup>1</sup> 'a bat, racket'	拍 pai <sup>1</sup> 'to bounce (ball)'	
59.	片 pian <sup>4</sup> 'a slice (of s.t.)'	片 pian <sup>4</sup> 'to slice'	
60.	漆 qi <sup>1</sup> 'paint'	漆 qi <sup>1</sup> 'to paint'	
61.	鉗 qian <sup>2</sup> 'pliers'	鉗 qian <sup>2</sup> 'to grip with pliers'	
62.	圈 quan <sup>1</sup> 'a circle'	圈 quan <sup>1</sup> 'to encircle, to mark w. a circle'	
63.	篩 shai <sup>1</sup> 'a sieve, sifter'	篩 shai <sup>1</sup> 'to sieve, sift'	
64.	梳 shu <sup>1</sup> 'a comb'	梳 shu <sup>1</sup> 'to comb'	
65.	束 shu <sup>4</sup> 'a bundle (of s.t.)'	束 shu <sup>4</sup> 'to bundle'	
66.	刷 shua <sup>1</sup> 'a brush'	刷 shua <sup>1</sup> 'to brush'	
67.	閂 shuan <sup>1</sup> 'a bar (for door, gate)'	閂 shuan <sup>1</sup> 'to bar/bolt (door)'	
68.	鎖 suo <sup>3</sup> 'a lock'	鎖 suo <sup>3</sup> 'to lock'	
69.	套 tao <sup>4</sup> 'a case, cover'	套 tao <sup>4</sup> 'to put into a case'	
70.	挑 tiao <sup>1</sup> 'loads carried on a shoulder pole'	挑 tiao <sup>1</sup> 'to carry on the shoulder w. a pole'	

## A. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

NOUN		VERB	
71.	網 wang <sup>3</sup> 'a net'	網 wang <sup>3</sup> 'to net'	
72.	袖 xiu <sup>4</sup> 'sleeve'	袖 xiu <sup>4</sup> 'to tuck hands into sleeves'	
73.	楦 xuan <sup>4</sup> 'shoe last'	楦 xuan <sup>4</sup> 'to last shoes'	
74.	印 yin <sup>4</sup> 'a seal'	印 yin <sup>4</sup> 'to stamp with a seal'	
75.	油 you <sup>2</sup> 'oil'	油 you <sup>2</sup> 'to paint w. oil paint'	
76.	紮 za <sup>1</sup> 'a bundle (of s.t.)'	扎 za <sup>1</sup> 'to bind (into a bundle)'	
77.	鑿 zao <sup>2</sup> 'a chisel'	鑿 zao <sup>2</sup> 'to chisel'	
78.	閘 zha <sup>2</sup> 'floodgate'	閘 zha <sup>2</sup> 'to dam up water'	
79.	鋤 zha <sup>2</sup> 'hay cutter'	鋤 zha <sup>2</sup> 'to cut with hay cutter'	
80.	罩 zhao <sup>4</sup> 'a cover, shade'	罩 zhao <sup>4</sup> 'to cover, shade'	
81.	摺 zhe <sup>2</sup> 'a fold'	摺 zhe <sup>2</sup> 'to fold'	
82.	指 zhi <sup>3</sup> 'finger'	指 zhi <sup>3</sup> 'to point with finger'	
83.	皺 zhou <sup>4</sup> 'wrinkle'	皺 zhou <sup>4</sup> 'to wrinkle'	
84.	錐 zhui <sup>1</sup> 'an awl'	錐 zhui <sup>1</sup> 'to pierce'	
85.	座 zuo <sup>4</sup> 'a seat' (坐)	坐 zuo <sup>4</sup> 'to sit' [3]	

List B consists of noun-verb pairs in which the verb is consistently in Tone 4.

## B. NOUN-VERB PAIRS WITH VERBS IN TONE 4

NOUN		VERB	
1.	釘 ding <sup>1</sup> 'a nail'	釘 ding <sup>4</sup> 'to nail'	
2.	鋼 gang <sup>1</sup> 'steel'	鋼 gang <sup>4</sup> 'to reinforce with steel'	
3.	膏 gao <sup>1</sup> 'grease, ointment'	膏 gao <sup>4</sup> 'to grease, lubricate'	
4.	冠 guan <sup>1</sup> 'a cap'	冠 guan <sup>4</sup> 'to put on a cap'	
5.	空 kong <sup>1</sup> 'empty space'	空 kong <sup>4</sup> 'to empty a space'	
6.	間 jian <sup>1</sup> 'space between'	間 jian <sup>4</sup> 'to create space bet.'	
7.	泥 ni <sup>2</sup> 'mud'	泥 ni <sup>4</sup> 'to cover with mud/plaster'	
8.	瓦 wa <sup>3</sup> 'tile'	瓦 wa <sup>4</sup> 'to tile'	
9.	中 zhong <sup>1</sup> 'center'	中 zhong <sup>4</sup> 'to hit the target'	
10.	種 zhong <sup>3</sup> 'a seed'	種 zhong <sup>4</sup> 'to plant, grow'	

List C consists of noun-verb pairs in which the nouns are consistently in Tone 4.

C. NOUN-VERB PAIRS WITH NOUNS IN TONE 4

NOUN		VERB	
1.	把 ba <sup>4</sup> 'a handle'	把 ba <sup>3</sup> 'to hold'	
2.	背 bei <sup>4</sup> 'back'	背 bei <sup>1</sup> 'to carry on back' (背)	
3.	稱 cheng <sup>4</sup> 'a scale' (秤)	稱 cheng <sup>1</sup> 'to weigh'	
4.	撐 cheng <sup>4</sup> 'a prop'	撐 cheng <sup>1</sup> 'to prop'	
5.	擔 dan <sup>4</sup> 'a carrying pole and loads on it'	擔 dan <sup>1</sup> 'to carry on a shoulder pole'	
6.	份 fen <sup>4</sup> 'a portion'	分 fen <sup>1</sup> 'to divide'	
7.	縫 feng <sup>4</sup> 'a seam'	縫 feng <sup>2</sup> 'to sew'	
8.	圈 juan <sup>4</sup> 'a pen, sty'	圈 juan <sup>1</sup> 'to shut in a pen'	
9.	磨 mo <sup>4</sup> 'a millstone'	磨 mo <sup>2</sup> 'to grind'	
10.	掃 sao <sup>4</sup> 'a broom, duster'	掃 sao <sup>3</sup> 'to sweep, to dust'	
11.	扇 shan <sup>4</sup> 'a fan'	扇 shan <sup>1</sup> 'to fan'	
12.	彈 dan <sup>4</sup> 'a pellet, bullet'	彈 tan <sup>2</sup> 'to shoot'	
13.	馱 duo <sup>4</sup> 'a load carried by a pack animal'	馱 tuo <sup>2</sup> 'to carry on the back (of a pack animal)'	
14.	鑽 zuan <sup>4</sup> 'a drill'	鑽 zuan <sup>1</sup> 'to drill'	

There is a well-known historical principle of using the Qusheng (去聲 'departing tone'), to derive nouns from verbs, or verbs from nouns, with the derived form bearing the Qusheng category. Since Tone 4 on a large number of modern Mandarin words is a reflex of the historical Qusheng category, one might be tempted to treat the nouns in List C as having been derived from their corresponding verbs. However, this convention of derivation by tone change does not apply to the modern Chinese dialects, including Mandarin. The majority, if not all, of the pairs in Lists B and C are vestiges of this historical principle, with its origin shrouded in the remote past. Since inclusion of List C as denominal verbs does not negatively affect the overall picture and conclusions of the present study, we have opted to treat the verbs in List C as derived from nouns.

The final list for Mandarin is D, consisting of miscellaneous near-homophonous noun-verb pairs that do not fit under any of the above lists. The members of these pairs differ in aspiration of initial, tone, and/or vowel quality.

## D. NEAR-HOMOPHONOUS NOUN-VERB PAIRS

	NOUN		VERB
1.	倉 cang <sup>1</sup> 'storage'	藏	cang <sup>2</sup> 'to put into storage'
2.	旁 pang <sup>2</sup> 'side'	傍	bang <sup>2</sup> 'to be by the side of'
3.	舌 she <sup>2</sup> 'tongue'	舐	shi <sup>4</sup> 'to lick'
4.	鹽 yan <sup>2</sup> 'salt'	醃	yan <sup>1</sup> 'to pickle w. salt' (腌)
5.	爪 zhua <sup>3</sup> 'claw'	抓	zhua <sup>1</sup> 'to scratch or grab w. claws'
6.	褶 zhe <sup>3</sup> 'a pleat'	摺	zhe <sup>2</sup> 'to pleat, fold'

**3.2. Categories of Denominal Verbs**

In their study of English denominal verbs, Clark and Clark (hereafter C&C) sorted them into nine different semantic categories, the ninth simply a miscellaneous one:

## (1) Clark and Clark's (1977) Nine Categories

1. LOCATUM VERBS. The parent nouns are in the object case in clauses that describe the location of one thing with respect to another. (E.g., paint the ceiling, tile the floor, powder her nose, man the ship, cushion the chair, sign the check, skin the rabbit, salt the food, pit the cherries, fence the yard.)

2. LOCATION VERBS. The parent nouns are in the locative case. (E.g., kennel the dog, ground the planes, string the beads, pot the begonias, photograph the children, shell the peas.)

3. DURATION VERBS. The parent noun must denote a stretch of time and take a preposition like 'for'. (E.g., summer in France, vacation in Mexico, honeymoon in Hawaii.)

4. AGENT VERBS. The parent nouns are in the agentive case. (E.g., butcher the cow, guard the jewels, tutor the boys, referee the game, parent the children, wife/husband someone, slave over the work.)

5. EXPERIENCER VERBS (rare: only three cases given in C&C). 'Witness the accident' is classified that way on the premise that witnesses do not watch accidents, but see them. (E.g., witness the accident, boycott the store (do the act one would do to Captain Boycott), badger the officials (do the act a dog would do to a badger).)

6. GOAL VERBS. The parent nouns denote roles conferred on people by external forces, sometimes against their will (in the case of human roles). (E.g., fool the man, orphan the children, pile the money, knot the string, loop the rope, cube the potatoes, powder the aspirin, copy the paper, cream the butter.)

7. SOURCE VERBS (only three examples in C&C). In an example such as 'piece the quilt together', the verb is classified as a source verb on the basis of the rather awkward paraphrase 'do something to cause it to come about that [the quilt is together out of pieces], i.e., put the quilt together from pieces'. (E.g., piece the quilt, word the sentence, letter the sign.)

8. INSTRUMENT VERBS (the commonest, according to C&C). The parent nouns denote instruments. (E.g., bicycle into town, ship (s.t. somewhere), bus, truck, nail, pin, paste, lock, buckle, button, mop the floor, hammer the nail into the board, bat the ball, knife the man, spear the fish, bomb the village, net the fish, rope off the area, dam the river, trail the deer, fork the pickle, market the goods, eye the guard-dog, elbow someone aside, plane the wood smooth, shovel the dirt, brake the car, pump the water, dye the cloth.)

9. MISCELLANEOUS VERBS. Meals (e.g., lunch, breakfast, snack); crops (e.g., blackberry in the woods, timber off the hills); parts (e.g., rear-end the van); elements (e.g., rain, snow); and other.

Based on C&C's categories, the Mandarin Chinese corpus falls under the following four categories of denominal verbs, together with five illustrative examples for each category:

## (2) Categories in Mandarin

## 1. Locatum verbs

e.g. 漆 qi<sup>1</sup> 'to paint', 糞 fen<sup>4</sup> 'to put manure (s.pl.)',  
 膏 gao<sup>4</sup> 'to grease', 點 dian<sup>3</sup> 'to put a dot (s.pl.)',  
 瓦 wa<sup>4</sup> 'to tile'

## 2. Location verbs

e.g. 窖 jiao<sup>4</sup> 'to store in a cellar', 套 tao<sup>4</sup> 'to put into a case',  
 炕 kang<sup>4</sup> 'to bake on a kang', 頂 ding<sup>3</sup> 'to carry on the head',  
 袖 xiu<sup>4</sup> 'to tuck hands into sleeves'

## 3. Goal verbs

e.g. 串 chuan<sup>1</sup> 'to string', 堆 dui<sup>1</sup> 'to pile', 捆 kun<sup>3</sup> 'to bundle',  
 片 pian<sup>4</sup> 'to slice', 畫 hua<sup>4</sup> 'to draw a picture'

## 4. Instrument verbs

e.g. 鋤 chu<sup>2</sup> 'to hoe', 鞭 bian<sup>1</sup> 'to whip', 梳 shu<sup>1</sup> 'to comb',  
 犁 li<sup>2</sup> 'to plow', 篩 shai<sup>1</sup> 'to sieve, sift'

Among these categories, least common are locatum and location verbs, next goal verbs, with the commonest being instrument verbs in modern Mandarin.

**4. CANTONESE CASE****4.1. Corpus**

Lists E to J form the corpus of denominal verbs in standard Cantonese. A very broad phonetic transcription system is used, with adjustments made for typographical convenience (e.g., /ng/ for the velar nasal). Transcription further ignores the /35/ changed tone that some nouns undergo. List E below are homophonous noun-verb pairs found in Cantonese but not in Mandarin.

## E. HOMOPHONOUS NOUN-VERB PAIRS (not found in Mandarin)

	NOUN		VERB
1.	車 /ts'e.55/ 'a car, machine'	車	/ts'e.55/ 'to drive (s.o. s.wh.), to be hit by a car, to sew (w. sewing machine), etc.'
2.	煲 /pou.55/ 'a kettle, pot'	煲	/pou.55/ 'to boil, to cook in water'
3.	泵 /pam.55/ 'a pump' (< 'pump')	泵	/pam.55/ 'to pump'
4.	轆 /luk.5/ 'a roller, wheel'	轆	/luk.5/ 'to roll, to crush under the wheels'
5.	鉸 /kaau.33/ 'a hinge'	鉸	/kaau.33/ 'to install (TV's, etc.), to adjust setting w. a knob'
6.	枳 /tsat.5/ 'a cork'	枳	/tsat.5/ 'to cork'
7.	夾 /kip.2/ 'a clip' (< 'clip')	夾	/kip.2/ 'to clip'
8.	婁 /lau.55/ 'cloak, coat'	摟	/lau.55/ 'to drape over shoulders'
9.	袋 /toi.22/ 'a bag, sack, pocket'	袋	/toi.22/ 'to bag, to sack, to put into the pocket'
10.	油 /yau.21/ 'oil' (> /yau.35/ 'oil paint, varnish')	油	/yau.21/ 'to paint (e.g., the house)' [4]
11.	影 /ying.35/ 'shadow, image'	影	/ying.35/ 'to photograph'
12.	隔 /kaak.3/ 'a partition, a (square slot)	隔	/kaak.3/ 'to partition'
13.	筒 /t'ung.21/ (> 桶 /t'ung.35/) tube, pipe'	捅	/t'ung.35/ 'to insert into a pipe/tube'
14.	擗 /soet.5/ 'a bolt (for door, gate)'	擗	/soet.5/ 'to bolt (door, gate)'
15.	遮 /tse.55/ 'an umbrella'	遮	/tse.55/ 'to shelter w. umbrella'
16.	槌 /ts'oey.21/ 'a mallet, pestle'	槌	/ts'oey.21/ 'to pound, beat'
17.	刮 /kwaat.3/ 'a scraper'	刮	/kwaat.3/ 'to scrape'
18.	送 /sung.33/ 'food accompanying a meal'	送	/sung.33/ 'to accompany/ be eaten w. rice'
19.	錘 /ts'aap.3/ 'a plug'	插	/ts'aap.3/ 'to plug'
20.	渡 /tou.22/ 'a ferry-boat'	渡	/tou.22/ 'to ferry'

In List F, the members within each of the three pairs do not differ in tone in Cantonese, unlike Mandarin where they are placed under List B or C.[5]

F. HOMOPHONOUS NOUN-VERB PAIRS (but with tone change in Mandarin)

	NOUN		VERB
1.	釘 /ting.55/ 'a nail' (/teng.55/)	釘	/ting.55/ 'to nail' (/teng.55/)
2.	稱 /ts'ing.33/ 'a scale'	稱	/ts'ing.33/ 'to weigh'
3.	掃 /sou.33/ 'a broom, duster'	掃	/sou.33/ 'to dust, to sweep'

List G are noun-verb pairs that are also found in Mandarin. For ease of cross-dialectal comparison, these pairs are arranged based on the ordering in List A for Mandarin.

G. HOMOPHONOUS NOUN-VERB PAIRS (also in Mandarin)

	NOUN		VERB
1.	磅 /pong.22/ 'a scale' (< 'pound')	磅	/pong.22/ 'to weigh'
2.	包 /paau.55/ 'a pack, package'	包	/paau.55/ 'to pack/wrap up'
3.	刨 /p'aau.21/ 'a plane'	刨	/p'aau.21/ 'to plane wood'
4.	鞭 /pin.55/ 'a whip'	鞭	/pin.55/ 'to whip'
5.	冰 /ping.55/ 'ice'	冰	/ping.55/ 'to put on ice, to freeze'
6.	擦 /ts'aat.3/ 'a brush'	擦	/ts'aat.3/ 'to brush'
7.	叉 /ch'a.55/ 'a fork'	叉	/ch'a.55/ 'to fork'
8.	鏟 /ts'aan.35/ 'a shovel'	鏟	/ts'aan.35/ 'to shovel' (剷)
9.	鋤 /ts'o.21/ 'a hoe'	鋤	/ts'o.21/ 'to hoe'
10.	串 /ts'yn.33/ 'a string (i.e., of s.t.)'	串	/ts'yn.33/ 'to string tog.'
11.	銼 /tso.33/ 'a file'	銼	/tso.33/ 'to file' (剜)
12.	滴 /tik.2/ 'a drip, drop'	滴	/tik.2/ 'to drip'
13.	點 /tim.35/ 'a dot'	點	/tim.35/ 'to dot, to put a dot on'

## G. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

	NOUN		VERB
14.	墊 /tsin.33/ 'a cushion'	墊	/tsin.33/ 'to cushion'
	墊 /tin.22/ 'a cushion'	墊	/tin.33/ 'to fill up/prop up'
15.	疊 /taap.3/ 'a stack/pile (of s.t.)'	疊	/taap.3/ 'to stack/pile'
16.	頂 /teng.35/ 'top of the head'	頂	/ting.35/ 'to carry on head'
17.	毒 /tuk.2/ 'poison'	毒	/tuk.2/ 'to poison'
18.	堆 /toey.55/ 'a mound, pile'	堆	/toey.55/ 'to pile up'
19.	鉤 /ngau.55/ 'a hook'	鉤	/ngau.55/ 'to hook'
20.	糊 /wu.21/ 'paste'	糊	/wu.21/ 'to paste'
21.	劃 /waak.2/ 'a stroke' (畫)	劃	/waak.2/ 'to form a stroke' (畫)
22.	夾 /kaap.3/ 'a clip'	夾	/kaap.3/ 'to clip'
23.	架 /ka.33/ 'a shelf, frame'	架	/ka.33/ 'to build framework to support'
24.	卷 /kyn.35/ 'a roll (of s.t.)'	捲	kyn.35/ 'to roll up'
25.	鋸 /koe.33/ 'a saw' (/koe.33/)	鋸	/koe.33/ 'to saw' (/koe.33/)
26.	釦 /k'au.33/ 'a button'	扣	/k'au.33/ 'to button'
27.	捆 /k'wan.35/ 'a bundle (of s.t.)'	捆	/k'wan.35/ 'to bundle'
28.	鑷 /nip.2/ 'tweezers'	鑷	/nip.2/ 'to pluck'
29.	耙 /p'a.21/ 'a rake, harrow'	耙	/p'a.21/ 'to rake, harrow'
30.	拍 /paak.3/ 'a bat, racket'	拍	/paak.3/ 'to bounce (ball)'
31.	片 /p'in.33/ 'a slice (of s.t.)'	片	/p'in.33/ 'to slice'
32.	鉗 /k'im.21/ 'pincers'	鉗	/k'im.21/ 'to pinch'
33.	圈 /hyn.55/ 'a circle'	圈	/hyn.55/ 'to mark w. circle'
34.	篩 /sai.55/ 'a sieve, sifter'	篩	/sai.55/ 'to sieve, sift'
35.	梳 /so.55/ 'a comb'	梳	/so.55/ 'to comb'
36.	束 /ts'uk.5/ 'a bundle (of s.t.)'	束	/ts'uk.5/ 'to bundle/tie up'
37.	刷 /ts'aat.3/ 'a brush'	刷	/ts'aat.3/ 'to brush'
38.	門 /saan.55/ 'a bar (for door, gate)'	門	/saan.55/ 'to bar/bolt (door, gate)'
39.	鎖 /so.35/ 'a lock, padlock'	鎖	/so.35/ 'to lock, padlock'
40.	套 /t'ou.33/ 'a case, cover'	套	/t'ou.33/ 'to put into a case'

## G. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

NOUN		VERB	
41.	網 /mong.13/ 'a net'	網	/mong.13/ 'to net'
42.	印 /yan.33/ 'a seal'	印	/yan.33/ 'to stamp w. a seal'
43.	紮 /tsaat.3/ 'a bundle'	扎	/tsaat.3/ 'to bind (into a bundle)'
44.	鑿 /tsok.2/ 'a chisel'	鑿	/tsok.2/ 'to chisel'
45.	閘 /tsaap.2/ 'a floodgate'	閘	/tsaap.2/ 'to dam up water'
46.	罩 /tsau.33/ 'a cover, shade'	罩	/tsau.33/ 'to cover, shade'
47.	指 /tsi.35/ 'finger'	指	/tsi.35/ 'to point w. finger'
48.	錐 /tsoey.55/ 'an awl'	錐	/tsoey.55/ 'to pierce'

List H consists of noun-verb pairs in which the verb is consistently in Qusheng, in this case, all in Yin-Qu (tone /33/).

## H. NOUN-VERB PAIRS WITH VERBS IN QUSHENG

NOUN		VERB	
1.	種 /tsung.35/ 'a seed'	種	/tsung.33/ 'to plant, grow'
2.	枕 /tsam.35/ 'a pillow'	枕	/tsam.33/ 'to rest on a pillow'
3.	間 /kaan.55/ 'a partition'	間	/kaan.33/ 'to partition'
4.	中 /tsung.55/ 'center'	中	/tsung.33/ 'to hit the target'

List I consists of noun-verb pairs in which the nouns are consistently in Qusheng; that is, either in Yin-Qu (tone /33/) or Yang-Qu (tone /22/).

## I. NOUN-VERB PAIRS WITH NOUNS IN QUSHENG

NOUN		VERB	
1.	擔 /taam.33/ 'a load carried on the end of a shoulder pole'	擔	/taam.55/ 'to carry on a shoulder pole'
2.	畫 /wa.22/ 'drawing, painting'	畫	/waak.2/ 'to draw, paint'
3.	磨 /mo.22/ 'a mill'	磨	/mo.21/ 'to grind'
4.	份 /fan.22/ 'a portion'	分	/fan.55/ 'to divide into portions'

List J are some cases of near-homophonous noun-verb pairs that do not fit any of the lists above.

#### J. NEAR HOMOPHONOUS NOUN-VERB PAIRS

NOUN	VERB
1. [ ]* /lei.22/ 'tongue' (* = 肉 radical + 利)	[ ]* /laai.35/ 'to lick' (* 舌 radical + 賴)
2. 皮 /p'ei.21/ 'skin'	[ ]* /p'ai.55/ 'to peel (skin)' (* 皮 + 刀 radical ) (批) (/p'ei.55/)
3. 鹽 /yim.21/ 'salt'	醃 /yim.55/ 'to preserve w. salt' (/yip.3/)
4. [ ] /t'aap.35/ 'a lock'	[ ] /t'aap.3/ 'to lock' [6]

#### 4.2. Categories of Denominal Verbs

The same four categories identified in Mandarin are also found in Cantonese. These are given below, together with three illustrative examples for each category. Also, as in Mandarin, locatum and location verbs are least common, goal verbs next, and instrument verbs are commonest.

##### (3) Categories in Cantonese

###### 1. Locatum verbs

- e.g. 油 /yau.21/ 'to paint (e.g., the house)',  
 摟 /lau.55/ 'to drape over shoulders',  
 [ ]\* /p'ai.55/ 'to peel (skin)' (\* 皮 + 刀 radical ) (批)

###### 2. Location verbs

- e.g. 插 /t'ung.35/ 'to insert into a pipe/tube',  
 袋 /toi.22/ 'to bag, to put into pocket',  
 枕 /tsam.33/ 'to rest on a pillow'

###### 3. Goal verbs

- e.g. 劃 /waak.2/ 'to form a stroke' (畫),  
 影 /ying.35/ 'to photograph',  
 隔 /kaak.3/ 'to partition'

## 4. Instrument verbs

- e.g. 車 /ts'e.55/ 'to drive (s.o. s.wh.), to be hit by a car,  
to sew (w. sewing machine)',  
煲 /pou.55/ 'to boil, to cook in water',  
泵 /pam.55/ 'to pump'

## 5. TAIWANESE CASE

## 5.1. Corpus

Lists K through P form the Taiwanese corpus. A very broad phonetic transcription is used. Vowel nasalization is indicated by 'N', and the glottal stop by '?'. The /ng/ final is a syllabic nasal. List K below are homophonous noun-verb pairs found in Taiwanese but not in Mandarin.

## K. HOMOPHONOUS NOUN-VERB PAIRS (not found in Mandarin)

	NOUN		VERB
1.	紐 /liu.53/ 'a button'	紐	/liu.53/ 'to button'
2.	鼻 /p'i <sup>N</sup> .33/ 'a nose'	鼻	/p'i <sup>N</sup> .33/ 'to smell'
3.	綢 /tiu.24/ 'silk'	綢	/tiu.24/ 'to filter with silk'
4.	袋 /te.33/ 'pocket'	袋	/te.33/ 'to put into pocket'
5.	蜜 /bit.21/ 'honey'	蜜	/bit.21/ 'to preserve with honey/sugar'
6.	筃 /ts'ing.53/ 'a duster'	筃	/ts'ing.53/ 'to dust with a duster'
7.	頁 /ya?.53/ 'a page'	頁	/ya?.53/ 'to turn the page' [7]
8.	針 /tsiam.55/ 'a needle'	針	/tsiam.55/ 'to give s.o. a shot with a needle'
9.	[ ]* /t'ai.55/ 'a sieve, sifter' (* = 竹 radical + 希)	[ ]*	/t'ai.55/ 'to sieve, sift' (* = 竹 radical + 希)
10.	[ ]* /kau.55/ 'a plane' (* = 手 + 區)	[ ]*	/kau.55/ 'to plane' (* = 手 + 區)

List L are noun-verb pairs that are homophonous in Taiwanese, but differ in tone in Mandarin, and are placed in List C there.[8]

L. HOMOPHONOUS NOUN-VERB PAIRS (but with tone change in Mandarin)

	NOUN		VERB
1.	稱 /ts'in.21/ 'a scale'	稱	/tsin.21/ 'to weigh'
2.	鑽 /tsng.21/ 'a drill'	鑽	/tsng.21/ 'to drill'

List M consists of noun-verb pairs that are also found in Mandarin. For ease of cross-dialectal comparison, they are arranged based on the ordering in List A for Mandarin.

M. HOMOPHONOUS NOUN-VERB PAIRS (also in Mandarin)

	NOUN		VERB
1.	磅 /pong.33/ 'a scale (that weighs in avoirdupois)' (< 'pound (lb.)')	磅	/pong.33/ 'to weigh'
2.	包 /pau.55/ 'a pack, package'	包	/pau.55/ 'to pack/wrap up'
3.	鑊 /pun.55/ 'an adze'	鑊	/pun.55/ 'to adze'
4.	畚 /pun.55/ 'a scoop'	畚	/pun.55/ 'to scoop'
5.	濱 /pin.55/ 'bank, shore'	濱	/pin.55/ 'to border on (sea, etc.)'
6.	冰 /ping.55/ 'ice'	冰	/ping.55/ 'to put on ice, to freeze'
7.	叉 /ts'e.55/ 'a fork'	叉	/ts'e.55/ 'to fork'
8.	錘 /t'ui.24/ 'a hammer'	捶	/t'ui.24/ 'to hammer'
9.	滴 /ti?.53/ 'a drip, drop'	滴	/ti?.53/ 'to drip'
10.	點 /tiam.53/ 'a dot'	點	/tiam.53/ 'to dot, to put a dot on'
11.	堆 /tui.55/ 'a mound, pile'	堆	/tui.55/ 'to pile up'
12.	鉤 /kau.55/ 'a hook'	鉤	/kau.55/ 'to hook'
13.	糊 /ko.24/ 'paste'	糊	/ko.24/ 'to paste'
14.	夾 /kiap.21/ 'a clip'	夾	/kiap.21/ 'to clip'
15.	卷 /kng.53/ 'a roll (of s.t.)'	捲	/kng.53/ 'to roll up'
16.	鋸 /ku.21/ 'a saw'	鋸	/ku.21/ 'to saw'
17.	銬 /k'au.21/ 'handcuffs'	銬	/k'au.21/ 'to handcuff'
18.	犁 /lui.24/ 'a plow'	犁	/lui.24/ 'to plow'
19.	面 /bi <sup>N</sup> .33/ 'face'	面	/bi <sup>N</sup> .33/ 'to face'

## M. HOMOPHONOUS NOUN-VERB PAIRS (cont'd)

	NOUN		VERB
20.	碾 /lian.53/ 'a roller (for grains)'	碾	/lian.53/ 'to grind/husk w. a roller'
21.	鑷 /ge?.21/ 'tweezers'	鑷	/ge?.21/ 'to pick up s.t. w. tweezers'
22.	耙 /pe.24/ 'a rake, harrow'	耙	/pe.24/ 'to rake, harrow'
23.	漆 /ts'at.21/ 'paint'	漆	/ts'at.21/ 'to paint'
24.	鉗 /k'i <sup>N</sup> .24/ 'pliers'	鉗	/k'i <sup>N</sup> .24/ 'to grip w. pliers'
25.	圈 /k'uan.24/ 'a circle'	圈	/k'uan.24/ 'to encircle, mark w. a circle'
26.	梳 /sue.55/ 'a comb'	梳	/sue.55/ 'to comb'
27.	門 /sng.55/ 'a bar (for door, gate)'	門	/sng.55/ 'to bar/bolt (door)'
28.	鎖 /so.53/ 'a lock'	鎖	/so.53/ 'to lock'
29.	套 /t'o.21/ 'a case, cover'	套	/t'o.21/ 'to put into a case'
30.	網 /bang.33/ 'a net'	網	/bang.33/ 'to net'
31.	鑿 /ts'ak.53/ 'a chisel'	鑿	/ts'ak.53/ 'to chisel'
32.	閘 /tsa?.53/ 'floodgate'	閘	/tsa?.53/ 'to dam up water'
33.	鑿 /tsa?.21/ 'a bundle'	扎	/tsa?.21/ 'to bind (into a bundle)'
34.	錐 /tsng.53/ 'an awl'	錐	/tsng.53/ 'to pierce'

List N consists of noun-verb pairs in which the verb is consistently in Qusheng, either Yin-Qu (tone /21/) or Yang-Qu (tone /33/).

## N. NOUN-VERB PAIRS WITH VERBS IN QUSHENG

	NOUN		VERB
1.	釘 /ting.55/ 'a nail'	釘	/ting.21/ 'to nail'
2.	毒 /tok.53/ 'poison'	毒	/t'au.33/ 'to poison'
3.	間 /king.55/ 'space between'	間	/kan.21/ 'to create a space between'
4.	中 /tiong.55/ 'center'	中	/tiong.21/ 'to hit center'
5.	種 /tsing.53/ 'a seed'	種	/tsing.21/ 'to plant, grow'
6.	舌 /tsi?.53/ 'tongue'	舐	/tsi.33/ 'to lick'
7.	空 /k'ang.55/ 'empty space, hole'	空	/k'ang.21/ 'to make empty'
8.	鍋 /we.55/ 'a pot'	鍋	/we.33/ 'to cook in a pot'

List O consists of noun-verb pairs in which the noun is consistently in Qusheng, either Yin-Qu (tone /21/) or Yang-Qu (tone /33/).

#### O. NOUN-VERB PAIRS WITH NOUNS IN QUSHENG

	NOUN		VERB
1.	擔 /ta <sup>N</sup> .21/ 'a carrying pole and loads on it'	擔	/ta <sup>N</sup> .55/ 'to carry on a shoulder pole'
2.	份 /hun.33/ 'a portion'	分	/pun.55/ 'to divide into portions'

List P are two near-homophonous noun-verb pairs in Taiwanese that do not fit any of the lists above.[9] The unrounded back vowel is transcribed as /ə/ for typographical ease.

#### P. NEAR HOMOPHONOUS NOUN-VERB PAIRS

	NOUN		VERB
1.	膏 /kə.55/ 'grease, ointment'	膏	/kə.24/ 'to grease, lubricate'
2.	磨 /bo.24/ 'a millstone'	磨	/bua.24/ 'to grind'

### 5.2. Categories of Denominal Verbs

The same four categories identified in Mandarin and Cantonese are also found in Taiwanese. As with the previous two dialects, these categories are given below, together with examples. And, as with Mandarin and Cantonese, locatum and location verbs appear to be least common, then goal verbs next, and instrument verbs being the commonest.

#### (4) Categories in Taiwanese

##### 1. Locatum verbs

- e.g. 膏 /kə.24/ 'to grease, lubricate',  
 點 /tiam.53/ 'to dot, to put a dot on',  
 漆 /ts'at.21/ 'to paint'

##### 2. Location verbs

- e.g. 袋 /te.33/ 'to put into pocket',  
 冰 /ping.55/ 'to put on top of the ice, to freeze',  
 套 /t'o.21/ 'to put into a case/ cover'

## 3. Goal verbs

- e.g. 分 /pun.55/ 'to divide into portions',  
 扎 /tʂaʔ.21/ 'to bind (into a bundle)',  
 包 /pau.55/ 'to pack/wrap up'

## 4. Instrument verbs

- e.g. 鼻 /p'iN.33/ 'to smell',  
 鍋 /we.33/ 'to cook in a pot',  
 舐 /tʂi.33/ 'to lick'

**6. JAPANESE AND KOREAN DENOMINAL VERBS****6.1. Japanese**

Concrete nouns in modern Japanese are rarely used as verb stems. Thus, one cannot add *-ru* to concrete nouns to form denominal verbs, as shown in (5):

- (5) a. mizu 'water'                      \*mizu-ru 'to water'  
 b. kawa 'skin'                          \*kawa-ru 'to skin'

To express 'to water' in Japanese, one needs to use native Japanese verbs, such as *yaru* 'to give', *maku* 'to scatter', to form verb phrases such as (6):

- (6) a. mizu o yaru                      'to give water'  
 b. mizu o maku                        'to scatter water'

Similarly, 'to skin' must be rendered in Japanese using native verb expressions with *kawa* 'skin' as the object in the phrase:

- (7) a. kawa o toru                        'to take off skin'  
 b. kawa o nagu                        'to strip off skin'  
 c. kawa o muku                        'to peel skin'

Based on Sode's (1994) study, there are only a few cases of established denominal verbs in Japanese that are formed from concrete nouns:



Instead, to express actions involving such concrete nouns, the *hata* construction is needed, together with the *-cil* affix:

- (12) a. mangchi-cil-hata           'to hammer'  
       b. khal-cil-hata             'to knife'

Note, however, that the *hata* construction, like the Japanese *suru* construction, was originally used to create verbal expressions not native to the language.

As in Japanese, there are verb-noun pairs involving morphological alternations, in which native speakers' intuition is to treat the nouns as the derived forms, with *-m* as the nominalizer:

- (13) a. kuri-ta                   'to draw, to paint'  
       kuri-m                   'a drawing, painting'
- b. kam-ta                 'to wrap'  
       kam-um                 'the wrapping (of s.t.)'

We are still unclear as to the extent to which Korean permits innovative denominal verbs, such as those in (9) in Japanese. Pending further research, it seems that denominal verbalization is even more restricted in Korean than in Japanese.

## 7. CONCLUSION

In this paper we identified a set of verbs that have corresponding homophonous (or near-homophonous) nouns denoting concrete objects in three Chinese dialects, namely, Mandarin, Cantonese, and Taiwanese. For the purpose of this study, these verbs are treated as denominal verbs, derivable from their corresponding nouns via conversion or zero derivation. The corpora of denominal verbs vary only slightly among the three dialects, with Mandarin having the largest corpus. Although they are not necessarily exhaustive, the corpora nonetheless provide sufficient basis for our analysis. Using Clark and Clark's set of categories of denominal verbs, the verbs in our cross-dialect study fall under only four of those categories, namely: locatum verbs, location verbs, goal verbs, and instrument verbs. Among those four categories, the commonest one for all three dialects is the instrument category. Far fewer, but next most common seems to be verbs in the goal category, of which a large portion have measure words as their source noun

(e.g., 堆 *dui* 'a pile', 串 *chuan* 'a string (of something)', 片 *pian* 'a slice (of something)'). Least common among the four categories in the Chinese corpora are the locatum and location categories. The above ranking of the four categories, we believe, will hold even if additional denominal verbs are identified and included in the corpora.

It is noteworthy that the source nouns of locatum and location verbs also assume some kind of instrumental function, as in 漆 *qi* 'paint' (> 'to paint', locatum verb) and 窖 *jiao* 'cellar' (> 'to put in the cellar', location verb). Thus, the verb 漆 *qi* can be paraphrased as 'to cover the wall with paint', and 窖 *jiao* as 'to store something using the cellar'. Perhaps all three categories (locatum, location, instrument) are prototypically instrumental in function.

Cross-linguistically, instrument verbs also form the commonest category in English (Clark and Clark 1979, 776). There may be a universal hierarchy among the different categories of denominal verbs, with the instrument category highest on the hierarchy. If this universal hierarchy holds true, it would be consistent with the above observation that there is a prototypical function of instrumentation underlying the three categories of locatum, location, and instrument verbs. Assuming the universality of the hierarchy, if a language lacks denominal verbs in the instrument category, it would also lack them in the other categories. This seems to be the case in Japanese and Korean.[10] In these two languages, indigenous denominal verbs are very rare, with only a few cases of exceptions in the instrument category.

Finally, it is important to note that Classical Chinese has an abundance of denominal verbs occurring in almost all of C&C's categories. This presents a sharp contrast to the modern dialects, and inevitably raises some intriguing questions about this difference. For example, what precisely is the distribution of denominal verbs in Classical Chinese with respect to C&C's categories? Does Classical Chinese exhibit the same hierarchy as observed for English and the modern Chinese dialects in our study? What explanations can be offered for this important contrast between Classical Chinese and the modern dialects? Did the fading of the mechanism for creating denominal verbs via derivation by tone change trigger the reduction of denominal verbs in the modern language? Or, is the contrast between Classical Chinese and the modern dialects due to some more fundamental reasons? Questions such as these can only be answered through an in-depth study of denominal verbs in Classical Chinese.[11]

## NOTES

\* We thank Audrey Li, the organizer of NACCL6 for inviting us to present our joint paper, which is based on research and data-collection over the past few years. We have benefited from comments and questions from the audience, including David Branner, James Huang, Nam-kil Kim, Hua Lin, Jerry Norman, and Tang Ting-chi. We have also benefited from discussing the topic with our graduate students at the Ohio State University, and with Hyunoo Lee on the Korean data. Needless to say, we remain solely responsible for any infelicities herein.

[1] It is often extremely difficult in Chinese, as well as in English, to establish the direction of derivation for noun-verb pairs, especially in cases where historical documents show both members existing at roughly the same time. Although Clark and Clark (1979, 768) claim that the English denominal verbs in their article are derived from nouns historically, Sanders (1988, 158) notes critically that not all authors agree with them with respect to the direction of derivation. For example, whereas they (p.776) consider the verb 'shampoo' to be derived from the corresponding noun, Marchand (1969, 303) treats the noun as having been derived from the corresponding verb.

[2] On the basis of the 'hand' radical, one might want to argue that the source form is the verb and the derived one the noun, as the vast majority of characters containing this radical denote actions involving the hand. Historically, this seems to be the case. However, for the purpose of this synchronic study, we are opting to avoid mixing orthography with the spoken language. Besides, the evolution of the writing system, including the addition of radical components to original characters, is a very complex one. As a result, one can be easily misled into making an over-generalization, such as "All words written in characters with the 'hand' radical originate as verbs". This generalization is clearly not true with respect to the character, 指 *zhi* (item 82), for example, which historically originated as a noun, 'finger', as indicated in the *Shuowen* and other early documents. In this study, we have included homophonous noun-verb pairs containing the 'hand' radical. By the same token, we have included homophonous noun-verb pairs containing the 'knife' radical, as in 刷 *shua* 'brush/to brush' (item 66.)

[3] Historically, this pair was not in fact homophonous; 座 *zuo* was in the Qusheng category and 坐 *zuo* in Shangsheng.

- [4] The equivalent in Mandarin is 漆 *qi*.
- [5] The absence of tonal derivation in these modern Cantonese pairs is the result of extending the tone on the noun members of the original, historical noun-verb pairs (via tonal derivation) to the corresponding verbs, creating new homophonous noun-verb pairs in Cantonese.
- [6] This pair is used by older speakers only. This noun-verb pair is provided by Roxana Fung, who also contributed a few other pairs to the Cantonese corpus.
- [7] 頁 *ye* as a denominal verb meaning 'to turn a page' is also found in Zhongshan Cantonese, the native dialect of one of the co-authors.
- [8] See note 5 for a discussion of the absence of tonal derivation in the pairs in List F for Cantonese, which is also relevant here for Taiwanese.
- [9] Actually, both noun-verb pairs are found in Mandarin: 膏 *gao/gao* in List B where the verb is in Tone 4 (< Qusheng), and 磨 *mo/mo* in List C, where the noun is in Tone 4 (< Qusheng). In other words, historically-speaking, the two Taiwanese cases had undergone some irregular tone changes.
- [10] Even in the *suru* and *hata* constructions, which have been excluded in the present study, it appears that the instrument category is more accessible for undergoing these constructions than other categories.
- [11] See Liu (1991) for a study of denominal verbs in two Classical Chinese texts, the *Mencius* and *Zuozhuan*.

## REFERENCES

- Clark, Eve V. and Herbert H. Clark (1979) "When Nouns Surface as Verbs," *Language* 55, 767-811.
- Liu, Cheng-hui (1991) *Nouns, Nominalization and Denominalization in Classical Chinese: A Study Based on Mencius and Zuozhuan*. Ph.D. dissertation, The Ohio State University.
- Lyons, John (1977) *Semantics*. Volume 2. Cambridge University Press, Cambridge.
- Marchand, Hans (1969) *The Categories and Types of Present-Day English Word-Formation*. 2nd edition. Beck, Munich.
- Sanders, Gerald A. 1988. "Zero Derivation and the Overt Analogue Criterion," *Theoretical Morphology*, 155-175. Academic Press, New York.
- Sode, Rumiko (1994) "A Note on Denominal Verbs in Japanese," manuscript, Ohio State University, Columbus, Ohio.
- Tai, James H-Y. (1992) "Category Shifts and Word-Formation Redundancy Rules in Chinese," in H. Samuel Wang and Feng-fu Tsao (eds.), *Proceedings of the Third International Symposium on Chinese Languages and Linguistics*, National Tsing Hua University, Taiwan, 1-19.