

MORPHOSEMANTIC CATEGORIES IN CHINESE: AN INTERIM REPORT

R. Lord and T.Z. Chang

Hong Kong Baptist College

ABSTRACT

This paper applies the notion of the homoneme - a sub-morphemic semantic unit - to the morphosemantic analysis of Cantonese. A number of major morphosemantic categories and subcategories in Chinese are identified through analysis of monomorphemic lexical items. The morphosemantic approach adopted is related to the 'sheng-xun' branch of traditional Chinese linguistics.

1. Another Look at the Homoneme

There has been a gap of more than a decade since the first of the present authors proposed a sub-morphemic semantic element: the HOMONEME. This work (Lord 1970a) was based purely on a small-scale analysis of the English lexicon. Both the results obtained and the conclusions reached were open to the obvious criticism of arbitrariness, even though little of that sort of criticism has been forthcoming.

It was perfectly evident that further analyses on other languages were needed, as well as empirical support. Because of the nature of this proposed sub-morphemic element, especially in its more interesting and productive form - the 'terminal homoneme' or terminal rhyming segment of the lexical item, otherwise known loosely as 'clang association' - none of the European languages known to the author could be used, owing to the presence of inflexion. The exception was French, which was considered too close to English to provide a solid test. Limited trial analyses of Russian and Hungarian, making use of the reverse dictionaries which had by the 1960s become available (e.g., Greve and Kroesche 1958, Papp 1969), showed some promise; these were not followed up, however, because of lack of a theoretical framework for subtraction of inflexion in either language.

The clearest test, it became evident, would be offered by the Chinese language, a language virtually without inflexion and not remotely connected with English. Also, even in its lexical

compounds, Chinese offers a relatively small selection of syllable terminations. This offered the prospect of a fairly rigorous test of the morphosemantic theory of the homoneme, which posits a range of sub-categories grouped into major semantic categories.

Further advantages of selecting Chinese were considered to be these:

(a) The Chinese writing system itself incorporates a morphosemantic element not unlike the terminal homoneme - the phonetic or 'right radical' - into the majority of written characters. Although rhyming assonance has suffered from the erosion of language change over time, it nevertheless seemed that it would be possible, though at a much later stage, to test homoneme theory against the Chinese writing system.

(b) An independent advantage was the non-congruence with the Chinese writing system (which is based on Northern Chinese) of a major southern dialect like Cantonese. A separate analysis could be made using Cantonese only, whether in its unrelated or in its etymologically archaic spoken forms; or in those forms that may be lexically confused with, but are phonologically distinct from, the forms of written Chinese.

(c) It also became evident that an empirical test could be devised which would elicit from a variety of Cantonese users what they considered to be the written versions of colloquial expressions in Cantonese which have no standardised written form. The results could then be compared against the hypothesis.

The initial impetus for the present study came from W. Terrence Gordon's 1978 article 'Morphosemantics: A neglected chapter in linguistics.' A second impetus came from collaboration between Lord and Chang; for without the latter's well-developed interest in Chinese lexicology, and extensive knowledge of the language, this study would not have been possible. It is expected, however, that it will take a few more years to complete the analysis: no empirical testing has so far been carried out, and the analysis of the written language lies in the future. Even the analysis of Cantonese has so far been based only on monosyllabic items and colloquial compounds. The availability of word-processors with practicable Chinese data-bases will no doubt speed things along.

2. The Homoneme as Such

The homoneme was proposed as a structural element of the lexicon. Unlike the phoneme and morpheme, the homoneme was not seen to form part of any hierarchy of levels, but was viewed strictly

as both a formative and stabilising factor in the lexicon, that is, a separable though not independent domain of language structure.

The homoneme has first, however, to be distinguished from the phonestheme (see Householder 1946), since this concept implies phonesthesia, and the wider panoply of sound symbolism. The theory behind the homoneme does not preclude sound symbolism, but is in no way informed by it. Nevertheless Householder's definition of the phonestheme as (1946:83): 'a phoneme or cluster of phonemes shared by a group of words which also have in common some elements of meaning or function' is not in conflict with the present authors' even more structuralist definition of the homoneme as: 'a sub-component of a word such that it is a function both of lexical forms and lexical meanings (lexico-semantic categories)' (Lord 1970a:27).

To put it more simply, a homoneme is a sub-morphemic element or section segment of a 'word.' This element segment may be initial or final. The homoneme thus brings into semantic relation to each other those words which contain the same initial or final segments. The homoneme is in this way a paradigmatic sorter of word meanings, and at the same time a sub-lexemic carrier of identifiable sense. The total number of homonemes will be considerably smaller than the total vocabulary. A 'word' or lexeme will thus be seen to be a conjunction of two, sometimes more, homonemes (initial and final). Its polysemy is in this manner stabilised, since each polysemantic difference of sense is structured paradigmatically and guaranteed at least temporarily by as many different homonemes. Conversely, synonymy and antonymy are maintained in a comparable manner. There is thus an analogy (an analogy only) between the homoneme and word-form/lexeme on the one hand, and the phoneme and morpheme on the other. The relatively small number of homonemes in a language compared with the total vocabulary makes for great economy and easier vocabulary learning and use, just as a relatively small number of phonemes combine in many different ways to form an indefinitely large number of morphemes.

It was argued back in 1970, by the first of the present authors, that a homoneme is not strictly congruent with a phonemic segment of a morpheme, although for practical purposes it can most often be said to be ostensibly identical to such. Homonemes can be shown to group themselves in ways that transcend phonemic/morphemic taxonomy. In English, the syntagmatic boundaries of homonemes appear to be more fluid and less specifiable than those of the classical phoneme or morpheme (the 'elastic boundaries' of Bolinger 1950). Moreover, in English it could be shown that a homoneme may at times comprise homonemes of shorter segment, or conversely may form part of homonemes of longer segment. Further, it appears

that in some cases morphemes can be treated as simultaneously constituting homonemes.

For example, the terminal - er in jumper could be morphemic, signifying 'one who jumps' or it could simply be a terminal homoneme without morphological status, as in 'a loose-fitting garment worn over a dress.' The latter cases were identified as quasi-morphemic homonemes, their special interest being that they can function also as normal terminal homonemes, as in trouser, pullover, etc.

It has long been an established fact that words of similar sound develop, over time, similar meanings by paronymic attraction. Pierre Guiraud was able to develop a framework of morphosemantic fields, embracing the synchronic and diachronic dimensions of language. The complex interaction of sound and sense showed up most startlingly of all in his study of around 2000 words in French related on formal or semantic grounds to 'cat' (Guiraud 1966). As is well known, Guiraud was eventually able to reduce this material to about 300 words which would constitute the minimum semantic field of the word chat.

The concept of the homoneme and lexico-semantic categories simply takes further the findings of Guiraud, but in one particular direction. The starting point was to take all English lexical items sharing a common ending, to identify any semantic associations between such items, and then to assign descriptions to any semantic features thus identified. This process was repeated for further endings. By this method it was found that, interestingly, the semantic areas tended to be repeated, in some cases several times by different endings. The investigation was far from being exhaustive, as only a selection of seventeen endings was covered.

3. Morphosemantic Categories in English

The semantic features arrived at in the first analysis, based on one particular ending, were labelled sub-categories. The larger categories into which these sub-categories appeared to fall were called major categories. There is no space here to reproduce in full the scheme of major categories arrived at for English based on these 17 'terminal' homonemes (AUT, EIK, AN, ART, ASH, BL, ED, EI, EIN, AID, IL, NK, OK, OW, CH, WER, UT) and an outline has to suffice (see Lord 1970a:33-37 for further details):

STATE	:	(1)	State, condition
		(2)	Change of state
		(3)	State attained

ORIENTATION	:	(1)	Static orientation
		(2)	Dynamic orientation
		(3)	Reciprocal orientation
SPACE	:	(1)	Spatial configuration
		(2)	Spatial orientation
		(3)	Space traversed or encompassed
TIME	:	(1)	Period
		(2)	Anticipated
TERRAIN			
WATER			
COLOUR			
MOVEMENT			
SOUND			
APPEARANCE			
TAXONOMIC	:	(1)	Species
		(2)	Configurations, wholes
		(3)	Parts
MEASURE			
QUALITY, NATURE	:	(1)	In person
		(2)	In thing
HUMAN ACTIVITIES	:	(1)	Craft, skill
		(2)	Religious
		(3)	Pleasure, entertainments
		(4)	Eating, culinary
		(5)	Agriculture
		(6)	Speech, utterance

Quite obviously, these 'major categories' had to remain to a large extent provisional, their residual arbitrariness having given ground for concern all along, especially in earlier investigations. On the other hand, as will be seen, these 'categories' have been found to recur, to a surprising degree, in Chinese (Cantonese). It is hoped that any residual Procrusteanism will in time be eliminated by the development of more rigorous and refined procedures.

In the meantime, a tidied-up and improved ordering seemed called for, and the right time for achieving this was immediately prior to the morphosemantic analysis for Cantonese. The following is the revised scheme proposed:

- | | | | | |
|-----|-------------|---|-----|--|
| (1) | STATE | : | (A) | State, condition |
| | | | (B) | Change of state |
| | | | (C) | State attained |
| | | | (D) | Alternative state |
| (2) | ACTION | : | (A) | Orientation towards others |
| | | : | (B) | Orientation towards objects/
situations |
| (3) | MOVEMENT | : | (A) | Locomotion |
| | | : | (B) | Transitive motion |
| | | : | (C) | Intransitive motion |
| (4) | SPACE | : | (A) | Spatial orientation |
| | | | (B) | Dimension |
| | | | (C) | Shape |
| | | | (D) | Spatial configuration |
| | | | (E) | Spatial containment |
| | | | (F) | Terrain |
| | | | (G) | Water |
| (5) | TIME | : | (A) | As succession |
| | | | (B) | As duration |
| (6) | SPECIES | : | (A) | Classification |
| | | | (B) | Human species |
| | | | (C) | Animal species |
| | | | (D) | Plant species |
| | | | (E) | Miscellaneous |
| (7) | WHOLE/PARTS | : | (A) | Whole |
| | | | (B) | Divided |
| | | | (C) | Body parts |
| (8) | QUANTITY | : | (A) | Number |
| | | | (B) | Degree |
| | | | (C) | Measure |
| (9) | QUALITY | : | (A) | In persons |
| | | | (B) | Inherent quality |
| | | | (C) | Sensible quality |

- (10) HUMAN ACTIVITIES : (A) Speech
 (B) Institution
 (C) Livelihood
 (D) Special skills/activities

In STATE, a new categorization 'Alternative State' has been introduced, since this appeared to be called for by the data. The category ACTION has replaced, and is a further development of, ORIENTATION TOWARDS OTHERS in the earlier scheme. SPACE now comprises also TERRAIN and WATER, which were separate categories in the earlier scheme. WHOLE/PARTS still has some of the ad hoc appearance that it had earlier under the even less satisfactory label TAXONOMIC; and it made good sense to isolate out SPECIES, which in the present study has yielded a wealth of sub-categories. The heading HUMAN ACTIVITIES is strikingly similar to that which emerged in the smaller scale analysis of the English lexicon.

4. The Advantages of the Homoneme in Morphosemantic Analysis

The homoneme has at various times been claimed to have three major advantages:

(1) It provides a framework for explaining the morphosemantic mechanics of loanword assimilation into a language (Lord 1970b, for English).

(2) The analytical procedure adopted offers an alternative, though not necessarily superior, method to that of Guiraud for explaining how new meanings emerge for particular items of the lexicon.

(3) The framework proposed offers a convincing explanation of how the user of a language is able to operate within a reasonably stable polysemy, synonymy, and antonymy, maintained in a state, as it were, of morphosemantic equilibrium. What appears to happen is this: (a) terminal homonemes bring together, through assonance, groups of lexical items in such a way that they begin to develop synonymic (or, alternatively though less commonly, antonymic) relationships: e.g., chatter-patter, tunnel-funnel, sputter-stutter, bang-clang, mother-smother, etc.; (b) terminal homonemes find their common factor in a particular lexical item which, through synonymy, serves to link it polysemantically with other lexical items: e.g., BAT: bat-cat-rat (animal species); bat-mat (a tangled mass); bat-slat (narrow strip of wood), etc. In this way a lexical item can literally be seen as the intersection of synonymy/antonymy and polysemy, an interaction brought about (within the framework of Guiraud's champs morphosémantiques) by the action of terminal homonemes.

5. A Preliminary Morphosemantic Analysis of Chinese (Cantonese)

The Chinese language, including Cantonese, one of its major dialects, contains a relatively restricted number of morphemes. Virtually all of these morphemes consist of a single syllable of the form CV(C), with superimposed tonality which varies considerably from dialect to dialect. The number of 'tones' in Cantonese is effectively seven (traditionally nine); Modern Standard Chinese (Mandarin) has four.

Virtually all monosyllables in Cantonese, as in Chinese generally, can be and are used as lexical items, though bimorphemic or polymorphemic words are and have been for centuries the most common, both in speech and in writing (whether in traditional 'literary' style or modern 'colloquial' style). All newly coined words in Modern Standard Chinese are polymorphemic, and the general trend from monomorphemic to polymorphemic is well established (Kratochvil 1968).

To date, our analysis has taken account in the main of monomorphemic lexical items, though at the same time we have borne in mind that the occurrence of such monomorphemes may in some cases be confined to polymorphemic lexical items. The study of polymorphemic lexical items and lexical compounds, except for a limited corpus of colloquial lexical compounds, remains still to be done. Also we have not at this stage thought it necessary to take account of 'homonemic' relations between lexical items in so far as their tonality is concerned, except to regard tonality as a marker of functional difference, especially where this is supported by difference in the writing system.

The stock of morpheme endings for Cantonese is relatively few, and can be listed as follows:

-it(-ɛt)	-ɛt	-at	-ɔt	-ut	-æt	-ýt						
-ik(-ɛk)	-ɛk	-ak	-ɔk	-uk	-æk		-i	-a	-ɔ	-u	-æ	-ÿ
-ip(-ɛp)	-ɛp	-ap					-ei	-ɛi	-ai	-ɔi	-ui	-æÿ
-in(-ɛn)	-ɛn	-an	-ɔn	-un	-æn	-ÿn	-iu(ɛu)	-ɛu	-au	-ou		
-im(-ɛm)	-ɛm	-am										

The endings so far analysed for this preliminary study are the following:

-ɛt -at -ɛn -an -ɔn -æn -iŋ(ɛŋ) -ɛŋ -aŋ -ɔŋ -æŋ

Following the conventions of the dictionaries consulted in this study, only six tones are used, and are indicated numerically. The numbers indicate the following tones:

- (1) high level; (2) high rising; (3) high falling;
(4) low level; (5) low rising; (6) low falling

As with the analysis of English, terminal sound segments in Chinese have been found to be not always congruent with phonemes (or phoneme segments), and in the Cantonese lexicon are evidently treated as the 'same sound.' There is no particular problem about this as it can be shown diachronically that /e/ and /a/ were originally one sound. More interesting is that /ɔ/, at least in the investigated triad -eŋ/-aŋ/-ɔŋ, also belongs to this same 'homonemic' sound segment. Sometimes there are defective groupings: for instance, there is an -eŋ/-ɔŋ only grouping for sub-category 'Continuity.' The data analysed suggest that there might even be a rule of 'phonetic proportion' which might be explored through techniques derived from generative phonology. Most intriguing of all is the regular occurrence of 'homonemic' sound segments comprising a phonetic contrast, in particular -iŋ/-ɔŋ which of course has its counterpart in English ding-dong.

In the analysis so far carried out for Cantonese, the taxonomy adopted was somewhat different from that earlier used for English. The terminal homoneme groupings have been collected for Cantonese regardless of whether the homonemes form a single sub-category (most commonly in the form of a homoneme pair but also in threes and fours) or a group of sub-categories. Thus our terminal homoneme categories will include sometimes 'A' as well as 'B' types of the earlier study on English (see Lord 1970a), 'A' being a group of sub-categories and 'B' a single sub-category.

In the Cantonese study, antonymic relationships have proved to be even more prevalent than in the English sample, on occasion even to the point of symmetry.

The analysis so far has indicated that Cantonese Chinese terminal homonemes fall fairly readily into the regrouped major morphosemantic (in earlier publications called 'lexico-semantic') categories adopted in the earlier studies of English. The characteristic differences are those that in the main could have been predicted for Chinese and Chinese culture.

The most obvious case in point is that two separate categories under SPECIES (Miscellaneous) have had to be created for 'jade' and 'bamboo.' The structure of 'jade' vocabulary especially is

highly ramified in terms of homoneme sub-categories (no less than 6 different homonemes out of the number so far analysed subtend sub-categories). Under SPACE (Spatial configurations) we have sub-categories for carved objects and crack lines (such as those visible in shards or other man-made objects). There is also a surprisingly high number of homoneme sub-categories, brought together under the same major category, for 'rope/cord.' There is however a paucity of sub-categories (only one so far) referring specifically to the 'sea', or maritime occupations, though there are many for 'water' and 'navigation.' The latter may have something to do with China's traditional reliance on irrigation, and inland rivers and waterways, and less on sea-faring.

Again, no doubt as a result of China's traditional emphasis on kinship and ancestry there is a large number of sub-categories for 'kinship.' Though this may have nothing to do specifically with Chinese ethnology, there also turns out to be a significant number of sub-categories under 'spirit/ghost.' The 'Animal species' category, as in English, includes as part of its animal divisions sub-categories which include mythical as well as actual creatures. Rather surprisingly, there are several sub-categories (five in all) for chemical elements, mostly foreign loan-words. The 'human virtues' figure very prominently under QUALITY (in persons) - -en alone subtends 18 different monosyllable lexical items for virtues as such. Among HUMAN ACTIVITIES the most substantial categories are 'government' (including the imperial court) (4 sub-categories, compared with zero for English); 'military' (3 sub-categories, compared with zero for English); 'culinary' (7 sub-categories, with one category for wine -æŋ; also numerous in English); 'clothes' and 'textiles' taken together (11 sub-categories; as against zero in the English sample); 'pottery/utensils' (4 subcategories; again zero in English). The English sample yielded a special category for 'pleasure, entertainment'; not so Chinese, at least so far.

For some reason Chinese appears to have a number of homoneme sub-categories (at least six) for 'blockage/check,' as well as several for 'constrain' (= 'tie up'). Only one of the former and none in the latter shows up in the English sample. The occurrence of sub-categories for 'violence' however is comparable across the two language samples. Expressions of emotional or psychological state appear to be rather few in the English sample, but in the Chinese sample they abound. Also, in Chinese, there is a large number of homoneme sub-categories for 'order/disorder.'

6. Morphosemantic Categories and Sub-categories in Cantonese

The following syllable terminations were exhaustively analysed:

-ət -at

-ən -an -ɔn -æn

-iŋ (ɛŋ) -eŋ -aŋ -ɔŋ -æŋ

It was hypothesized from the outset that -ət/-at, -ən/-an, and eŋ/aŋ would be able to be treated as single terminations, in that /e/ and /a/ are derived from a common form historically. This hypothesis proved to be justified by the analysis. But it was found that -eŋ, -aŋ and -ɔŋ fall together also, and can be treated as a single homoneme. -æn, -æŋ and -iŋ on the other hand were found to be completely and identifiably separate homonemes, except for the chiming alternation overlap of -iŋ and -ɔŋ already mentioned, though in limited and usually single instances.

A separate card was made not only for each vocabulary item, both archaic and current, literary and colloquial, but also for each separate sense, in so far as these could be identified from the various dictionaries and intuitive resources available. In each case, examples and occurrences in compounds were also recorded. The cards were arranged according to termination, and gradually grouped into sub-categories, and thence into major categories.

From these 11 terminations, or 7 terminal homonemes, the following provisional picture of major categories and immediate sub-categories emerged:

STATE

A. STATE, CONDITION

A.1. Situation

Situation
foundation
order/disorder
weather

A.2. Experience

Experience
endurance
hardship
complaint
struggle

A.3. Vitality

Life/death
birth
energy

A.4. Containment

Storage
concentration

awake/asleep
 health/illness
 negation/positivity

A.5. Psychological/Emotional State

Emotion, expression of
 tantrum, shaking
 surprise
 excitement
 annoyance

A.6. Continuity

Permanence/transience
 habit
 sequence
 repetition

A.5. Psychological/Emotional State (cont'd)

apprehension
 happiness/sadness
 enjoyment/leisure
 dazed
 loneliness

B. CHANGE OF STATE

B.1. Change

Change (of state)
 change (of direction)
 turning/connecting point

B.2. Anticipation

Supposition
 expectation
 fortune, luck
 chance
 advantage, opportunity
 suspicion

B.3. Change of size, volume, shape, etc.

Stretching
 accumulation/decrease
 expansion/contraction
 constriction
 spreading open
 growth, reproduction
 becoming

B.4. Causality, initiation

(No sub-categories, only major category).

B.5. Negative Change

Loss
 disorientation
 catastrophe

C. STATE ATTAINEDC.1. Stasis

Stasis, stabilisation
 peace, calm/disturbance
 residue
 full/empty

C.2. Result

Result
 success/failure
 target, goal
 bring to a conclusion

C.3. Limit

Closure/no limit
 predestined, fixed

C.4. Satisfaction

Satisfaction
 proof
 information

C.5. Negative State Attained

Consumed
 broken
 hopeless, in vain

D. ALTERNATIVE STATED.1. AlternativeD.2. EquivalenceD.3. Preference

Equivalence
 reciprocity, copy
 match/mismatch

ACTIONA. ORIENTATION TOWARDS OTHERSA.1. Allocutionary Orientation

Address, allocution
 beg, ask
 invite, solicit
 reaction, response
 acknowledge, admit
 criticism/praise
 insult
 praise, eulogise
 disapproval, expression of

A.2. Reciprocal Orientation

Agreement/discord
 competition/sharing
 opposition/similarity
 affinity/lack of affinity
 marriage
 collaboration
 accommodating/hostile
 give/receive
 hospital/inhospitable
 visit

A.3. Supportive Orientation

Guide, constrain/unchecked
 lead/follow
 defend/attack
 rescue, assist
 guard, watch over
 support/hinder

A.4. Judgement

Be at fault
 reward, award
 punishment
 respect/disrespect
 criticism (see also A.1.
 - a variant)
 praise (see also A.1.
 - a variant)
 admire

A.5. Violence

Use of force
 robbery
 harm, die unnaturally
 damage/mend

A.6. Deceit

Pretence
 deception, manipulation/
 sincerity
 concealment/openness
 corruption/integrity

B. ORIENTATION TOWARDS OBJECTS/SITUATIONSB.1. Restraint

Block, check/unchecked
 constrain, tie up/loosen

B.2. Selection

Selection
 avoidance
 analysis

B.3. Control

Rectification
 investigation
 revelation exposure
 testimony

MOVEMENT

A. LOCOMOTION (Human)

Locomotion (in general)
 walk
 motion forwards/backwards
 journey
 carriage
 speed
 slow, delayed motion
 leisurely pace/haste

B. TRANSITIVE MOTION

Manual movements
 pull
 press
 throw, eject
 expel/intake
 catch hold of
 step on
 dig
 detach, loosen
 crush, grind
 lift

C. INTRANSITIVE MOTION

Bodily motion
 sudden movement
 lie down
 rise, ascend/fall
 plunge
 float
 shake
 rocking motion
 flopping motion
 impact
 lubrication

SPACEA. SPATIAL ORIENTATION

Location
 direction, orientation
 centre/periphery
 lateral
 horizontal
 vertical
 near/far
 level, layer

B. DIMENSION

Short, low
 narrow
 long (see also 'short' above)
 thick

C. SHAPE

Straight/crooked
 circular
 square
 curved
 spherical

D. SPATIAL CONFIGURATION

Shaped objects
 strip, streak
 spinal structure
 corridor, alleyway
 coiled
 row, terrace
 kernel, knot
 handle, (n.)
 protuberance
 rope, cord
 carved object
 crack line, craze

E. CONTAINMENT

Container
 shelter
 enclosure (general)
 hole, pit
 aperture, opening
 barrier, fence
 boundary
 curtain, screen
 link, chain
 crowded, tightly packed

F. TERRAIN

Open space/clearing
 mountain
 elevated, raised
 mound
 dam, dyke
 shore, bank
 path

G. WATER

Water, stretch of
 sea, ocean
 water flow

TIMEA. TIME AS SUCCESSION

Before
 late
 past/present
 time of day
 calendar

B. TIME AS DURATION

Duration
 moment

SPECIESA. CLASSIFICATION

Nominal classifiers
 name
 insignia
 collective term

B. HUMAN

People
 bad people
 male/female
 kinship
 spirit, ghost

C. ANIMAL

Animal (incl. mythical)
 airborne creature
 insects and other small
 creatures
 aquatic creatures
 horse (-related)

D. PLANT

Plant (general)
 weed
 edible plant
 flower

E. MISCELLANEOUS

Disease
 heavenly body
 chemical element
 jade
 bamboo

WHOLES/PARTSA. WHOLE

Whole/not whole
 complete/incomplete

B. DIVISION

Division
 fragmented mass
 compartment
 example, sample
 share

C. BODY PARTS

Body parts (in general)
 arm
 neck, shoulder
 eyes
 hair
 teeth

QUANTITYA. NUMBER

Numeral
 frequency/rarity

B. DEGREE

Degree
 excess

C. LIVELIHOOD

Agriculture
 navigation
 culinary
 cleansing, hygiene
 weaving: clothes
 textiles
 building
 pottery, utensils
 business, commerce

D. SPECIAL SKILLS, ACTIVITIES

Books, writing
 medicine
 painting
 musical instruments
 special skills (misc.)
 understanding, cognition

6.1 Characteristic terminal homonemes

As with the analysis of the English sample, each morphosemantic sub-category was found to have its own characteristic morphosemantic domains. The ones set out below are perhaps the most characteristic, with no, or hardly any, tie-over to other homonemes and their sub-categories:

-t/-at:

Preternatural (a sub-category grouped under HUMAN ACTIVITIES/B. INSTITUTIONS/Religion.)

fat ³	法	has 'tantric magic or ritual objects used by Taoist monks' as one of its meanings.
bat ⁶ /bet ⁶	魃	refers to 'evil spirits responsible for drought.'
sat ³	煞	means bad 'chi,' or bad energy.
pui ⁴ sat ³	菩薩	is the transliteration of 'bodhisatva'
fet ⁶	佛	is the Buddha (orig. a transliteration of 'Buddha'), archaic pronunciation is <u>bet</u> .
het ⁶	覡	is a literary word, meaning 'wizard'

Hole (under SPACE/E. CONTAINMENT/Hole)

fet ¹	窟	'cave, hole'
fet ¹	窟	'anus'
dʒet ⁶	腔	'vagina'
wet ⁶	掘	'dig, excavate'
gwet ⁶	掘	'dig, scrape'
get ¹	刮	'poke a hole into'

Obesity (under QUALITY/A3. NEUTRAL QUALITY/Obesity)

det ¹	脂	'fatness'
ŋet ⁶	腩	'fatness'
wet ¹	脛	'fatness'
(fei ⁴)det ¹ det ¹	肥脂脂	is a reduplicated qualifier of <u>fei</u> = 'plump fatness'

Tightly Packed (under SPACE/E. CONTAINMENT/tightly packed)

(set ⁶) dʒet ¹ dʒet ¹	實枳枳	<u>s</u> <u>t</u> means solid, and the whole group 'solidly packed.'
		Here we have a reduplicated intensifier.
(met ⁶) dʒet ¹ dʒet ¹	密質質	'tightly (crowded) together'
(git ⁶) det ¹ det ¹	杰吧吧	'things in a gluey state'
wet ¹ dʒet ¹	屈質	'crowded, cramped'

-en/-an:

Virtue (under QUALITY AI. POSITIVE QUALITY/Virtue/lack of virtue)

In this case, we have a very large number of (synonym) occurrences, all but one grouped exclusively under -n, and three antonyms, all under -an in this instance (the latter are not included here):

	ten ¹	斌, 彬	'grace and cultivation (of a gentleman)'
	ben ²	品	'(moral) character'
(arch.)	dʒen	禛	'receive blessing and grace because of one's genuineness'
	men ⁴	志	'perseverance'
	yen ⁴	仁	'benevolence'
	dʒen ¹	真	'clear, true, genuine'
	yen ⁵	忍	'endurance, to control an emotion'
	gen ²	謹	'cautious, respectfully cautious'
	gwen ¹ (dʒi ²)	君子	confucian term for 'virtuous man'
	yen ¹	殷	'diligently thorough and thoughtful'
	kwen ¹	惇	'honesty, genuineness'
	hen ¹	懇	'sincerity, reliability'
	ken ⁴	勤	'diligence'
(arch.)	ken ⁴	愷	'diligence, sincerity and application'
	wen ²	穩	'stability'
(arch.)	wen ¹	贊	'virtuous, good'

wen ⁵	尹	'reliable, honest' (-antonym sa ⁴ sa ⁴ gwen ² 沙沙滾)
yen	恩	'gratitude'
wen ² dʒen ⁶	穩陳	'reliable, cautious'
gwen ¹ dʒen ¹	君真	'genuine, sincere (like a gentleman)'

Change (under CHANGE OF STATE/B.I. CHANGE/)

It is interesting to note that all the items so far collected for CHANGE - including change of state, change of direction, and turning point - are all under -an.

One of the meanings of the compound bin³wan⁶ is 'change'
(變幻)

Change of state:

fan ¹	番	'translate'
dʒan ¹	燙	'sudden cold attack on hot objects'

Change of direction:

fan ¹	翻	'turn about; change'
fan ²	反	'turn around completely'
fan ²	返	'to return'
wan ⁴	還	'to return, restore to former condition'
pan ³	盼	'look around'

Even dan⁶ 'but' is an indication of 'change of direction' in a sentence.

<u>Crack line</u>	(under SPACE/D. SPATIAL CONFIGURATION/crack line, craze). All are -en.	
men ⁶	罅	'a crack line on a vessel'
gwen ¹	皸	'skin cracks due to coldness or dryness'
yen ³	血汗, 罅	'crack (in emotion or argument)'
yen ³	罅	'a crack (in tortoiseshell or pottery)'

-ɔn:

This homoneme has very few exemplars, and is a relatively infrequent termination in Cantonese.

However there is one sub-category 'shore/bank' under which both morphosemantic occurrences collected to date appear:

gon ¹	干	'bank of a lake or river'
ŋɔn ⁶	岸	'shore'

-ɛn:

Target, goal (under STATE/C. STATE ATTAINED/Result/target, goal)

dʒɛn ¹	臻	'to arrive at a goal'
dʒɛn ²	埠	'bull's-eye of a target'
dʒɛn ³	竣	'to have completed a project'

-iŋ(ɛŋ):

Beauty (under QUALITY/D. SENSIBLE QUALITY/Visual/Beautiful/ugly)

	dziŋ ⁶ or læŋ ³	靚	'beautiful, good-looking, make up'
	kiŋ ⁴	瓊	'beauty, fineness'
(coll.)	siŋ ²	醒	'smart-looking, showy'
	siŋ ³	勝	'beautiful and exceptional'
	kiŋ ⁴ or hyn ¹	嫗	'fresh and pretty'
	tiŋ ⁴	婷	'graceful, beautiful'
	piŋ ¹ tiŋ ⁴	娉婷	'description of graceful poise in girls'
	ziŋ ¹	英	'beauty, elegance'
(coll.)	biu tseŋ ¹	標青	'outstanding, beautiful'
(coll.)	d3eŋ ³	正	'good-looking, good'
(coll.)	bak ⁶ d3eŋ ⁶	白淨	'delicate' (skin)

Enclosure (under SPACE/E. CONTAINMENT/enclosure (general))

	siŋ ⁴	城	'a city'
	siŋ ⁴	宸	'imperial library'
	kiŋ ²	頤	'small hall'
	tɛŋ ¹	廳	'a large room used for gathering'
	tiŋ ⁴	庭	'open yard, courtyard'
	gwiŋ ²	扃	'a latch or lock which closes door from outside'
	tin ¹ dziŋ ² (ɛŋ ²)	天井	'enclosed courtyard'

	tin ⁴	亭	'pavilion'
	ga ¹ tin ⁴	家庭	'the communal yard shared by a family'
	dziŋ ² (eŋ ²)	井	'a well'
	dziŋ ⁶	穿	'a well-shaped trap for catching animals; a trap in general'
	liŋ ⁴	囚	'jail'
(coll.)	fa ¹ teŋ ¹	花廳	'jail'
	yiŋ ⁴	箆 瓶	'trunk, case'

Marriage (under ACTION/A. ORIENTATION TOWARDS OTHERS/A2.
Reciprocal Orientation/Marriage)

	piŋ ⁴	聘	'marital engagement; marriage of a girl'
	piŋ ¹	姘	'cohabitation outside marriage'
	gwei ¹ niŋ ⁴	歸寧	'woman going home for a visit after marriage'
	yiŋ ⁶	媵	'female attendants accompanying the bride to groom's family; a concubine'
	seu tsin	守清	'to remain a widow/widower'

-eŋ/-aŋ/-oŋ:

Constriction (under STATE/B. CHANGE OF STATE/B.3 Change of size, shape, etc./constriction)

	seŋ ³	蹭	'chaff, rub'
	seŋ ³	擤	'to squeeze and blow the nose'

(coll.)	heŋ ⁴	ㄣ *	'tight' (of belt), 'full' (car-tire, sharp turn) (___ indicates that the syllable has no written form)
(coll.)	dʒeŋ ⁶	綑	'to bind together, bundle up'
(coll.)	meŋ ¹	拽	'to tug, pull on something'
(coll.)	geŋ ²	梗	'something stuck'
	keŋ ²	哽	'to choke'
	maŋ ¹ or baŋ ¹	綑	'to bind and constrict'
	tsaŋ ¹	撐	'full, stuffed full'
(coll.)	baɔ ³ paŋ ⁴	爆棚	'full-house'
(coll.)	dʒaŋ ⁶	ㄣ	'to stuff full'

Repetition (same categorisation as for 'Permanence' above)

All item occurrences are under -eŋ or -oŋ

tsen ⁴	層	'repeatedly, again and again'
geŋ ³	更	'again, more'
wɔŋ ³ wɔŋ ³	往往	'often'

-æŋ:

Curtain/Screen (under SPACE/E. CONTAINMENT/curtain, screen)

The items in this group are partial homophones.

dʒæŋ ²	帳	'a curtain, a drape, a cloth partition'
dʒæŋ ³	嶂	'sharply rising mountain which looks like a screen'

dʒæŋ³

中章

'a curtain on which messages of
condolence/congratulation are
written'

6.2 Antonymous sub-categories

In English it was already apparent that terminal homonemes serve to relate together not only synonymous lexical items but also antonymous ones. This pattern is clearly very well-established in Chinese.

Some are simple antonym pairs, for example:

sæŋ⁴ yæŋ⁴ 徜徉 } 'to stroll freely and casually'

sæŋ⁴ 徜 }

hɔŋ¹ yæŋ⁴ 匆忙 'hurried, rushed'

or

yæŋ¹ 央 'centre'

gæŋ¹ 疆 'boundary'

or

miŋ⁴ 明 'in the open, not secretive'

bæŋ³ ㄩ a colloquial word meaning
'hidden', 'to store away' (no
written form)

or

men⁵ 敏 'alert, agile'

wen¹ wen¹ 渾渾沌沌
den⁶ den⁶ 'not alert, in a daze'

In some instances the sub-categories include up to or more than half the total number of items as antonyms, though this is rare. A good example would be:

-æŋ:

satisfy/dissatisfy

	hæŋ ²	飽	'satisfy'
	sæŋ ⁴	償	'satisfy'
	yæŋ ³	快	'dissatisfied'
	tsæŋ ³	悵	'disappointment, sense of loss or sadness'
(coll.)	tsæŋ ¹ dzæŋ ³	吹漲	'to give up in frustration'

Most often the antonym is a minority occurrence within a sub-category. There are many examples. Typical is:

-æn:

motion forwards:

	dʒæ n ³	進	'advance, move ahead'
	s æ n ⁶	順	'to go in the same direction'
	l æ n ⁴	輪	'to follow in order'
	dʒæ n ¹	退	'retreat'
	dʒæ n ¹ tsæ n ⁴	逡巡	'oscillating, not advancing'

6.3 Homonemes across categories

Many homoneme sub-categories are distributed across several different homonemes.

It is too early to try to establish what particular pattern of semantic or functional difference is indicated, and no doubt a larger number of terminations needs to be analysed, including word compounds.

Animals, including airborne creatures, occur in significant groupings under all seven homonemes so far studied. Insects however

do not occur in -en, -en or -en/-an, whereas aquatic creatures occur in only -en and -en.

Plants, again, fall into all seven homonemes. But the 'weeds' as well as their opposite, the edible plants, are predominantly under -en. For 'flowers' we have to look at -an/ and -in.

Jade occurs under every homoneme except -et/-at.

Some of the distributions found are symmetrical enough to warrant further investigation. For example, for the sub-category big/small we find:

<u>Big</u>		<u>Small</u>
-en	(3 occurrences)	-en (3 occurrences)
-en	(6 occurrences)	-in (6 occurrences)

7. Morphosemantics in Traditional Chinese Linguistics

Morphosemantics seems to find a natural habitat in the historical study of the Chinese language. One important branch of Chinese traditional linguistics, 'sheng-xun,' in fact adopts a comparable approach to morphosemantics. This section is a brief account of 'sheng-xun' and its theoretical implications in the light of the present research.

'Sheng-xun' literally means 'etymological investigation through the study of sound.' It seeks explanation for the original sense of words by means of semantically related homophones (or approximate homophones). Examples of its application can be found as early as Confucius' Analects, and it was used widely as a rhetorical tool by the early philosophers. In the 2nd century A.D., Liu Xi compiled a dictionary of etymology, Shi Ming, using the 'sheng-xun' technique.

By far the most influential book in Chinese linguistics is the Shuo Wen Jie Zi (or Shuo Wen for short). As a dictionary it gave order to the Chinese lexicon by classifying words (logographs) under semantic categories (Xu Shen arrived at 540 categories). The category of a word (logograph) is actually indicated by a component (the classification-radical) that forms part of the logograph.

The theoretical achievement of Xu Shen is crystallized in his theory of the 'Six Scripts.' His concern was the written word and he made no attempt to trace language back to the spoken tongue. One of the strengths of his approach is the resolution of the semantic problem posed by the vast number of homophones in the language by concentrating on the logograph. Homophony is a real problem as the Shuo Wen already recorded 10,513 monosyllabic words while some linguists reconstructed the second century tongue differentiating only about 500 semantically significant syllable-types (this does not take into account the three, or four, tones for each type). But one question remains: how are homophones semantically ordered so as to be identifiable when they appear in speech, excepting of course the benefit of spoken context and word compounds? It was not until the 18th century that linguists had some success in resolving the seeming parting of the ways between sound and pictograph. The resolution was made by means of 'sheng-xun' scholarship.

In his Preface the author of Shi Ming wrote: 'Names relate to reality by categories of meaning. People use Names every day without knowing how Names came about, I have therefore taken various subjects, including even household utensils, to try to elucidate this.' Unfortunately he could not provide a general theory but showed his method by example only. A famous one is the entry for the word 'sky'; he noted that 'sky' is pronounced like the word 'lofty' in one region and like the word 'openness' in another, and drew a semantic relationship between these words by noting that they both indicate aspects of 'sky.' The assumption in that words which sound similar are also related in meaning.

The interesting thing about Shi Ming (the same can be said for early dictionaries of synonyms such as Er Ya and Guang Ya which Shi Ming drew upon) with an eye to the present research is the way chapters are organised. Each of its 27 chapters covers a 'category of meaning', such as 'kinship,' 'animals,' etc. and the choice of subject reflects an underlying affinity with morphosemantic categories posited by homoneme theory. However, the Shi Ming states its categories without commenting on how they were chosen, as though these were a priori cognitive categories. The Shi Ming approach can be interpreted as the homoneme approach in reverse. The homoneme approach examines words of the same phonetic element exhaustively in order to discover the morphosemantic categories that govern them; Shi Ming first states the categories and then looks for words that go with them. It would be a revealing exercise to take all

the words under a chapter of the Shi Ming and examine the sounds associated with that category.

A major advance in 'sheng-xun' was made in the 11th century by Wang Zi-shao with his 'Right Radical' theory. He noticed in dictionaries of the Shuo Wen tradition that although words are classified by the classification-radical (often placed physically on the left), the sense of the word is often provided by the radical on the right (the phonetic radical or the 'Right Radical'). A well-known example is the logograph for 'jian' - meaning 'little.' Used as a phonetic radical with the left radical 'water' added to it the new word means 'shallow water'; and with the left radical 'gold' it means 'money' (literally 'a little gold').

Improved versions of the 'Right Radical' theory have remained current until today, and the term is often used instead of 'sheng-xun.' The main weakness of the theory, as was pointed out earlier, is that it did not see the right radical as a purely phonetic marker, and in many ideo-phonetic words the meaning of the logograph used as the right radical has nothing to do with the sense of the word.

The great period of Chinese linguistics came with the boom of classical studies which started in the 17th century. The Qing Dynasty was a period in which phonology, philology and etymology all saw significant breakthroughs. The success in reconstructing archaic sounds through rhyming literature, ancient 'sheng-xun' notes and assonant-rhyming compound words changed many scholars' prejudice in favour of the primacy of the pictograph. Phonological research revealed laws of phonological change, adding to the tools of 'sheng-xun.' Even the great annotation of the Shuo Wen by Duan Yu-cai (1735-1815) made extensive use of 'sheng-xun.' Later, Zhu Jun-sheng (1788-1858) actually rearranged the Shuo Wen by rhyme, paying heed to earlier philologists' suggestions that the dictionary can be semantically ordered by rhyme. Another classic of Qing scholarship, an annotation of the 4th century dictionary of synonyms, Guang Ya, by Wang Nian-sun (1744-1832), made semantic investigations of logographs by studying their pronunciations. This latter is a masterpiece in applied 'sheng-xun' philology. Unfortunately it did not aspire to a general theory and many interpretations in the text are therefore necessarily poetical and fanciful.

In the first decades of the 19th century Huang Cheng-zhi published an essay called Meaning of Words Comes from the Phonetic Radical on the Right. This is an important piece of theoretical writing on 'Right Radical' theory and it rectified many old pitfalls.

Well into the first half of this century the 'Right Radical' theory continued to find enthusiasts in a many great scholars, among them Zhang Bing-Ling (1868-1936), Liu Shi-pei (1884-1919), Huang Kan (1886-1935), Yang Shu-da (1885-1936) and Shen Jian-si (1894-1947). One should also mention Bernard Karlgren who in 1933 wrote 'Word Families in Chinese,' using similar ideas.

Zhang Bing-ling made one important observation with regard to Huang Cheng-ji's theory. He accepted Huang's theory for words whose basis are the three 'Scripts' with phonetic connection (including ideo-phonetic words), but he contested the view that words with essentially pictographic roots should have a different origin. Zhang is basically a Shuo Wen scholar whose instincts refused to let him abandon either 'sheng-xun' or the logographs. His 'Primal Logographs' is an illuminating attempt at synthesising the two traditions.

One main shortcoming of the 'Right Radical' theory is that it cannot state categorically that 'all' the words with a certain phonetic segment ought to be related to one specific meaning category, as is implied by the theory. Shen Jian-shi pointed out that words of the same rhyme may fall under more than one category of meaning. This latter observation could have led to a theoretical synthesis akin in spirit to the present homoneme research, but Shen did not pursue this point further.

The one major handicap of the traditional linguists is that they were not linguists in the contemporary sense of the word. Few of them were interested in general linguistics outside of the scope of the Chinese classics. Most research stopped at the Tang dynasty at the latest, and no synchronic studies were carried out to test discoveries against the living tongue. On the other hand, these scholars' strength lay in grounding their work on meticulous textual proof; for a logographic written language - which means that certain aspects of the language are 'fossilised,' and therefore 'exochronic' to a large extent - etymological studies are essential to semantic research.

Homoneme theory was initially developed without awareness of the Chinese 'sheng-xun' tradition, and this has happened to be a happy confluence. Homoneme theory provides certain possibilities for synthesis and fulfilment of the implications of 'sheng-xun' ideas.

8. Future Research

Several major pieces of work need to be done before we arrive at an all-round conspectus of Chinese morphosemantics. Given the necessary time and opportunity, our sequence would be as follows:

(A) To carry out an analysis of several more terminal morpheme endings in Cantonese. In order to maintain symmetry and minimal contrast with endings already analysed, we would choose the following: -ot, -ət, -ək, -ak, -ɔk, -æk, -ei, -ai, -ɔi, and -eu/-au. At the same time we will need to look more closely at the role played by tonality, if any.

(B) To conduct an extensive survey of genuine word compounds in Cantonese. Our analysis so far has included only a relatively small number of mainly colloquial compounds. This class of word promises to be of some considerable interest.

(C) To conduct an experiment to test the hypothesis that, when committing to writing morphemes which are unfamiliar or colloquial (and therefore not officially written), Cantonese speakers will be influenced by morphosemantic factors. (Morphemes of a colloquial nature which have acquired standard written form will be excluded).

(D) To analyse initial homonyms in Cantonese.

(E) To analyse Chinese writing morphosemantically. This may prove more difficult than expected. The writing system incorporates phonetic radicals (rhyme endings or assonant initials) to a very large extent, but the sound values have become 'frozen' at various historical periods. If a 'panchronic' model can be constructed satisfactorily, then it should be possible to test the degree of morphosemanticity inherent in Chinese writing.

(F) To consider possible applications, as yet only provisionally conceived.

(G) To explore the possible interface between (Western) morphosemantics and Chinese traditional linguistics.

(H) To attempt to postulate morphosemantic universals.

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