

Shape Classifiers in Earlier Southern Min Texts^{*}

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This paper tackles shape classifiers in earlier Southern Min texts. It focuses on three kinds of shape classifiers, which collocate with noun phrases denoting specific sets of objects bearing common features. We flesh out the distributional pattern of each type of classifier and furnish a perceptual structure of shape classifiers based on a feature analysis. We also try to account for how less-straightforward shape classifiers function in terms of their etymological origin.

Key words: shape classifier, Southern Min, perceptual structure, feature

1. Introduction

Examination of the linguistic nature of classifiers will shed light on human cognition as well as categorization of objects. Allan (1977) proposes that there are four types of classifier languages in the world. Mandarin Chinese (MC for short) is one of the typical numeral classifier languages. There are basically two approaches to research on classifiers. One is to tackle classifiers in terms of the semantic nature of their collocating nouns (Tai & Wang 1990,¹ Tai & Chao 1994, and Tai 1999). The other approach is to sort out

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¹ Note that the tones for all Mandarin examples are indicated by superscript numbers after each syllable. Three explicit linguistic criteria are proposed in Tai & Wang (1990) to distinguish between classifiers and measure words: (1) *De*⁰ 的 cannot appear between a classifier and the following noun phrase, as in **yi*⁴ *zhang*¹ *de*⁰ *zhuo*¹ *zi*⁰ 一張的桌子 ‘a desk’. But it is possible for *de*⁰ 的 to occur between a measure word and the following noun phrase, as in *shi*² *bang*⁴ *de*⁰ *rou*⁴ 十磅的肉 ‘ten pounds of meat’; (2) Classifiers can be replaced by *ge*⁰ 個 without changing their semantic meaning, as in *yi*⁴ *zhang*¹ / *ge*⁰ *zhuo*¹ *zi*⁰ 一張/個桌子 ‘a desk’. In the case of measure words, however, *ge*-replacement results in a different semantic interpretation, as in *shi*² *bang*⁴ / **ge*⁰ *rou*⁴ 十磅/*個肉 ‘a pound of meat’; (3) Classifiers vary from dialect to dialect, but measure words are rather consistent between dialects. Such criteria are not without dispute

the semantic interpretations and historical changes of classifiers. Lee (2005) proposes that metonymy and metaphor play a role in this respect and can be used to gain insight into the use of classifiers in the Hakka dialect. This study intends to explore shape classifiers as attested in earlier Southern Min texts. We adopt Allan's seven categories of classification (Allan 1977) to re-examine our data and further suggest that dimensionality is not the only salient aspect for classifiers of the shape category. Several minor features of the object are also crucial for the linguistic output of classifiers. The interaction of these parameters is, therefore, important, and worthy of careful consideration.

The first thing that must be done when researching classifiers is to distinguish real classifiers from measure words. The syntactic distributions of classifiers and measure words actually overlap in MC. However, the nature of these two types of elements can be teased apart by focusing on the semantic relationship between the element (classifier or measure word) and the following NP. Classifiers refer to persistent and salient characteristics of objects, while measure words refer to the temporary quantity of objects. The paper is organized as follows: we will first review existing literature on the theoretical models of shape classifiers and previous studies of Chinese shape classifiers. Drawing data from earlier Southern Min texts, we will then explore three kinds of shape classifiers, viz., one-dimensional, two-dimensional and three-dimensional classifiers. For each type of shape classifier we will furnish a range of objects that occur with them and give relevant explanations. We will then discuss the correlated distributions of the classifiers and provide a perceptual structure of the classifiers backed up by feature analysis. Finally, we will briefly explore the etymological origins of some less straightforward classifiers in an attempt to give an adequate explanation of shape classifiers in operation.

2. Literature review

2.1 Allan's categorization of classifiers

Allan (1977) identifies seven categories of classification: (1) "material", (2) "shape", (3) "consistency", (4) "size", (5) "location", (6) "arrangement", and (7) "quanta". We adopt his model and take each classificational category as a parameter within which features are specified. The category "shape" can be dimensional or non-dimensional. Non-dimensional shapes include curved exterior, hollow, and angular forms. The dimensional classifiers, on the other hand, are used for long, flat, and round objects; these are the basic target of our study.

—see Tang (2005) for more explorations. In identifying the classifiers in the texts in this article, we basically follow Tai & Wang (1990).

For Allan's seven types of classifiers, each can be further subdivided into more precise subcategories. "Material" is defined as "the essence of the entities referred to by nouns" and includes three subcategories: [animacy], [actions],² and [inanimacy]. The parameter "consistency" refers to the flexibility or rigidity of an object. [Flexible], [hard], [rigid], and [discrete] are the relevant features. The parameter "size" is straightforward, as it indicates the perceptual features [big] and [small]. "Location", on the other hand, is about the constraints of the environment in which the nominal expression is situated. The typical features of "arrangement" are [pleat], [fold], and [twisted-off], all of which actively interact with other parameters to indicate an entity. Finally, "quanta" concerns the (grammatical) number of the objects.

2.2 Tai's model

Tai & Wang (1990) propose that each classifier has a salient perceptual property which serves as the typical condition for categorization. For example, the one-dimensional extension is relevant for *tiao*² 條, and the three-dimensionality of a long, rigid object is salient for *gen*¹ 根. Later, Tai & Chao (1994) adopt the major parameters mentioned by Allan (1977) in conjunction with the model of prototype theory and divide the referents into three kinds of members: central members, natural extension members, and metaphorical extension members. The members of these semantic domains can be illustrated in Table 1, distilled from Tai & Wang (1990:47).

Table 1: Distribution of kinds of objects associated with *tiao*²

	Nominal Origin	Central Members	Natural Extension	Metaphorical Extension
條 <i>tiao</i> ²	條子 <i>tiao</i> ² <i>zi</i> ⁰	魚 <i>yu</i> ²	路 <i>lu</i> ⁴	新聞 <i>xin</i> ¹ <i>wen</i> ²
	柳條兒 <i>liu</i> ³ <i>tiaor</i> ²	黃瓜 <i>huang</i> ² <i>gua</i> ¹	街 <i>jie</i> ¹	意見 <i>yi</i> ⁴ <i>jian</i> ⁴
	麵條兒 <i>mian</i> ⁴ <i>tiaor</i> ²	褲子 <i>ku</i> ⁴ <i>zi</i> ⁰	河 <i>he</i> ²	消息 <i>xiao</i> ¹ <i>xi</i> ⁰
	木條兒 <i>mu</i> ⁴ <i>tiaor</i> ²	被單 <i>bei</i> ⁴ <i>dan</i> ¹	走廊 <i>zou</i> ³ <i>lang</i> ²	理由 <i>li</i> ³ <i>you</i> ²
		凳子 <i>deng</i> ⁴ <i>zi</i> ⁰		

The core members and extensions represent the domain structure in a synchronic state resulting from a historical development.³

² Although Allan (1977) takes [abstract and verbal nouns] as the second subcategory of material, he does not actually touch on abstract nouns. We therefore replace this category with the label [actions].

³ For the dating of various domains of *tiao*² in a diachronic perspective, see Erbaugh (1986) and Tai & Wang (1990).

Tai (1999) further concludes that the prototype theory of categorization has an explanatory value in the Chinese classifier system. This model is rather straightforward in that it captures the choice of classifiers in terms of a simple semantic mechanism.

2.3 Wu's analysis

Modeling his analysis after Allan (1977) and Pinker (1989), Wu (1998) specifies the referents of a classifier in terms of the dimensionality of an object and its saliency. An object can have at most three dimensions, one or two of which can be saliently focused. Dimensionality of an object has nothing to do with its size and shape, but rather with the ratio of the three dimensional axis. Based on this mechanism supplemented by some other features, Wu's research is claimed to be descriptively adequate.

2.4 Experimental analysis of Lien & Wang (1999)

Lien & Wang (1999) conducted a psycho-linguistic experiment on speakers of Taiwanese and Mandarin dialects. Their study uncovered the patterns of interaction of shape classifiers (two-dimensional and three-dimensional). In particular, it proved that the prototypical effect does apply. There is also a dialect-specific general tendency in the use of classifiers. Here are some points worth mentioning: (1) Prototypical effects on different classifiers are observed; the prototypical effect of *li⁴* 粒, for example, is greater than that of *ke¹* 顆, which means that *ke¹* 顆 is a more general classifier; (2) The experiment helps us tease out the central member associated with a classifier so that we can examine the core features that differentiate one classifier from another. For instance, [precious] is the main feature distinguishing *ke¹* 顆 from *li⁴* 粒; (3) Dialectal comparisons and related phenomena are accounted for. For example, Group A participants (Mandarin native speakers) used fewer items associated with shape than Group B participants (Min native speakers) did. In other words, Taiwanese speakers tend to use shape classifiers such as *ke¹* 顆 and *li⁴* 粒 instead of the neutral *ge⁴* 個.

3. Shape classifiers in earlier Southern Min texts

Allan (1977) prompted many of the studies on shape-oriented classification touched on above. Inspired by this line of enquiry, the present paper surveys a range of shape-related classifiers in the earlier Southern Min text “The Legend of the Litchi Mirror”.⁴ We also distinguish shape classifiers into three main categories in accordance

⁴ There are four texts of “The Legend of the Litchi Mirror” in our corpus. JJ, WL, SZ, and GX

with their salient dimensionality, and compare the early Southern Min data with that of other research.

3.1 One-dimensional shape classifiers

3.1.1 The referents of one-dimensional classifiers

We have assumed that the salient features for each of the one-dimensional classifiers —*tiau*⁵ 條, *ki*¹ 枝, *chiah*⁴ 隻, and *ber*² 尾—are all subsumed under the main [shape] category and the sub-feature [one dimensional].⁵ This is a hierarchical categorization. The structure of classifiers is amenable to further analysis from different perspectives. Given in (1) are the four one-dimensional shape classifiers *tiau*⁵ 條, *ki*¹ 枝, *chiah*⁴ 隻 and *ber*² 尾, gleaned from earlier Southern Min texts.⁶

- (1) a. *tiau*⁵ *chhiu*²-*phe*³ 手帕 ‘handkerchief’₃ *soa*ⁿ³ 線 ‘line’₁
 *peh*⁴-*au*⁷-*loo*⁵ 白後羅 ‘embroidery’₁ *be*²-*pi*ⁿ¹ 馬鞭 ‘horsewhip’₁
 *oe*⁵-*toe*²-*soa*ⁿ³ 鞋底線 ‘shoelace for the boot’₂
 b. *ki*¹ *chhiu*⁷-*ki*¹ 樹枝 ‘branch, twig’₁ *hoe*¹ 花 ‘flower’₅
 *kim*¹-*thoe*¹ 金釵 ‘gilt hairpin’₃ *chher*⁵ 簍 ‘rod, poker’₂⁷
 *khi*²-*thok*⁴ 齒托 ‘tooth-pick’₁ *chha*⁵ 柴 ‘fire wood’₂

are the respective abbreviations for the *Jia*¹-*Jing*⁴ 嘉靖 (AD 1522-1566) edition, the *Wan*⁴-*Li*⁴ 萬曆 (AD 1573-1619) edition, the *Shun*⁴-*Zhi*⁴ 順治 (AD 1644-1661) edition, and the *Guang*¹-*Xu*⁴ 光緒 (AD 1875-1908) edition. See Wu (2001a, b, c, d) for the annotated editions of the four play scripts. The language represented in the texts reflects mainly colloquial forms of Southern Min developed from a hybridization of the Quanzhou 泉州 and Chaozhou 潮州 varieties, as well as some earlier Mandarin and classical elements. The numbers in the parentheses stand for the date of each edition. The modified Church Romanization system is adopted with numerical superscripts for the tonal categories in Southern Min.

⁵ The spelling of Southern Min in this paper is based on the Church Romanization given in Douglas (1873). Some modifications have been made. In particular, the diacritic tone marks have been replaced by numerical superscripts. 1, 2, 3, 4, 5, 7 and 8 stand for the tone categories yin ping, yin shang, yin qu, yin ru, yang pang, yang qu and yang ru respectively. No distinction is made between *ch* and *ts* or *chh* and *tsh* as they do not involve phonemic contrast. Open /o/ and closed /o/ are rewritten as *oo* and *o*, as in *too*⁵ 圖 ‘drawing’ and *to*⁵ 逃 ‘escape’. /er/ and /ir/ stand for /ɤ/ and /u/ respectively.

⁶ The subscripts on the right of the Chinese expressions indicate the number of tokens for each item.

⁷ There are two occurrences of *chher*⁵ 簍. The one which occurs as a free form means a long thin rod made of wood or bamboo. The other occurs in the compound *her*²-*chher*⁵ 火簍 fire-rod ‘poker’ (Douglas 1873:67).

- | | | |
|-----------------------------|--|--|
| | <i>tek⁴-poe¹</i> 竹杯 ‘bamboo rod’ ₁ ⁸ | <i>chiak⁴</i> 燭 ‘candle’ ₃ |
| | <i>kim¹-chiam¹</i> 金針 ‘hairpin’ ₂ | <i>sau³-chhiu²</i> 掃帚 ‘broom’ ₁ |
| c. <i>chiah⁴</i> | <i>se²-chun⁵</i> 小缸 ‘boat’ ₂ | <i>be²</i> 馬 ‘horse’ ₃ |
| | <i>lang²-a²</i> 籠子 ‘cage’ ₁ | <i>kau²</i> 狗 ‘dog’ ₃ |
| | <i>kim¹-chiam¹</i> 金針 ‘golden hairpin’ ₁ | <i>tir¹-ko¹</i> 豬 ‘sex maniac’ ₁ ⁹ |
| d. <i>be²</i> | <i>bo⁵-bat⁸-le⁵</i> 無目鸚 ‘blind fish’ ₁ | <i>choa⁵</i> 蛇 ‘snake’ ₂ |

As for *tiao²* 條 and *zhi¹* 枝 in Mandarin (Tai 1994), the feature of rigidity can be evoked to distinguish *tiau⁵* 條 and *ki¹* 枝 in earlier Southern Min texts, as shown in (1a) and (1b). Thus the secondary parameter for *tiau⁵* 條 is [–rigid], whereas that for *ki¹* 枝 is [+rigid]. However, *ki¹* 枝 could be further narrowed down in its [material] specification. The data show that all the referents are made of wood or related to wooden products or metal. If we specify something as [+wood] or [+metal], it naturally implies the feature of [+rigid].

In the analysis of Tai & Wang (1990), animals with long shapes take *zhi¹* 隻 as their classifier in Mandarin, and this is taken as the default marker for the category of animacy.¹⁰ However, this feature is not at work in the objects that involve the classifier *chiah⁴* 隻 in the Southern Min texts, as in (1c). Rather, what is involved is the feature of moveability [+move], specifically the potential of changing location.¹¹

As shown in Tai (1999), the classifier *ber²* 尾 collocates with nouns like *hir⁵* 魚 ‘fish’ and *choa⁵* 蛇 ‘snake’ in modern Southern Min. Scant data gleaned from earlier Southern Min texts also show that the classifier *ber²* 尾, as in (1d), applies to reptiles and fish with the salient feature ‘tails’, and rarely (in only one instance) applies to birds with the same salient feature.¹² We therefore sort [+coda], in other words ‘with a tail as a part of

⁸ *Tek⁴-poe¹* 竹杯 is glossed as ‘a flat bamboo rod for beating criminals or scholars’ in Douglas (1873:382).

⁹ This usually means ‘boar’, as in *khan¹ tir¹-ko¹* 牽豬哥 lead-pig male ‘to lead a boar to a sow’ (Douglas 1873:228). But in the example adduced in the text (3.019 GX, see Wu 2001d), it takes on the metaphoric sense as indicated in the list.

¹⁰ As an anonymous reviewer perceptively remarked, ‘In Mandarin, animals with long shape take *tiao²* 條 (fish, snake, crocodile); *zhi¹* 隻 is also used for other objects (the characteristic feature usually being specified as “one of a pair”). But the latter is used for any kind of quadruped or bird, even roundish ones, in its more general use’.

¹¹ Moveability includes auto-motion and passive moveability. This feature is only a necessary rather than sufficient condition for the use of *chiah⁴* 隻. For example, *chhia¹* 車 ‘car’ can collocate with both *chiah⁴* 隻 and *tai⁵* 台. The same object may be amenable to more than one means of interpretation due to different construals in our cognitive process.

¹² *Nng⁷ be² bo⁵-bat⁸-le⁵* 兩尾無目鸚 two CL not-have eye oriole ‘two eyeless orioles’ is found in GX (1875-1908). But the character 鸚 is rendered as ‘魚遷’ in SZ (1644-1661), an even earlier text. Since 鸚 appears later than ‘魚遷’, with a time gap of about 200 years, it is

the body’, into the arrangement category and place Allan’s (1977) [+animate] feature into the material category.¹³

3.1.2 The distribution of one-dimensional shape classifiers

There are four typical one-dimensional classifiers in earlier Southern Min texts, namely *tiau*⁵ 條, *chiah*⁴ 隻, *ber*² 尾, and *ki*¹ 枝, as shown in Table 2.¹⁴

Table 2: The distribution of one-dimensional shape classifiers

	<i>tiau</i> ⁵ 條	<i>chiah</i> ⁴ 隻	<i>ber</i> ² 尾	<i>ki</i> ¹ 枝	Total	Word count	Percentage
JJ	1	3	0	3	7	7331	0.00095
WL	0	2	0	3	5	4361	0.00115
SZ	4	3	2	9	18	8208	0.00219
GX	3	4	1	7	15	9147	0.00164
Total	8	12	3	22	45		

Some studies, such as Tai & Wang (1990:37), suggest that *tiao*² 條 is one of the most frequently-used classifiers. The concept of ‘extension in length’ underlying *tiao*² 條 is also very common among other classifier languages. Erbaugh (1986) shows that *tiao*² 條 is the most frequently used and extended classifier in child Mandarin. However, in earlier Southern Min texts, *tiau*⁵ 條 is no more frequent than other classifiers. In fact, among the four classifiers, *ki*¹ 枝 is the most frequently used in the earlier Southern Min texts. *Ber*² 尾, on the other hand, appears the least frequently in the texts. It is difficult to determine whether there is a chronological increase in the use of one-dimensional shape classifiers based on the ratio of the sum total of tokens of classifiers to the total number of words in each text because there is a tangible gap between JJ and WL.

3.1.3 The perceptual structure of one-dimensional classifiers

In the previous section, each of the one-dimensional classifiers was further defined

reasonable to surmise that barring a slip of the scriptwriter, what is involved is a categorical extension of fish and reptiles to birds for the classifier *ber*² 尾. Such a semantic extension is motivated by the salient feature of the coda that they share. Other kinds of birds with the salient coda feature, such as *oan*¹-*iu*ⁿ¹ 鴛鴦 ‘mandarin duck’, *too*⁷-*koan*¹ 杜鵑 / *chu*²-*kui*¹ 子規 ‘cuckoo’, and *i*ⁿ²-*a*² 燕仔 ‘swallow’, take on the general classifier *e*⁵ 个 rather than *be*² 尾.

¹³ Allan (1977) sub-divides the material category into animacy, inanimacy, and abstract and verbal nouns.

¹⁴ The numbers indicate the token count of each classifier.

in terms of one or more prominent perceptual features. We propose that those features must be constrained within Allan's (1977) seven parameters. Only when the possible categories for the perceptual features are not random can our analysis be said to reach a generalization. Example (2) summarizes the analysis of one-dimensional classifiers given above.

- (2) a. *tiau*⁵ [-rigid] (interacts with 'consistency')
 b. *ki*¹ [+rigid] [+wood] [+metal] (interacts with 'consistency')
 c. *chiah*⁴ [+move] (interacts with 'location')
 d. *ber*² [+coda] [+animate] (the part of an animal in relation to 'arrangement')

The features adopted here are all related to Allan's parameters for classifier languages. The whole organization of the mechanism is represented in Figure 1. Each classifier is on a tier of the 'shape' category, and is related to other perceptually salient features via linking.

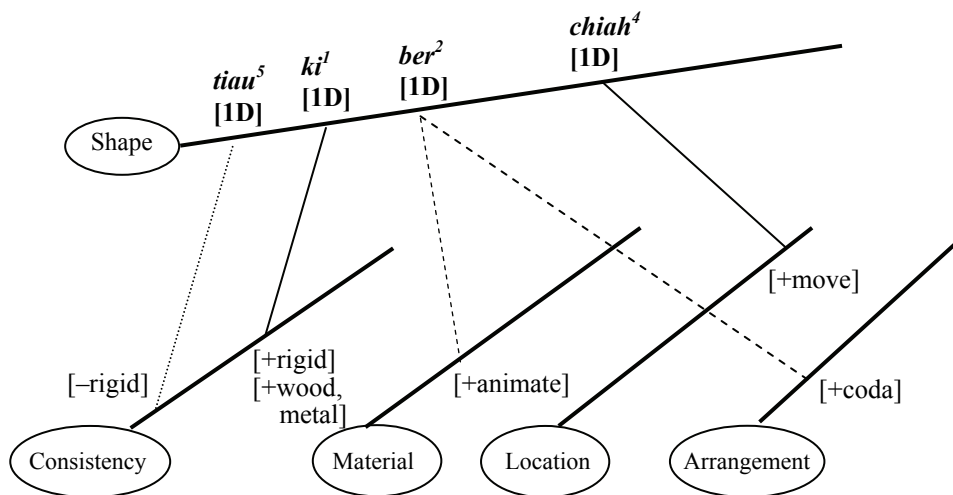


Figure 1: The perceptual structure of one-dimensional classifiers

One noteworthy point is that an object may be associated with more than one classifier. Tai (1994) acknowledges this point for MC, pointing out the overlap between *tiao*² 條 and *gen*¹ 根, on the one hand, and between *gen*¹ 根 and *zhi*¹ 枝, on the other. Similar phenomena are found in earlier Southern Min texts, as exemplified by the coexistence of *chit*⁸ *ki*¹ *kim*¹-*chiam*¹ 一枝金針 one CL golden-needle 'a hairpin' and *chit*⁸ *chiah*⁴ *kim*¹-*chiam*¹ 一隻金針 one CL golden-needle 'a hairpin' in the same text, particularly in the GX edition. Each classifier teases out a different perspective of the same object. Each of the expressions must be used in a different setting. For example,

*chit*⁸ *ki*¹ *kim*¹-*chiam*¹ 一枝金針 is used in the gift-giving context,¹⁵ as in (3), whereas *chit*⁸ *chiah*⁴ *kim*¹-*chiam*¹ 一隻金針 occurs in the setting of conveyance of an object reflecting the semantic property of *chiah*⁴ 隻, that is to say moveability, as in (4).¹⁶

- (3) *Chit*⁸ *ki*¹ *kim*¹-*chiam*¹ *sia*⁷ *lu*²
 一 枝 金針 謝 汝 (7.071, GX)
 one CL golden-needle thank you
 ‘Here is a golden hairpin for you as a token of thanks.’
- (4) *Kang*⁷ *a*¹-*ma*² *teh*⁸ *chit*⁸ *chiah*⁴ *kim*¹-*chiam*¹ *lai*⁵
 共 亞媽 提 一 隻 金針 來 (7.069, GX)
 for grandma fetch one CL golden-needle come
 ‘Fetch me a golden hairpin.’

3.2 Two-dimensional shape classifiers

3.2.1 The referents of two-dimensional classifiers

On a par with our account of the one-dimensional classifiers, we display the collocating objects for two-dimensional classifiers *tiu*ⁿ¹ 張, *hong*¹ 封, *pak*⁴ 幅, *pun*² 本, *pan*² 板, *bin*⁷ 面, and *phi*ⁿ³ 片 in (5).

- (5) a. *tiu*ⁿ¹ *chong*⁷ 狀 ‘written petition’₁ *choa*²-*ji*⁷ 紙字 ‘written paper,
*pai*⁵-*phio*³ 牌票 ‘warrant’₁ letter’₃
 b. *hong*¹ *sir*¹ 書 ‘letter’₃₇ *sir*¹-*sin*³ 書信 ‘letter’₆
*thian*¹-*chir*²-*chiau*³ 天子詔 ‘imperial decree’₁
 c. *pak*⁴ *oe*⁷ 畫 ‘painting’₁
 d. *pun*² *nui*⁷-*chi*¹ *ki*³ 荔枝記 ‘The Legend of the Litchi Mirror’₁
 e. *pan*² *phah*⁴ ...*toa*⁷ *pan*² 打...大板 ‘give ... a flogging’₉
 f. *bin*⁷ *ki*ⁿ³ ...*chit*⁸-*bin*⁷ 見...一面 ‘meet’₉
 g. *phi*ⁿ³ *hoo*⁵-*soat*⁴ 胡說 ‘talk nonsense’₁
*giok*⁸-*kiat*⁸-*peng*¹-*chhing*¹ 玉潔冰清 ‘purity; virginity’₁

*Tiu*ⁿ¹ 張, *hong*¹ 封, *pak*⁴ 幅 and *pun*² 本 are basically classifiers for objects featuring a salient two-dimensionality. As listed in (5a), a piece of paper, a two-dimensional object, takes on a special function when co-occurring with the classifier *tiu*ⁿ¹ 張. A written

¹⁵ Gift-giving could, but does not necessarily, involve movement of the object from one person to another. It may only imply the shift of ownership without movement in space.

¹⁶ The numbers in parentheses in the following two examples stand for the scene and the input item respectively.

complaint is needed in a lawsuit; a written note is used to inform; a warrant is good for arrest. Despite its manifold functions in collocation with a range of noun phrases, the common feature in the object associated with the classifier *tiuⁿ¹* 張 is [spread], which is subsumable under the category of consistency. By [spread] is meant that something can be spread out. *Hong¹* 封, as shown in (5b), emphasizes the sealing and delivery of the letter. This element may be implicated in the origin of the lexical items *tiuⁿ¹* 張 and *hong¹* 封 in Chinese. The two words are verbs and mean ‘to stretch a bow’ and ‘to seal a letter’, respectively. Lee (2005) interprets this as a process of metaphorical extension. Here the feature [+move] is proposed on a par with the mechanism of one-dimensional objects in order to highlight the process of delivery. The classifiers *pak⁴* 幅, as in (5c), and *pun²* 本, as in (5d), only favor paintings and books respectively.

Unlike the nominal classifiers just touched on, *pan²* 板, *bin⁷* 面 and *phiⁿ³* 片, as given in (5e-g), are verbal classifiers. They function as classifiers for actions or events. They therefore take on the feature [+event]. Although they are both two-dimensional objects in their original meanings, they are related to the counting of events. *Pan²* 板, meaning ‘wooden board’, is an instrument used in the action of flogging, and when collocated with a numeral denotes a single or plural event. *Bin⁷* 面, with an original meaning of ‘human face’, assumes the function of a counter for meeting events. It is often but not always occurs in constructions with the verb *kiⁿ³* 見 ‘meet’. *Phiⁿ³* 片 may be used as a counter of gibberish utterances or more abstract entity such as ‘purity or virginity’.

3.2.2 The distribution of two-dimensional shape classifiers

Given in Table 3 is the distribution and frequency of the two-dimensional classifiers *tiuⁿ¹* 張, *hong¹* 封, *pak⁴* 幅, *pun²* 本, *pan²* 板, *bin⁷* 面, and *phiⁿ³* 片.

Table 3: The distribution of two-dimensional shape classifiers

	<i>tiuⁿ¹</i> 張	<i>hong¹</i> 封	<i>pak⁴</i> 幅	<i>pun²</i> 本	<i>pan²</i> 板	<i>bin⁷</i> 面	<i>phiⁿ³</i> 片
JJ	1	15	0	0	1	3	1
WL	0	10	1	1	2	2	1
SZ	2	9	0	0	4	3	0
GX	3	10	0	0	2	1	1

3.2.3 The perceptual structure of two-dimensional classifiers

Given in (6) are the feature specifications of the two-dimensional classifiers:

- (6) a. *tiu*ⁿ¹ [+spread] [–sealed]
 b. *hong*¹ [+move] [+sealed]
 c. *pak*⁴ [+material] [+painting]
 d. *pun*² [+material] [+print]
 e. *pan*² [±single]
 f. *bin*⁷ [±single]
 g. *phi*ⁿ³ [+single]

For a proper treatment of two-dimensional classifiers, in the last section we proposed to include the feature [+spread] in the category “consistency” to account for the spreadability of the object denoted by the noun phrase in collocation with the classifier *tiu*ⁿ¹ 張. We also postulated the feature [+sealed] in the category “arrangement” to distinguish *hong*¹ 封 from *tiu*ⁿ¹ 張 in earlier Southern Min texts. In particular, *hong*¹ 封 is used to categorize sealed letters, whereas *tiu*ⁿ¹ 張 is the classifier for papers not sealed in envelopes. *Pak*⁴ 幅 is used specifically for paintings, so we locate its selection restriction in the category “material”. Compared to other classifiers for different kinds of paper, *pun*² 本 denotes a volume comprising written pages or prints. We specify this classifier in terms of the feature [+print] subsumed under the category “material”.

*Pan*² 板, *bin*⁷ 面 and *phi*ⁿ³ 片 function as verbal classifiers denoting actions and events. Thus, according to Allan’s analysis (1977), they are specified in terms of the feature [+action], subsumed under the parameter of material. Figure 2 encapsulates the perceptual structure of two-dimensional classifiers.

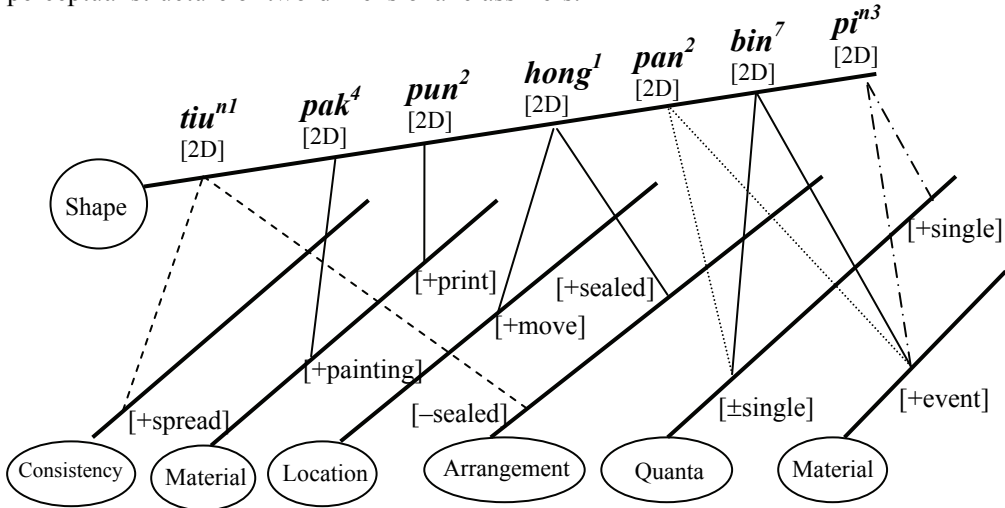


Figure 2: The perceptual structure of two-dimensional classifiers

3.3 Three-dimensional shape classifiers

3.3.1 The objects collocating with three-dimensional classifiers

Three-dimensional classifiers to be examined, such as *ter*³ 塊, *liap*⁸ 粒, *thng*⁵/*oan*⁵ 團, *lun*⁵ 輪 and *lui*² 蕊, are listed in (7):

- (7) a. *ter*³ *kiam*⁵-*chhai*³ 鹹菜 ‘salted vegetable’₁ *gun*⁵ 銀 ‘silver ingot’₂
 *chioh*⁸-*thau*⁵ 石頭 ‘stone’₂ *kia*ⁿ³ 鏡 ‘mirror’₃
 *tiam*²-*sim*¹ 點心 ‘snack’₁ *ker*² 粿 ‘rice-cake’₂
 *choa*² 紙 ‘paper’₂ *pang*¹ 版 ‘board’₁
 (*bin*⁵-*chhng*⁵) *pang*¹ (眠床) 枋 ‘(bed) board’₃
- b. *liap*⁸ *bi*² 米 ‘rice’₂
- c. *thng*⁵/*oan*⁵ *tia*ⁿ²-*phi*² 鼎丕 ‘rice crust’₁¹⁷ *leng*²-*png*⁷ 冷飯 ‘cold rice’₁
- d. *lun*⁵ *kng*¹-*gerh*⁸ 光月 ‘full moon’₇ *ang*⁵-*jit*⁴ 紅日 ‘sun’₂
 *gerh*⁸-*chiau*³ 月照 ‘moonbeam’₁
- e. *lui*² *hoe*¹ 花 ‘flower’₄

*Ter*³ 塊 in (7a), denoting a lumpish object, functions as a classifier for chunks of stone, bits of ink, etc. (Douglas 1873:482). It is a productive classifier for three-dimensional objects, as exemplified by *kiam*⁵-*chhai*³ 鹹菜 ‘salted vegetables’, *kia*ⁿ³ 鏡 ‘mirror’, *chioh*⁸-*thau*⁵ 石頭 ‘stone’, *ker*² 粿 ‘rice cake’, *gun*⁵ 銀 ‘silver (ingot)’, *pan*² 版 ‘pattern’, (*bin*⁵-*chhng*⁵) *pang*¹ (眠床) 枋 ‘(bed) plank’, *tiam*²-*sim*¹ 點心 ‘snack’, and *choa*² 紙 ‘lump of paper’.

*Liap*⁸ 粒 in (7b) denotes a tiny and globular mass of an object such as a grain of rice. The feature [+small] can be posited in the ‘size’ parameter to capture the meaning of this classifier.¹⁸ Whereas *liap*⁸ 粒 must denote an individual object, the classifier *thng*⁵/*oan*⁵ 團 in (7c), which also denotes a globular mass, can be used to refer to an aggregate of objects such as a cluster of rice crusts. It is therefore bigger in size and takes on the features of [–small] [+collective] in our specification. The situation is much simpler for *lun*⁵ 輪 in (7d) and *lui*² 蕊 (7e): they are simply used to refer to disc-like heavenly bodies — such as the sun and the moon — and flowers, respectively.

¹⁷ *Tia*ⁿ²-*phi*² 鼎丕 is glossed as ‘incrustation on a rice-boiler from boiling rice or other things’ in Douglas (1873:394). It corresponds to *kuo*¹-*pa*¹ 鍋巴 in Mandarin. See also Wu (2001d:345).

¹⁸ The feature [+small] does not figure in the classifier *liap*⁸ 粒 in modern Southern Min, as it is acceptable to use this classifier in reference to a watermelon (Lien & Wang 1999).

3.3.2 The distribution of three-dimensional shape classifiers

Except for *ter*³ 塊, three-dimensional classifiers are hard to come by. The distribution and frequency of three-dimensional classifiers are given in Table 4.

Table 4: The distribution of three-dimensional shape classifiers

	<i>ter</i> ³ 塊	<i>liap</i> ⁸ 粒	<i>oan</i> ⁵ 團	<i>lun</i> ⁵ 輪	<i>lui</i> ² 蕊
JJ	6	1	0	2	0
WL	6	0	1	2	0
SZ	14	1	1	3	2
GX	3	1	0	3	2

As expected, the three-dimensional classifier *ter*³ 塊 is the most productive, and we will see in the next section that its referents are also the most diverse. But the distribution of *lun*⁵ 輪 shows that the content of the legend plays a role in the frequency of occurrence as well. The number of tokens of this classifier is high, but the variety of objects it applies to is small.

3.3.3 The perceptual structure of three-dimensional classifiers

The feature specifications of the three-dimensional classifiers are given in (8):

- (8) a. *ter*³ [+lumpish]
 b. *oan*⁵ [–small] [+collective]
 c. *liap*⁸ [+small] [–collective]
 d. *lun*⁵ [+heavenly body] (in interaction with the category ‘material’)
 e. *lui*² [+flower] (in interaction with the category ‘material’)

Sub-parameters can be furnished to better specify the three-dimensional classifiers: [smallness] and [collectiveness]. One interesting point is that, theoretically, the classifiers shown in (8) do not exhaust the possible realizations of the feature combinations for [smallness] and [collectiveness]. For instance, we can say that the case of [–small] and [–collective] is realized as *ter*³ 塊 but what about the opposite: a classifier with the features [+small] and [+collective]? It is logically possible for a small object to comprise a set of even smaller elements. However, the data is not sufficient for us to make any further claims. We leave this question open for further research. The perceptual structure of three-dimensional classifiers is given in Figure 3.

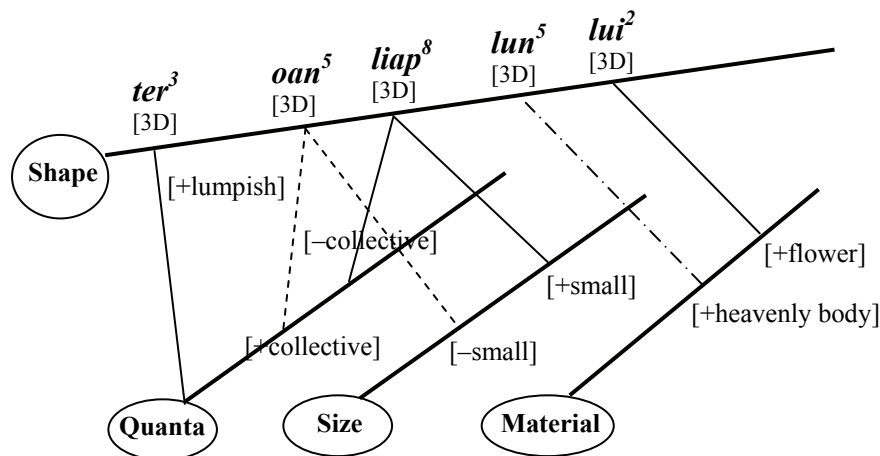


Figure 3: The perceptual structure of three-dimensional classifiers

4. The semantic interpretations of classifiers

In this section, we look into the etymological origins of the classifiers. As we noted in the first section, the meanings of the lexical items themselves are worth exploring. Some of the historical changes undergone by these lexical items provide reasonable explanations for the linguistic uses of the classifiers. Since our study focuses on earlier Southern Min texts, and since a basic account of many dimensional shape classifiers has been given in the previous sections, we will only focus on semantic interpretations of the classifiers that we have not done full justice to.

For one-dimensional classifiers we tackle the earlier and more basic senses of *tiau*⁵ 條, *ki*¹ 枝 and *chiah*⁴ 隻, but not of *ber*² 尾, which is pretty straightforward. While *tiau*⁵ 條 originally referred to the long and thin branch of a tree (Wang et al. 2000:483), it is no longer confined to the branch of a tree but can indicate anything long and slender (Douglas 1873:498). It has shed its arboreal property while keeping its configurational character. The default value of this classifier is the feature [–rigid], which denotes flexible objects; however, this feature does not always apply, as exemplified by the compatibility of *tiau*⁵ 條 with objects such as *kim*¹-*tiau*⁵ 金條 ‘a bar of gold’ and *han*¹-*chir*⁵ 蕃薯 ‘sweet potatoes’ (Douglas 1873:498). The original meaning of *ki*¹ 枝 was a tree branch or twig (Wang et al. 2000:464) but, as a classifier, it takes on the sense of something long, straight, and characterizable by the feature [+rigid] (Douglas 1873:210). Such a feature distinguishes *ki*¹ 枝 from *tiau*⁵ 條. *Ki*¹ 枝 is quite common in modern Southern Min especially in its extended use, as it can co-occur with *ien*⁵-*pit*⁴ 鉛筆 ‘pencil’, *ki*⁵-*koain*¹ 旗桿 ‘pole’, *ong*⁷-*lai*⁵ 旺梨 ‘pineapple’, etc. (Douglas 1873:210). On the basis of its graphic make-up, we can surmise that the earliest sense of *chiah*⁴ 隻

was the getting or holding of birds; in the modern language, however, its sense extends to single as opposed to double, as in *shuang*¹ 雙 (Ogawa et al. 1994:156). This lexeme is etymologically related to 獲, which indicates the setting of dogs to catch birds and beasts (passim 648). Such an etymological origin can account for the confinement of the *zhi*¹ 隻 to animals in Mandarin.¹⁹ Perhaps there is a semantic link between catching animals and identifying the animals to be caught. In Southern Min, this classifier has undergone further semantic extension by shedding the feature of animacy while retaining the feature of moveability.²⁰

For two-dimensional classifiers let's consider *tiu*ⁿ¹ 張 and *pun*² 本. *Tiu*ⁿ¹ 張 originally meant 'stretching a bow', but such a particular action has extended first to stretching anything and then to anything stretched. This then leads to two-dimensional entities. *Yi*⁴ *zhang*¹ *wang*³ 一張網, 'a net' in MC, could be taken as a telling example reflecting such a propensity. However, notwithstanding the historical link, if all noun phrases that the classifier *zhang*¹ 張 covers in modern MC are taken into consideration, we can see the prototype effect, since synchronically it is difficult to pin down the semantic common features that all the noun phrases involved share. *Pun*² 本 is commonly known to denote the root of a tree in its earlier sense.²¹ In the modern language, it can also denote the plant itself. This extension is probably a result of the operation of metonymy where part (root) stands for whole (tree), as in *toa*⁷ *pun*² 大本 'large plant' in modern Southern Min. Although the precise development which caused *pun*² 本 to become a classifier for books remains a mystery, we deem it quite plausible that the sense of book as a 'basis or foundation', could lay the grounds for developing a new function for this classifier.

5. Closing remarks

In this paper we have examined one-dimensional, two-dimensional and three-dimensional classifiers in earlier Southern Min texts, viz., "The Legend of Litchi Mirror", dating back to as early as the sixteenth century. For each kind of classifier, examples have been furnished and supported by relevant explanations, and their distribution and

¹⁹ As mentioned here, however, there has been another route of development for this classifier as well, with *zhi*¹ 隻 denoting one of a pair, such as *yi*¹ *zhi*¹ *yan*³ *jing*¹ 一隻眼睛 'one eye', *yi*¹ *zhi*¹ *wa*⁴ *zi*⁰ 一隻襪子 'a sock' and *yi*¹ *zhi*¹ *xiu*⁴ *zi*⁰ 一隻袖子 'a sleeve'. This is a development that Mandarin but not Southern Min has experienced.

²⁰ It would be immensely interesting to examine the discrepancy between Mandarin and Southern Min regarding the development of *zhi*¹ 隻 from a diachronic perspective in line with Erbaugh (1986) and Peyraube (1998).

²¹ See Liu (1965:96-97).

frequency of occurrence have been given. Finally, figures featuring the perceptual structures of the classifiers have been presented on the basis of detailed feature analysis. We have concluded the paper with an attempt to flesh out the etymological origins of some less straightforward classifiers and have hopefully provided a viable account for the behavior of the classifiers in question.

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