

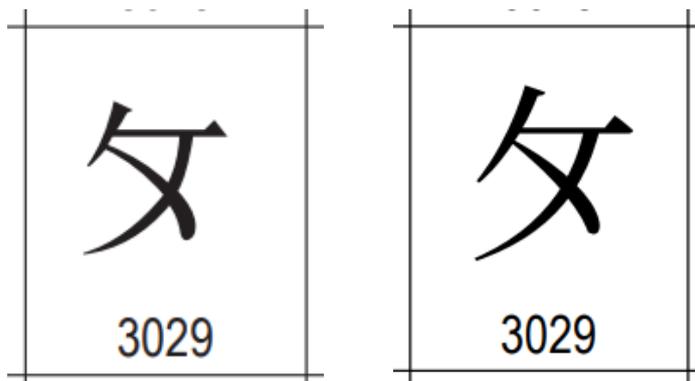
Title: Proposal to update representative glyph of U+3029 SUZHOU NUMERAL NINE

Author: Night Koo

Date: 2023-07-01

This is a proposal to update the representative glyph shown in the code charts for U+3029 SUZHOU NUMERAL NINE 𠄎. Three suggestions will be given on the update method

In this proposal, I propose that the shown representative glyph does not reflect the current real-world usage. Below shows the representative glyph of U+3029 in pre-Unicode 13.0 on the left, and the post-Unicode 14.0 on the right. The current glyph (on the right) is provided by *CJK Strokes* as provided in [L2/20-058](#).



Unicode 13.0 and older on left, Unicode 14.0 and 15.0 on right

Some real-world usage of the Suzhou numeral 9 as excerpted from books and photographs are provided in the References section. The pictures are tagged with digits wrapped in parenthesis such as (1).

Background

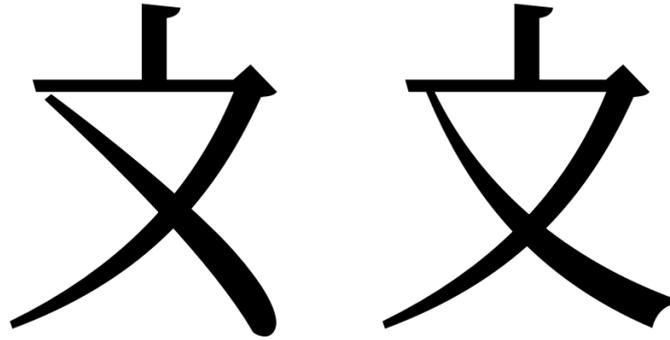
The Suzhou numerals is a numeral system used in Chinese communities before the introduction of Arabic numerals. Unicode currently encodes 12 of them in the [CJK Symbols and Punctuation](#) block, nine at U+3021..U+3029 and three at U+3038..U+303A.

The current glyph of U+3029 𠄎 HANGZHOU NUMERAL NINE, and its processor glyph 𠄎, shown in Unicode with 4 separate strokes might be from GBK and GB 18030-2000. Only reference (10) shows the numeral exactly as shown in the Unicode code charts, and reference (20) shows a similar but not exact using 3 strokes similar to the character 夕.

Besides, in GB 18030-2005, which is the successor of GB 18030-2000 (which is also successor of GBK), the shown glyph for Suzhou numeral 9 is modified and does not match those in GB 18030-2000 and GBK.

Due to the lack of real-world usage evidence and change of glyph in different versions of GB 18030, I would like to propose Unicode to modify and update the glyph for U+3029. However, there are multiple sources for the character and some of the usages shown a different glyph than other usages. Thus, I have compiled 3 possible glyph(s) to be used to replace the glyph for U+3029.

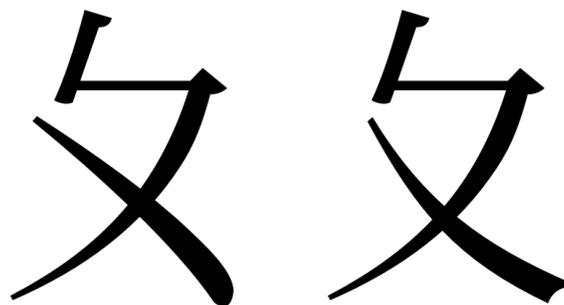
Suggestion 1



This glyph is the form mostly used in **typed material** during the early documents and designed based on reference (1), (2), (3), (4), (5), (7), some of (8), (11) and (17). This glyph is also the reference glyph as provided by GB 18030-2005 and GB 18030-2022. With normalisation, the glyph provided by CNS11643 can match this glyph too. Samples of glyphs from font vendors implementing Big5 are also similar to this glyph in composition.

Reference (1), (2), (5), (7) and some of (8) uses a dot stroke (點筆, 丶) instead of a press stroke (捺筆, ㇇). Reference (3) is a geometric font and it is not possible to deduce the last stroke. CNS11643 uses a dot stroke for both the first and third stroke. Both GB 18030-2005 and GB 18030-2022, along with both Big5 font vendors (Arphic and Dynacom) shows a press stroke. However, both of these forms are equivalent.

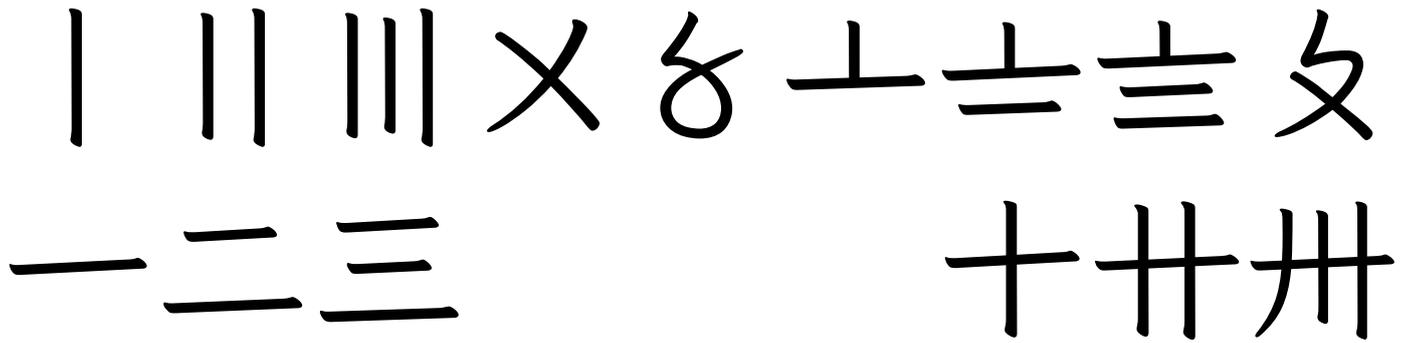
Suggestion 2



This glyph is the form mostly used in **written material** during the early documents and designed based on reference (9), (12), (13), (14), (15), (16), (19), (21), (22) and first of (8). This glyph is also the reference glyph as provided by Big5 specification document. It is noted that the first stroke usually does not pass through the third stroke like the current glyph in Unicode.

All the references showing the glyph uses a dot stroke (點筆, 丶) instead of a press stroke (捺筆, ㇇) as it is easier to carry the stroke from this numeral to the next in handwriting. However, normalising the dot stroke to press stroke is acceptable when displaying the glyph using printed fonts.

Suggestion 3



This suggestion does not focus on U+3029 only, but all the Suzhou numeral glyphs. Since the modern usage of Suzhou numeral is primarily handwritten as shown in reference (12) through (19), it might be better to convert all the Suzhou numeral glyphs to use a handwritten style font instead of a printed style font. The problem with Suzhou numeral 9 can also be solved elegantly as this is the form the general public uses in handwriting and education (shown in reference (21)).

The above glyphs are provided as in [Iansui](#), an open-source Traditional Chinese font simulating handwritten style and licensed under SIL Open Font License, version 1.1. Alternative vertical form is also shown here for U+3021..U+3023.

There is precedence of using handwritten style glyphs as shown in L2/20-058 such as the two spacing modifier glyphs U+02EA and U+02EB used for Taiwanese Phonetic Symbols. The Bopomofo and Bopomofo Extended blocks are also shown with a handwritten style, which is also due to mostly handwritten usage in modern time.

All 3 suggestions will require a change to the *CJK Symbols* font. *Iansui* is license-wise compatible with *CJK Symbols* and may be merged directly into the font. If the Unicode committee choose to change to use a handwritten style but requires the glyph to match those in the Bopomofo block, I will be able to help design such glyphs.

That is all.

Thanks to Ken Lunde and Henry Chan for providing materials and references.
Thanks to But Ko for providing the font of *Iansui*.

References

With sources:

(12)碼子字 尋常記帳,爲簡便起見,還有一種碼子字如下:——

丨 𠄎 𠄎 𠄎 𠄎 𠄎 𠄎 𠄎 𠄎 𠄎

這是當一到九的九個數字和零字用的;不過丨 𠄎 𠄎三字,也可以橫寫做一 二 三,使並用起來,豎寫橫寫,輪流變換,容易分別;他的記法,也是橫行,例如:——

二千一百三十二,寫做丨-𠄎=;

五百六十,寫做𠄎𠄎𠄎或𠄎10;

四萬九千,寫做𠄎𠄎𠄎或𠄎000.

(1)

1929年《新學制算術教科書第1冊》(New Academic System Arithmetic Textbook Volume 1)

丨 <i>one</i>	𠄎 <i>four</i>	𠄎 <i>seven</i>
𠄎 <i>two</i>	𠄎 <i>five</i>	𠄎 <i>eight</i>
𠄎𠄎 <i>three</i>	𠄎 <i>six</i>	𠄎 <i>nine</i>

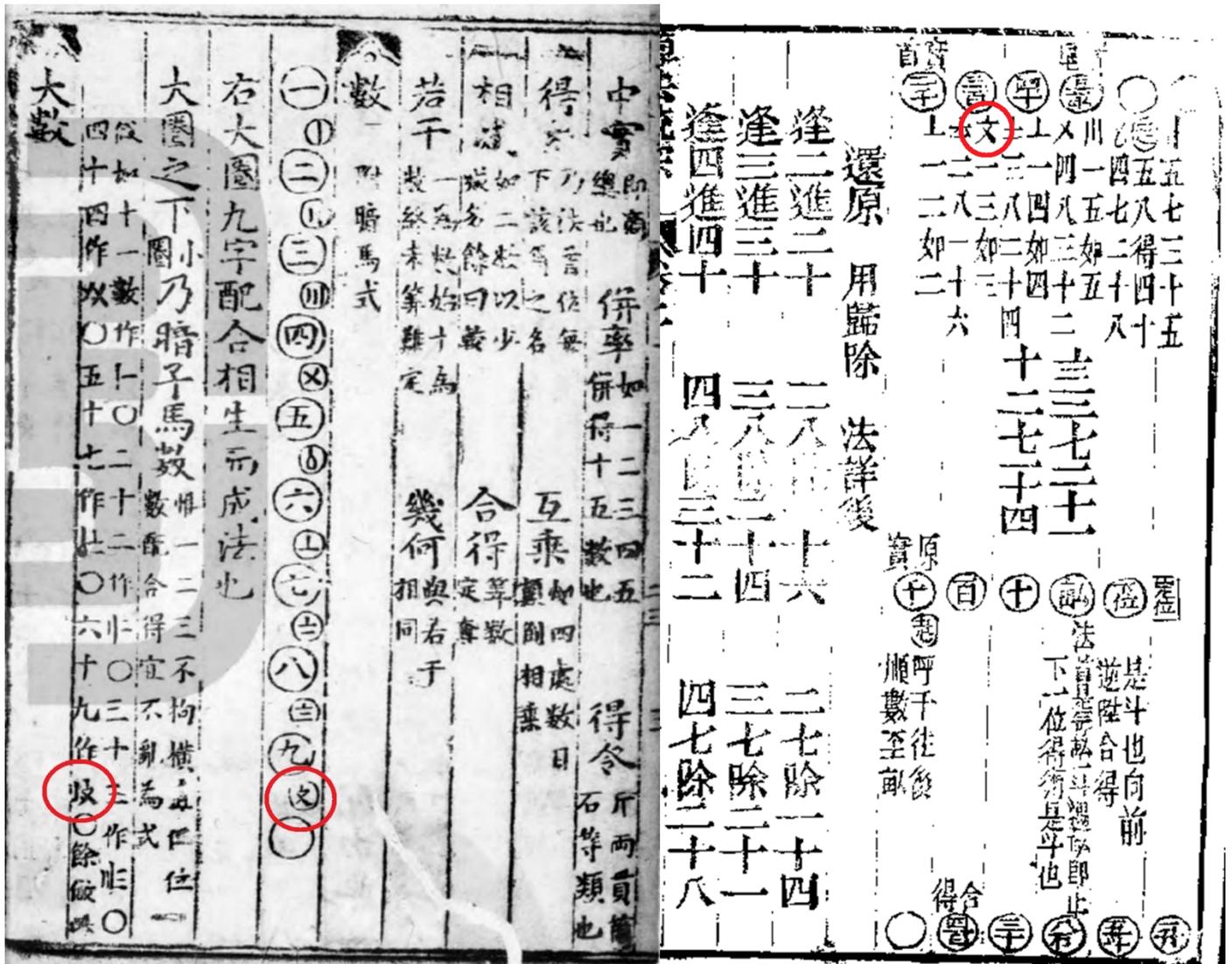
(2)

1814年《中國言法》(Elements of Chinese Grammar, by Joshua Marshman)

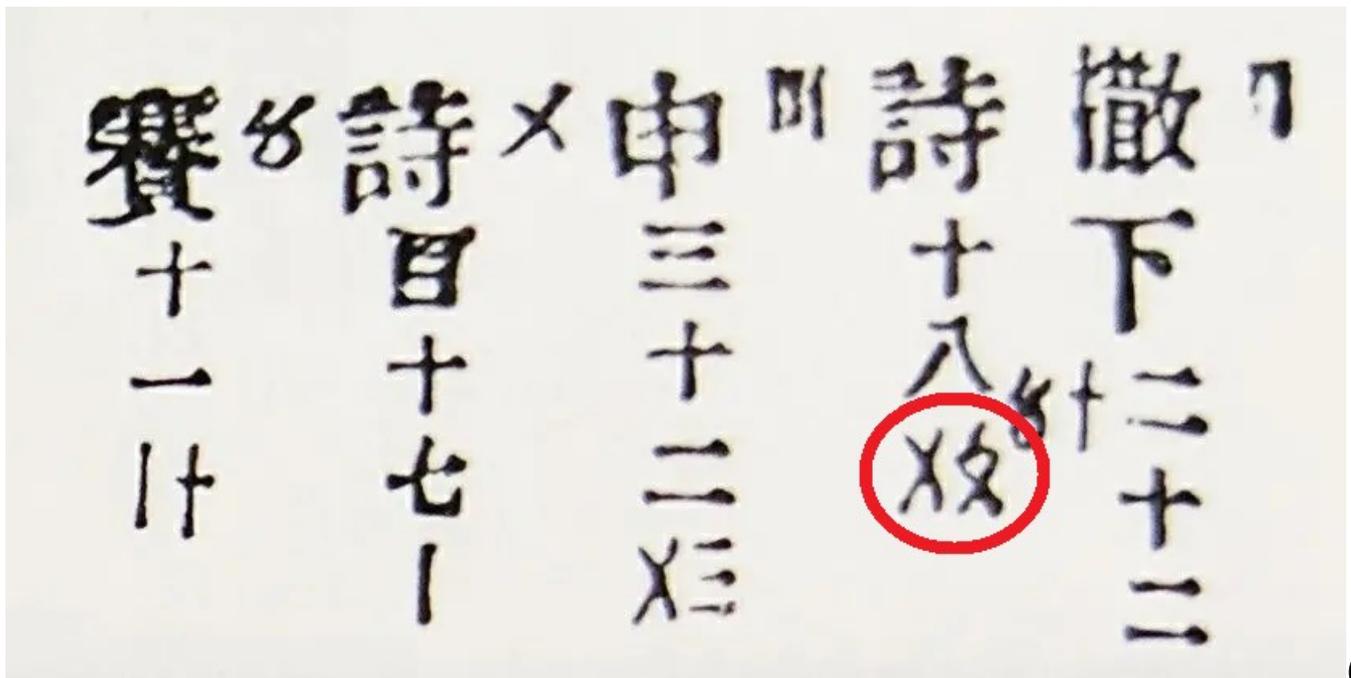


(3)

青龍橋車站計程石碑 Milestone stele at Qilongqiao Station



1592 年《算法統宗》 (Suanfa tongzong) (4), (5)



(6)

法京人數

○法國巴黎斯京城人數雖不如英京然冠蓋踵錯士庶殷繁亦一大都會也西歷二月初十至十六日曾有人稽巴黎斯京中人數共二百二十二萬五千九百有十人數日間婚姻者五百五十八家死者一千四百十七人中男七百六十一人女六百五十六人誕生者一千二百十九人中男六百一十二人女六百零七人蓋該處風俗凡婚喪喜慶某處某人各須稟報地方官存冊故瞭若掌螺一望即能了了也

精算圖

○西

報載有精算圖二則不知仿于何人該報名其圖為邪術圖蓋甚言其推算之精也按是二圖各行橫疊總數實相吻合各行直疊或對角二行交疊其總數亦合若符節茲譯錄于左以為茶餘酒後消遣之一助

卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅

卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅
卅	卅	卅	卅	卅	卅	卅	卅

蘭廳雜詠

○明憲十二淨無塵細雨輕風一半春讀罷陔南詩一卷堂前剛到賣花人 超然臭味有誰同總在春風淡蕩中此地紅塵飛不到却將清水洗芳叢 晨起看花到北堂開窗放出隔宵香怪儂一笑偏多事自製新詞誄夕陽 誰是蘭心蕙質人風流濯濯少年春因循恐把韶華負忙煞閒吟自在身 楚詞讀罷有餘音香草叢中寄託深千古騷人千古恨不知誰識美人心 薛子兼初稿

辛巳偶題

○老大何堪憶少時驚心往日去如馳一千里外歸無物三十年來剩有詩入世敢矜才獨絕思親不覺夢相隨西郊又遇新秋節一葉梧桐早自知○登城西道上遠眺 閒來常獨步秋色繞

FIGURES.

1	一	cék.	19	卒	cáp káu.	2,076	一
2	二	nǒ.	20	廿	jī cáp.	3,506	二
3	三	sa ⁿ .	23	卅	jīh sa ⁿ .	4,728	三
4	四	sì.	35	卅五	sáp ngǒ.	5,206	四
5	五	ngǒ.	44	卅六	síp sì.	5,782	五
6	上	lák.	56	卅七	ngôp lák.	6,008	上
7	下	chit.	69	卅九	lák káu.	6,703	下
8	三	poih.	78	卅	chit poih.	7,543	三
9	女	káu.	94	卅四	kâup sì.	7,600	女
10	早	cáp.	100	百	cék peh.	7,030	早
11	午	cáp it.	105	百五	peh lân ngǒ.	8,000	午
12	半	cáp jī.	150	百	peh ngǒ.	8,764	半
13	半	cáp sa ⁿ .	382	百	sa ⁿ peh poih jī.	9,706	半
14	半	cáp sì.	570	百	ngǒ peh chit.	9,900	半
15	半	cáp ngǒ.	853	百	poih peh ngǒ cáp sa ⁿ .	9,830	半
16	半	cáp lák.	900	百	káu peh.	17,846	半
17	半	cáp chit.	1,000	千	cék choi ⁿ .	40,700	半
18	半	cáp poih.	10,000	万	cék b̄w̄n.	97,015	半

乃至五十錢を添ふる人あり、臺灣北部に此風多し

第十五章 臺灣人の日用文字其他

第一節 商業帳簿用文字及び符牒

○	一	二	三	四	五
零					
	上	六	七	八	九
					十

千 百 二十三圓	六 百 十五圓	二 百 五 十 圓
一 一 三	上 一 八	一 八 〇
千 百 十 元	百 十 元	百 十 元

二十圓 三十三錢 四厘	三 百 二 十 圓 一 錢
一 〇 三 八	三 二 〇 〇 一
十 元 角 點 厘(文)	百 十 元 點

錢位は之を以て表はす

第十五章 臺灣人の日用文字其他

二六三

臺灣記憶
Taiwan Memory
國家圖書館數位典藏

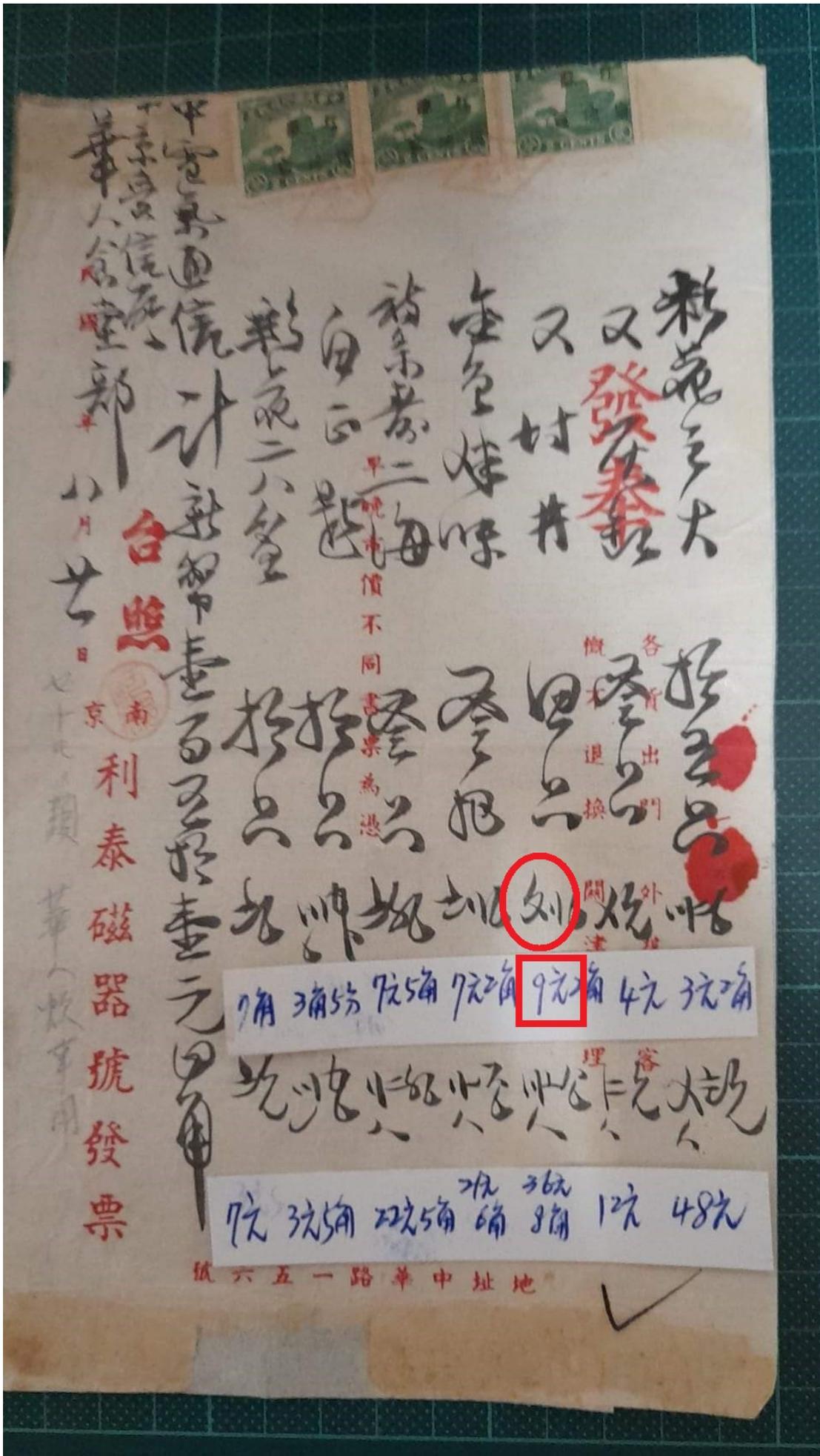
Written materials:

This image shows a page from a handwritten manuscript, likely a medical or alchemical text. The page is divided into a grid of red-bordered boxes. The characters are written in black ink. A red circle highlights a character in the middle-left section, which appears to be '文' (Wen). The text is arranged in vertical columns, with some characters appearing to be numbers or specific terms. The overall style is traditional Chinese calligraphy.

(12)

This image shows another page from a handwritten manuscript, similar to the one above. It features a grid of red-bordered boxes containing handwritten characters. A red circle highlights a character in the middle-right section, which appears to be '水' (Shui). The text is written in vertical columns. The page includes various annotations and possibly a list of items or ingredients. The handwriting is consistent with the previous page.

(13)



(16)

(a note labelling it as 9 is marked below)

Usage as seen in Hong Kong:



(19)



(20)

3. Traditional Signs for Numbers

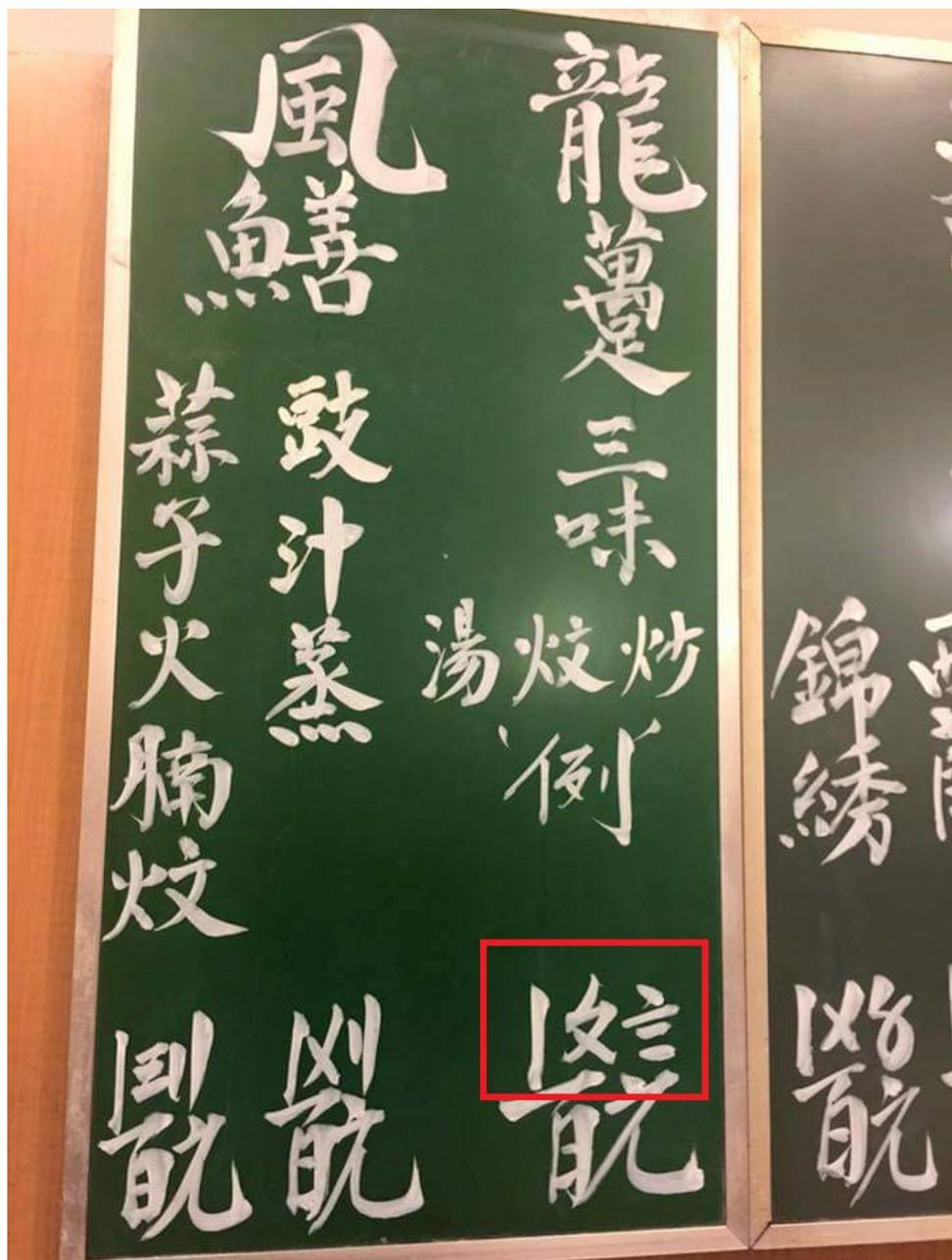
These signs are usually used for showing prices in market, restaurant or sometimes minibus.

Traditional signs	○	丨			乂	ㄥ	一	二	三	𠄎	十
Chinese characters	零	一	二	三	四	五	六	七	八	九	十
	0	1	2	3	4	5	6	7	8	9	10

In written Chinese, we write the digits and the units of money as follows:

千 cīn ¹	百 bàak ³	十 sǎp ⁶	元 jyun ⁴	角 gòk ³ /毫 hòu ⁴	分 fān ¹
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(21)



Encoding standards:

A9	0	1	2	3	4	5	6	7	8
4				×	⌘	⊥	≡	≡	文
	3021	3022	3023	3024	3025	3026	3027	3028	3029

GBK

A9	0	1	2	3	4	5	6	7	8
4				×	⌘	⊥	≡	≡	文
	3021	3022	3023	3024	3025	3026	3027	3028	3029

GB18030-2000

A9	0	1	2	3	4	5	6	7	8
4				×	⌘	⊥	≡	≡	文
	3021	3022	3023	3024	3025	3026	3027	3028	3029

GB18030-2005

A9	0	1	2	3	4	5	6	7	8
4				×	⌘	⊥	≡	≡	文
	3021	3022	3023	3024	3025	3026	3027	3028	3029

GB18030-2022

A2DD	∨	A2DE	∩	A2DF	∩	A2E0	∩
A2C1	IX	A2C2	×	A2C3		A2C4	
A2C5		A2C6	×	A2C7	⌘	A2C8	⊥
A2C9	≡	A2CA	≡	A2CB	文	A2CC	+
A2CD	≡	A2CE	≡	A2CF	A	A2D0	B
						A2D1	D

Big5 Specification (1984)

A2C3	A2C4	A2C5	A2C6	A2C7	A2C8	A2C9	A2CA	A2CB	A2CC	A2CD	A2CE
丨	川	川	乂	8	一	一	三	文	十	卅	卅

Arphic Big5 encoding scheme sample, shown with Regular script

A2C3	A2C4	A2C5	A2C6	A2C7	A2C8	A2C9	A2CA	A2CB	A2CC	A2CD	A2CE
丨	川	川	乂	8	一	一	三	文	十	卅	卅

Dynacomware Big5 encoding scheme sample, shown with Regular script

字形資訊

本機字型

文

全字庫字型

文

CNS

1-243D

Unicode

3029 文

BIG-5

A2CB

EUC

8EA1A4BD

CNS11643

Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation Internationale de Normalisation
Международная организация по стандартизации

Doc Type: Working Group Document
Title: Feedback on L2/23-167 (Proposal to update representative glyph of U+3029 SUZHOU NUMERAL NINE)
Source: Eiso Chan (陈永聪, Culture and Art Publishing House)
Status: Individual Contribution
Action: For consideration by UTC
Date: 2023-10-07

Ms. Night Koo submitted a document to request for updating the representative glyph for U+3029 as [L2/23-167](#). She kindly provided three suggestions, but we need to keep only one for the future version of the standards.

For Suggestion 3, she suggested modifying the glyph style of all Suzhou Numerals to use the “handwritten style” glyphs which meant Kai Style in her document for the Suzhou Numerals in the Sung/Ming style fonts/typefaces, that would be like the generations like kana and Japanese Kanji in Japanese Meichotai font. This suggestion is not easy to be accepted by the typographical practitioners and the end readers.

For Suggestions 1 and 2, let us see how to use in two pieces of authoritative evidence in Chinese mainland first.

Fig. 1 shows the form is the same as the right one of Suggestion 1.

【苏州码子】 Sūzhōu mǎ·zi 我国旧时表示数目的符号,从一到十依次写作丨、||、川、X、8、上、上、上、文、十。也叫草码。

Fig. 1 中国社会科学院语言研究所词典编辑室:《现代汉语词典(第7版)》,北京:商务印书馆,2016.9, ISBN 978-7-100-12450-8, p. 1246

There are eight lines in Fig. 2. We need to focus on the second and third lines. The second line shows the cursive forms, and the form for numeral nine is close to the right one of Suggestion 2; the third line shows the regular forms, and the form for numeral nine is close to the right one of Suggestion 1. That means the forms of Suggestion 2 is not better to be used in a set with other current forms in the code charts. If any type designers hope to design a cursive style for the Suzhou Numerals, they could use the forms mentioned in the second line.

图表「一一」：民间『记账码』符号

十	九	八	七	六	五	四	三	二	一	字数准标
十	文	彡	彡	厶	彡	义	川	川	丨	码数账记
十	文	三	二	一	彡	义	川	川	丨	法写一另
居	乃	章	行	申	中	在	汪	月	溜	音发典春
足	内	张	斜	挠	中	则	王	月	刘	路西吹鼓门俗北雁
家	艾	张	心	生	中	则	王	月	刘	音发匠鼓林榆北陕
足	爱	张	心	神	中	则	汪	月	流	字用会帮京津
十足 取意							王 字 去 竖	月 字 取 中	一 溜 象 形	义释单简

Fig. 2 中华人民共和国文化部艺术司, 中国艺术研究院音乐研究所: 《中国工尺谱集成·总论》, 北京: 文化艺术出版社, 2017.5, ISBN 978-7-5039-5789-5, p. 7

We can choose the right one of Suggestion 1 in Ms. Koo's document to update the representative glyph for U+3029 as below.



Fig. 3 Suggested form for updating U+3029

In the following part, I will show more examples in the modern publishing materials to support the suggestion.

Figs. 4 and 12 show the form is more like the left one of Suggestion 1, but they are still under Suggestion 1.

苏州码子 也叫草码。我国传统的表示数目的符号，从一到十依次写作丨、||、|||、×彡、上、下、下、**文**、十。会计记帐时，又在数码的上面或下面标以元、十、百、千、万等，用以记位。

Fig. 4 珠算小辞典编写组: 《珠算小辞典》, 北京: 中国财政经济出版社, 1988.12, ISBN 7-5005-0264-8/F·0233, p. 109

这种筹算的记数方法，逐渐演变成我国传统的，适用毛笔书写记帐的数码字，称为“苏州码子”。一至十依次写作 |、||、|||、×、𠄎、⊥、⊥、≡、文、十。会计记帐时，又在数码的下面标以分、角、元、十、百、千、万等，用以记位。例如：三千四百六十八元二角七分，则写成

 ||| × ⊥ ≡ || ⊥
 千 百 十 元 角 分

这种数码，曾在我国普遍使用。

Fig. 5 傅梓北：《财经珠算脑算教程》，福州：福建人民出版社，1991.11, ISBN 7-211-01813-5/G·1283, p. 2

The book cited as Fig. 6 was published by the important and authoritative publishing house, and Fig. 7 shows the later edition of the same article in other book, which the form is still stable.

我国有一种数码，叫做“苏州码子”。20年代上海“南市”的门牌上还用“苏州码子”，而“租界”的门牌都用“阿拉伯数码”。我幼年住在苏州，没听说“苏州码子”跟“苏州”有什么关系。后来听说，这种数码起源于琉球，不知是否有人考证过。“苏州码子”现在几乎没有人用了。它的写法如下：

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
| || ||| × 𠄎 ⊥ ⊥ ≡ 文 十

现在我国的报纸和杂志，对使用阿拉伯数码还有一定的限制，不可多用。

Fig. 6 周有光：《中国语文纵横谈》，北京：人民教育出版社，1992.11, ISBN 7-107-10716-X/G·2023, p. 256

中国有一种数码,叫做“苏州码子”。20世纪20年代上海“南市”的门牌上还用“苏州码子”,而“租界”的门牌都用“阿拉伯数码”。苏州人不知道“苏州码子”跟“苏州”有什么关系,据说这种数码起源于琉球,不知是否有人考证过。“苏州码子”现在几乎没有人用了。

它的写法如下:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
丨			×	𠂇	⊥	⊥	≡	文	十

三大符号系统

现在中国的报纸和杂志,对使用阿拉伯数码还有一定的限制,不可多用。

Fig. 7 周有光:《21世纪的华语和华文——周有光毫耄文存》,北京:生活·读书·新知三联书店,2002.7,ISBN 7-108-01686-9, pp. 114-115

4. 人类在长期的生产和生活实践中,为了比较事物的大小和物质的多少,创造出了整数(也叫自然数),并用不同的形式和符号来表示,这种表示数的符号叫做数字。目前世界上表示数字的符号很多,主要有:

(1)中国数字:一、二、三、四、五、六、七、八、九、十、百、千、万;明清时代商业上表示数目的符号叫数码,又叫“苏州码子”,写法是:丨、||、|||、×、𠂇、⊥、⊥、≡、文、十。

(2)阿拉伯数字:1、2、3、4、5、6、7、8、9、0。

(3)罗马数字:I、II、III、IV、V、VI、VII、VIII、IX、X

Fig. 8 范德勇:《基层商业银行应用数学》,北京:北京教育出版社,1995.7,ISBN 7-80554-287-2/G·34, p. 169

Based on the actual usages, there are other names for Suzhou Numeral in different places, “肉码” is one of them. It is not hard to find the numerals in Fig. 9 mean Suzhou Numeral.

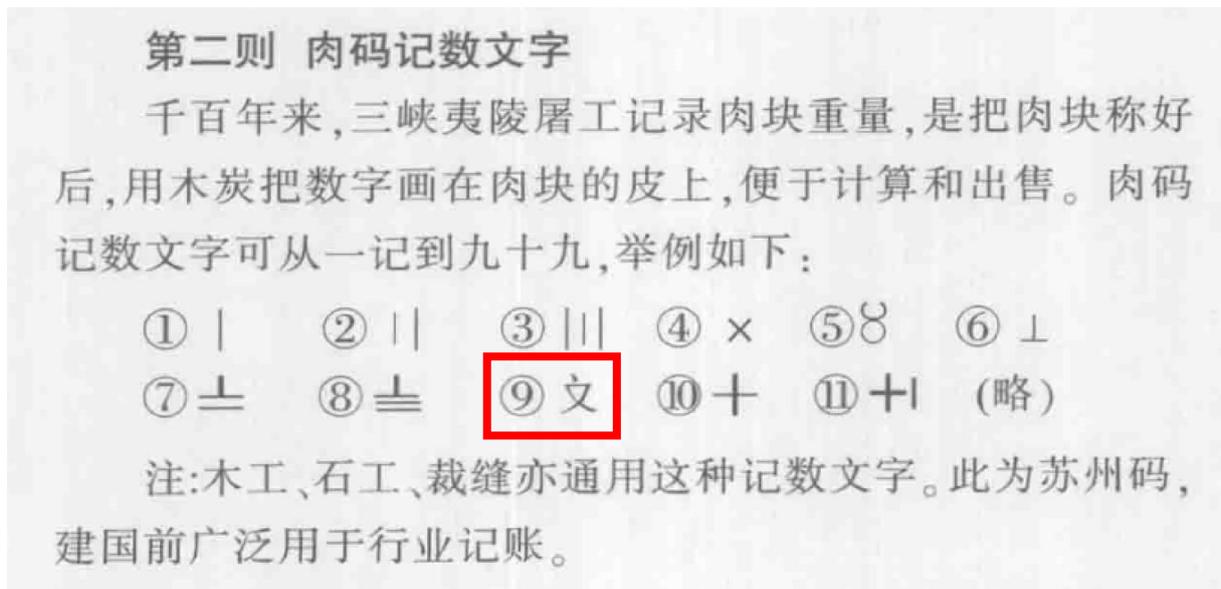


Fig. 9 王作栋, 王志琦, 熊庆文: 《宜昌民俗风情》, 武汉: 湖北人民出版社, 2005.5, ISBN 7-216-04229-8/G·1187, p. 268

為使其免于失傳，故將其收錄于冊，並作了拓片。

光緒十二年，即公元一八八六年。

(二) 旧井已不存在，旧章亦已佚。

(三) 碑文中所刊的 一、二、三即現在通用的阿拉伯數文的 1、2、3 和中文一、二、三相似，而其餘 X，即 4，8 即 5，十，即 6，卅，即 7，卅，即 8，一十，即 9，○ 與阿拉伯文中的 0 相同。

據有關資料介紹，這種計數文字叫做蘇州碼子，又叫花碼。它脫胎於中國文化歷史的算籌。也是唯一尚在民間繼續使用的算籌系統。花碼是由南宋時期以算籌中分化出來，產生於蘇州，所以叫蘇州碼子。也和算籌一樣，是一種進位制計數系統。與算籌不同的是，算籌常用在數學和工程上，而花碼則用在商業領域里，主要用途是速記。舊時在商業、金融以及百姓生活中所使用的是豎寫賬本，所以花碼被廣泛使用。由於其形象性很強，因此上至宦官，下至商賈和黎民百姓，即使是文盲也極易學會和掌握，故能熟練地書寫，所以又稱之為「商業數字」。隨着阿拉伯數字進入我國，并被廣泛使用，且由於它比漢語寫數字更為簡便宜行。所以，作為中國發明、并長時間使用過的蘇州碼子，也就逐步退出歷史舞臺。以筆者所識，蘇州碼子是中國的文化遺產之一，也是祖國的文化遺產之一。為此，將這方以完整的蘇州碼子記錄并刊載損資數目的碑文收錄于冊，并將其中之算數文字一一加以說明，目的是使其免于失傳。

清·蘇性撰修西江路記（一）

宋儒李燾（二）有言，凡人不必待有位方為功業，但隨力到處推以及物，即功業矣。以此知，士君子鄉居，值有利濟之事固當為也。邑西有地名西江者，萬山環鎖，中居十餘村，出入之路涉東西兩江（三），逾磨石嶺（四），江駛嶺高，行人恒苦之。其西岸別有山徑，自馬鞍（五）直達山外，可省跋涉。惟臨流一線，崖石橫互，除樵牧鮮有行者。明經陽蔚卿炳照倡議修治，適有茂才康少欽承恩與有同志，於是邀集里人章崑山、秦伯群、鄧世雄、陳丹山、粟田心（六）履勘周詳，勸捐興工，鑿崖石，闢荊榛，墊險仄，架山梁，連歲增修，遂成坦途焉。彼馬援（七）之刊道千里，高駢（八）之鑿道五所，其為功於吾粵也大矣。然此舉亦一方永利也，謂非功業哉？諸君始終其事，曾不自以為功，而歸美於捐資者，因泐各姓名於石（九），以為好義者勸。

旧时茶肆酒楼记账，既不用阿拉伯数字，也不用汉字的数字，而是用一套专用的数码字，叫做“苏州码子”（图 14）。苏州码子是中国民间使用的“商业数字”，脱胎于古老的算筹，与甲骨文并没有关系。

小篆“七”写作 ，“十”写作 ，两者字形相近容易混淆，所以通过隶变后“七”被写作“七”，这样就和“十”有明显区别了。

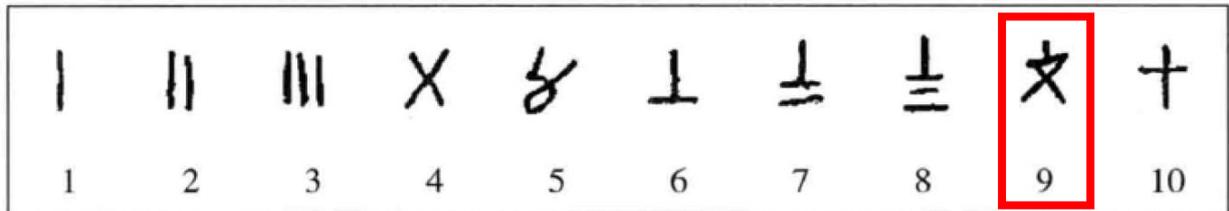


图 14 苏州码子

Fig. 11 叶文宪:《趣味文字》, 济南: 山东人民出版社, 2014.05, ISBN 978-7-209-08275-4, p. 21

数字的大写笔画繁复，写起来费劲，于是有人又创造了一种记数用的“苏州码子”。从“一”到“十”写作“|、||、|||、X、8、⊥、±、≡、文、十”。这种“苏州码子”笔画简单清晰，容易书写，用起来很方便。不过在“文人学士”的眼里，不算正规的文字，以“码子”名之，就是说，不过是一种记数的符号罢了。但是，它以易认易写易记的优势，深受人们的喜爱，乐于采用，长期流行于民间。

Fig. 12 韩敬体:《语文应用漫谈》, 北京: 商务印书馆国际有限公司, 2015.7, ISBN 978-7-5176-0155-5, p. 55

① “苏州数码”又称苏州码子，也叫草码、花码、商码。是中国早期民间的“商业数字”，脱胎于历史上的算筹，因产生于苏州而得名。今港澳地区的街市、旧时茶餐厅及中药房仍偶尔得见。一到十位数字的具体写法是：|、||、|||、X、8、⊥、±、≡、文、十。

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Fig. 13 行龙:《基层农村档案发现记》//行龙, 徐杰舜, 韦小鹏, 胡英泽:《人类学与黄土文明》, 哈尔滨: 黑龙江人民出版社, 2015.8, ISBN 978-7-207-10365-9, p. 13

COUNTING TABLE

數目表

	Ling'	I'	Ech'	San'	Ssu'	Wu'	Liu'	Ch'i'	Pa'	Chiu'	Shih'
	0	1	2	3	4	5	6	7	8	9	0
A. The Szechow System 蘇州碼子	○	一	二	三	四	五	六	七	八	九	十
B. The Large System 大寫	零	壹	貳	叁	肆	伍	陸	柒	捌	玖	拾
C. The Common System 小寫	零	一	二	三	四	五	六	七	八	九	十
11		一	一	二	三	四	五	六	七	八	九
21		二	一	二	三	四	五	六	七	八	九
100	百	零	一	二	三	四	五	六	七	八	九
111		一	一	一	二	三	四	五	六	七	八
121		一	二	一	二	三	四	五	六	七	八
200	二百										
1,000	一千										
10,000	一萬										
100,000	十萬										
1,000,000	一百萬										
10,000,000	一千萬										
100,000,000	一億萬										

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Fig. 14 王澧华, 吴颖: 《近代来华外交官汉语教材研究》, 桂林: 广西师范大学出版社, 2016.5, ISBN 978-7-5495-7633-3, p. 268

从此后，苏州码子在这一带便流传开了。用这种数目符号算账，当时很普遍。直到新中国成立前后，在这一带还有人用苏州码子。后来，逐渐被阿拉伯数字取而代之。现在，除了耄耋老人外，年轻人很少有认识这种数目符号的。

阿拉伯数字与苏州码子对照表

阿拉伯数字	1	2	3	4	5	6	7	8	9	10
苏州码子	丨			乂	ㄥ	一	二	三	文	十

过去，汉字的排列都是自右向左竖写，苏州码子也不例外。如二十，写成廿；三十写成“卅”；四十写成“卌”，以此类推。如过百或过千便加进了“百”字或“千”字。

Fig. 15 寇冠荣：《永定河畔梨花村》，北京：新华出版社，2018.1，ISBN 978-7-5166-3817-0，p. 37

数学：苏州码子。工商业发展需要数学知识的普及与计算技术的简化，这使得应用数学有很大发展，并构成中国传统数学的重要方面，其中，明代苏州码子的数码字非常流行。它从南宋数学家杭州人杨辉数学著作中所用数码字传用而来。由算筹演化而来的一二三×〇一六一七〇，其中表示4、5与9的×〇是杨辉创用的，以代替难写的三、三与三。这套数码流传到明代，就成为被称为暗码的一二三×〇一六一七〇，其中前三个数字也可用直式表示：丨|||。因盛行于工商业发达的苏州，它被称为苏州码子。

苏州码子这套簿账符号多用于商业、手工业、当铺、金融等经营活动的数字记载、契约签订与账务往来。它的应用推广与明代中期以来苏州工商业发达、簿账工具技能提高和普及相辅相成，保障了商业活动秩序顺利展开，并影响到海内外的商业记账与活动，更担当了商业金融活动中心的领导角色。苏州码子在明清使用，迄今港台地区仍见沿用。

Fig. 16 《苏州通史》编纂委员会；吴建华：《苏州通史 明代卷》，苏州：苏州大学出版社，2019.3，ISBN 978-7-5672-2507-7，p. 549

Based on the above examples, we can confirm that the glyph for Suzhou Numeral Nine in modern uses is stable.

Solutions for other related regional standards

- 1) For China, this glyph (0xA948) has been updated in GB 18030-2022 to match the suggestion, so there is no need to do anything on this issue.
- 2) For Hong Kong SAR, U+3029 is inherited from Big5 as HB-A2CB. IRGN2074 shows the glyph is the same as the right one of Suggestion 2. When we confirm the updating, maybe UTC could suggest CLIAC to update the glyph in their font, but not in HKSCS.
- 3) For Macao SAR, U+3029 is also inherited from Big5 as MB-A2CB (?). We don't know how the glyph they used is currently. If they use the glyph based on MingLiU or PMingLiU directly, the glyph is still the same as Hong Kong SAR. When we confirm the updating, maybe UTC could suggest DSAFP experts of Macao SAR to pay more attention in future.
- 4) For TCA, this glyph (1-243D) matched the left one of Suggestion 1 in Ms. Koo's document in TCA-CNS 11643 (2007 edition). It is up to TCA to decide whether to update the glyph in the next edition or not.

(End of Document)