

Title: Feedback to Nushu glyph update proposed by L2/22-138

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Considering that the Noto fonts are widely distributed over the Internet, the summarization of the glyphic differences between Noto Traditional Nushu and the UCS code chart is quite important work. I appreciate the author for his huge efforts. The major part of the proposal is trying to reduce the difference between the current code chart and “Nushu Duben” by Xie Mingyao & Zhao Liming (謝明暁, 趙麗明: “女書讀本”, 2008, ISBN 9787543852822, NSDB hereafter). NSDB is the only reference used for UCS Nushu charset, it would be strange experience for the typeface designers to find no evidences for some UCS glyphs in NSDB. Hence, the attempt of the proposal is quite reasonable.

1. Difference between NSDB and UCS code chart

Nushu did not have a history of the systematic education or learning by commonly used textbook, so the variety of the glyphic variations are much varied in comparison with CJK Unified Ideograph. Therefore, it is reasonable attitude to have a loose unification rule, and permit the implementation dependency. But it is expected to clarify the schema how the representative glyphs in the UCS code chart were chosen. In WG2 N4639, Professor Zhao explained about the methodology how they had chosen the representative glyph shapes, but the description is not sufficiently detailed (see Figure 1), and the selection of the glyph shapes was not sufficiently schematic (see Figure 2).

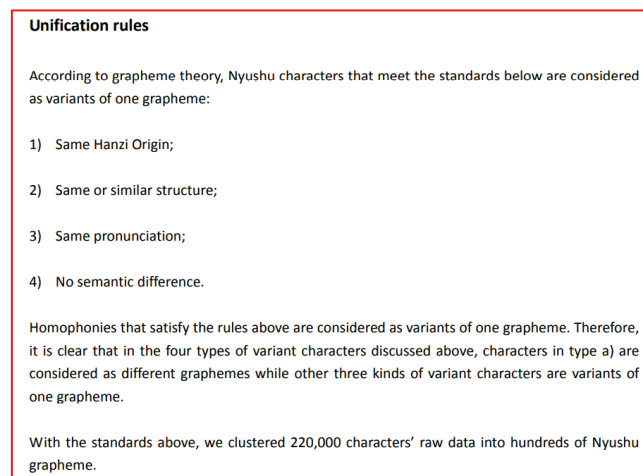


Figure 1: The explanation on the “Unification Rule” for Nushu in WG2 N4639.

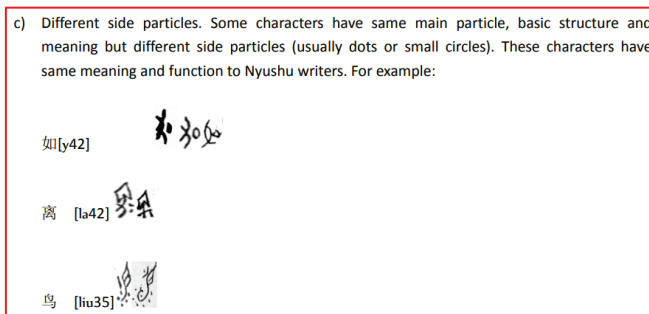


Figure 2: The explanation on the glyph variants of U+1B28E and U+1B2D2 in WG2 N4639.

Also, as shown in Figure 3 and 4, the glyph variations in NSDB are much restricted than the variety of the source for NSDB, “Nushu Yongzi Bijiao” (趙麗明 *et al* “女書用字比較”, 2006, ISBN 9787801982612, NSYZBJ hereafter). Thus, the implementation dependency is much varied in comparison with that of CJK Unified Ideograph.

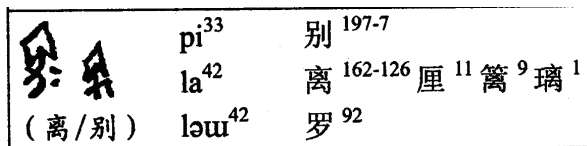


Figure 3: The variations of U+1B28E recorded in NSDB (p.50)

la ⁴²	离 篙 璃 厘 狸 累 (劳~)	离 ⁶⁰ 离 ⁴¹ 离 ³⁵ 离 ²¹ 离 ²⁰ 离 ⁴	离 ³⁹ 厘 ⁷ 离 ⁴ 璃 ¹ 离 ¹² 离 ⁶ 离 ³ 离 ¹	离 ⁴³ 离 ¹ 狸 ¹ 离 ³ 离 ¹ 璃 ¹	离 ³⁹ 离 ² 离 ⁴ 离 ³	离 ¹⁸ 离 ² 厘 ⁴ 离 ⁹ 厘 ¹ 离 ³ 璃 ¹
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Figure 4: The variations of U+1B28E recorded in NSYZBJ (p.23)

The columns from left to right: ① phonetic value, ② semantically corresponding Hanzis, ③ glyphs found in the anonymous materials, ④ glyphs found in Gao Yinxian (高銀仙) materials, ⑤ glyphs found in Yi Nianhua (義年華) materials, ⑥ glyphs found in Yang Huanyi (陽煥宜) materials, ⑦ glyphs found in He Yanxin (何艷新) materials.

I hope that Script Ad Hoc group experts can contact China NB experts in JTC1/SC2, and ask whether the changing of the representative glyph to the shape more similar to NSDB is acceptable idea, or, the current glyph shapes are preferred by the Nushu experts committee in Jiangyong county and they are recognized as better than NSDB.

2. Difference between NSDB and Noto Traditional Nushu

But, same question (how the representative glyph was chosen?) should be asked to the developers of Noto Traditional Nushu font, because there are a few glyphs whose shapes are not justified by NSDB. For example, U+1B22E has same shape with NSDB glyph, but the proposed glyph is different.

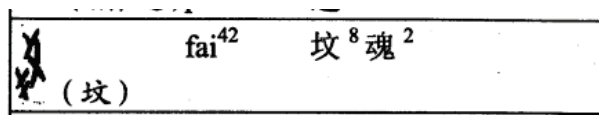


Figure 5: U+1B22E glyph in NSDB (p.54)

fai ⁴²	魂坟焚	魂 ₁	魂 ₁₈ 坟 ₄	魂 ₆	魂 ₇ 坟 ₁	魂 ₄ 坟 ₂
			坟 ₄ 魂 ₁	魂 ₃		坟 ₂ 魂 ₁
			坟 ₂	坟 ₁		坟 ₁

Figure 6: U+1B22E glyph shape in NSYZBJ (p.97)

There might be a possibility that Noto Traditional Nushu selected more frequent glyphs from NSYZBJ (see Figure 6), but same policy cannot justify the proposed glyph shape for U+1B2D6 (see Figure 7). The typeface designer preferred a glyph whose shape is more similar to the corresponding Hanzi?

mu ³³	木目莫 麦墓磨 (石~) 暮幕慕 莫模(~ 糊)穆牧 末沫抹 募脉	木 ₃ 莫 ₂ 目 ₁	木 ₁₆ 目 ₂ 墓 ₃ 麦 ₂ 抹 ₁ 莫 ₂₀ 莫 ₁₀ 莫 ₆ 莫 ₈ 麦 ₁ 麦 ₁ 磨 ₁ 莫 ₁ 木 ₂ 莫 ₁ 莫 ₁	木 ₇ 目 ₅ 莫 ₁ 墓 ₁ 募 ₂ 莫 ₁₁ 莫 ₆ 莫 ₄ 目 ₁ 目 ₁ 脉 ₁	目 ₄ 莫 ₃ 暮 ₂ 墓 ₁ 麦 ₁	木 ₁₀ 目 ₁ 抹 ₁ 莫 ₈ 墓 ₄ 木 ₁ 莫 ₃ 莫 ₃ 莫 ₁ 木 ₃ 木 ₁
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Figure 7: U+1B2D6 glyph shape in NSYZBJ (p.64)

3. Preliminary Comment of the Proposed Change of the Glyphs

In the past discussion (WG2 N4533 and N4610) I and Professor Endo Orié tried to put the priority to the works by He Yanxin (the last native Nushu successor who we can interview today) for the consistency. Comparing the proposed glyph shapes with her works (for WG2 N4610, Professor Endo & Professor Liu Ying made an interview and asked for writing the glyph shapes she thinks as right, in 2014), the results are summarized in Table 1. The glyph differences can be classified as follows, tentatively. I'm positive to the glyph change in the category A, but further discussion is needed for other categories, B & D. I'm negative to the glyph change in the category C. But their glyphic differences are not unacceptable implementation dependency, so I put priority to the consistency of the typographic styles, described in the next section.

A) The cases which the proposed glyph is almost same with He Yanxin's glyph

U+16FE1, U+1B18E, U+1B1EF, U+1B23E, U+1B248, U+1B267, U+1B270, U+1B28E, U+1B2AC, U+1B2EA, U+1B2F1

B) The cases which the proposed glyph increases the similarity with He Yanxin's glyph, partially

U+1B22E, U+1B29B, U+1B2CE, U+1B2D2, U+1B2D4

C) The cases which the proposed glyph does not change or decreases the similarity with He Yanxin's glyph

U+1B25C, U+1B29F, U+1B2D1, U+1B2D6, U+1B2DB

D) The cases which the corresponding glyph is not found in He Yanxin's works yet.

U+1B2E4

Table 1: Comparison of the current UCS code chart glyph, Noto Traditional Nushu, and He Yanxin's work

The columns from left to right: ① UCS code point, ② current UCS code chart glyph, ③ Noto Traditional Nushu glyph, ④ He Yanxin glyph (collected in the interview by Professor Endo and Professor Liu, on 2014), ⑤ the evidence lists in L2/22-138, ⑥ the corresponding glyph number in Endo Oriie 2002 (遠藤織江, “中国女文字研究”, 2002, ISBN 4-625-48300-X¹) or the page number in NSYZBJ.

The yellow mark on the column ⑤ means that the referred source material was by He Yanxin.

U+16FE1		1, 2(a), 3(a)	Endo2002-086	U+1B29F		4(j), 2(m)	Endo2002-246
U+1B18E		4(a), 2(b), 3(b)	Endo2002-036	U+1B2AC		4(k), 2(n), 3(j)	Endo2002-335
U+1B1EF		4(b), 2(c)	Endo2002-162	U+1B2CE		4(l), 2(o), 3(k)	NSYZBJ p.25
U+1B22E		2(e), 3(d)	Endo2002-231	U+1B2D1		4(m), 2(p), 3(l)	Endo2002-377
U+1B23E		4(d), 3(e), 2(f), 5	Endo2002-190	U+1B2D2		2(q), 3(m)	Endo2002-415
U+1B248		4(e), 2(g), 3(g)	Endo2002-300	U+1B2D4		2(r), 3(m)	Endo2002-426
U+1B25C		4(c), 2(d), 3(c)	NSYZBJ p.90	U+1B2D6		4(n), 2(s), 3(n)	Endo2002-378
U+1B267		4(f), 2(h), 2(i), 3(g)	Endo2002-366	U+1B2DB		2(t), 3(o)	NSYZBJ p.105
U+1B270		4(g), 2(j), 3(h)	Endo2002-282	U+1B2E4		Not found	4(o)
U+1B28E		4(h), 2(k), 3(i)	Endo2002-348	U+1B2EA		4(p), 2(u), 3(p)	Endo2002-432
U+1B29B		4(i), 2(l)	NSYZBJ p.100	U+1B2F1		4(q), 2(v), 3(q)	Endo2002-445

4. About Typographic Style of Noto Traditional Nushu

Some of the proposed changes improves the similarities with the glyph by He Yanxin, thus I'm positive to accept such cases. But I must note that Noto Traditional Nushu is inappropriate to be used for the UCS code chart, because its typographic style is much different from the current code chart, in 3 features.

- Noto Traditional Nushu uses thicker strokes, even in Noto Traditional Nushu Thin. In typographic terminology,

¹ The glyphs printed in Endo 2002 were collected from the works which He Yanxin was still recovering her ability for Nushu writing, thus the

Noto Traditional Nushu Thin Thin is still heavier than the current font provided by China NB.

- Noto Traditional Nushu uses highly geometric strokes, whose terminations have sharp corners.
- The metrics of Noto Traditional Nushu is much wider than the font in the current code chart.

I understand these features are intended design of the Noto family, which is assumed to be used as a Sans Serif typeface. Also, the visibility & legibility should be cared for the low-resolution device or the usecases where the glyphs are displayed at small size. Therefore, these features are reasonable for their purpose. But it is not the best for the representative glyph in the UCS code chart. I hope that Script Ad Hoc Group experts can contact with the copyright holder of the current Nushu font for the code chart (China NB in JTC1/SC2 ?), and whether they can provide the updated font for the proposed glyph changes. If they cannot provide, it is not the time to change the glyphs, because the glyphic differences are not the critical errors, and the consistency of the typeface design is still important.

5. Summary

In summary, although I'm positive to some of the proposed change, the discussion with the owner of the current code chart font owner would be most important work item. The concerned glyphic differences are visible (and sometimes too significant for the eyes of CJK Ideograph users), but considering that the unification rule used in current Nushu charset was quite permissive, I don't think they are so critical that they should be fixed by replacing the whole fonts. I hope that this issue is resolved with the collaboration with China NB experts in JTC1/SC2.

Appendix

About the evidence in Figure 3 (Zhao & Xu 2017, 女書規範書法字帖), although the title says as it is representative & normative, the glyphs in this book seem to be calligraphically decorated, it would not be the appropriate evidence. Using NSYZBJ would be better as raw materials. The proposed glyph change improves the glyph similarity to NSDB, but its frequency is the lowest one found in the NSYZBJ, and its representative phonetic value is different from NushuSrc.txt.

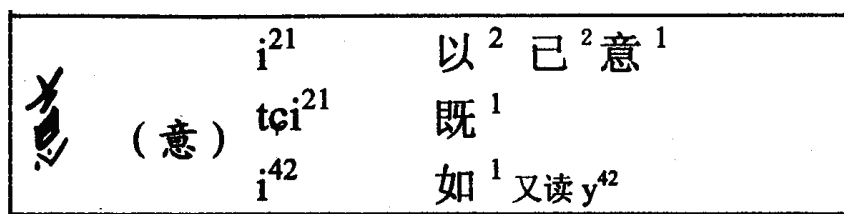


Figure 8: U+1B2E4 glyph shape in NSDB (p.55)

tci ²¹	记 计 寄	记 ₁₅	以 已 矣	以 ₁₀
	季 制 稚	计 ₂ 寄 ₂		已 ₁₉
	既 继 滞	季 ₄	以 已 矣	以 ₂
	屐 技 妓	记 ₅		
	痣 剂	记 ₁	意 忆 亿	意 ₂₀
		制 ₁₀		意 ₁
		制 ₃	意 忆 亿	意 ₁
		制 ₂		意 ₁
		既 ₁		

NSYZBJ p.62

Figure 9: U+1B2E4 glyph shapes in NSYZBJ (p.55)

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