

Sino-Uralic Etymology for 'Jupiter, Year' Supported by Rhyme Correspondence

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Abstract

Using etymological methods, the present study has identified seven Sinitic and Uralic shared etymologies (etyma). Three of them form a rhyme correspondence. Two of them form an onset correspondence. Four of them form another rhyme correspondence. These regular sound changes validate the genetic connection between Sinitic and Uralic. The Sino-Uralic etymology (etymon) for 'Jupiter, year' is among these etyma. It is demonstrated that this term should be aboriginal in Sino-Uralic languages.

Keywords: etymology, rhyme correspondence, Sinitic, Uralic, Sino-Uralic, Indo-European, Jupiter, year, wether, wet, water, mead.

Introduction

The “Finno-Ugric” term for ‘year’ (equivalents e.g. Finnish *vuosi\vuote-* ‘year’; Estonian *voos\vooe* ‘annual harvest’; Livonian *ūožri’gž* ‘spring rye’; Veps *vož* ‘year’; Votic *vōsi* ‘year’; North Sami *-vuohtha* ‘-hood’; Komi\Zyrian *vo* ‘year’; Khanty\Ostyak *al/ot/ɔr* ‘year’) has no cognate in Samoyedic languages, therefore it has been previously claimed a loanword from Indo-European (e.g. Sammallahti, 1998, p. 127; Koivulehto, 1999, p. 218). The present study finds that this “Finno-Ugric” term has cognates in Sinitic languages (which mean ‘Jupiter, year’) supported by a rhyme correspondence consisting of three etyma and an onset correspondence consisting of two etyma; therefore this term must be aboriginal in Sino-Uralic languages.

Gao (e.g. 2005, 2014b, 2019; Gāo, 2008) detected and identified Sinitic and Uralic shared etyma, and has solely researched Sinitic and Uralic shared etyma for more than a decade. We could infer a general skepticism about this approach. Several unsound language comparisons, e.g. Finnish with Basque, Finnish with Dravidian, Proto-Uralic with Proto-Indo-European, have become tedious. It was difficult to clarify how the Sino-Uralic comparison is extraordinarily significant. Gao (2014b) turned the focus to a solid demonstration of regular sound correspondences (rhyme and onset correspondences) between Sinitic and Uralic, and included long discussions on the methodology. In light of this, one can realize that the Sino-Uralic etymological studies are distinguished from those unsound language comparisons. The general direction of Sino-Uralic affinity studies should be acknowledged.

A rhyme correspondence is a strict and composite rule of interlinguistic sound correlations. A rhyme correspondence achieves that not only a single phoneme but also a composite rhyme (the -VCv part of a CVCv morpheme) is consistently correlated among related language varieties. The first rhyme correspondences between the Sinitic and Uralic languages have been demonstrated on the example of the Finnish *-ala* and *-aja* rhymes with ten etyma (Gao, 2014b). A total of ten rhyme correspondences with 32 etyma has been published (Gao, 2019a). Another rhyme correspondence with five etyma has been added (Gao, 2019b). The present study adds two rhyme correspondences with seven etyma.

Materials and methods

The Sinitic language family is compared to Uralic language family.

The Sinitic etyma are guided by Chinese etyma (DOMs) which are historically attested glyphs. Their historical glosses are cited from the first two Chinese classical dictionaries (121-SW; 543-YP). Their historical phonological features are cited from the work 1161-YJ. Their attested equivalents including contemporary forms and glosses are represented by Beijing Yan (Mandarin) (written in Hanyu Pinyin including non-simplified forms), Guangzhou Yue (Cantonese) (written in Jyutping), Taipei Min (Minnan) (written in Tâi-lô), Japanese Go-on and Kan-on (written in Hepburn). English glosses are made in the present study. Historically attested Old Chinese (OC) rhymes of the etyma are given according to Wáng (1980). Reconstructed phonetic values of the rhymes are made in the present study.

The Uralic etyma are based on the relevant etymological dictionaries 1988-UEW and 2001-SSA. Their attested equivalents including contemporary forms and glosses are represented by Estonian, Finnish, Sami\Lappish North/Lule/Inari/Skolt/Kildin (equivalents up to 1989-YSaS; North Sami forms are adjusted according to 1989-SSS), Mordvin, Mari\Cheremis, Udmurt\Votyak, Komi\Zyrian, Khanty\Ostyak, Mansi\Vogul, Hungarian, Nenets\Yurak, Enets\Yen, Nganasan\Tawgi, Selkup and Kamass. Non-English glosses are translated to English in the present study. Some modifications within Uralic etyma (adding or deleting equivalents) are made and remarked in the present study. Refutations of previously suggested etymological equivalents are given in footnotes.

Etymological equivalents in some other languages (mainly Indo-European, Tibeto-Burman, Manchu-Tungus suggested by other scholars) are checked according to the relevant works 1959-IEW, 1988-UEW, 1996-CV5ST, 2001-SSA, 2007-EDOC and 2008-NIL.

Reconstructed forms are added only for reference reasons. All the attested forms are compared instead of trusting the phonetic and semantic details of reconstructions, because the reconstructions are subject to changes depending on (newly compared) attested linguistic data. Two Old Chinese reconstructions, OC-W according to Wáng (1980) and OC-Z according to Zhèng-zhāng (2013), are listed. Other reconstructions are cited from the direct references. Double quotation marks ("") are added when a notion or a reconstruction is not agreed.

Proto-Sinitic, also known as Proto-Chinese, cannot be compared because it is only a theoretical notion without reconstructed results. “Proto-Sino-Tibetan” cannot be compared because it is a hypothetical notion without a sufficient amount of etyma representing a sufficient number of languages. Moreover, the Sino-Tibetan hypothesis has been successively criticized (Miller, 1974; Beckwith, 2002, 2006, 2008; Hé, 2004; Guō, 2010, p. 21; Zhāng, 2012). Besides, there are hypotheses for the multiple origins of Sinitic (Lǐ, 1990; Schuessler, 2003).

Etymological equivalents are given in orthographies or transcriptions (for Uralic, mainly the Uralic Phonetic Alphabets). Equivalents in Western alphabets are given in boldface if they are found in official languages covered by ISO 639-1. Equivalents in Roman scripts are given in italic. If a given word is longer than one morpheme, the targeted morpheme is underlined (if certain). In Uralic, conditionally apocopated phonemes are given in uppercase. A cross sign (†) indicates that its target is archaic and outdated. Arrows (→, ←) indicate non-genetic diffusions of terms (called loanwords by Western linguistics). In successive data, dialectal and authorial variants are separated by a slash (/); grammatical variants are separated by a backslash (\); while lexical variants are separated by a comma (,).

The methods follow traditional etymology (cf. Rask, 1818) and renewed etymology (cf. Gao, 2014a, 2014b, 2017, 2019a, 2019b). This study includes also methods of traditional Sino-grammatology (cf. 121-SW, 543-YP, 1978-1982-HJ, 1989-LZ) and Sino-phonology (cf. 1008-GY, 1161-YJ) which are ancient technologies.

Results and discussion

#1) 【歲】 『說文(121-SW): 木星也('Jupiter'); 玉篇(543-YP): 載名('name of year'); 韻鏡(1161-YJ): 外轉第十六合四等去聲齒音[左]清(outbound, 16th final, labialized+, 4th division, C tone, dental initial [fricative+] voiced-); Mandarin *sùi* (*suèi*) 'year-old', *sui-xīng* (*suèi-xīng*) 'year-star (Jupiter)'; Cantonese *seoi3* 'year-old', *seoi3-sing1* 'year-star (Jupiter)'; Minnan *suè/huè/hè* 'year-old', *suè-sing* 'year-star (Jupiter)'; Japanese Go-on *sai*; Kan-on *sei*; {OC rhyme 月韻 *-ta; OC-W *siuat; OC-Z “*sq^{hw}wads”}】 is compared (Gāo 2008, p. 206) to the Uralic etymon after the equivalents: Estonian *voos|vooe* 'annual harvest', *tänayu* ‘this year’; Finnish *vuosi|vuote-* 'year'; Sami\Lappish *-vuohtha/-vuohtha/-/-/-* '-hood/period'; Udmurt\Votyak *ya-puŋ* 'time, lifetime, age'; Komi\Zyrian *vo* 'year'; Khanty\Ostyak *al/ot/ɔŋ* 'year'; {“Proto-Finno-Ugric” *oðe/*ðøe 'year' (1988-UEW, p. 335)}. {Proto-Sino-Uralic *hʷétaS 'Jupiter, year'}

This etymon has been identified (since Schrader, 1907, vol. 2, p. 525: only Finnish ~ Veps ~ Khanty\Ostyak ~ Proto-Indo-European *vet-, ut-, veto) in Indo-European languages: {Germanic: Danish *vædder* 'ram'; Swedish *vädur* 'ram'; Norwegian *vær* 'ram'; Icelandic *veður* 'ram'; Old Norse *veðr* 'ram'; English *wether*; Old English *weber* 'wether'; Dutch *weer* 'wether'; Old Low German *withar* 'ram'; German *Widder* 'ram'; Old High German *widar* 'ram'; Gothic *wibrus* 'yearling lamb'}; {Baltic: Latvian *vecs* 'old'; Lithuanian *vētušas* '†old'}; {Slavic: Czech *vetchý* 'decrepit'; Slovak *vetchý* 'decrepit'; Polish *wiotki* 'flabby'; Russian *ветхий* (*vethij*) '†old'; Ukrainian *в́етхий* (*vethij*) '†old'; Bulgarian *вext* (*veht*) 'old'; Serbo-Croatian *вेतах/větah* '†old'; Old Church Slavonic *ветъхъ* (*vetixij*) 'old'}; {Italic: Latin *vetus* 'old'; Italian *vieto* 'old'; Spanish *viejo* 'old'; Romanian *biet* 'poor'}; Albanian *wit* 'year', *wjet* 'last year'; Ancient Greek ἔτος (étos) 'year'; {Anatolian: Hittite *witta* 'year'; Luwian *uššiš* 'year'}; {Indo-Iranian: Sanskrit वत्स vatsá, 'calf, son, year'; Ossetian **baec** (*væs*) 'calf'}; {Proto-Indo-European *y̑et- 'year' (1959-IEW, p. 1175)}. This etymon has not been identified in other languages.¹ {?Proto-Sino-Uralo-Indo-European *hʷétaS. See the overview section for this question.}

¹ REFUTATION: Previously claimed (Mei, 1979, p. 117) etymological equivalents after Written Tibetan *skyod* 'to go, walk, go down, set' are rejected due to phonetic and semantic inconsistencies. Previously claimed (2007-EDOC, p. 485) etymological equivalents after Proto-Tai *xuap; Siamese *kʰuap* 'year' are rejected due to phonetic and semantic inconsistencies.

This etymon must be aboriginal in Sino-Uralic languages. There are two main reasons:

(1) The planet Jupiter was used to indicate years in ancient China, because it is located between different stars by year. The expression of year in Old Chinese is 【歲在……】 'Jupiter is at (location of stars)'. This DOM is already attested in the Oracle Bone Script². (Figure 1) (1989-LZ, p. 917: 1978-1982-HJ, #13475). The glyph shows a toolbar pointing between stars.



Figure 1. Attested form of 【歲】 in the Oracle Bone Script.

(2) It is a certain Sino-Uralic etymon supported by a rhyme correspondence consisting of three etyma (see Table 1 in the next section). The following etyma are studied in order to form a rhyme correspondence with the etymon #1.

#2) 【兌】 『說文(121-SW): 說也('explain'); 玉篇(543-YP): 說也('explain'); 韻鏡(1161-YJ): [兌]外轉第十六合一等去聲舌音濁(outbound, 16th final, labialized+, 1st division, C tone, alveolar initial voiced+); Mandarin *duì* (*duèi*) 'correspond'; Cantonese *deoi3* 'correspond'; Minnan *tuē/tuī* 'correspond'; Japanese Go-on *dai*; Kan-on *tei*; {OC rhyme 月韻 *-ta; OC-W *duat; OC-Z “*l'o:ds”} 』 is compared (first publication) to the Uralic etymon after the equivalents: Estonian *tōsi\tōe-* 'true, truth', *tōde\tōe-* 'truth'; Finnish *tosi\tote-* 'truth'; Sami\Lappish *duohta/tuohta/tuota/tuq'it⁴*/-- 'fact'; {"Proto-Finno-Lappic" **tote* (Sammallahti, 1998, p. 239)}. This etymon has not been identified in other languages.³ {Proto-Sino-Uralic *d^wotaS 'correspond'}

#3) 【沫】 『說文(121-SW): 水出蜀西徼外東南入江('name of river'); 玉篇(543-YP): 水名又水浮沫也('name of river, foam'); 韵鏡(1161-YJ): [末]外轉第二十四合一等入聲唇音清濁(outbound, 24th final, labialized+, 1st division, D tone, labial initial voiced±); Mandarin *mò* (*muè*) 'foam'; Cantonese *mut3* 'foam'; Minnan *buāt/buāh* 'foam'; Japanese Go-on *machi/matsu*; Kan-on *batsu*; {OC rhyme 月韻 *-ta; OC-W *mat; OC-Z *ma:d} 』 is compared (first publication) to the Uralic etymon after the equivalents: Sami\Lappish *muohta/muohta/myettid/muq'it⁴/mū'tteđ* 'snow'; {"Proto-Lappic **mōttē* (Sammallahti, 1998, p. 225)}. This etymon has not been identified in other languages.⁴ {Proto-Sino-Uralic *mb^wotaS 'foam, ice powder'}

² Oracle Bone Script is the unearthed writing system of the Shang Empire (c.a. 1600–1046 B.C.E). It was recognized as being ancient Chinese writing by Wáng Yí-róng 王懿榮 in 1899. Liú È 劉鶚 compiled and published the first collection of 1,058 rubbings including some interpretations of some unearthed scripts in 1903. In English, it was introduced as “inscriptions upon bone and tortoise shell” by Frank H. Chalfant (1906, p. 30). The largest collection of 41,956 rubbings is 1978-1982-HJ. The primary academic reference book is 1989-LZ which sorts lexical terms and identifies their graphic-etymological equations to transmitted Chinese etyma (DOMs).

³ REFUTATION: Previously claimed (Koivulehto, 1983, p. 120; Sammallahti, 1998, p. 239) etymological equivalents after Proto-Indo-European **dʰy̆ntó* 'tamed'; English *tame* are rejected due to phonetic and semantic inconsistencies. It was already rejected (Katz, 1998, p. 90; Rédei, 2002, p. 315). Previously claimed (Katz, 1998, p. 90) etymological equivalents after Proto-Germanic **stōdia-* 'stable'; Proto-Scandinavian **stōdir* 'stable' are rejected due to phonetic and semantic inconsistencies. Previously claimed (Ritter, 1993, p. 86) etymological equivalents after Proto-Baltic **stātiā-*; Lithuanian *stāčias* 'erect' are rejected due to phonetic and semantic inconsistencies.

⁴ REFUTATION: Previously claimed (Sammallahti, 1998, p. 127, 255; Koponen, 2005, p. 227; Koivulehto, 2006, p. 185) etymological equivalents after Proto-Balto-Slavic **mat-*; Russian **мотать** (*motat'*) 'to reel, to wind' are rejected due to semantic inconsistencies. Previously claimed (Koponen, 2005, p. 227; Koivulehto, 2006, p. 185) etymological equivalents after Estonian *matma* 'to bury' are rejected due to phonetic (according to the rhyme correspondence Re#2020GaoAt1, its Estonian equivalent is expected to be *mōsi* or *mosi*, but negative result) and semantic inconsistencies.

Since the etymon #1 involves compared onsets with different places of articulation in Sinitic and Uralic, the following etymon is studied in order to form an onset correspondence with the etymon #1.

#4) 【水】『說文(121-SW): 象眾水並流中有微陽之氣也('water'); 玉篇(543-YP): 流津也('river'); 韻鏡(1161-YJ): 內轉第七合三等齒音[左]清(inbound, 7th final, labialized+, 3rd division, dental initial [fricative+] voiced-); Mandarin *shuǐ* (*shuēi*) 'water'; Cantonese *seoi2* 'water'; Minnan *sui/tsuí* 'water'; Japanese Go-on *sui*; Kan-on *sui*; {OC rhyme 脂韻 *-ðə; OC-W *ciei; OC-Z “*q^{hw}ljil?”}』 is compared (Gao, 2005, p. 73; Gāo, 2008, p. 204) to the Uralic etymon after the equivalents: Estonian *vesi\vee-* 'water'; Finnish *vesi\vetē-* 'water'; Mordvin *ved/väd* 'water'; Mari\Cheremis *wət/wüt* 'water'; Udmurt\Votyak *vu/vii* 'water'; Komi\Zyrian *va* 'water'; Mansi\Vogul *üt/wit/wüt/wit* 'water'; Hungarian *víz* 'water'; Nenets\Yurak *jī?*/*wit* 'water'; Enets\Yen *bi?* 'water'; Nganasan\Tawgi *bē?* 'water'; Selkup *yt/üt/üt/öt* 'water'; Kamass *buu* 'water'; {Proto-Uralic *wete 'water' (1988-UEW, p. 570)}. {Proto-Sino-Uralic *h^weðəX 'water'}

This etymon has also been identified (since Moller, 1756, p. 39, 164: only Estonian ~ Finnish ~ Swedish ~ German ~ Phrygian 'water') in Indo-European languages: {Germanic: Danish *væde* 'wetness, to wet', *våd* 'wet', *vand* 'water'; Swedish *väta* 'wetness, to wet', *våt* 'wet', *vatten* 'water'; Norwegian *væte* 'wetness, to wet', *våt* 'wet', *vann* 'water'; Icelandic *væta* 'wetness, to wet', *votur* 'wet', *vatn* 'water'; Old Norse *væta* 'wetness, to wet', *vátr* 'wet'; *vatn* 'water'; English *wet*, *water*; Old English *wætan* 'to wet', *wæt* 'wet', *wæter* 'water'; Dutch *water* 'water'; Old Low German *watar* 'water'; German *Wasser* 'water'; Old High German *wazzar* 'water'; Gothic *wato* 'river'}; {Baltic: Latvian *ūdens* 'water'; Lithuanian *vanduō* 'water'; Old Prussian *wundan/wunda/undan* 'water'}; {Slavic: Czech *voda* 'water'; Slovak *voda* 'water'; Polish *woda* 'water'; Russian **вода** (*voda*) 'water'; Belarusian **вадá** (*vadá*) 'water'; Ukrainian **водá** (*vodá*) 'water'; Bulgarian **вода** (*voda*) 'water'; Serbo-Croatian **вòда\вòда** 'water'; Slovene *vóda* 'water'; Old Church Slavonic *вода* (*voda*) 'water'}; {Celtic: [Old] Irish *uisce* 'water'; Scottish Gaelic *uisge* 'water, rain, river'}; {Italic: Latin *onda* 'wave'; Italian *onda* 'wave'; French *onde* 'wave'; Spanish *onda* 'wave'; Portuguese *onda* 'wave'; Romanian *undă* 'wave'}; {Albanian *ujë* 'water'; Greek **ύδωρ** (*yðor*) 'water'; Ancient Greek *ὕδωρ* (*húdōr*) 'water'; Phrygian *βέδυ* (*bédu*) 'water'; {Anatolian: Hittite *waatar* 'water'; Luwian *wida-* 'wet'; *wārsa* 'water'}; [Old] Armenian **գետ** (*get*) 'river'; Sanskrit उद्रा (udrá) 'water'; उदन् (udán) 'water, wave'; Tocharian-A *wär* 'water'; Tocharian-B *war* 'water'; {Proto-Indo-European **ued-* “swell” (2008-NIL, p. 707)}. {?Proto-Sino-Uralo-Indo-European *h^weðəX-n > h^wenðəX. See the overview section for this question.}

This etymon has also been identified (Illich-Svitych, 1967, p. 334) in Manchu-Tungus languages: Orochi *udu(n)* 'rain'; Evenki *udun* 'rain'; Solon *udū* 'rain'; Even *udvn* 'rain'; {Proto-Manchu-Tungus **udun* 'rain (with wind)' (1977-SSTÅ, p. 248)}.⁵ {= *h^weðəX-n}

The following etyma are studied in order to form a rhyme correspondence with the etymon #4.

#5) 【指】『說文(121-SW): 手指也('finger'); 玉篇(543-YP): 手指也('finger'); 韵鏡(1161-YJ): [旨]內轉第六開三等上聲齒音清(inbound, 6th final, labialized-, 3rd division, B tone, dental initial voiced-); Mandarin *zhī* (*z̥i*) 'finger, indicate'; Cantonese *zi2* 'finger, indicate'; Minnan *tsí/kí* 'finger, indicate'; Japanese Go-on *shi*; Kan-on *shi*; {OC rhyme 脂韻 *-ðə; OC-W *ciei; OC-Z

⁵ REFUTATION: Previously claimed (1996-CV5ST) etymological equivalents after Kachin *mədi^t* 'be wet'; Lushai *tui* 'water' are rejected due to phonetic inconsistencies. Previously claimed (2007-EDOC, p. 475) etymological equivalents after Proto-Tibeto-Burman **lwi(y)*; Jingpho *lui³³* to flow'; Lushai *lui^t* < *luih*; Tiddim *luuiF* < *luuh* 'stream, river'; Old Mon *lwuy*; Khmer *luj* 'float, drift'; Vietnamese *loy* 'swim' are rejected due to phonetic inconsistencies. Previously claimed (Illich-Svitych, 1967, c. 334) etymological equivalents after Proto-Dravidian **jēd-* 'water', Proto-Chukchee-Kamchatkan **jūl-* 'to drip'; Proto-Korean **órán-* 'heavy rain' are rejected due to phonetic inconsistencies.

*kji?} 》 is compared (Gāo 2014b, p. 73) to the Uralic etymon after the equivalents: Estonian *käsi\käe* 'hand, arm'; Finnish *käsi\käte-* 'hand, arm'; Sami\Lappish *giehta/kiehta/kieta/kie^ttA/kīd̪t* 'hand'; Mordvin *ked/käd* 'hand'; Mari\Cheremis *kit* 'hand'; Udmurt\Votyak *ki* 'hand'; Komi\Zyrian *ki/ti* 'hand'; Khanty\Ostyak *köt/ket* 'hand'; Mansi\Vogul *kāt/kōt/kāt* 'hand, forefoot'; Hungarian *kéz* 'hand'; {"Proto-Finno-Ugric" **käte* 'hand' (1988-UEW, p. 140)}. This etymon has not been identified in other languages. {Proto-Sino-Uralic **keðəX* 'arm-hand-finger'}

#6) 【脂】 《說文(121-SW): 戴角者脂無角者膏('grease'); 玉篇(543-YP): 脂膏也('grease'); 韻鏡(1161-YJ): 內轉第六開三等平聲齒音清(inbound, 6th final, labialized-, 3rd division, A tone, dental initial voiced-); Mandarin *zhī* (ㄓ) 'grease'; Cantonese *zi1* 'grease'; Minnan *tsi* 'grease'; Japanese Go-on *shi*; Kan-on *shi*; {OC rhyme 脂韻 *-ðə; OC-W *tēiei; OC-Z *kji} 》 is compared (first publication) to the Uralic etymon after the equivalents: Estonian *kesi\kee* 'bran, husk'; Finnish *kesi\kete-* 'cuticle'; Sami\Lappish --/-/-/*katt/-kē^tt/-* 'skin'; Mordvin *ked/käd* 'skin, peel, husk'; {"Proto-Finno-Ugric" **keðe* 'skin, leather, peel' (1988-UEW, p. 142)}. This etymon has not been identified in other languages.⁶ {Proto-Sino-Uralic **keðə* 'skin grease'}

#7) 【蜜】 《說文(121-SW): [蠶]蠶甘飴也('sweet product of bee'); 玉篇(543-YP): 蜂所作('product of bee'); 韵鏡(1161-YJ): 外轉第十七開四等入聲唇音清濁(outbound, 17th final, labialized-, 4th division, D tone, labial initial voiced=); Mandarin *mì* 'honey'; Cantonese *mat6* 'honey'; Minnan *bit* 'honey'; Japanese Go-on *michi/mitsu*; Kan-on *bitsu*; {OC rhyme 質韻 *-θə; OC-W *miet; OC-Z “*mlig”} 》 is compared (Gāo 208, p. 135) to the Uralic etymon after the equivalents: Estonian *mesi\mee* 'honey'; Finnish *mesi\mete-* 'honey'; Sami\Lappish *miehta/mieta/-/mię^ttA/mīdt* 'honey' (not loanword from Finnish, because of rhyme correspondence); Mordvin *med/mäd* 'honey'; ?{Mari\Cheremis *mü/müj* 'honey'; Udmurt\Votyak *mu/mi* 'mead'; Komi\Zyrian *ma* 'honey'; → Nenets Sjoida *mā* 'honey'}(uncertain equivalents, out of rhyme correspondence); Hungarian *méz* 'honey'; {"Proto-Finno-Ugric" **mete* 'honey, mead' (1988-UEW, p. 273)}. {Proto-Sino-Uralic **mbèθəS* 'honey, mead'}

This etymon has also been identified (since Moller, 1756, p. 155: only Estonian ~ Finnish ~ some Germanic) in Indo-European languages: {Germanic: Danish *mjød* 'mead'; Swedish *mjöd* 'mead'; Norwegian *mjød* 'mead'; Icelandic *mjöður* 'mead'; Old Norse *mjøðr* 'mead'; English *mead*; Old English *medu* 'mead'; Dutch *mede* 'mead'; Old Low German *medu* 'mead'; German *Met* 'mead'; Old High German *metu* 'mead'}; {Baltic: Latvian *medus* 'honey, mead'; Lithuanian *medūs* 'honey'; Old Prussian *meddo* 'honey'}; {Slavic: Czech *med* 'honey'; Slovak *med* 'honey'; Polish *miód* 'honey'; Russian *мёд/мед* (*mjod/med*) 'honey, mead'; Belarusian *мёд* (*mjod*) 'honey'; Ukrainian *мед* (*med*) 'honey'; Bulgarian *мед* (*med*) 'honey'; Serbo-Croatian *мēд/mēd* 'honey'; Slovene *mēd* 'honey'; Old Church Slavonic *мēдъ* (*medu*) 'honey'}; {Celtic: Irish *miodh* 'mead'; Old Irish *mid* 'mead'; Welsh *medd* 'mead'; Cornish *medh* 'mead'; Breton *mez* 'mead'; Gaulish *medu* 'mead'}; Greek *μέθη* (*méthi*) 'drunkenness'; Ancient Greek *μέθυ* (*méthu*) 'wine (Epic)'; {Indo-Iranian: Sanskrit *मधु* (*mádhu*) 'sweet thing, honey, milk'; Avestan *maðu* 'wine'; Ossetian *мыд/муд* (*myd/mud*) 'honey'; Northern Kurdish *mot* 'molasses'; Classical Persian *می* (*mey*) 'alcoholic beverage'; Tajik *май* (*may*) 'wine'; (1989-CLI, p. 460)}; Tocharian-B *mīt* 'honey';

⁶ REFUTATION: Previously claimed (Koivulehto, 1983, p. 119) etymological equivalents after Proto-Indo-European **skento*; Proto-Germanic **skenpa*; Old Norse *skinn* 'skin' are rejected due to phonetic inconsistencies. Previously claimed (Aikio, 2006, p. 17) etymological equivalents after Proto-Samoyedic **ket* 'shape, appearance, figure'; Nenets *syiq* 'shape, figure'; Enets *śi'* 'resemblance, similarity, likeness; omen, sign'; Nganasan *сыты* 'he, she' are rejected due to phonetic and semantic inconsistencies. Previously claimed (1996-CV5ST) etymological equivalents after Tibetan *ākhja(s)-pa* 'to freeze, congeal', *ska* 'thick (of fluids)'; Burmese *kja?* 'strong (of tea)'; Kachin *lɔgji³* 'be frozen, be stiff, numb' are rejected due to phonetic and semantic inconsistencies.

{Proto-Indo-European **médʰu-* 'honey, mead' (2008-NIL, p. 467)}. This etymon has not been identified in other languages as inherited equivalents. {?Proto-Sino-Uralo-Indo-European **mbèθəS*. See the overview section for this question.}

#7) 【比】 『說文(121-SW): 密也('close, dense'); 玉篇(543-YP): 類也校也並也('alike, collate, side by side'); 韻鏡(1161-YJ): [匕]內轉第六開四等上聲唇音清(inbound, 4th final, labialized-, 4th division, B tone, labial initial voiced-); Mandarin *bǐ* 'contrast'; Cantonese *bei2* 'contrast'; Minnan *pí* 'contrast'; Japanese Go-on *bi/hi*; Kan-on *hi*; {OC rhyme 脂韻 *-ðə; OC-W *piei; OC-Z *pi?}』 is compared (first publication) to the Uralic etymon after the equivalent: Hungarian *bíz-* 'entrust'. This etymon has not been identified in other languages.⁷ {Proto-Sino-Uralic **péðəX* 'side by side'}

Overview

The etyma #1 【歲】 , #2 【兌】 and #3 【沫】 form a rhyme correspondence (Table 1).

Table 1. Rhyme correspondence (Rc#2020GaoAt1): Old Chinese rhyme 月韻 *-ta : Mandarin -*uei* : Cantonese -*eoī* : Minnan -*ue* : Estonian -*ose|-oe* : Finnish -*osi|-ote-* : North Sami -*uohta*

DOM	Mandarin	Cantonese	Minnan	Estonian	Finnish	North Sami
【歲】	<i>suei^(sui)</i> "year old"	<i>seoi3</i>	<i>suè/huè/hè</i> "year old"	<i>voos vooe</i>	<i>vuosi vuote-</i>	<i>-vuohtha</i>
【兌】	<i>duèt^(dui)</i> "correspond"	<i>deoi3</i>	<i>tuē/tuī</i> "correspond"	<i>tōsi tōe</i>	<i>tosi tote-</i>	<i>duohtha</i>
【沫】	<i>mò</i> "foam"	<i>mut3</i>	<i>buāt/buāh</i> "foam"	--	--	<i>muohtha</i> "snow"

This is a regular rhyme correspondence with three etyma. It is evidential. Its coincidental probability⁸ is as low as 1/53,824. The first etymon with a certain rhyme (1) * the first etymon with comparable onsets (1/4 [There are four sorts of onsets: labial, coronal, dorsal and laryngeal.]) * the second etymon falls into the same Old Chinese rhyme group (1/29 [There are 29 rhyme groups in Old Chinese.]) * the second etymon with comparable onsets (1/4) * the third etymon falls into the same Old Chinese rhyme group (1/29) * the third etymon with comparable onsets (1/4) = 1 * 1/4 * 1/29 * 1/4 * 1/29 * 1/4 = 1/53,824.

The etyma #1 【歲】 and #4 【水】 etyma form an onset correspondence (Table 2).

Table 2. Onset correspondence (Oc#2020GaoAt2): Mandarin/Minnan *su-* : Cantonese *s-* : Estonian/Finnish *v-*

DOM	Mandarin	Cantonese	Minnan	Estonian	Finnish	North Sami
【歲】	<i>suèt^(sui)</i> "year old"	<i>seoi3</i>	<i>suè/huè/hè</i> "year old"	<i>voos vooe</i>	<i>vuosi vuote-</i>	<i>-vuohtha</i>
【水】	<i>shuēi^(shui)</i> "water"	<i>seoi2</i>	<i>suí/tsuí</i> "water"	<i>vesi vee</i>	<i>vesi vete-</i>	--

The etyma #4 【水】 , #5 【指】 , #6 【蜜】 and #7 【比】 form a rhyme correspondence (Table 3).

⁷ REFUTATION: Previously claimed (1996-CV5ST) etymological equivalent Written Tibetan *dpe* 'pattern, model, symmetry' is rejected due to phonetic and semantic inconsistencies. Previously claimed (2007-EDOC, p. 162) etymological equivalents after Written Tibetan *pʰyi* 'behind, after'; Lepcha *bin* 'follow closely, belong to, be with, be next to' are rejected due to phonetic and semantic inconsistencies.

⁸ It is comparable to a lottery probability for 2 matching numbers chosen from 29 and 3 matching numbers chosen from 4 options, repeatedly.

Table 3. Rhyme correspondence (Rc#2020GaoAt3): Old Chinese rhyme 脂韻 *-ðə⁹: Mandarin/Minnan -i : Estonian/Finnish -esi|e : North Sami -iehta : Erzya -ed̄ : Hungarian -íz/-éz

DOM	Mandarin	Cantonese	Minnan	Estonian	Finnish	North Sami	Erzya	Hungarian
【水】	<i>shuēi</i> ^(shui) ‘water’	<i>seoi2</i>	<i>suí</i> ‘water’	<i>vesi\vee</i> ‘water’	<i>vesi\vetē-</i> ‘water’	--	<i>ved̄</i> ‘water’	<i>víz</i> ‘water’
	<i>zǐ</i> ^(zhi) ‘finger’	<i>zi2</i>	<i>tsí/kí</i> ‘finger’	<i>käsi\küe</i> ‘hand, arm’	<i>käsi\käte-</i> ‘hand, arm’	<i>giehta</i> ‘hand, arm’	<i>ked̄</i> ‘hand’	<i>kéz</i> ‘hand’
【蜜】	<i>mì</i> ‘honey’	<i>mat6</i>	<i>bit</i> ‘honey’	<i>mesi\mee</i> ‘honey’	<i>mesi\metē-</i> ‘honey’	<i>miehta</i> ‘honey’	<i>med̄</i> ‘honey’	<i>méz</i> ‘honey’
	<i>bǐ</i> ‘contrast’	<i>bei2</i>	<i>pí</i> ‘contrast’	--	--	--	--	<i>bíz-</i> ‘entrust’

The etyma #1 【歲】 , #4 【水】 and #6 【蜜】 form a coda distinction covering both Sino-Uralic and Indo-European (Table 4). Old Chinese codas *-t-, *-ð-, *-θ- (while merged to a single coda -s-, -ht-, -d̄- or -z- in Uralic) are corresponding to Old English codas -þ-, -t-, -d-; Ancient Greek codas -t-, -d-, -th- and Sanskrit codas -t-, -d-, -dh-, respectively. Although it is still only a table of distinction (more etyma with the same codas are required in order to form tables of correspondences), its coincidental probability is already low.

There is currently no evidence to claim the etyma #1 【歲】 , #4 【水】 and #6 【蜜】 non-genetic diffusions (loanwords) from Sino-Uralic or Indo-European, because their semantic realizations are evenly original in both Sino-Uralic and Indo-European. Their greater genetic connection will be confirmed, if rhyme correspondences covering both Sino-Uralic and Indo-European are found in further studies. I must now apply the same caveat to the etymon #1 【畫】 in the publication of Gao (2019b).

Table 4. Coda distinction (Cd#2020GaoAt4) in Sino-Uralic and Indo-European

DOM	Old Chinese	Estonian	Finnish	North Sami	Erzya	Hungarian	Old English	A. Greek	Sanskrit
【歲】	月韻 *-ta ‘Jupiter’	<i>voos\vooe</i> ‘annual harvest’	<i>vuosi\vuote-</i> ‘year’	<i>-vuohtha</i> ‘-hood’	--	--	<i>weþer</i> ‘wether’	<i>étos</i> ‘year’	<i>vatsá</i> ‘calf’
	脂韻 *-ðə ‘water’	<i>vesi\vee</i> ‘water’	<i>vesi\vetē-</i> ‘water’	--	<i>ved̄</i> ‘water’	<i>víz</i> ‘water’	<i>wæt</i> ‘wet’	<i>húdōr</i> ‘water’	<i>udrá</i> ‘water’
【蜜】	質韻 *-θə ‘honey’	<i>mesi\mee</i> ‘honey’	<i>mesi\metē-</i> ‘honey’	<i>miehta</i> ‘honey’	<i>med̄</i> ‘honey’	<i>méz</i> ‘honey’	<i>medu</i> ‘mead’	<i>méthu</i> ‘honey’	<i>mádhu</i> ‘honey’

Conclusions

Using etymological methods, the present study has identified seven Sinitic and Uralic shared etymologies (etyma). Three of them form a rhyme correspondence. Two of them form an onset correspondence. Four of them form another rhyme correspondence. These regular sound changes validate the genetic connection between Sinitic and Uralic. The Sino-Finnic term for 'Jupiter, year' is among these seven etyma. It is demonstrated that this term should be aboriginal in Sino-Uralic languages.

⁹ There is an exception in this rhyme correspondence. The third etymon belongs to Old Chinese rhyme 質韻 *-θə.

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