How Basic is Basic Vocabulary? The Problematic Case of Bai[1]

Johann-Mattis List (Heinrich Heine University Düsseldorf)

I. Key Assumptions Regarding Basic Vocabulary

- relatively resistent to borrowing
- relatively stable over time
- **not borrowable without limit** (cf. Starostin 1999)[2]

II. On the Limits of Borrowing: Starostin (1999)

«Характерно, однако, что мы при этом называем французский и испанский языки потомками латыни, но не местных кельтских языков. Дело в том, что если уже начинает активно заимствоваться базисная лексика языка, как правило, проникается заимствованиями в еще большей мере. Этот процесс сопровождается и активным заимствованием грамматической системы, в результате чего язык фактически меняет свою генетическую принадлежность.»

"It is characteristic, however, that we regard French and Spanish as descendents of Latin, and not of the local Celtic varieties. This is due to the fact that – when the basic vocabulary is already being replaced actively – the lexicon of the language, as a rule, will be exposed to borrowings of an even greater degree. This process is also accompanied by borrowings within the grammatical system, resulting in the actual change of the language's genetic affiliation." (my translation)

III. No Country for Mixed Languages

«Отсюда, в частности, следует вывод о невозможности «смешанных» языков в рамках классической модели генеалогического древа. Любой язык может – в том, что касается его базисных компонентов – иметь только одного предка.»

"This leads in particular to the conclusion that 'mixed' languages are impossible within the framework of the classical model of the genealogical tree. Any language can – as far as its basic components are concerned – only have one single ancestor." (my translation)

[1] I am deeply indebted to Wang Feng (Nanyang Technological University), who was so friendly to send me parts of his field work data for the preparation of this presentation.

[2] The last point is not often mentioned explicitly in the literature, it is however, *the* basic assumption underlying all lexicostatistic enterprises.

IV. The "Mixed" Status of Bai

- genetic affiliation unclear, surely Sino-Tibetan
- many Chinese borrowings in different layers of contact
- sound correspondences with Sinitic languages belonging to different layers and extending to the basic lexicon

V. Assumptions Regarding the Genetic Affiliation of Bai

- Tibeto-Burman with heavy influence of Chinese (Matisoff 2000, Lee & Sagart 1998 & 2008, Deng & Wang 2003, Wu 2000)
- Sinitic (Starostin 1995, Wang 2006, Norman 2002)

VI. Bai as Sinitic: Starostin (1995)

- glottochronological analysis (with a revised formula, cf. Starostin 2000) of four Chinese dialect varieties and Jianchuan Bai
- split of Bai and Sinitic somewhere around the first century BC
- 65 cognates within Swadesh 100
- 8 loans, three from Chinese, 5 from other Sino-Tibetan languages

VII. "No Limits to Borrowing": The Proposal of Lee & Sagart (2008)

- stratification of Sino-Bai sound correspondences (Middle and Old Chinese and Jianchuan Bai)
- identification of three different layers of contact with Sinitic
- identification of a "more basic" layer of genetic inheritance (close to Proto-Loloish)
- identification of at least 48 borrowings from Sinitic within Swadesh 100
- 12 items within Swadesh 100 are claimed to be related to Proto-Loloish

> "Bai is counterevidence to Starostin's claim […] that there are limits to lexical borrowing, specifically that a language cannot borrow more than 15% of a Swadesh 100-word list. Starostin argued that once a language has reached that stage, its speakers will shift to the dominant language. Bai shows that this is not the case. The genetic layer in a language cannot be determined mechanistically by looking at the number of matches on a basic vocabulary list." (Lee & Sagart 2008)

VIII. Differing Results of Lexicostatistical Analyses Provoked by Differing Cognate Judgments

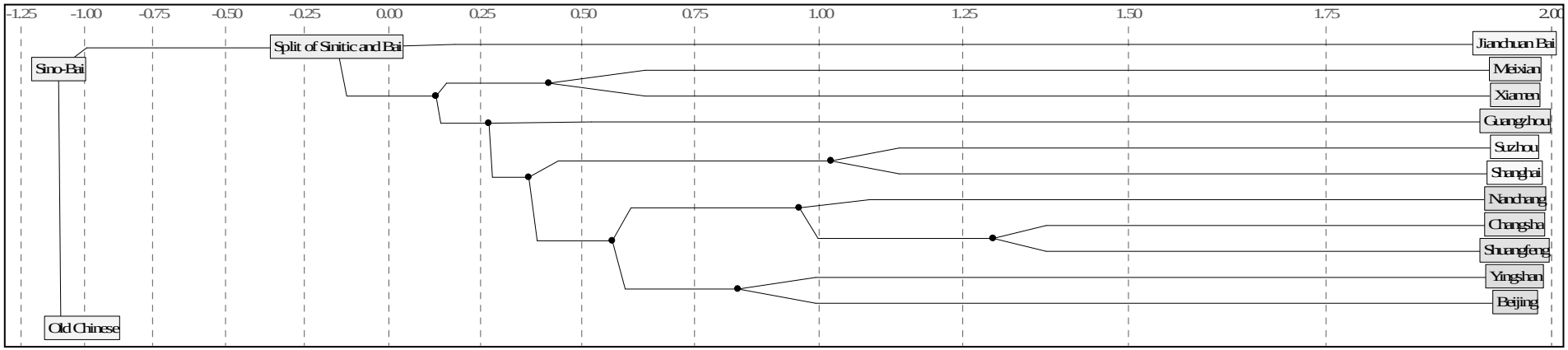

Table 1: Glottochronological analysis of Jianchuan Bai, Old Chinese and ten Chinese Dialects based on Starostin (1995)

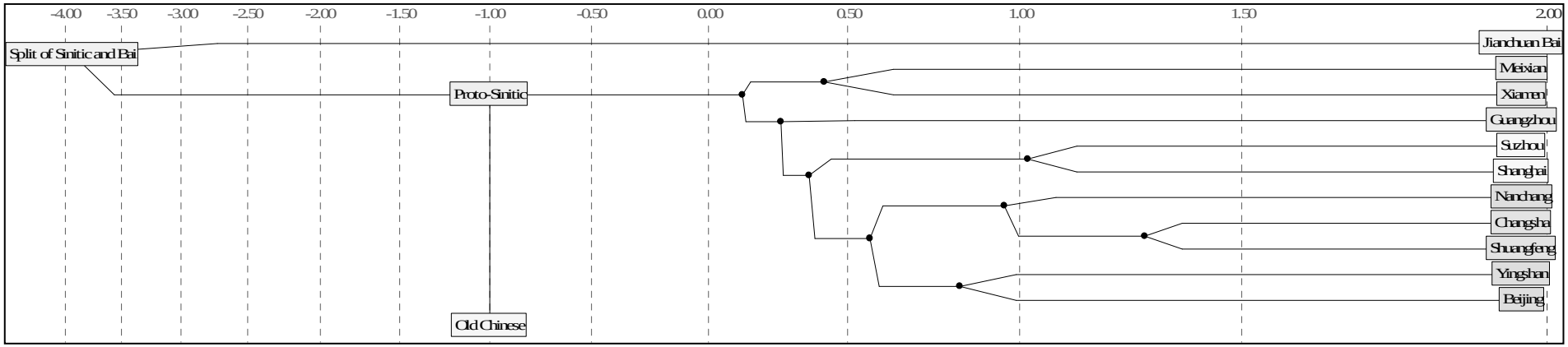

Table 2: Glottochronological analysis of Jianchuan Bai, Old Chinese and ten Chinese Dialects based on Lee & Sagart (2008)

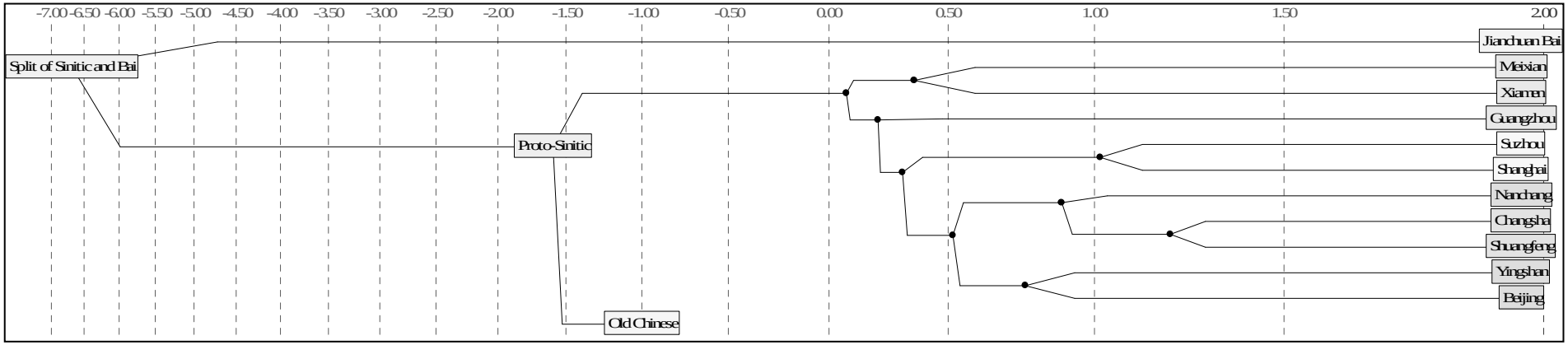

Table 3: Glottochronological analysis of Jianchuan Bai, Old Chinese and ten Chinese dialects, based on Lee & Sagart (1999), loans coded as non-cognates

IX. Employing Refined Methods in Determining the Genetic Affiliation of Bai: Wang (2006)

- Comparison of 9 different varieties of Bai
- Reconstruction of Proto-Bai
- Determining different layers of sound correspondences between Sinitic and Bai
- sound correspondences between Sinitic and Proto-Bai which can not be explained by an assumed Sinitic donor language (Wang's "inexplicability principle)
- different proportions of Sino-Bai correlates (related words) in Chen's high and low rank (cf. Chen 1996) of Swadesh's 200 basic words, pointing rather to genetic relationship than to the result of borrowing
- different proportions of Sino-Bai correlates within Jachontovs high and low rank (35 stable meanings opposed to 65 less stable meanings, cf. Starostin 1999)

List	strong sublist					weak sublist				
	- obv. loans	%	% (- loans)	all correlates	%	- obv. loans	%	% (-loans)	all correlates	%
Jachontov 35-65	22	62	76	27	78	34	52	63	44	68
Chen 100-100 (Chen 1996)	39	39				23	23			

Table 4: Percentages for possible cognates, and correlates within the weak and strong subliststs of Jachontov and Chen Baoya[3]

[3] Jachontov's list follows the estimation proposed in this presentation, Chen's list is based on the estimation of Wang (2006).

X. The Inexplicability Principle

WORD	two	old	cry	horn	sji⁴	say	hand	small
Tuoluo	koŋ³³	kɤ³³	qʰo⁴²	qo⁴²qa²¹	four	sua⁴²	ɕiɯ³³	*se²¹
Gongxing	koŋ³³	ku²²	qʰu²⁴	qao²⁴	ɕi⁴²		ʂi²²	*sɛ⁴²
Enqi	ku²²	ku²²	qʰu⁵⁵	qo⁵⁵	ɕi²⁴		ɕiɯ²²	*sɛ⁴³
Ega	kɤ³³	kɤ²²	qʰu⁴⁴	qo⁴⁴	si⁵⁵		ɕi²²	*sɛ⁴²
Jinman	koŋ³³	kɤ²²	qʰo⁵⁵	qo⁵⁵	si⁴⁴		ɕi²²	*sɛ̃⁴²
Jinxing	kõ³³	ku³³	kʰou⁴⁴	kv⁴⁴	ɕi⁴⁴	suɑ⁴⁴	sɯ³³	*se³¹
Dashi	koŋ³³	ku³³		ko⁴⁴	ɕi⁴⁴		ʂʰɯ³³	*sʰe²¹
Zhoucheng	kou³³	ku³³	kʰɑ⁴⁴	kɤ⁴⁴	ɕi⁴⁴	sua⁴⁴	sɯ³³	*se³¹
Mazhelong	koŋ³³	kv³³	kʰo⁴⁴	koŋ⁴⁴	ɕi⁴⁴	sua⁴⁴	səɯ³³	*sɛ²¹
Jianchuan	kõ³³	ku³³	kʰou⁴⁴	kɤ⁴⁴	ɕi⁴⁴	sua⁴⁴	sɯ³³	se³¹
Eryuan	kɔ³³	ku³³	kʰɔ⁴⁴	kɤ⁴⁴	ɕi⁴⁴		ʂɯ³³	se³¹
Heqing	kɔ̃u³³	ku³³	xʰɛ⁵⁵kuɔ⁵⁵	kuɔ⁴⁴	ɕi⁴⁴		sʰɯ³³	sʰe³¹
Lanping	kɔ̃⁴⁴	ku³³	kʰu³³	ko⁵⁵	ɕi⁴⁴		sɯ³³pʰao³³	se³¹
Qiliqiao	ko³³	ku³³	kʰo⁴⁴	kɤ⁴⁴	ɕi⁴⁴		sɯ³³	se³³
Yunlong	kɔ³³	ku³³	kʰu⁴⁴	kɤ⁴⁴	ɕi⁴⁴		ʃɤ³³	se³¹
Xiangyun	kɔu³³	ku³³	kʰɔu⁴⁴	kɯ³³	ɕi⁴⁴		sou³³	se²¹
Luobenzhuo	kɤ³³	kɤ³³	qʰo⁵⁵	qõ⁵⁵	ɕi⁴⁴		ɕi³³	sæ̃⁴²
Zhaozhuang	ko³³			kʊ⁴⁴	si⁵⁵	ɕua⁴⁴	sɯ⁴⁴	se³³
Proto-Bai	ko⁴	ku²	qʰɔ⁴	qɔ⁴	sji²	sua⁴	sʰrɯ²	*sʰɛ³
Middle Chinese	kjak	lawX	khuwk	kaewk	sijX	sywejH	syuwX	sejH

XI. Comparison of the different Proposals

Author	Language	Matches with PST/Sinitic	Borrowings from Sinitic	Other Borrowings
Starostin (1995)	Jianchuan Bai	65	3	5
Lee & Sagart (2008)	Jianchuan (Huang et al. 1992)	12	48	not displayed
Wang (2006)	Proto-Bai	39	11	not displayed
This presentation	Jianchuan (Huang et al. 1992)	59	14	not entirely sure

XII. Revised Glottochronological Analysis Following Wang's Proposal

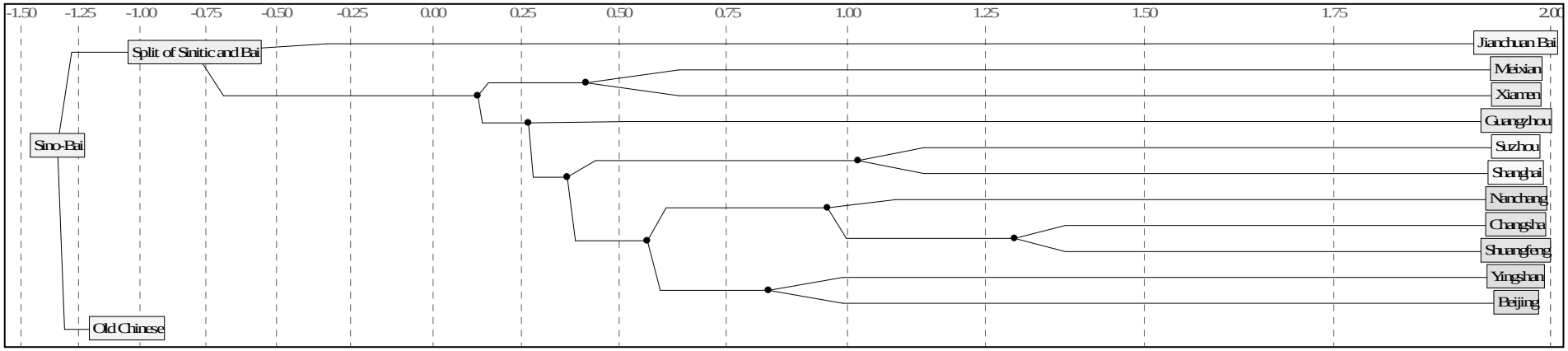

Table 5: Revised glottochronological analysis following Wang (2006) with a few modifications

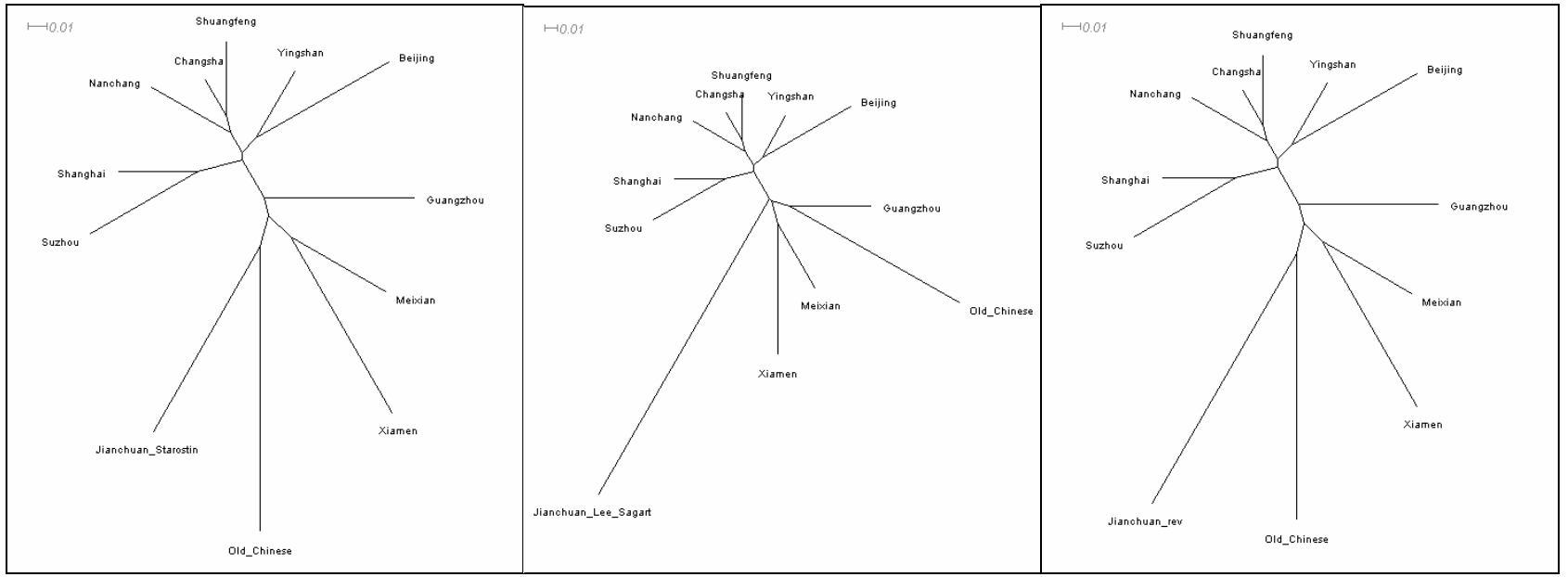

Table 6: Comparison of the different proposals (Starostin 1995, Lee & Sagart 2008, this presentation) using the BioNJ algorithm in SplitsTree (cf. Huson & Bryant 2006)

References

ABVD: *Austronesian Basic Vocabulary Database*, from http://language.psy.auckland.ac.nz/austronesian/.

Allen, B. (2007). *Bai Dialect Survey*: SIL International.

Baxter, W. H. (1992). *A Handbook of Old Chinese Phonology:* de Gruyter.

Beijing Daxue Zhongguo Yuyan Wenxue Xi 北京大学中国语言文学系 (Ed.) (1964). *Hanyu Fangyan Cihui 汉语方言词汇 (Vocabulary of Chinese Dialects).* Beijing: Wenyi Gaige.

Benedict, P. K. (1972). *Sino-Tibetan: A Conspectus:* Cambridge University Press.

Chen Baoya 陈保亚 (1996). *Yuyan jiechu yu yuan lianmeng* 语言接触与语言联盟 *(Language contact and language unions).* Beijing: Beijing Yuwen.

Deng Xiaohua 邓晓华, & Wang Shiyuan 王士元 (2003). Zangmian yuzu yuyan de shuli fenlei ji qi fenxi 藏缅语族语言的数理分类及其分析 (Lexicostatistic classification of the Tibeto-Burman family and its analysis). *Minzu Yuwen*, (4), 8–18.

DOC: Wang, W. Shiyuan, & Cheng, C.-C. *DOC. Dictionary On Computer*, from http://starling.rinet.ru.

Greenhill, S. J., Blust, R., & Gray, R. D. (2008). The Austronesian Basic Vocabulary Database: From bioinformatics to lexomics. *Evolutionary Bioinformatics, 4*, 271–283.

Hashimoto, M. J. (1973). *The Hakka dialect: A linguistic study of Its phonology syntax and lexicon.* Cambridge: Cambridge University Press.

Huang, B., et al. (1992). *A Tibeto-Burman Lexicon.* Beijing: Zhongyang Minzu Xueyuan.

Huson, D. H., & Bryant, D. (2006). Application of phylogenetic networks in evolutionary studies. *Molecular Biology and Evolution, 23*(2), 254–267.

Lee, Y.-J., & Sagart, L. (1998). *The strata of Bai. Paper presented at the 31st international conference on Sino-Tibetan Languages and Linguistics.* University of Lund.

Lee, Y.-J., & Sagart, L. (2008). No limits to borrowing: The case of Bai and Chinese. *Diachronica, 25*(3), 357–385.

Matisoff, J. A. (2001). *On the genetic position of Bai within Tibeto-Burman: Paper presented at the 34th international conference on Sino-Tibetan languages and linguistics.* Kunming, from Xinan Minzu Xueyuan; Tianjin Daxue.

Matisoff, J. A. (2003). *Handbook of Proto-Tibeto-Burman: System and philosophy of Sino-Tibetan reconstruction.* Berkeley; Los Angeles; London: University of California Press.

Norman, J. (2002). The Chinese dialects: Phonology. In G. Thurgood & R. J. LaPolla (Eds.), *The Sino-Tibetan languages* (pp. 72–83). Taylor & Francis Ltd.

Peiros, I., & Starostin, S. A. (1996). *A comparative vocabulary of five Sino-Tibetan languages.* University of Melbourne Department of Linguistics and Applied Linguistics.

Sagart, L. (1999). *The roots of old Chinese.* Amsterdam: Benjamins.

Sagart, L., & Baxter, W. H. *Baxter-Sagart Old Chinese reconstructions*, from University of Michigan: http://sitemaker.umich.edu/wbaxter/home.

Schuessler, A. (2003). *What are cognates and what are variants in Chinese word families?: Paper presented at the third international conference on Sinology.* Hongkong, from Academia Sinica: .

Schuessler, A. (2006). *ABC Dictionary of Old Chinese.* Honolulu: Univeristy of Hawai'i Press.

Starostin, S. A. (1995). The historical position of Bai. *The Moscow Linguistic Journal, 1*, 174–190, from http://starling.rinet.ru/Texts/bai.pdf.

Starostin, S. A. (1999). O dokozatel'stve jazykovogo rodstva (Proving language relationship). In *Typology and Theory of Language. Moscow:* (pp. 55–69). Moscow: Languages of Russian Culture.

Starostin, S. A. (2000). Comparative-historical linguistics and lexicostatistics. In C. Renfrew; A. M. S. McMahon, & L. Trask (Eds.), *Time depth in historical linguistics* (pp. 223–265). McDonald Institute for Archaeological Research.

Tower of Babel: *The Tower of Babel. An Etymological Database Project*, from http://starling.rinet.ru/main.html.

Wang, F. (2006). *Comparison of languages in contact: The distillation method and the case of Bai.* Taipei: Inst. of Linguistics Academia Sinica.

Wang, F., & Wang, W. Shiyuan (2004). Basic words and language evolution. *Language and Linguistics, 5*(3), 643--662, from http://www.ee.cuhk.edu.hk/~wsywang/publications/ww11.pdf.

Wang Feng 汪锋 (2006). Baiyu zhong songqi cayin de laiyuan 白语中送气擦印的来源 (Origin of aspirated fricatives in Bai). *Minzu Yuwen*, (2), 19–23.

Wiktonary Swadesh Lists: *Wiktionary Swadesh Lists*, from http://en.wiktionary.org/wiki/Appendix:Swadesh_list.

Wu Anqi 吴安其 (2000). Zangmianyu de fenlei he Baiyu de guishu 藏缅语的分类和白语的归属 (Classification of Tibet-Burman and the position of Bai). *Minzu Yuwen*, (2), 1–12.

Zhao Yanzhan 赵燕珍 (2006). *Zhaozhuang Baiyu miaoxie yanjiu* 赵庄白语描写研究 *(Investigations of Zhaozhuang Bai)*, Zhongyang Minzu Daxue, from Zhongyang Minzu Daxue: .

Zhou Wuji 周无忌 (Ed.) (1981). *Guangzhou fangyan cidian* 广州方言词典 *(Dictionary of the Guangzhou dialect).* Hongkong: Shangwu Yinshuguan.

Appendix A: Cognate Judgments for 100 Basic Words (Swadesh 1955) within Beijing, Old Chinese, Proto-Bai and Jianchuan Bai

Num.	WORD	Beijing	NUM	Old Chinese	NUM	Proto-Bai	NUM	Jianchuan Bai	NUM
1	all	都, tou^{55}	3	皆, MCH keaj, OCH *kˁrij	350		-666	tsɑ^{35}ka^{42}tsɨ^{33}	510
1	all	全, tɕ^{h}yɛn^{35}	4	凡, MCH bjom, OCH *[b]rom	351		0		0
2	ashes	灰, xuei^{55}	8	灰, MCH xwoj, OCH *m̥ˁə	8	*sru^{1}	512	tɕi^{55}su^{55}	512
3	bark	樹皮, ʂu^{51}p^{h}i^{35}	9	皮, MCH bje, OCH *m-[p](r)aj	9	drɯ^{3}bre^{1}	9	*pi^{31} (Allen 2007)	9
4	belly	肚, tu^{51}	10	腹, MCH pjuwk, OCH *p^{h}uk	11	pju^{4}	11	fu̱^{33}	11
4	belly		0	肚, MCH duX, OCH *m-tˁaʔ	10		0		0
5	big	大, ta^{51}	12	大, MCH dajH, OCH *[l]ˁa[t]-s	12	dɔ^{5}	-12	to̱^{21}	-12
6	bird	鳥, niau^{214}	14	鳥, MCH tewX, OCH *tˁiwʔ	14	tso^{4}	16	tɕi^{55}kə^{55}u^{55}tso̱^{33}	16
7	bite	咬, iau^{214}	17	噬/啑, MCH dzyejH, OCH *det-s	352	*C-ŋa^{4} > ʁa^{4}	17	ŋɑ̱^{33}	17
8	black	黑, xei^{55}	19	黑, MCH xok, OCH *m̥ˁək	19	χɯ^{4}	19	xə̱^{33}	19
9	blood	血, ɕyɛ^{51}	22	血, MCH xwet, OCH *m̥ˁik	22	*s^{h}ua^{4}	22	suɑ^{33}	22
10	bone	骨, ku^{214}	23	骨, MCH kwot, OCH *kˁut	23	qua^{4}	23	kuɑ^{33}tiə^{42}	23
11	breast	唑, tsa^{35}	27	乳, MCH nyuX, OCH *noʔ	354	ba^{4}	514	pɑ̱^{21}tɕi^{33}	514
11	breast	媽, ma^{55}	26		0		0		0
12	burn tr.	燒, ʂau^{55}	28	燒, MCH syew, OCH *[q^{h}]ew	28	nji^{2}	-30	ɲə^{55}k^{h}ə^{33}	-30
12	burn tr.	著, tʂu^{214}	29	焚, MCH bjun, OCH *bən	355	ʂu^{1}	-28	xu^{55}k^{h}ə^{33}	-30
13	claw(nail)	指甲, tʂəɹ^{35}tɕia^{21}	30	甲, MCH kap, OCH *kˁrap	30	*(s^{h}rɯ^{2})qæ^{4}	30	sɨ^{33}tiə^{42}kɑ̱^{33}	30
14	cloud	雲, yn^{35}	32	雲, MCH hjun, OCH *wən	32	ŋɔ^{1}	-32	vã^{42}	-32
15	cold	冷, ləŋ^{214}	33	寒, MCH han, OCH *[g]ˁa[n]	34	kɯ^{1}	517	kɑ^{42}	517
15	cold		0		0	gæ^{1}	518	kə^{55}	518
16	come	來, lai^{35}	35	來, MCH loj, OCH *(mə).rˁə(<*mə.rˁək)	35	*ɣe^{1}	35	χə^{35}	35
17	die	死, sɨ^{214}	37	死, MCH sijX, OCH *sijʔ	37	sji^{2}	37	ɕi^{33}	37
18	dog	狗, kou^{214}	38	犬, MCH khwenX, OCH *[k]^{whˁ}[e][n]ʔ	356	q^{h}uaŋ^{2}	356	k^{h}uɑ̃^{33}	356
19	drink	喝, xə^{55}	43	飲, MCH 'imH, OCH *ʔəmʔ	40	ɯ̃^{2}	40	ə̃^{33}	40
20	dry	乾, kan^{55}	47	乾, MCH kan, OCH *kˁar	47	qaŋ^{1}	47	kɑ̃^{55}	47
21	ear	耳, aɻ^{214}	52	耳, MCH nyiX, OCH *nə(ŋ)ʔ	52	*nje^{2} (?)	52	*ɲi^{33}tiə^{42}kuɑ̃^{55}	52
22	earth	土, t^{h}u^{214}	357	地, MCH dijH, OCH *[l]ˁej-s	53	di^{3}	53	t^{h}u^{33}sɑ^{33}	53
22	earth		0	土, MCH thuX, OCH *t^{hˁ}ar	357		0		0
23	eat	吃, tʂ^{h}əɹ^{55}	54	食, MCH ziH, OCH *s-m-lək-s	55	jɯ^{4}	55	jə̱^{33}	55
24	egg	雞子, tɕi^{55}tsɨ^{214}	59	卵, MCH lwanX, OCH *Cə.rˁorʔ	58	sen^{5}	521	sɛ̱^{21}	521
24	egg	蛋, tan^{51}	57		0		0		0
25	eye	眼, iɛn^{214}	60	目, MCH mjuwk, OCH *[m][u]k	61	ŋuen^{2}	-60	ŋue^{33}	-60

27	feather	羽毛, y²¹mau³⁵	63	羽, MCH hjuX, OCH *waʔ	332	*mɛ¹/ma¹	63	mɑ⁴²	63
28	fire	火, xuɔ²¹⁴	65	火, MCH xwaX, OCH *m̥ˤəjʔ	65	xui²	65	xue³³	65
29	fish	魚, y³⁵	66	魚, MCH ngjo, OCH *ŋa	66	ŋo¹	66	ŋo⁵⁵	66
53	meat	肉, ʐou⁵¹	141	肉, MCH nyuwk, OCH *[n]uk	141	ɕæ¹	600	ka⁴²	600
53	meat		0	肌, MCH kij, OCH *krə[j]	358		0		0
30	fly v.	飛, fei⁵⁵	67	飛, MCH pj+j, OCH *Cə-pə[r]	67	pje¹	67	fa⁵⁵	67
31	foot	腳, tɕiau²¹⁴	68	足, MCH tsjowk, OCH *[ts]ok	359	ko⁴	68	kǭ³³	68
32	full	滿, man²¹⁴	70	滿, MCH manX, MCH	70	*mɑ²/mɛ²	70	mɑ³³	70
32	full		0	盈, MCH yeng, MCH *leŋ	360		0		0
33	give	給, kei²¹⁴	76	畀, MCH pjijH, MCH	72	zɯ³/*zi³	523	zɨ²¹	523
33	give		0	與/予, MCH yoX, OCH *laʔ	361		0		0
34	good	強, tɕʰiaŋ³⁵	82	好, MCH xawX, OCH *qʰˤuʔ	79	dræn¹	601	ɕo²¹	602
34	good	好, xau²¹⁴	79		0		0		0
26	fat n.	脂肪, tʂəˠ⁵⁵faŋ³⁵	87	脂, MCH tsyij, OCH *kij	362	tsri¹	-362	tsa⁵⁵	-362
35	green	綠, ly⁵¹	85	綠, MCH ljowk, OCH *(pə.)rok	85	tsʰæn¹	86	lu̱³³	-85
35	green		0	青, MCH tsheng, OCH *[s.r̥]ˤeŋ	86		0		0
36	hair	頭髮, tʰou³⁵fa	92	毛, MCH maw, OCH *mˤaw	94	ɕa⁴	602	tiə⁴²mɑ⁵⁵	-94
37	hand	手, ʂou²¹⁴	95	手, MCH syuwX, OCH *n̥uʔ	95	sʰrɯ²	95	sɨ³³	95
38	head	腦, nau²¹⁴	98	首, MCH syuwX, OCH *l̥uʔ	363	djɯ¹	96	tiə⁴²po⁴²	96
39	hear	聽, tʰiŋ⁵⁵	99	聞, MCH mjun, OCH *mu[n]	364	tɕʰæn¹	99	tɕʰɑ̃⁵⁵tiə̱³³	99
40	heart	心, ɕin⁵⁵	100	心, MCH sim, OCH *səm	100	*sʰjen¹	100	ɕĩ⁵⁵	100
41	horn	角, tɕiau²¹⁴	101	角, MCH kaewk, OCH *k.rˤok	101	qɔ⁴	101	*kǭ³³	101
42	I	我, uɔ²¹⁴	102	吾/我, MCH ngaX/ngu, OCH*ŋˤa-jʔ	102	C-ŋɔ³>ɴɔ³	102	ŋo²¹	102
42	I		0	余, MCH yo, OCH *la	365		0		0
43	kill	殺, ʂa⁵⁵	104	殺, MCH sreajH, OCH *sat-s	104	ɕʰa⁴	104	ɕɑ̄³³	104
44	knee	膊楞蓋兒, po³⁵ləŋ⁰kaiɻ⁵¹	108	膝, MCH sit, OCH *s.tsʰik	105	*qʰa³ (?)	530	kua³³tiə⁴²kɑ̱³³	530
45	know	知, tʂəˠ⁵⁵	111	知, MCH trje, OCH *tre	111	*sen²	531	sẽ³³	531
46	leaf	葉, iɛ⁵¹	113	葉, MCH yep, OCH *l[a]p	114	sʰrɛ⁴	114	se̱³³	114
47	lie	躺, tʰaŋ²¹⁴	118	臥, MCH ngwaH, OCH *[ŋ]ˤ[o]j-s	366	*tsʰræn²	533	tsʰɑ̃³³	533
48	liver	肝, kan⁵⁵	122	肝, MCH kan, OCH *kˤhar	122	qaŋ¹	122	kɑ̃⁵⁵	122
49	long	長, tʂʰaŋ³⁵	123	長, MCH drjang, OCH *Cə.[d]raŋ	123	droŋ¹	123	tsõ⁴²	123
50	louse	虱, ʂəˠ⁵⁵	124	蟲/虱, MCH srit, OCH *sri[t]	124	ɕi⁴	-124	ɕi̱³³	124
51	man	男, nan³⁵	125	男, MCH nom, OCH *nˤ[ə]m	125	tsi²	-125	ɲə³³ɲi²¹	-125
51	man	爺們, iɛ³⁵mən⁰	135		0		0		0
52	many	多, tuɔ⁵⁵	138	多, MCH ta, OCH *[t-l]ˤaj	138	tjɯ¹	603	tɕi⁵⁵	603

54	moon	月, yɛ^{51}	143	月, MCH ngjwot, OCH *ŋ^{w}at	143	mji^{1}-ŋua^{4}	143	mi^{55}ŋuɑ̱^{33}	143
55	mountain	山, ʂan^{55}	144	山, MCH srean, OCH *s-ŋrar	144	sro^{4}	535	sṵ^{21}	535
56	mouth	嘴, tsuei^{214}	145	口, MCH khuwX, OCH *k^{hʕ}(r)oʔ	149	*tsju^{2} (?)	145	tsɔ̱^{33}kua^{55}	145
57	name	名, miŋ^{35}	150	名, MCH mjieng, OCH *[m]eŋ	150	mjæ^{1}	150	mia^{55}	150
58	neck	脖, po^{35}	152	領, MCH ljengX, OCH *[r]eŋʔ	367	*qo^{5}	604	mṵ^{21}mi̱^{21}tsa̱^{33}	620
58	neck		0	頸, MCH kjaengX, OCH *k^{ʕ}reŋʔ	151		0		0
59	new	新, ɕɪn^{55}	155	新, MCH sin, OCH *[s-ts^{h}]i[n]	155	s^{h}jen^{1}	155	ɕĩ^{55}	155
60	night	夜晚, iɛ^{51}uan^{214}	157	夜, MCH yaeH, OCH *[ɕ](r)ak-s	157	pɛ^{2}	605	jo^{21}	-157
61	nose	鼻, pi^{35}	164	鼻, MCH bjijH, OCH *m-[b]i[t]-s	164	bjo^{4}	164	vu^{42}tiə^{42}ne^{42}	164
62	not	不, pu^{51}	168	不, MCH pjuw, OCH *pəʔ	168	(ɣ)a^{5}	606	ɑ^{33}/jɑ^{33}	606
62	not		0	無, MCH mju, OCH *ma	167		0		0
63	one	一, ji^{55}	172	一, MCH 'jit, OCH *ʔi[t]	172	*ʔa^{3}	540	ɑ^{21}	540
63	one		0		0	*ji^{4}	172	ji̱33	172
67	road	道, tau^{51}	178	道, MCH dawH, OCH *l^{ʕ}uʔ-s	178	t^{h}ju^{2}	-178	t^{h}u^{33}	-178
67	road	路, lu^{51}	177	路, MCH luH, OCH *(Cə.)r^{ʕ}ak-s	177		0		0
64	person	人, ʐɛn^{35}	173	人, MCH nyin, OCH *ni[n]	173	njen^{1}	173	ɲi^{21}kã^{55}	173
65	rain	雨, y^{214}	174	雨, MCH hjuX, OCH *waʔ	174	*rwo$^{2/4}$	174	za^{33}ɕy^{33}/va^{33}ɕy^{33}	174
66	red	紅, xʊŋ^{35}	175	赤, MCH tsyhek, OCH *[t-q^{h}](r)Ak	176	t^{h}ræ^{4}	176	ts^{h}a̱^{33}	176
68	root	根, kən^{55}	179	本, MCH pwonX, OCH *p^{ʕ}ə[n]ʔ	368	mi$^{3/4}$, tɛ^{4}	542	tsɨ^{21}tɐ̱^{33}	542
68	root		0	根, MCH kon, OCH *[k]^{ʕ}ə[n]	179		0		0
69	round	圓, yɛn^{35}	182	員/圓, MCH hjwen, OCH *wen	182	ʁuen^{1}	182	ŋue^{42}	182
70	sand	沙, ʂa^{55}	183	沙, MCH srae, OCH *[s]^{ʕ}raj	183	s^{h}rɔ^{1}	183	so^{55}tsɨ^{55}	183
71	say	說, ʂuɔ^{55}	186	曰/話, MCH , MCH	185	sua^{4}	186	suɑ̱^{33}	186
71	say		0	說, MCH sywejH, OCH *l̥ot-s	186		0		0
72	see	瞅, tʂ^{h}ou^{213}	192	見, MCH kenH, OCH *[k]^{ʕ}e[n]ʔ-s	369	en^{2}	608	ã^{33}kẽ^{21}	621
72	see	瞧, tɕ^{h}iau^{35}	189		0		0		0
73	seed	種, tʂʊŋ^{214}	194	種, MCH tsyowngH, OCH *toŋʔ-s	194	tsruŋ^{2}	-194	tsõ^{33}tsɨ^{33}	-194
74	sit	坐, tsuɔ^{51}	196	坐, MCH dzwaX, OCH *[dz]^{ʕ}o[j]ʔ	196	ko^{5}	505	kṵ^{21}	505
75	skin	皮, p^{h}i^{35}	197	膚, MCH pju, OCH *pra	323	*bre^{1}	0	pe^{42}	197
75	skin		0	皮, MCH , MCH	197		197		0
76	sleep	睡覺, ʂuei^{51}tɕiau^{51}	201	寐, MCH mjijH, OCH *mi[t]-s	370	*ts^{h}ræn^{2}	371	ts^{h}ã^{33}	371
76	sleep		0	寢, MCH tshimX, OCH *ts^{h}imʔ	371		0		0
77	small	小, ɕiau^{214}	203	小, MCH sjewX, OCH *[s]ewʔ	203	*s^{h}ɛ^{3}	202	se^{21}	202
77	small		0	細,MCH sejH, OCH *s^{ʕ}əj-s	202		0		0
78	smoke	煙, iɛn^{55}	204	熏, MCH , MCH	205	xui^{2}-sjen^{1}	609	ɲi^{55}tsɨ^{55}	622

78	smoke		0	煙/烟, MCH , MCH	204		0		0
79	stand	站, tʂan^{51}	208	立, MCH lip, OCH *(kə.)rəp	207	*ji^{4}	610	tsɨ^{21}	623
80	star	星, ɕiŋ^{55}	211	星, MCH seng, OCH *[s-ts^{h}]^{ʕ}eŋ	211	s^{h}jæn^{1}	211	ɕã^{55}	211
81	stone	石, ʂəɤ^{35}	212	石, MCH dzyek, OCH *dAk	212	dro^{4}	212	*tsǫ^{21}k^{h}ue^{55}	212
82	sun	太陽, t^{h}ai^{51}iaŋ^{35}	214	日, MCH nyit, OCH *wat	215	nji^{4}	215	ɲi^{33}p^{hʔ}i^{21}	215
83	swim	鳧水, fu^{51}ʂueiɻ^{214}	225	游, MCH yuw, OCH *[ɢ](r)u	220	*s^{h}ɛ^{2}	223	ɲã^{42}ɕy^{33}	630
83	swim	游泳, iou^{35}yʊŋ^{214}	220	泳, MCH hjwaengH, OCH *wraŋ-s	220		0		0
84	tail	尾, uei^{214}	227	尾, MCH mj+jX, OCH *məjʔ	227		-666	*ŋa^{33}tu^{55}	-227
85	that	那個, na^{51}kə	232	彼, MCH pjeX, OCH *pa[j]ʔ	372	m-pju^{1}	611	mə^{55}tɑ^{33}	611
86	this	這個, tʂə^{51}kə	244	此, MCH tshjeX, OCH *[ts^{h}]e(j)ʔ	373	a^{1}	612	no^{21}	624
86	this		0	是/時, MCH dzyeX/dzyi, OCH *de/əʔ	374		0		0
87	thou	你, ni^{214}	249	爾/汝, MCH nyeX/nyoX, OCH *neʔ/*naʔ	249	nɔ^{3}	-249	no^{21}	-249
88	tongue	舌, ʂə^{35}	253	舌, MCH zyet, OCH *m.lat/*mə.lat	253	drɛ^{4}	253	tsɐ^{21}	253
89	tooth	牙齒, ia^{35}tʂ^{h}əɤ^{214}	256	齒, MCH tsyhiX, OCH *[t-k^{h}]ə(ŋ)ʔ	257	*tsri^{2}/tsru^{2} (?)	-257	*tsǫ^{33}pɑ^{33}	-257
89	tooth		0	牙, MCH ngae, OCH *m-ʔhra	256		0		0
90	tree	樹, ʂu^{51}	259	木, MCH muwk, OCH *m^{ʕ}ok	375	druɯ^{3}	259	tsɨ^{22}	259
91	two	二, aɻ^{51}	260	二, MCH nyijH, OCH *ni[j]-s	260	koŋ^{2}	261	kõ^{33}	261
92	walk (go)	走, tsou^{214}	263	行, MCH haeng, OCH *Cə-[g]^{ʕ}raŋ	262	jɔ^{4}	613	pɐ^{33}	558
92	walk (go)		0	于, MCH hju, OCH *wa	376	pe^{4}	558		0
93	warm	温(乎), uən^{55}xu^{55}	266	溫, MCH 'won, OCH *ʔ^{ʕ}un	266	ʔuen^{1}	266	ə^{21}(ɲi^{33})	266
93	warm	兀禿, u^{55}t^{h}u^{55}	269	熱, MCH nyet, OCH *ŋet	268		0		0
94	water	水, ʂuei^{214}	268	水, MCH sywijX, OCH *s.turʔ	268	ɕui^{2}	-268	ɕy^{33}	-268
95	we	我們, uɔ^{21}mən	269	我, MCH ngaX, OCH *ŋ^{ʕ}ajʔ	269	*ŋa^{1}	269	ŋɑ^{21}	269
95	we		400	余, MCH , MCH la	377		0		0
96	what	甚麼, ʂən^{35}mə^{0}	295	何, MCH ha, OCH *g^{ʕ}a[j]	378	*a^{1}	574	ɑ^{55}xã^{21}/ɑ^{55}sa^{21}	574
96	what	甚麼, ʂən^{35}mə^{0}	294		0		0		0
97	white	白, pai^{35}	300	白, MCH baek, OCH *b^{ʕ}rak	300	bæ^{4}	300	pɐ^{21}	300
98	who	誰, ʂei^{35}	306	誰/孰, MCH dzywij/dzyuwk, OCH *duj/k	306	*a^{1}do^{1} (?)	306	ɑ^{21}to^{21}	306
98	who		0		0		0	ɑ^{21}mɑ^{21}ɲi^{21}	625
99	woman	女的, ny^{214}	314	女, MCH nrjoH, OCH *nraʔ-s	314	ŋjo^{2}	314	tsɨ^{33}ɲi^{21}	314
99	woman	娘們, niang^{35}mən^{0}	318		0		0		0
100	yellow	黃, xuaŋ^{35}	322	黃, MCH hwang, OCH *N-k^{wʕ}aŋ	322	ʁoŋ^{1}b	322	ŋo^{42}	322

Appendix B: Comparison of the Proposed Cognate Judgments with those of Lee & Sagart (2008)

No.	Item	Jianchuan Bai	L & S	JML	Proto-Bai	PBANUM	Notes
1	all	tsɑ^{35}ka^{42}tsɨ^{33}	510	510		-666	No root reconstructable for PBA.
2	ashes	tɕi^{55}su^{55}	512	512	*sru^{1}	512	No related Chinese word could be found.
3	bark		-666	9	drɯ^{3}bre^{1}	9	Addition for JCB follows Allen (2007), where a Jianchuan variety close to that described in Huang et al. (1992) is given.
4	belly	fu̱^{33}	-11	11	pju^{4}	11	No loan acc. to Wang (2006)
5	big	to̱^{21}	-12	-12	dɔ^{5}	-12	Loan from Chinese acc. to Wang (2006)
6	bird	tɕi^{55}kə^{55}u^{55}tso̱^{33}	513	16	tso^{4}	16	No loan acc. to Wang (2006)
7	bite	ŋɑ̱^{33}	-17	17	*C-ŋa^{4} > ʁa^{4}	17	PBA added by me. Correspondences quite regular. Uvular nasal suggests inheritance rather than borrowing.
8	black	xə̱^{33}	-19	19	χɯ^{4}	19	No loan acc. to Wang (2006)
9	blood	suɑ^{33}	22	22	*s^{h}ua^{4}	22	Both the PBA and the Chinese forms can be related to PST *shwiʔ (Benedict 1972)
10	bone	kuɑ^{33}tiə^{42}	-23	23	qua^{4}	23	Uvular initial suggests inheritance rather than borrowing.
11	breast	pɑ̱^{21}tɕi̱^{33}	514	514	ba^{4}	514	No related Chinese word found.
12	burn tr.	ɲə^{55}k^{h}ə^{33}	515	-30	ɲji^{2}	-30	A loan acc. to Wang (2006)
12	burn tr.	xu^{55}k^{h}ə^{33}	516	-30	ʂu^{1}	-28	Not able to connect the JCN-form to PBA. Regard it preliminarily as a loan.
13	claw(nail)	sɨ^{33}tiə^{42}kɑ̱^{33}	-30	30	*(s^{h}rɯ^{2})qæ^{4}	30	Uvular initial suggests inheritance rather than borrowing.
14	cloud	vã^{42}	-32	-32	ŋɔ^{1}	-32	Loan acc. to Wang (2006)
15	cold	kɑ^{42} (weather)	517	517	kɯ^{1}	517	No Chinese related words found.
15	cold	kə^{55} (water)	518	518	gæ^{1}	518	No Chinese related words found.
16	come	ɣə^{35}	-35	35	*ɣe^{1}	35	PBA added by me. Correspondences quite regular. PBA initial belongs to the oldes Bai-layer, therefore probably not a loan.
17	die	ɕi^{33}	-37	37	sji^{2}	37	
18	dog	k^{h}uɑ̃^{33}	-356	356	q^{h}uaŋ^{2}	356	Uvular initial suggests inheritance rather than borrowing.
19	drink	ə̃^{33}	-40	40	ɯ̃^{2}	40	
20	dry	kɑ̃^{55}	-47	47	qaŋ^{1}	47	
21	ear	*ɲi^{33}tiə^{42}kuɑ̃^{55}	52	52	*nje^{2} (?)	52	PST r-njəɣ (Benedict 1972)
22	earth	t^{h}u^{33}sa^{33}	-357	357	di^{3}	53	
22	earth		0	0	t^{h}u^{2}	357	
23	eat	jə̱^{33}	520	55	jɯ^{4}	55	Related to Chinese, not mentioned by Lee & Sagart (2008).
24	egg	sɛ̃^{21}	521	521	sen^{5}	521	No Chinese related words found.
25	eye	ŋue^{33}	-60	-60	ŋuen^{2}	-60	
26	fat n.	tsa^{55}	-362	-362	tsri^{1}	-362	

27	feather	mɑ⁴²	-63	63	*mɛ¹/ma¹	63	PBA added by me. Correspondences seem irregular, there are, however comparable reflexes throughout all dialects (cf. "full"). More data is needed to be sure about this entry.
28	fire	xue³³	-65	65	xui²	65	
29	fish	ŋo⁵⁵	66	66	ŋo¹	66	PST *ŋyɑ (Benedict 1972)
30	fly v.	fa⁵⁵	-67	67	pje¹	67	
31	foot	kǫ̲³³	522	68	ko⁴	68	Related to Chinese, not mentioned by Lee & Sagart (2008).
32	full	mɑ³³	-70	70	*ma²/mɛ²	70	cf. "hair"
33	give	zɨ²¹	523	523	zɯ³/*zi³	523	Second form for PBA added by me. Correspondences not quite regular.
34	good	ɕo²¹	527	602	dræn¹	601	
35	green	lu̲³³	-85	-85	tsʰæn¹	86	
36	hair	tiə⁴²mɑ⁵⁵	-94	94	ɕa⁴	602	Wang (2006) regards this as loan. Cf., however, my comments in "hair".
37	hand	sɨ³³	-95	95	sʰrɯ²	95	
38	head	tiə⁴²po⁴²	96	96	djɯ¹	96	PST *dbuɣ (Benedict 1972)
39	hear	tɕʰã⁵⁵tiə̲³³	-99	99	tɕʰæn¹	99	
40	heart	ɕĩ⁵⁵	-100	100	*sʰjen¹	100	Aspirated initial added by me, relying on additional correspondences found in the dialect data of Allen (2007).
41	horn	*kǫ̲³³	101	101	qɔ⁴	101	PTB *kruw (Matisoff 2003), can likewise be reconstructed to PST.
42	I	ŋo²¹	102	102	C-ŋɔ³>ɴɔ³	102	Uvular initial suggests inheritance rather than borrowing.
43	kill	ɕɑ̲³³	104	104	ɕʰa⁴	104	Aspirated initial suggests inheritance rather than borrowing. PTB g-sat (Matisoff 2003), likewise reconstructable for PST.
44	knee	kua³³tiə⁴²kɑ̲³³	530	530	*qʰa³ (?)	640	No proposal for this entry.
45	know	sẽ³³	531	531	*sen²	531	PBA added by me. Apparently no relation to Chinese.
46	leaf	sɛ̲³³	532	114	sʰrɛ⁴	114	Not related to Chinese by Lee and Sagart (2008).
47	lie	tsʰã³³	533	533	*tsʰræn²	533	PBA added by me. See "sleep" in App. A. for correspondence to Chinese.
48	liver	kɑ̲̃⁵⁵	-122	122	qaŋ¹	122	
49	long	tsõ⁴²	-123	123	droŋ¹	123	
50	louse	ɕi̲³³	-124	-124	ɕi⁴	-124	
51	man	ɲə³³ɲi²¹	-125	-125	tsi²	-650	
52	many	tɕi⁵⁵	534	603	tjɯ¹	603	
53	meat	ka⁴²	-502	600	ɕæ¹	600	PBA suggests a different origin than that suggested by Lee & Sagart (2008).
54	moon	mi⁵⁵ŋuɑ̲³³	-143	143	mji¹-ŋua⁴	143	
55	mountain	su̲²¹	535	535	sro⁴	535	
56	mouth	tsǫ̲³³kua⁵⁵	536	145	*tsju² (?)	145	
57	name	mia⁵⁵	150	150	mjæ¹	150	

58	neck	mu̱²¹mi̱²¹tsa̱³³	537	620	*qo⁵	604	
59	new	ɕĩ⁵⁵	-155	155	sʰjen¹	155	Aspirated initial suggests inheritance rather than borrowing.
60	night	jo²¹	-157	-157	pɛ²	605	
61	nose	vu⁴²tiə⁴²ne⁴²	538	164	bjo⁴	164	
62	not	*a*³³/jɑ³³	606	606	(ɣ)a⁵	606	
63	one	*a*²¹	540	540	*ʔa³	540	My proto-form differs from Wang (2006), the corr. seem to suggest tone 3.
63	one	ji̱³³	-172	172	*ji⁴	172	Not sure whether this is a loan from Chinese or a borrowing.
64	person	ɲi²¹kã⁵⁵	-173	173	njen¹	173	
65	rain	za³³ɕy³³/va³³ɕy³³	541	174	*rwo²/⁴	174	PST *rɣwjaɣ (Benedict 1972)
66	red	tsʰa̱³³	-176	176	tʰræ⁴	176	
67	road	tʰu³³	-504	-178	tʰju²	-178	
68	root	tsɨ²¹te̱³³	542	542	mi³/⁴, tɛ⁴	542	
69	round	ŋue⁴²	-182	182	ʁuen¹	182	
70	sand	so⁵⁵tsɨ⁵⁵	-183	183	sʰrɔ¹	183	Aspirated initial suggests inheritance rather than borrowing.
71	say	suɑ̱³³	-186	186	sua⁴	186	
72	see	ã³³kẽ²¹	543	621	en²	608	
73	seed	tsõ³³tsɨ³³	-194	-194	tsruŋ²	-194	
74	sit	ku̱²¹	-505	505	ko⁵	505	
75	skin	pe⁴²	-197	197	*bre¹	197	Medial -r- added by me, relying on reflexes in Ega and Jinman Bai.
76	sleep	tsʰã³³ (cf. 'lie')	544	371	*tsʰræn²	371	PBA form added by me, see App. A for related Chinese words.
77	small	se²¹	-202	202	*sʰɛ³	202	PBA added by me. I follow the proposal by Lee & Sagart (2008), but regard it as inherited and not borrowed because of the aspirated initial.
78	smoke	ɲi⁵⁵tsɨ⁵⁵	622	622	xui²-sjen¹	609	
79	stand	tsɨ²¹	545	623	*ji⁴	610	
80	star	ɕã⁵⁵	-211	211	sʰjæn¹	211	cf. Wang (2005) for the aspirated initial, which is not given in Wang (2006)
81	stone	*tsɑ̱²¹kʰue⁵⁵	212	212	dro⁴	212	PST *tɨă(k) (Peiros & Starostin 1996)
82	sun	ɲi̱³³pʰĩ²¹	215	215	nji⁴	215	PST *nyi? (BENEDICT 1972)
83	swim	ɲã⁴²ɕy³³	630	630	*sʰɛ²	223	PBA added by me. Root might be the same as in PBA *sʰɛ² "wash", which implies a motivation such as "wash (oneself) in the water", which can be met in some Chinese dialects (e.g. Meixian Hakka).
84	tail	*ŋa³³tu⁵⁵	227	-227		-666	PTB r-may (Matisoff 2003), likewise reconstructable for PST
85	that	mə⁵⁵tɑ̱³³	546	611	m-pju¹	611	
86	this	no²¹	547	624	a¹	612	
87	thou	no²¹	578	-249	nɔ³	-249	Wang (2006) regards this as a loan from Chinese, due to the irregular correspondences in tone.

88	tongue	tsɐ̲²¹	253	253	drɛ⁴	253	PTB m-lay/s-lay (Matisoff 2003)
89	tooth	*tsɵ̲³³pa³³)	556	-257	*tsri²/tsru² (?)	-257	PST [*thiəH] (Peiros & Starostin 1996), not sure about the proposed form for PBA, correspondences might suggest a loan from Chinese.
90	tree	tsɨ²²	-259	259	druɯ³	259	
91	two	kõ³³	557	261	koŋ²	261	Wang (2006) relates this word to 兩, MCH ljangX, OCH *Cə.raŋʔ
92	walk (go)	pɐ̲³³	558	558	jɔ⁴	613	
92	walk (go)		0	0	pe⁴	558	
93	warm	ə²¹(ɲi̲³³)	529	266	ʔuen¹	266	Wang (2006) does not relate this word to Chinese. For my assessment cf. App. A "warm".
94	water	ɕy³³	-268	-268	ɕui²	-268	
95	we	ŋa²¹	269	269	*ŋa¹	269	This root can be safely reconstructed to PST for both Chinese and Bai.
96	what	a⁵⁵xã²¹/ a⁵⁵sa²¹	574	574	*a¹	574	
97	white	pa̲²¹	-300	300	bæ⁴	300	
98	who	a²¹to²¹	576	306	*a¹do¹ (?)	306	PBA added by me, relation to Chinese follows Starostin (1995)
98	who	a²¹ma²¹ɲi²¹	577	625		0	
99	woman	tsɨ³³ɲi²¹	-314	314	ŋjo²	314	
100	yellow	ŋo⁴²	-322	322	ʁoŋ¹b	322	

Appendix C: Starling-Matrix for the Revised Sino-Bai Calculations

LANGUAGE	Guangzhou	Suzhou	Meixian	Nanchang	Yingshan	Beijing	Changsha	Shuangfeng	Shanghai	Xiamen	Old Chinese	Jianchuan
Guangzhou	0.00	0.79	0.80	0.81	0.80	0.78	0.82	0.85	0.81	0.72	0.54	0.56
Suzhou	50.79	0.00	0.74	0.83	0.84	0.80	0.87	0.85	0.92	0.71	0.50	0.51
Meixian	50.80	50.74	0.00	0.81	0.75	0.75	0.80	0.83	0.76	0.81	0.53	0.55
Nanchang	50.81	50.83	50.81	0.00	0.87	0.85	0.92	0.91	0.85	0.75	0.48	0.54
Yingshan	50.80	50.84	50.75	50.87	0.00	0.89	0.94	0.88	0.83	0.70	0.51	0.55
Beijing	50.78	50.80	50.75	50.85	50.89	0.00	0.88	0.84	0.81	0.68	0.50	0.53
Changsha	50.82	50.87	50.80	50.92	50.94	50.88	0.00	0.96	0.88	0.73	0.50	0.54
Shuangfeng	50.85	50.85	50.83	50.91	50.88	50.84	50.96	0.00	0.85	0.74	0.51	0.55
Shanghai	50.81	50.92	50.76	50.85	50.83	50.81	50.88	50.85	0.00	0.72	0.48	0.54
Xiamen	50.72	50.71	50.81	50.75	50.70	50.68	50.73	50.74	50.72	0.00	0.50	0.56
Old Chinese	50.54	50.50	50.53	50.48	50.51	50.50	50.50	50.51	50.48	50.50	0.00	0.42
Jianchuan	50.56	50.51	50.55	50.54	50.55	50.53	50.54	50.55	50.54	50.56	50.42	0.00

Notes:

1. Data Sources: The Chinese dialect data are largely based on a comparison of Hanyu Fangyan Cihui, Wang & Wang (2004), Starostin (1995), Tower of Babel, DOC, Zhou (1981), Hashimoto (1973) and Wiktionary Swadesh Lists. Data for Old Chinese follow William Baxter's transcription system for Middle Chinese (cf. Baxter 1992) and the reconstruction system of William Baxter and Laurent Sagart (Baxter-Sagart Old Chinese reconstructions, Baxter 1992, Sagart 1999) with a few modifications which are based on Schuessler (2007). Data for Proto-Bai follow the reconstruction system of Wang Feng (Wang 2006) with a few modifications and additions in certain proto-forms (marked by an asterisk), which are either not given in Wang (2006) or differ slightly from his proposal. The modifications are based on the inclusion of additional Bai dialects (Allen 2007, Zhao 2006) in the comparison. The data for Jianchuan Bai follow Huang et al. (1992), one item ("bark"), which is not included in Huang et al. (1992) has been added, relying on Allen (2007). His variety of Jianchuan Bai happens to be very close to the one described in Huang et al. (1992).
2. Choosing the Words for the Word-Lists: Everybody who has experience in compiling word lists knows, what a difficult task it is to choose the right words for the comparison. The comparison of the different word-lists showed, that there is much variation among the different scholars, regarding the items they choose for their comparisons. The data in Hanyu Fangyan Cihui has been taken as a reference point for compiling the word lists for the Chinese dialects. Items not displayed in Hanyu Fangyan Cihui follow the above-mentioned sources. Shanghai, Yingshan and Shuangfeng are not listed in Hanyu Fangyan Cihui and are completely taken from Wang & Wang (2004). Since they only give characters and not their readings for the items, I have deleted all cases, where the respective dialect reading could not be recognized by employing sources such as DOC. The old Chinese word list is based on a comparison of Sagarts word list of 210 items compiled for ABVD (cf. Greenhill et al. 2008) and Starostin's word list given in Tower of Babel. The word lists for Proto-Bai and Jianchuan Bai follow Wang (2006) and Lee & Sagart (1998) respectively.
3. Cognate Judgments: The display of cognate judgments follows the practice which is provided for the Starling-Software (available via Tower of Babel). Cognate judgments are displayed by assigning the same number to the language entries, different numbers point to different origin. Loans are displayed by negative numbers, gaps by -666. Where the source of borrowings is known, the negative number corresponds to the number of the donor. The cognate judgments for the Sinitic varieties are based on the theory of "word families" (cf. Schuessler 2003), which is essential for the reconstruction of the phonological system of Old Chinese. Different Chinese characters for the respective items may therefore nevertheless be cognate items. The decisions are, however, not easy to make and there might be some disagreement among scholars with certain of my judgments.
4. Quality of the Analysis: All the calculations displayed here should be taken with care. They are just preliminary results which can be exposed to several objections. Many uncertainties remain, and I am sure that the last word on the genetic affiliation of the Bai language has not been spoken yet. It is also possible that there are some so far undetected errors in the calculation which might have influenced the results. Due to the fact that almost no case of borrowing could be proven for the Chinese dialect data, especially the glottochronological datings are surely far from being real (and it is questionable, whether they can be real at all). Further research is needed.