



Issues in Chinese Nepali Sound Translation: An Equivalence Based Dualistic Approach

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Abstract

This paper sheds light on the phonological issues of Chinese-named entities transliterated into Nepali in contrast to the Source language phonology, Hànyǔ Pīnyīn (pinyin), and the target language phonology. We compared 500 transliterated nouns related to their pronunciation to the source language employing speaker and listener-oriented experiments on phonological similarity. We found out that the prevailed sound translation approaches are strictly inclined to pinyin. The priority over phonological equivalence is completely neglected in preserving the source language phonological units and their nativization in target language orthography. The prevalent issues like phonological gaps, inconsistencies, mis-syllabification, etc. arose. We purpose phonological-based Dualistic Equivalence Approach (hybrid transliteration approach) based on Nepali Chinese bilinguals' perceptual similarity to address the existing issues mainly where the monotonous sound alignment in between source language, pinyin, and target language breaks down.

Keywords: Chinese-Nepali Sound Translation, Phonological Issues, Equivalency, Segmentation

Introduction

Named entities with little or no semantic content are generally transferred in translation. This is often described separately under "transliteration", "phonological translation," and "transcription" in western translation theories. The transfer of sound in the approaches mentioned above always lies at the margins since "transliteration." That is often defined as the process of transcribing the alphabet or character of one language to the other language, which strictly denotes the conversion of Source language(SL)

character (orthographic) into target language (TL) character rather than sound segments. "Phonological translation" mostly stresses the preservation of SL sound effects in prosody (Newmark, 1988, and Catford, 1965), and "transcription" focuses on the recording / transcribing of SL physical sounds using the International phonetic alphabet (IPA). Is it possible to translate/transcribe all the sounds or characters of one language to the other? Do those translated sounds in academic books are readable (understandable) for both language community people? How be the phonological gaps maintained? To address such queries about sound translation, we use "transliteration" as an umbrella term. In a broad sense, according to (Al Khuli, 1982), transliteration is a process of finding asymmetry between SL and TL to get a mutual letter correspondence by putting SL sound in TL letter. The SL sound or phonological units and TL graphological units should be phonologically relatable and equivalent or near equivalent in transliteration.

Since no two languages exhibit identical equivalent sounds (Nida, 1964), the fundamental job of a translator is to seek the closest possible equivalent (approximation) of SL sound in transliterated words, which represents, reflects, and inroads the conditions of translation equivalence to the total translation (Catford, 1965 ; Febriani, et al. 2021). Based on the definitions mentioned above, transliteration can be redefined as borrowing and converting SL phonological units into equivalent or approximant TL phonological units by putting them in a familiar TL writing system. Along with the translation of Buddhist masterpieces in the late Han Dynasty (206 BC to AD 220), the Chinese Buddhist poets not only transliterated a large number of Sanskrit named entities Mair and Mei, (1991). They also developed the prosody-based syllable system for transliterating Buddhist Gathas (Branner, 2003). The study on Sanskrit-Chinese (old) translation strategies and issues have been conducted by numerous Chinese researchers (such as Yúmǐn-俞 敏,1984; Chǔ Tàisōng-儲泰松,1998; Chí Zhìpíng-遲治平, 2002, etc.), But the studies on transliterated Nepali named entities and vice versa in and from classical Chinese sources- especially Chinese Monks' biographies and travelogues extended from the 7th to 15th centuries(e.g., "Nepal"-尼波羅/尼八刺/尼巴辣, "Licchavi"-呬婆種, "Malla"-瑪刺, "Amśuvarma" -碩學聰觀, "Vaiśālī" (river)-毘舍離, "Narendradev"- 那陵提婆, "Madanarāma"-馬達納羅摩, "Balabahu" -八魯布, , etc. from *Datang Xiyu Ji*, as cited in Kotyk, (2015) were not paid attention much. In recent decades, a few Chinese biographies, Chinese language textbooks, Novels, short stories, and Chinese dictionaries, etc., have been translated into Nepali. Still, the studies on Chinese Nepali transliteration and vice versa are scanty.

Named entities in the translation are often neglected in literary translation, as they do not carry any semantics meanings. In my view, at the very least, the misspelled/mis-transliteration of the names of important people that are familiar in both language community, names in Language textbook which has pedagogic implications is malicious. The development of Pinyin and Pinyin

Fangan (pinyin syllables) in 1982 comes as a boon in breaking the script barrier in Chinese to non-Chinese transliteration and other academic fields. Especially in reading and typing its logographic writings, which is undeniable. However, the Pinyin and its phonetic realization in SL and TL (especially non-English) are not always arbitrary (discussed in Chris and Chao, 2007). The translator or used approaches in sound translation fail to address the phonological gaps in transliteration. That does not only generate ambiguities and inconsistencies, the mis-spelled transliteration, e.g., "Zhōu Ēnlái" as "चौर एन लाई"/tʃəu en lai/ completely distorts the original sound, alleviate cultural sensitivity for both language community. Therefore, the translator must bridge the existing phonological gaps and equivalence due to greater phonological correspondence in both languages and both directions with consummate ease.

We view the transfer of sound as the dual practice of phonological translation and transliteration. They focus on the phonological gaps and equivalent. They also related the issues and established a correspondence between SL and TL phonological units in transliterated words. We assume the initials (onset consonant) related phonological gaps and equivalence issues can be addressed through the distinctive phonological features. But, the Transliteration of Rhyme (including medials, nucleus vowels, and syllabic ending) and related phonological issues can only be addressed through SL contextual features (phonological environment in SL). Simultaneously, the equivalence between the number of SL syllables, form, and size in a word should also be maintained in transliterated words.

Research Methodology

A list of 500 transliterated Named entities: proper names, seasons, festivals, and locations with Chinese character (hanzi) and Pinyin were randomly collected from 6 Chinese Nepali translated language textbooks, the article from three Nepali widely circulated newspapers, and the article from an online portal of CRI Nepali Service in between June and November 2020. For the speech corpus, a Nepali language teacher (entirely unfamiliar with the Chinese language) at Tribhuvan University, a Chinese bilingual (English), and a Nepali bilingual post-graduate student of Beijing Normal University (three persons) were surveyed. The speech corpus of those 500 words was recorded using Feipeng (recording software) and transcribed using the International Phonetic Alphabet (IPA).

This project's main objective is to find out the issues in sound translation and maintain phonological equivalence between transliterated words and their SL phonological units, demonstrate the richness of SL phonology, and enhance the transliteration quality. We employed the Dualistic Equivalence Approach-speaker and listener oriented experiment on phonological similarity to ensure

the utterance more intense and effective to that of SL sound, syllable form, etc. For that, first, the recorded corpus data (SL pronunciation and the pronunciation of transliterated words) by Chinese and Nepali (unfamiliar to each-others language) speakers were observed. Then the errors or differences in correspondences with the similarity and differences were shorted out. Those data (SL nouns with pinyin) in which the sound alignment breaks were given to Nepali Chinese bilingual speakers to pronounce and data were recorded. Finally, the word pronounced by Nepali Chinese bilingual, and that was also understandable to Chinese native speakers, were taken as approximate equivalence to the SL pronunciation.

Only the relevant phonological units to the sound translation issues from the corpus data were discussed. The segments to be compared are Initials, Finals, Syllable and Syllabification, and Word boundaries. The translated part (semantic marker) in half transliterated nouns are neglected.

Findings and Discussion

Phonological gaps

The gaps in Chinese Nepali transliteration, e.g., (1) the difference in the number of SL and TL vowel and consonant characters (here pinyin for Chinese and Devanagari for Nepali) and their corresponding phonemes, (2) phonetic variation of the same character in both languages, (3) the missing sounds that are present in SL or in SL syllable but absent or be a loss there in TL and vice versa, (4) syllable form, and size, etc. are the existing gaps that add complexity in establishing phonological equivalence. **Table 1:** gives a contrast between Chinese and Nepali consonant characters with phonemes.

Place & Manner of articulation			Stops				Affricates				Nasal	Lat	Tri	Fricativ	
			VI	Vd	VI	Vd	VI	Vd	Vd	eral	ll	VI	Vd		
Labials	C	Pinyi	b	p						m				f	
		IPA	p	p _h						m				f	
	N	Dvn.	प	फ	ब	भ				म					
		IPA	p	p _h	b	b _h				m					
Dentals	C	Pinyi	d	t			z	c		n	l			s	
		IPA	t	t _h			ts	t _{sh}		n	l			s	

	N	Dvn.	त्	थ	द्	ध	च्	छ	ज्	झ	न्	ल्	र्	स्	
		IPA	t	t ^h	d	d ^h	ts	ts ^h	d	dz ^h	n	l	r	s	
Retr ofle x	C	Pinyi n					z	ch						sh	r
		IPA					tʂ	tʂ ^h							ʂ
	N	Dvn.	ट्	ठ्	ड्	ढ्								ष्	
		IPA	t̪	t̪ ^h	d̪	d̪ ^h								ʃ	
Pala tals	C	Pinyi n					j	q						x	
		IPA					tɕ	tɕ ^h						ɕ	
	N	Dvn.												श्	
		IPA												ʃ	
Vela rs	C	Pinyi n	g	k							ng			h	
		IPA	k	k ^h							ŋ			x	
	N	Dvn.	क्	ख्	ग्	घ्					ङ्				
		IPA	k	k ^h	g	g ^h					ŋ				
Glot tal	N	Dvn.												ह्	
		IPA												ɦ	

Table 1. Chinese Nepali Consonants contrast
(Where C=Chinese, N=Nepali, vl/vd=voiceless/voiced)

Nepali has comparatively more consonants (phoneme/character) than Chinese. Only the 17 Chinese consonants (out of 22) ([p, p^h, t, t^h, ts, ts^h, k, k^h, m, n, ŋ, l, r, s, ʂ, ʃ, ɦ]) have an elusive one-to-one correspondence to Nepali consonant phonemes/ characters. All TL retroflex stops voiced stops and affricates ([b, b^h, d, d^h, dz, dz^h, t, t^h, d, d^h, g, g^h]) are absent in SL as all the obstruent in Chinese is voiceless.

As SL retroflex and palatal affricates ([tʂ, tʂ^h, tɕ, tɕ^h] and labiodental fricative [f] is absent in TL. It is necessary to link the gap but finding an exact equivalence/parallel for absent phonological segments in translation is impossible, as there is always some loss of information (Crystal, 1991). However, finding near equivalence or approximation between the source text and the target text(sound/sound units) items (at least some of them) is relatable to the same features of substance, which can be helpful to bridge the gaps in translation (Catford, 1965). Nepali affricate [ts,tsh] and labial [p^h] share most of the distinctive features with Chinese affricates [tʂ, tʂ^h, tɕ, tɕ^h] and fricative[f] respectively. On the other hand, even the Nepali Chinese/English bilinguals do not differentiate them in back-translation. Moreover, affricates in both languages show dual characteristics, e.g., Chinese palatal [tɕ, tɕ^h] only make a distinction dental [ts, ts^h] followed by front glide and the retroflex [tʂ, tʂ^h] are

often replaced with dental by native speakers (Duanmu, 2000). Similarly, Nepali affricates [ts, tsh, dz, dzʰ] are often categorized as palatals [tʃ, tʃʰ, dʒ, dʒʰ] (Acharya, 1991).

The number of Vowel characters and their phonetic value varies in both languages. **Table2** gives a contrast between Chinese and Nepali vowel character and their respective phoneme.

	Front			Central		Back		
	Unround		Round	Unround		Unround	Round	
	C	C	N	C	N	C	C	N
High	i [i]	ü [y]	ई [i] इ [ɪ]	i [ɿ; ʅ]			u [u]	ऊ [u] उ [ʊ]
Mid		ए [e]	ऐ	e [ə, ə̃]	अ [ə]	e [ɤ]	o [o, ɔ]	ओ [o]
Low	ε			a [a]	आ [a]		(a)	

Table 2. Chinese Nepali Vowel contrast

Chinese vowel characters (pinyin): / i, ü; u, a, e, o / represent 10 different phonetic values, where /i/ represents: [i, ɿ, ʅ]; /a/ represents: [a, a, ε] and /e/ represents: [ɤ, ə, ə̃] (Norman, 1988). Chinese high vowels may appear as a medial (pre-peak glide:[j,w,u]) and nucleus [i, u, y], [i, u (o)] may appear at syllabic ending (post-peak glide) followed by a non-high vowel and form a diphthong (Acharya, 1991); [i, u] as nucleus are lowered before [ɿ], [i] gets centralized [ɿ, ʅ] followed by apical affricates and retroflex; [ə] becomes [e, o] before [i, u] respectively; [a] remains unchanged followed by [ɿ] and [u], but becomes [a] at zero coda syllable and [ε] in between [i] and [ɿ]. Besides, Chinese pinyin do not show long and short vowel markers, but has phonemic significance (Acharya, 1991). Such arbitrariness and gaps in between SL pinyin and their phonetic value has created difficulty to be consistent in choosing the most equivalent vowel character among 6 Nepali monophthongs: [ə], [a], [ɪ], [ʊ], [e], [o]. In addition, Nepali orthography only possess separate character for high vowels vowel length distinction, and 2 diphthongs, but vowel length due to the intervocalic [h] deletion makes clear long short contrast (Adhikari and Neupane, 2020), and has phonemic significance in syllable division, stress in the word etc. that brings semantic changes. Nepali is semi-syllabary language, that's why the vowels in it's writing systems are categorized as (1) independent vowel letters: अ [ə], आ [a], इ [ɪ], ई [i], उ [ʊ], ऊ [u], ए [e], ऐ [əɪ / eɪ], औ [o], अौ [əu], (2) dependent vowel signs (Matras/non inherent vowels) that exist in combination with a consonant letter, e.g., प् p/ + ो /o/ = पौ /po/; ा [a], ि [ɪ], ी [i], ु [ʊ], ू [u], े [e], ै [əi], ो [o], ौ [əu]. Except the diphthongs with schwa and high vowels ([əɪ, əu]) are written in a single combining letter, others are mostly written in combining vowel letters.

The gaps appears in conversing (representing) the existing 13 Chinese

diphthongs and triphthongs : ai[ai], ei[ei], ao[ao], ou[ou], ia[ia], ie[iɛ], ua[ua], uo[uo], üe[yɛ], iao[iau], iou[iou], uai[uai], uei[uei] into 10 Nepali diphthongs: [əɪ], [aɪ], [əʊ], [aʊ], [eɪ], [oɪ], [eʊ], [oʊ], [uɪ] and [iʊ] (Adhikari and Neupane, 2020) with appropriate letter or letters as Nepali lacks falling diphthongs and triphthongs.

Chinese and Nepali possess a maximum of 5 characters in their written form (pinyin syllable and monosyllabic word in Devanagari): CG(V)CC and CCC(V)C, respectively, which leads to lots of controversies about the size and form of the syllable in both languages, e.g., (1) Consonant cluster /ng/ at syllabic ending that actually represents a single phoneme([ŋ]), (2) the missing of schwa vowel in between glide and high vowel, e.g., gui [gwəɪ]), (3) the consonant clusters in written Nepali which do not form a consonant cluster in spoken form. However, both languages share the common syllable form (C) (G) V (X) (where C= Consonant, G= glide/Medial, V= main vowel (monophthong/ a long vowel), X= syllabic final) that makes twelve types of a permissible syllable: V, CV, VV, VC, GV, GVV, GVC, CVV, CVC, CGV, CGVV, CGVC (Acharya, 1991, and Pokharel, 1989) in their spoken form. All basic vowels (6 vowels) constitute the syllabic peak (v) alone or with the pre-peak [j, w, ɥ] or post-peak glide ([i, u]) or single consonant in the margin.

3.2 Phonological Inconsistencies

3.2.1 Inconsistencies in Transliterating Initials (onset consonants)

Table 3: presents the voiceless-voiced inconsistencies of the SL stops and affricates in transliterated words. The left two columns show the expected Transliteration with IPA.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
Bólínchán	po.lin.tʃʰan	बो लिन छान	bo lin tʃʰan	[p]→[b]	पोलिन छान	po.lin.tʃʰan
Báiyángdiàn	pai.jan.tjæn	बाई याङ्ग ल्येन	bai.jang.tjen		पाइयाङ्ग ल्यान्	pai.jan.tjan
Běishān	pei.ʃan	पै शान	pəi ʃan	[p]→[p]	पेइशान	pei.ʃan
Běidàihé	pei.tai.xə	पै ताई ह	pəi tai hə	[p]→[p], [t]→[t]	पेइताइ ह	pei.tai.hə
Běijīng	pei.tʃɪŋ	पेकिङ्ग/बेइ जिङ्ग/ पैचिङ्ग	pe.kiŋg/ bei.dziŋg/ pəi.tsiŋg	[p]→[p, b]	पेइचिङ्ग/ बेइजिङ्ग	pei.tsiŋg
Bóhǎi	po.xai	बो(पो) हाई	bo(po) hai	[p]→[p, b]	पोहाइ	po.hai
Dézhōu,	tə.tʃəʊ	द (त) चौ	də (tə) tʃəʊ	[t]→[d], [tʃ]→[tʃ]	तचौ	tə.tʃəʊ

Duānwǔ	twan.u	तुआन उ	tu.an u	[t]→[t]	त्वानू	twan.u
Dàxīng	ta.ɣɪŋ	दा(ता)सिङ	da(ta) sɪŋ	[t]→[d, t]	ताशिङ	ta.ʃɪŋ
Chéngdū	tʂʰaŋ.tu	छन्दु	tʂʰən.du	[t]→[d]	छङ्दू	tʂʰaŋ.tu
Guǎngz hōu	kwaŋ.tʂ əu	ग्वान्झाउ/ ग्वान्झाओ/ ग्वान् च्छोउ	gwan.dzʰ aʊ/dzʰa. o/gwang .tʂəu	[k]→[g] [tʂ]→[dzʰ, tʂʰ]	ग्वान्चौ	gwaŋ.ts əu
Gānsù	kan.su	गान्सु	gan.su	[k]→[g]	कान्सू	kan.su
Zhūgē Liàng	tʂu.ky ljaŋ	चु क ल्यङ्ग	tʂu kə lɪŋg	[tʂ]→[tʂ], [k]→[k]	चूक ल्याङ	tʂu.kə ljaŋ
Jiā Yáng	tʂja.jaŋ	चिया याङ	tʂɪ.ja jaŋ	[tʂ]→[tʂ]	च्यायाङ	tʂja.jaŋ
Jílín	tʂi.lin	जि लिन/चीलिन	dzi lɪn /tʂi lɪn	[tʂ]→[dz]	चीलिन	tʂi.lɪn
Xí Jìnpíng	xi tʂin.pʰɪŋ	सी जिन फिङ /(चिन)पिङ	sidzin.pʰɪ ŋ (tʂin)	[tʂ]→[ts, dz]	सी चिनफिङ	si tʂin.pʰɪŋ
Zhèngdì ng	tʂaŋ.tɪŋ	चन तिङ	tʂən tɪŋ	[tʂ]→[tʂ]	चनतिङ	tʂən.tɪŋ
Zhōngku í	tʂuŋ.kʰw əɪ	चोङ्ग ख्वइ	tʂong kʰwəɪ		चुङख्वै	tʂoŋ.kʰw əɪ
Zhāngm ù	tʂaŋ.mu	च्चाङ्गमु	tʂhang.m u	[tʂ]→[tʂʰ]	चाङ्गमू	tʂaŋ.mu
Zhèjiāng	tʂə.tʂjaŋ	च्ह चियाङ	tʂhə tʂjaŋ		चच्याङ	tʂə.tʂjaŋ
Zhāngn án	tʂaŋ.nan	झाङनान	dzʰaŋg.n an	[tʂ]→[dzʰ]	चाङनान्	tʂaŋ.na n

Table 3. Chinese unaspirated voiceless and transliteration

Note: Where dot mark "." represents syllable boundary, space between Chinese syllables represents the separated part (syllable), which is either Surname, semantic marker, or the structured semantic name that consists of more than three syllables (will be discussed in 3.4). The spaces in transliterated words that do not correspond to SL spaces are transliteration errors.

As mentioned in Table 3, SL voiceless [p] in Bólínchán, Báiyángdiàn, and Bóhǎi is transliterated into voiced [b], but it preserved SL sound in Běidàihé and Běishān. The same voiceless phoneme in Běijīng is transliterated as [p] and [b] inconstantly. /tʂ/ in Daxing, Chéngdū is transliterated into voiced [d], but it is transliterated into voiceless [t] in Dézhōu and Duānwǔ. Voiceless [k] in Zhūgē Liàng is preserved as it is in SL, but it is transliterated into voiced [g] in Guǎngzhōu and Gānsù. [tʂ] in Jiāyáng is transliterated into voiced [dz], but it is transliterated into voiced and voiceless [dz, tʂ] in Xí Jìnpíng and Jílín. [tʂ] in

Zhāngnán is transliterated into aspirated voiced [dzʰ], but [ts] is multi-transliterated into [ts, dzʰ, tʃʰ] in Zhāngmù, Guǎngzhōu, Zhèjiāng, and Zhōngkuí. Transliteration of an SL single initial (C) into a consonant cluster ([tʃʰ]([ts+h])) is not appropriate as CC is un-permissible in SL and TL syllables.

Table 4: shows the aspirated-unaspirated inconsistencies of the SL stops and affricates in transliterated words.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
kǎitǐ	kʰaɪ.tʰi	खाइ थि	kʰaɪ tʰɪ	[kʰ]→ [kʰ]	खाइथी	kʰaɪ.tʰi
tángkǎ	tʰaŋ.kʰa	थान्का	tʰan.ka	[kʰ]→[k]	थाङ्खा	tʰaŋ.kʰa
Kūnmíng	kʰun.mi ŋ	कुनमिङ/ खुनमिन	kʰun.miŋ / kʰun.mi n	[kʰ]→[k] [kʰ]	खुनमिङ	kʰun.miŋ
Pān Yuè	pʰan.yɛ	पान युए	pan jʉe	[pʰ]→[p]	फान् खे	pʰan.jʉe
pānzhīhuā	pʰan.tʃɿ. xwa	पान चिर ह्वा	pan tʃɪr fwa]	फान्चह्वा	pʰan.tʃɪ.f wa
Tiān'ān mén	tʰjæn.a n.mən	तियानआ न मेन	tɪ.jan an men	[tʰ]→[t]	थ्यान-आन मन	tʰjan an.mən
Téngxùn	tʰəŋ.ɣyn n	थङ्ग स्युन	tʰəŋg sjʉn	[tʰ]→[tʰ]	थङ्गस्युन्	tʰəŋ. ʃʃʉn
Tángsēng	tʰaŋ.səŋ	चान्सेंग	tsan.the ŋg	[tʰ]→[ts]	थाङ्गसङ्ग	tʰaŋ.səŋ
Wūtáishān	u.tʰaɪ.ʃ an	उटाई शान	u.tʰai.ʃan	[tʰ]→[t]	उथाइ शान	u.tʰaɪ ʃan

Table 4. Chinese voiceless aspirated and transliteration

SL voiceless aspirated [kʰ] is preserved in kǎitǐ, but it is *transliterated into* unaspirated ([k]) in tángkǎ. [kʰ] in Kūnmíng is transliterated into [k] and [kʰ]. [pʰ] in Pān Yuè (or Pān Ān), Pānzhīhuā is transliterated into unaspirated voiceless [p]. The SL pronunciation [tʰ] is preserved in the Transliteration of Téngxùn, but it is transliterated into unaspirated [t] in Tiān'ānmén. The same SL sound, [tʰ] in Wūtáishān and Tángsēng is mis-transliterated into retroflex [ʈ] and dental affricate [ts] respectively. Chinese do not have retroflex stops at all.

Table 5: presents the inconsistencies in transliterating sibilants.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
Shānhǎi	ʃan.xaɪ.	शान हाइ	ʃan haɪ	[ʃ]→[शानहाइ	ʃan.haɪ

guān	kwan	कान	kwan]]	कान	kwan
Shénnóng	ʃən.nʊŋ	शन नोङ्ग	ʃən nɔŋ		शन्-नुङ	ʃən.nɔŋ
Shāndōng	ʃan.tʊŋ	सान तोङ	san toŋ	[ʃ]→[s]	शानतुङ	san.toŋ
Shēnzhèn	ʃən.tʃən	सेनचेन	sen.tsen		शनचन	sentsen
Yù Shān	yu.ʃan	यु सेन्	ju sen		यू शान	ju.ʃan
Xí Jìnpíng	xi.tʃin.p ^h ŋ	सी जिन(चिन) फिङ/पिङ	si dzin.p ^h ŋ(tsin)	[ʃ]→[s]	शी चिनफिङ	ʃi.tʃin.p ^h ŋ
Xīzàng	xi.tʃaŋ	सी चाङ्ग	si tʃaŋ		शीचाङ	ʃitʃaŋ
Xīnjiāng	xi.n.tʃuaŋ	सीन च्याङ्ग	sin tʃwaŋ		शिनच्याङ	ʃin.tʃwaŋ
Qīng Xīlíng	tʃin.tʃi.lɪŋ	छिङ्ग सी लिङ्ग	tʃiŋ si liŋ		छिङ शीलिङ	tʃiŋ ʃi liŋ
Xuánzàng	xuan.tsan	गान्चाङ	gan.tsang	[ʃ]→[g]	श्वानचाङ	ʃwan.tsan

Table 5. Chinese sibilants and transliteration

As mentioned in table 5, Chinese retroflex sibilant [ʃ] in Shānhǎiguān, Shénnóng is transliterated into palatal [ʃ], but it transliterated into dental [s] in Shāndōng, Shēnzhèn, Yù Shān. There is controversy whether SL retroflex makes closer equivalence to TL [ʃ] or [s]. Palatal [ʃ] is almost transliterated into dental [s] as in Xí Jìnpíng, Xīzàng, Xīnjiāng, Qīng Xīlíng, etc., which distorts the original sound. Though Nepali always makes a clear distinction between dental and palatal sibilant orthographically. The phonological distinction is found while followed by high vowels/glide. Transliterating SL sibilants into stops [g] and [tʰ] in Xuánzàng, Tángsēng (see table 4) is inappropriate.

3.2.2 Inconsistencies in Transliterating Finals

1. Finals without medial

Chinese open mouth finals lack medial and may occur with or without coda. SL vowel letters within a similar phonological environment are often transliterated differently and inconsistently. **Table 6:** shows the Chinese vowels (monophthongs and rising diphthongs) in open finals and inconsistencies in their transliteration.

Nouns in Pinyin	Transliterated Nouns	Issues	Should be Transliterated	
niányè fàn	न्यान ये फान	njan ye phan	[e]→[je] न्यान-ए फान	njan-ep ^h an

Zhōu Ēnlái	tʂəʊ.ən.l ai	चाउ एन-लाइ	tsaʊ en-lai	[əʊ]→[aʊ], [ən]→[en]	चौ अनला इ	tʂəʊ ən.lai
Dèng Xiǎo píng	tɿŋ ɕjaʊ.pʰɿ ŋ	देङ/दङ स्याओ फिङ/पि ङ	dəŋ sja.ao pɿŋ	[əŋ]→[eŋ]	तङ श्याउ फिङ	dɿŋ ʃjaʊ pɿŋ
Hòu yànrǎ	xəʊ jæŋ.tʂʰi	होउ यान्छी हौ याङ्की	hou jan.tʂʰi həʊ jan.ki	[ou]→[əʊ]	हौ यान्छी	həʊ jæŋ.tʂʰi
Běishā n	peɪ.ʃan	पै शान	pəɪ ʃan	[ei]→[əi]	पेइशान	peɪ.ʃan
Húběi	xu.peɪ	हुबेई	fu.bei	[ei]→[ei]	हूपेइ	fu.peɪ
Máo Zédōng	maʊ.tʂə. tʊŋ	माओ चतोङ/तु ङ, माओत्से तोङ	ma.o tʂə tʊŋ/ ton maot. se ton	[aʊ]→[ao], [ʊŋ]→[oŋ,ʊŋ]	माउ चतुङ	maʊ.tʂə. tʊŋ (ton)
cǎoshū	tʂaʊ.ʃu	छाओ शु	tʂa.o.ʃu	[aʊ]→[ao]	छाउशू	tʂaʊ.ʃu
niángā o	njan.ka ʊ	न्यान काओ	njan ka.o		न्यान- काउ	njæn kaʊ

Table 6. Vowels in open mouth finals and Transliteration

[e] in niányèfàn is transliterated into [e], but the formal initial [j] followed by corresponding vowels ([y] by [i, e]) get merged in Nepali (see table 11). Moreover, the [je] sequence is unusual in Nepali orthography. Nucleus [ə] in a closed syllable is transliterated into [e] in Zhōu Ēnlái, Dèng Xiǎopíng, Tiān'ānmén (see 4) Shēnzhèn (see table 5), etc.

[ei] which is pronounced as [eɪ] in Chinese, but it transliterated into [əi, ei] in Běishān, Běidàihé (see table 3), and Húběi. It is multi-transliterated into [e, ei, əi] in Běijīng (see table 3). Similarly, [ai] in Zhōu Ēnlái, Běidàihé, Báiyángdiàn, Bóhǎi (see table 3), Wǔtái Shān (see table 4) Zhōu Ēnlái is transliterated into [ai]. [o] proceed or followed by corresponding glide [w, u] is [ə], but it is transliterated into [ou] corresponding to SL pinyin in Hòu Yí shì rì, fěnzhēngròu, shǒu suì. It is transliterated into [au, əu, ao] in Guǎngzhōu (see table 3), but [aʊ] in Zhōu Ēnlái. Similarly, [aʊ(o)]is transliterated as [ao, au, aʊ] in Máo Zédōng, cǎoshū, and niángāo. Strictly speaking, pinyin /o/ proceed by low vowels ([a, ə]) is [ʊ]. Moreover, /ao/ cluster don't form a diphthongs in Nepali, the transliteration of pinyin /ao/ as [ao] or [au] in Nepali divides Chinese monosyllable into di-syllable.

2. Finals with Medial

Finals with /i, ʊ, u / ([j, ɥ, w] and [i,y,u] as medial and nucleus) are known as

even-teeth finals, puckered- mouth finals, and closed-mouth finals, respectively. The common problems in transliterating vowels in them are (1) inconsistencies in transliterating nucleus [i, u] of zero coda syllable into short and long vowels [i, i:, u, u:], (2) transliterating SL medial into vocalic ([i, u]), (3) missing of the nucleus in between medial and high vowels.

Table 7: shows the inconsistencies in the Transliteration of SL pinyin /i/ (medial/nucleus) in even teeth finals.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
suānní	swan.ni	सु आन नि	sʊ an nɪ	[i]→[ɪ]	स्वान्-नी	swan.ni
Shídé	ʃɪ.tə	श द	ʃə də	[ɪ] →[ə]	शीत	ʃi.tə
Shíjiāzhuāng	ʃɪ.tʃiɑ.tʃwɑŋ	शीचिया च्वाङ	ʃi.tʃɪ.jɑ tʃhwɑŋ	[ɪ]→[i],[iɑ]→[ɪjɑ]	शीच्या च्वाङ	ʃi.tʃjɑ tʃwɑŋ
jiā yang	tʃjɑ.jɑŋ	चिया याङ/ च्या याङ्ग	tʃɪ.jɑ jɑŋ/tʃjɑ. jɑŋ	[iɑ]→[ɪjɑ]/[jɑ]	च्यायाङ	tʃjɑ.jɑŋ
jiägǔwén	tʃjɑ.ku.wən	च्या कु वन	tʃjɑ ku wən	[iɑ] →[jɑ]	च्याकू वन	tʃjɑ.ku wən
Yìxiàn	i.ɛjɑen	यी सेन्	ji sen	[jɑen]→[en]	यी श्यन	ji.ʃjɑen
Yānshān	iɑen.ʃɑn	येन सान	jen san	[jɑ]→[je]	यानशान	jɑen.ʃɑn
Zhōngqiūjīé	tʃʊŋ.tʃʰjəu. tʃjɛ	चोङ्ग छ्यौ/ चोङ छिउ	tʃʊŋ tʃʰjəu tʃɛ / tʃʊŋ tʃʰɪɯ	[ɯŋ]→[oŋ], [iəu]→[jəu][ɪ ɯ]	चोङ छ्यौ	tʃʊŋ.tʃʰjə ɯ
Tángxiōng	tʰɑŋ.ɛjʊŋ	थाङ्ग स्योङ्ग	tʰɑŋ sjɔŋ	[iɯŋ] →[jɔŋ]	थाङ श्योङ	tʰɑŋ.sjɔŋ
Liáoníng	liɑu.niŋ	लियाउनि ङ्ग	li.jɑo.nɪ ŋ	[iɑu] →[ɪjɑɯ]	ल्याउनि ङ	liɑu.niŋ
Cāng Jié	tʃʰɑŋ.tʃjɛ	छाङ्ग चे	tʃʰɑŋ tʃɛ	[iɛ]→[e]	छाङ-चे	tʃʰɑŋ.tʃɛ /jə
Zhū Bāijiè	tʃʊ pa.tʃjɛ	चूपा जिये	tʃʊ.pa dzɪjɛ	[iɛ] →[ijɛ]	चू पाचे	tʃʊ pat.sjɛ

Table 7. Vowels in even-teeth finals and transliteration

Nucleus [i] in zero coda syllable is not only transliterated into short vowel ([ɪ]) as in suānní, kǎitǐ, tàijǐquán (see 8) and long vowel ([i]) in Hòu yànrǎ, Xí Jìnpíng, Xīzàng (see 5), it is often transliterated into [i] and [ə] as in Shíjiāzhuāng and Shídé.

SL medial [j] in /ia, iao, iu, ie/ sequences as in Shíjiāzhuāng, Liáoníng, Zhōngqiūjīé is transliterated into vocalic ([i]), but it is transliterated into

consonantal [j] in Zhūgě Liàng. Medial-low vowel sequences /ia/ [ja] in a closed syllable is often transliterated into [ɪn, jan, en] as in Tiān'ānmén (see table 4). In the transliteration of /qiū/ in Zhōngqīūjié, the schwa in between medial and back high vowel sequences is missed. ,Similarly SL medial [j] followed by corresponding vowel([j followed by [[i,e] in Cāng Jié, Zhū Bājiè is transliterated into consonantal and vocalic, tomerges in actually which[e:] Nepali in)see table 11.(

Table 8: shows the inconsistencies in the Transliteration of SL pinyin /u/(medial/nucleu) in even closed-mouth finals.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
Wǔhàn	u.xan	वुहान	wu.fan	[u]→[w ɯ]	ऊहान	u.fan
Wú gang fá Guì	u.kan.fɑ. kwei	उ काङ्ग फा क्वइ	ɯ kang fa kwɛi	[u]→[ɯ] [wei]→[wɛi]	ऊकाङ् फाक्इ	u.kan pʰɑ.kwɛi
Wǔtái Shān	u.tʰɑi.ʃɑ n	उटाई	ɯ.tai	[u]→[ɯ]	ऊथाइ शान	u.tʰɑi
huībān	xwei.pa n	हुई पान	ɦui.pan	[wei]→[ɯi]	ह्वइपान	ɦwɛi.pa n
guìhuājiǔ	kwei.xwa .tʃəu	क्इ ह्वा (रक्सी)	kwɛi ɦwa	[wei]→[wɛi] [wa]→[wa]	क्इह्वा (रक्सी)	kwɛi.ɦw ɑ
Héngshu lǎo bái gàn	xan.ʃwei laɯ.bai.k an	हङ् स्वी लाओ पाई कान्	ɦən swi lao bai kan	[wei]→[wi]	हङ्स्वइ लाउ पाइकान्	ɦən.ʃwɛi laupaika n
Zhū Dì	tʃu.ti	चु ति	tsu ti	[u]→[ɯ]	चूती	tsu. ti
Kūnqǔ	kʰun.tʃhy	खुन छ्यु	kʰun tʃhɯ	[u]→[ɯ]	खुनच्यौ	kʰun.tʃhɤ ɯ
lìshū	li.ʃu	लि शु	li ʃu	[u]→[ɯ]	लीशू	li.ʃu

Table 8. Vowels in closed-mouth finals and transliteration

As presented in Table 8, SL formal initial [w] in Wǔhàn is transliterated into consonantal ([w]). Short vowel [ɯ] is employed for nucleus [u], but the same vowel is transliterated into [ɯ, u] without transcribing the formal initial in Wú gang fá Guì, Wǔtái Shān, and Duānwǔ (see table 3). Again, nucleus [u] as zero coda syllable in Zhūgě Liàng, Húběi (see table 6), Zhū Dì, kūnqǔ, lìshū, jiǎgǔwén (see1), etc. is transliterated into [ɯ].

Though SL medial [w] followed by a non-high vowel is transliterated into

consonantal [w] in Héngshuǐ lǎo bái gàn, guìhuājiǔ (guì), Wú gāng fá Guì, Shǐjiāzhuāng, and tàijǐquán, but it is transliterated into vocalic [ɤ] in most of the words as in Duānwǔ, suānní, Shǐjiāzhuāng, Zhōngyuán, Yuáncháo, cháng'é bēnyuè, etc. Pinyin sequence/ui/ is transliterated into [ɤi] and [wɪ] in huībān and Héngshuǐ, where (1) the SL schwa vowel is missed, (2) the medial is transliterated into vocalic and consonantal, (3) the syllabic ending vowel is also transliterated into the long and short vowel. The same SL vowel sequence in Wú gāng fá Guì, guìhuājiǔ, Zhōngkuí (see 3) is transliterated into [wəɪ].

Table 9: shows the inconsistencies in the Transliteration of SL pinyin /ü/ (medial /nucleus) in puckered -mouth finals.

Nouns in Pinyin		Transliterated Nouns		Issues	Should be Transliterated	
Niúláng Zhīnǚ	njəʊ.la ŋ tʃɿ.ny	न्यौ लाङ्ग चिर् न्यु	njəʊ lang tsɪr njɥ	[y] →[jɥ]	न्यौ लाङ्ग ची न्यू	njəʊ.laŋ tsi.nju
nǚwá	ny.wa	न्यु वा	niɥ.wa		न्यूवा	nju.wa

Table 9. Vowels in puckered-mouth finals and transliteration

Nucleu [y] in nǚláng zhīnǚ and nǚwá is transliterated into [jɥ], which do not match SL pronunciation.

3. Syllabic Finals (Nasals)

In most of the examples (see table 3- 9), the SL syllabic ending nasal [ŋ] is transliterated as [ŋg], corresponding to pinyin cluster /ng/, which is unnecessary. Nepali exhibits a single consonant letter for SL [ŋ], and any sorts of consonant cluster and elicit codas are not allowed in both languages.

Discussion:

Generally, it is believed that phonological errors and inconsistencies in transliteration arise when the translator has permanent contact with SL and TL. But they never become fully acquainted with its phonology either. From the examples mentioned above (table 3-9), it is almost clear on the following points: (1) The transliteration errors of the two nasals [m, n], liquids [l, r], dental sibilant [s] is almost null or comparatively less than the Transliteration of SL stops and affricates. (2) Phonological inconsistencies and controversies in transliterating SL voiceless consonant phoneme into TL voiceless and voiced the character. They aspirated into unaspirated and vice versa, often transliterating SL medial into TL semivowel [j,w] or respective long and short vowels, etc. Transliteration of a single SL phoneme into consonant/vowel clusters shows that the translator more intends to be inclined to the Englisization of both languages to fill the gaps, not borrowing actual phoneme borrowing the English alphabet (SL pinyin). The translator even seems unfamiliar that a letter does not always correspond to a single phoneme. Even

the multi-letter combination is often employed to represent a single phoneme in both languages. Such may happen because of using a character mapping approach in which every source script (pinyin) in a word is mapped to the target script. Therefore the number of characters matches rather than sound, Phoneme based approaches-SL phoneme to TL script is merely applied.

Table 10: shows the contrast of English consonant letters used for a respective consonant phoneme in both languages and its effect in maintaining phonetic equivalency in transliteration.

Chinese	Dvn.	b	p			d	t						g	k			
	IPA	p	p ^h			t	t ^h						k	k ^h			
Nepali	Eng. albt.	p	p ^h	b	b ^h	t	t ^h	d	d ^h	t	t ^h	d	d ^h	k	k ^h	g	g ^h
	IPA	p	p ^h	b	b ^h	t	t ^h	d	d ^h	t	t ^h	ɖ	ɖ ^h	k	k ^h	g	g ^h
	Dvn.	प	फ	ब	भ	त	थ	द	ध	ट	ठ	ड	ढ	क	ख	ग	घ
Chinese	pinyin	f	m	n	n ^g	l	r	s	sh	x	h	z	c	j	zh	ch	q
	IPA	f	m	n	ŋ	l	ʐ	s	ʃ	ɣ	x	ts	ts ^h	tɕ	tɕ ^h	tʃ ^h	tʃ ^h
Nepali	Eng. albt.		m	n	n ^g	l	r	s	s	sh	h	c	c ^h	j	jh		
	IPA		m	n	ŋ	l	r	s	ʃ	ɸ	h	ts	ts ^h	d	d ^h		
	Dvn.		म्	न्	ङ्	ल्	र्	स्	ष्	श्	ह्	च्	छ्	ज्	झ्		

Table 10. English letter for Chinese-Nepali consonants phonemes

From Table 10 and the above-mentioned examples (Table 3-9), it is clear that the English alphabet for SL voiceless unaspirated and aspirated are used to represent voiced unaspirated and voiceless unaspirated in Nepali. For example, pinyin/ b, p / represents [p, ph] in Chinese but the same English alphabet(/ b, p /)represents [b, p] respectively in Nepali. Such arbitrary creates difficulties in choosing the most equivalent phoneme for SL phoneme in transliteration. Therefore SL voiceless unaspirated (/ b, d, g, z /) are often transliterated into TL voiced character (ब, द, ग, ज), voiceless aspirated (/p, t, k, c/) into unaspirated character (प, त, क, च), rather than transliterating into (प, त, च, क and फ, थ, ख, छ) respectively. SL voiceless unaspirated [tʃ, tɕ] (/zh, j/) are often transliterated into TL voiced aspirated and unaspirated affricate character (झ, ज), rather than voiceless unaspirated (च), aspirated dental [t^h](/t/) is often transliterated into TL voiceless dental and retroflex character (त, ट), rather than transliterating into dental aspirated (थ). The Clusterization of a single SL consonant phoneme,e.g., [tʃ, ŋ] into consonant clusters [dz^h/dz^h/ tʃ^h, ŋ] in transliteration also indicates the translator is quite unfamiliar with the

multi-letter combination in pinyin /zh, ng/ and their phonetic value.

Similarly, Chinese sibilants [ʃ, ʒ] (/sh, x/) corresponds to Nepali character / ष, ञ / ([ʃ, ʒ]), share the common phonological features, but [ʃ, ʒ] are often converted into [s, ʒ]. Transliterating SL retroflex [ʃ] into dental [s] is somehow considerable, which is rarely used both in writing, and it mostly occurs proceed or followed by another retroflex at a juncture. This is impossible to have appeared in Chinese transliterated words as only the dental and velar nasal are permissible at syllabic ending positions in Chinese. In both languages, the palatal sibilant makes a clear distinction from the dental sibilant, followed by high vowels and glide. Transliterating [ʃ] into [ʒ] could be a graphic corruption English as /sh/ represents retroflex sibilant in Chinese, where it is employed to represent palatal in Nepali.

Some existing transliterating vowels are mainly because the translator is unknown to the different phonetic realization of SL vowel letters at the nucleus and at the syllabic ending position (see 3.1).

We assume, In Transliteration, Chinese diphthongs and triphthongs (see table 3) should be viewed under rising diphthongs/ long vowels (= VV) and falling diphthongs (=GV). All Chinese vowels as a nucleus in zero coda syllables are long and should be transliterated into long vowel characters. Transliterating the SL syllabic ending vowel into short vowel character and medial into a respective glide. This is the easiest and effective way to preserve SL sounds as vowels [i, u,] appear at the coda, followed by a non-high vowel from a diphthong in both languages. They are comparatively shorter than [i, u] in zero coda syllables, i.e., [ɪ, ʊ] in narrow transcription. Glide/medial in between Onset consonant and nucleus are consonantal, more attached to onset consonant and form a complex onset (CG) in both Languages. CG in both languages merges into one sound at the surface level. Therefore the pre-peak glides (medial) in transliterated words should be attached written to onset consonant. To preserve the SL syllable form and size, the vowel conjunction rules (internal sandhi), which is known as replacing two or more combining letters by a single combining letter/letters to be applied in TL syllable or across syllable boundaries. Nepali follows only the limited Sanskrit sandhi rules described by Panini in his Ashṭadhyayi (Adhikari and Neupane, 2020). Some sandhi rules that can be used to convert Chinese vowel sequences and their adjustment in the Nepali writing system are presented in Table 11.

Classification	Vowels in Chinese finals			Vowel conjunction rules in Nepali	
	Pinyin	Broad Transcription	Narrow Transcription	Sandhi rule	Narrow Transcription

Rising diphthongs	ei ai ou ao	[ei] [ai] [ou] [au]	[eɪ] [aɪ] [əʊ] [aʊ]	ए+इ= यै/ऐ आ+इ= आइ अ+उ= अौ आ+ओ = आउ	e+ɪ=eɪ a+ɪ=aɪ ə+ʊ=əʊ a+o=aʊ
Falling diphthongs/ triphthongs	ie ia, iu iao	[ie] [ia] [iou] [iau]	[jɛ] [jA/æ] [jəʊ] [jaʊ]	इ+ ए= य इ+ आ=या इ+अौ= यौ इ+ आउ = याउ	ɪ+ə=jə/jɛ ɪ+a=jɑ ɪ+ʊ= jəʊ ɪ+ aʊ= jaʊ
	uo ua uai ui/uei	[uo] [uA] [uai] [uei]	[wo] [wA] [wai] [wei]	उ+ अ/ओ =व उ+ आ =वा उ+ आइ =वाइ उ+ ऐ = वइ	ʊ+ə=wə ʊ+a=wɑ ʊ+ɪ=wɪ ʊ+ ei=wei
	ü üe	[y] [ye]	[y] [yɛ]	यू यू+ए= व्य	ju ju+e=wjə

Table 11. SL Vowel sequences and their sandhi rules in Nepali

As shown in table 11, SL rising diphthongs with low and high vowels, i.e. [aɪ, aʊ], are expected to be written in combining vowel letters. The medial in all the Chinese falling diphthongs/triphthongs should be conversed and written attached with respective glide [j,w] (semi-vowels letter). There is no one-to-one corresponding single vowel letter or letters that are equivalent to Chinese glide [y] and monophthong [y] (pinyin ü). Even the Nepali Chinese bilingual could not spell the sound correctly. To medial /ü/[y] are often followed by mid vowel [e]. It is heard for Nepali speakers as [ju] in English loanwords "New, view." The issues related to the breaking up of a syllable into two syllables emerging extra peak syllables in comprising the rising diphthongs, can be solved easily.

3.3 Unsupervised Syllable Segmentation

Term segmentation in Names Transliteration can be taken to take a sequence of character strings and produce meaningful morphological units. They are usually highly selective and given high weight in natural language systems. Therefore, the proper segmentation of such terms in relevance order as original appears in the query. Syllable segmentation is to identify the number of syllables, their pattern as a whole.

Chinese written language is unsegmented. Though every syllable of a word and phrase is written separately, there are no delimiters or inter-word spaces to mark word boundaries. The translators/speaker have to depend on high-level information to segment or attach a word's syllable in a transliterated word. Still, all the syllables of a word are attached with a horizontal line above

them to be intervened in form and meaning in Nepali orthography that makes it unlikely or separated by any other linguistic unit(words). If we go through the examples mentioned above, e.g., cǎoshū, niángāo, niányèfàn (see 5), they are a single word, but they are segmented into two/three words.

A word's Syllabification is directly linked to SL syllable units, form and phoneme sequence, and nativization of the SL syllable structure in TL rather than transliterating every individual phoneme.

From all tables mentioned above, we can see that nearly the two-third of the transliteration problems are due to the unsupervised syllabification, i.e., the translator has focused on conversing every SL character to Devanagari alphabet rather than phonological units, which is a problematic issue, for example: "Tiān'ānmén" has three syllables /Tiān.ān.mén/ [tʰjæn.an.mən], but transliterating it as [tɪ.jan a man] has not only segmented a word, dis-matches to SL pronunciation, the number, size and structure of the syllable got changed (CGVC.VC.CVC→CV.GVC.VC.CVC). In other words, most of the transliterated words are not syllabified or mis-syllabified before transliterating, and the probabilities for the SL syllable in TL is completely neglected. The epenthesis and the di-syllabicity effect are found in these transliterated words.

3.4 Concatenation Ambiguities

Concatenation in transliteration is related to the problems of marking word boundaries. Chinese personal name mostly consists of two or three syllables (characters), including given name and family name. The family name comes first and is separated from the given name and middle name. A given name with two syllables is usually concatenated. Still, in most of the Nepali transliterated Chinese name, e. g: Máo Zédōng, Zhōng Nánshān, the Given name is attached to the surname, and the middle name is separated. Similarly, in Zhūgě Liàng, Zhūgě is a given name with two syllables which is pronounced and written concatenated. Its transliterated form should be hyphenized or attached in Nepali writing.

Two or three syllabic historical Chinese Names, pen names, nicknames, monks, god, and goddesses are usually concatenated. The structured semantic name with four or more syllable are usually separated as The Chinese phonetic alphabet spelling rules for Chinese names, e.g., Niúláng Zhīnǚ, each name (two) consists of two syllables are concatenated. Such names are similar to the Nepali name "Shivaparwati", and "Sitaram," but these all are neglected in transliteration.

Table 12: shows some examples of Concatenation ambiguities in

transliteration

Nouns in Pinyin		Transliterated Nouns		Should be Transliterated	
Cāngjié	tʃaŋ. tʃɛ	छाङ्ग चे	tʃaŋg tse	छाङ्गचे	tʃaŋ.tʃɛ
Qiánlóng	tʃiæn.lʊŋ	छ्यान लोङ्ग	tʃjan long	छ्यानलोङ्ग	tʃjan.lon
sāncóng-sid é	san.tʃʊŋ-sɿ.ty	सान छोङ्ग स् द	san tʃʊŋ sə.də	सानछोङ्ग सीत	san.tʃʊŋ-si.tə
Wú gang fá Guì	u.kɑŋ.fa.k weɪ	उ काङ्ग फा क्वै	ʊ kɑŋ fa kwɛɪ	ऊकाङ्ग फाक्वै	u.kɑŋ-pʰa kwɛɪ

Table 12. Concatenation ambiguities in transliteration

As per The Chinese phonetic alphabet spelling rules for Chinese names, the bi-syllabic names, e.g., Cāngjié and Qiánlóng, be concatenated, but they are segmented in transliteration words. The words that have four or more than four-syllable should be concatenated as per their pronunciation. The syllable can be segmented into two concatenated groups. In the word sāncóng-sid é, Wú gang fá Guì, the first two-syllable and later two should be written in two words separated by a hyphen.

Apart from the problems mentioned above, sometimes the translators are more interested in using already well-established calques in TL society, such as Beijing, Mao Zedong, Lāsà, etc. which are transliterated inappropriately as /beɪdʒɪŋ/, /maotsetʊŋ/, /lʰasa/ etc. There is no fixed translation strategy for such nouns, and often use the calques, traditional and modern forms of SL expression for the same word and leads to inconsistencies.

Conclusion

The sound translation is taken to map SL sound into TL script, but it is more than that when the transliterated sound or nouns have pedagogic implication. Preservation of SL sound and establishing equivalency in both written form and pronunciation is a must. For maintaining equivalency between transliterated words with the source text, the approaches are employed in transliteration.

Regarding Chinese Nepali sound translation, one should keep in mind that every Chinese character is a single syllable. Therefore each Chinese syllable in the transliterated/transcribed name should be in a single syllable. To preserve Chinese syllable form and monosyllabic structure two types of sinicization can be done. The use of [j] and [w] for SL medial and the transcribed [j] and [w] should be attached written to onset consonant as Nepali do not have triphthongs. /ŋg/ cluster in pinyin is phonetically [ŋ] in both languages. It should be transliterated into [ŋ] orthographically. Syllabic ending vowels [i] and [u] (o) be transliterated into short vowels [ɪ, ʊ]. As all Chinese vowels in the open syllable are long. They should be transliterated into long vowel letters to help

with transliteration consistency and reduce inconsistencies and ambiguities. Formal initials are translated into consonantal [j] and [w] proceeding non-corresponding high vowels and non-high vowels. They get merged followed by the corresponding vowel, not need to transliterate them.

Equivalency issues in Chinese Nepali transliteration are very common because the TL sound unit is wrongly equated to SL pinyin. The translator is completely unfamiliar with pinyin's phonetic value in Chinese. The translator always tries to translate every SL letter but still fails to direct A →B type of transliteration where the same English alphabet represents different sounds. Therefore, all the phonological inconsistencies can be solved through phoneme-based transliteration. In short, Just identifying the SL and TL sound is insufficient to be a good translator. One should also fit how to adopt SL sound in the TL writing system. The concatenation and segmentation problem shows that the translator is even unknown how the naming word is concatenated in the respective writing system and pronunciation.

Limitation and further work

This study is limited to our corpus data, observation, and phonological aspects in Named entities in transliteration. The materials and approaches employed in this study may not be entirely applicable to prosody transliteration, machine transliteration, etc. Further research on Chinese Nepali translation, issues, and strategies is a must.

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