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Kman ethno-ophresiology; characterising taste and smell in a language of Arunachal Pradesh¹

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1 Introduction: the lexicon of taste and smell

The notion traditional societies have a rich lexicon applied to taste, smell (and texture in the mouth) goes back more than a century in the psychological literature (Chamberlain 1903; Myers 1904). Various anthropologists have tried to uncover universals in sensory terms (Dupire 1987) but the variety of documented ethnographic examples remains stubbornly small (Howes 1991). The study of taste, smell and texture terms has sometimes been called ‘ophresiology’ and this term is retained here, although it technically applies to smells. Taste and smell are often partly polysemous in many languages, while sensations of texture in the mouth clearly form part of the eating experience. Thus, English has specific words like ‘crunchy’ and ‘chewy’ which only apply to edible things, while more general terms, such as ‘soft’ and ‘hard’ can be transferred to foods. The worldwide literature on the vocabulary of taste, smell and is not extensive and much of it seems to focus on Africa (e.g. Van Beek 1992; Hombert 1992; Blench & Longtau 1995; Nakagawa 2012; Storch 2014). For SE Asia, Kuipers (1993) describes Weyewa, a Sumbanese language, while Enfield (2011) compares the taste and flavour vocabulary in the unrelated Lao and Kri languages in Laos, which show a remarkable conceptual convergence. The Aslian languages of the Malay Peninsula have had considerable attention, for example in Tufveson (2011) Burenhult & Majid (2011) and Wnuk & Majid (2014). An interesting early analysis of a South Asian language is Rivers (1905) who discusses Toda sense vocabulary from the point of view of psychology. Japanese is

¹ This paper could not have been prepared without the assistance of Mr. Sokhep Kri, whose kind hospitality and assistance in Tezu in February-March 2015 made work on Kman go very smoothly. I would like to acknowledge the careful work of an anonymous reviewer whose comments have sharpened up the argument of the paper and significantly expanded the review of the comparative literature.

a rich field for the lexical field of taste, and indeed has been the source of the claim that there is a fifth ‘taste primitive’, *umami*, the delicious taste of monosodium glutamate (Backhouse 1994). The taste terminology of the Kilivila language of the Trobriands is described in Senft (2012). The oral societies of the New World might be expected to yield of a rich harvest of ophresiological terms, but the literature is quite restricted. Aschmann (1946) is an early discussion of odour terms among the Totonac, while Shephard (2004) provides an account of two Amazonian societies in relation to their medicinal plants. The broad hypothesis is that oral societies in a strong dependency relationship with the natural environment tend to have a more complex and elaborate aroma and taste terminology than communities with connections to a wider pluralistic world. Given the complexity of food culture in hierarchical societies with nation states and literacy, this is not necessarily what would be expected. Colour terminology, for example, tends to become more elaborate in such societies.

An aspect of taste research which has occupied the attention of many researchers is the synaesthesia with other sensory modes, both between taste and smell, but in a more extreme case, between phonology and taste. Ward & Simner (2003) describe an individual with what they call ‘Lexical-gustatory synaesthesia’, who experienced tastes in relation to specific phonological conjunctions. Ideophones may not be completely arbitrary, with their sounds somehow relating to deep aspects of brain function. Several of the chapters in Hinton *et al.* (2006) discuss the role of sound symbolism in ethnozoological vocabulary or the non-arbitrary relationship between vowel quality and size. Taste and smell words may be similarly linked, but as this vocabulary is much less well-documented, generalisation is more problematic. In the case of odour terminology, it has been shown that in Africa sensory words form a lexical class distinct from mainstream ideophones (Hombert 1992; Blench & Longtau 1995). They typically fit into a stereotyped syntactic frame and do not show the properties of reduplication and iconic phonology characteristic of ideophones. However, this may not be the case globally, or indeed across other sense modalities.

There is no precise term covering this whole semantic area. The term ophresiology (used in Blench & Longtau 1995) goes back to the Parisian anatomist, Hippolyte Cloquet (1784-1840) who introduced it in 1821, but which appeared in print in German translation (Cloquet 1824). Technically speaking, this refers to the sense of smell (Greek *ophresio-*, *ophresi-* ‘to smell’) but is extended to ‘the senses’ (e.g. Jütte 2005). Even in this expanded definition, there is little or no literature on sensory vocabulary in languages of the Himalayas. Indeed, the regional literature on ethnolinguistics in general is best described as ‘thin’; most linguists working in the area have been concerned with phonology and syntax. Comprehensive dictionaries are rare, especially in Arunachal Pradesh, where only the Tani languages have any coverage (e.g. Post 2011; Kepor 2012). This is not a reflection of the properties of the languages themselves which are rich in parallel lexicons and have a wide variety of terms

reflecting experiential sensations. As a by-product of a project to create a dictionary and grammar of Kman, a variety of terms were collected describing taste and smell, together with information about the foods or substances they normally qualify. This paper describes those terms together with whatever contextual material is available. As there is no reliable published phonology of Kman, this is outlined in a preliminary section. The conclusion discusses the range of substances associated with sensory words, with some discussion of regional comparisons.

2 The Kman and the ‘Mishmi’

The Kman (Kaman, Geman, Miju) are usually categorised in Arunachal Pradesh as ‘Mishmi’. The term ‘Mishmi’ is used in the travel literature as far back as the early nineteenth century to refer to three distinct peoples, the Kman, Tawra and the Idu. While Idu and Tawra are undoubtedly related, Kman is not part of the same linguistic group. Nonetheless, culturally speaking, the Tawra have been historically grouped with the Kman. The Kman people are commonly known in India as Miju, a term found in the early colonial literature (e.g. Robinson 1856). Miju is not used in the vernacular (e.g. Boro 1978 for the Indian side and Li (2003) for the Chinese communities) and local publications have switched to a form of Kman (e.g. Tawsik 2014). Kman is listed as ‘Miju-Mishmi’ [mxj] in the *Ethnologue* (17th edition) and it is said to have 18,000 speakers on the Indian side and 200 on the Chinese side. This is almost certainly a considerable exaggeration. Even accounting for individuals claiming Kman ethnicity but not proficient in the language, it is unlikely there are more than 3–4000 speakers. The core area of Kman villages is in Lohit district, Arunachal Pradesh, and its effective capital is Tezu, where the Kman and Tawra are intermixed with settlers from Assam and other regions of India.

Kman has been little described. The first record appears to be Robinson (1856) which is quite accurate for the period, and his transcriptions are recognisable today. Additional Kman materials are cited in Campbell (1874). The only anthropological sketch appears to be Mills (1952) which discusses all three ‘Mishmi’ peoples in rather general terms. Needham (1886) is the first specific vocabulary of Kman (under Miju) and the first to compare it with Tawra. The only modern publications on the language from the Indian side are Das Gupta (1977) and Boro (1978). These were said to be ‘practical’ guides and the transcription of Kman is highly inaccurate by current standards. Tawsik (2014) is a comparative wordlist of Tawra and Kman, which uses an idiosyncratic transcription but includes much useful cultural information. Despite the small number of speakers on the Chinese side of the border, there have been several publications on ‘Geman’, the Chinese version of the name. These include Sun (1991, 1999) and most importantly, Li (2003) which is a full-length description of the language. Kman is usually considered a Tibeto-Burman language, part of

the ‘North Assam’ group, a characterisation which goes back to Konow (1902). However, there is no published argument defending this classification and Blench & Post (2013) consider it equally likely to be a language isolate.

All the work reported here was conducted in the field in Tezu, the centre and nearby settlements in February-March 2015 and the original field recordings related to all the examples will be archived and should be freely available in due course.

3 Phonology and transcription

Kman consonants are shown in TABLE 1 

TABLE 1 – Kman consonants

	Bila-bial	Labio-dental	Alve-olar	Retro-flex	Palato-alveolar	Palatal	Velar	Glottal
Plosive	p, p ^h b		t, t ^h d				k, k ^h g	ʔ
Fricative		f v	s z		ʃ			h ^h h
Affricate			ts dz		tʃ, tʃ ^h dʒ			
Nasal	m		n			ɲ	ŋ	
Flapped			r					
Lateral			l	ɭ				
Approximant	w	v		ɻ		y		

Kman permits a wide range of consonant prosodies, which can be combined with both the aspirated and non-aspirated series. These include labialisation, palatalisation, lateralisation and rhoticisation.

Table  presents the vowels of Kman.

TABLE 2 – Kman vowels

Vowels	Front	Central	Back
Close	i	ɨ	u
Close-Mid			o
Open-Mid	ɛ	ə	ʌ ɔ
Open		a	

Despite claims to the contrary in previous publications, there are no long vowels and no nasalised vowels in Kman. Like most regional languages, Kman has a relatively simple tone-system. There are two level tones, High (ˊ) and Low (ˋ), a rising (ˊˊ) and a rare falling (ˊˋ) tone. Glide tones also arise from VV sequences, but the complex tones given in Li (2003) do not seem to be present in the speech of the Tezu area. Either the tones are a product of the author’s training in Sinitic languages or represent a dialect under local influence from Tibetan.

4 Experiencing sensation

Kman has a generic verb, *mìn*, which expresses the meaning associated with the experiential verbs, such as ‘taste’, ‘smell’, ‘feel’. It is combined with words such as cold (*kran*) or fearful (*dʒʰil*), in the sense of ‘to feel’. However, its widest application is in the domain of smells and tastes. These are not easily mapped against English sensation words, which have a rather limited range. There is clearly also an element of texture in sensation words. For example, mushroom *nún*, compared to watery foods, not because of their flavour but because they are easily bitten into and digested. I have translated this by the rather clumsy formulae ‘is experienced as’ or ‘to feel in the mouth’, since English does not really have a concise way of expressing the sensation of oral texture. English speakers can ‘feel in the mouth’ using specialised words ‘chewy’ and ‘crunchy’ as well adopted descriptive terms such as ‘goeey’ and ‘crispy’ (Lawless, Vanne & Tuorila 1997).

Importantly, Kman sensory terms are not applicable generically; you cannot use the term *khá* ‘bitter’ for a previously unknown taste. Bitter (and indeed sweet) objects are thus in a culturally sanctified list. In practice, these lists evolve, since there is a term for ‘pungent’ (*shyá*), applied to the chili, which is an introduction from the New World, as well as the even more recent apple.

The typical formulation of these expressions is standardised. The object tasted is the headword, followed by the sensation word, which could be considered an adjective, and then the verb *mìn*. The sensation words in context sometimes undergo unexplained tonal changes in relation to the form cited in isolation, but elsewhere the tone remains static. The sensory word is thus intransitive and is preceded by a qualifier, as in example (1);

- (1) *áy* *lèy* *khá* *mìn*
 fish stomach bitter taste
 ‘fish stomachs taste bitter’

This is quite distinct from constructions which describe how a protagonist smells a named object. Kman has a noun/verb, *cʰiŋ*, which is both ‘aroma, flavour’ and also ‘to smell’. Thus in the example (2) an SVO structure is used.

- (2) *ki* *cʰiŋ* *kwi*
 I smell dog
 ‘I can smell a dog’

This allows speakers to answer open-ended questions or make statements about smells, and is a distinct linguistic sphere compared with the closed set of sensory words.

5 Tastes, smells, experiences

5.1 Taste

This section lists all the sensation words so far recorded, covering taste, texture and smell, together with a list of the foods or plants to which they apply.

5.1.1 *tím* ‘sweet, salty’

tím is in some ways an archetypical taste sensation, since it applies to two tastes which would be sharply differentiated in the Euro-American lexicon, salty and sweet. The strong similarity to the word for ‘salt’, *tímìn*, makes it possible that this underlies its etymology. Examples of the term in use are given in (3) and (4):

- (3) *tímìn* *tīm* *mìn*
 salt salty tastes
 ‘salt tastes salty’

- (4) *shùnìy* *tīm* *mìn*
 sugar sweet tastes
 ‘sugar tastes sweet’

5.1.2 *khá* ‘bitter’

This term is applied to a rather specific range of plants as well as the stomachs of fish, as listed in Table 3. The scientific names of the plants are given in the second column.

TABLE 3 – Items described as *khá* ‘bitter’

bitter gourd	<i>Momordica charantia</i>	kerela
Mishmi tita	<i>Coptis tita</i>	páwá
fish stomach		áŋŋá hlèy

This is exemplified in (5):

- (5) *páwá* *khá* *mìn*
 Mishmi tita bitter tastes
 ‘Mishmi tita tastes bitter.’

Mishmi tita is a well-known medicinal plant, gathered wild in the mountains and exported to Tibet.

- (6) *áŋŋá*  *hlèy* *khá* *mìn*

fish stomach bitter tastes
 ‘fish stomach tastes bitter’

5.1.3 *shyá* ‘pungent, sharp’

This term applies to chili and other peppery plants, as in example (7).

(7) *bíci* *shyà* *mìn*
 chili pungent tastes
 ‘chili tastes pungent’

An equivalent term is *bǎt*, exemplified in (8)

(8) *bíci* *bǎt* *mìn*
 chili pungent tastes
 ‘chili tastes pungent’

5.1.4 *sál* ‘fruity, sour’

Items that are described as *sál* are listed in Table 4, and exemplified in (9).

TABLE 4 – Items described as *sál* ‘fruity, sour’

tomato	shòwsál
green oranges	téŋá kámbròn
bamboo shoots	t.wón

(9) *shòwsál* *sál* *mìn*
 tomato fruity tastes
 ‘tomato tastes fruity’

5.1.5 *kráp* ‘sharp, unripe’

Items that are described as *kráp* are listed in Table 5, and the exemplified in (10).

TABLE 5 – Items described as *kráp* ‘sharp, unripe’

green apple	ápél k.tí
betel nut	támùl

(10) *ápél k.tí* *kráp* *mìn*
 green apple sharp tastes
 ‘green apple tastes sharp’

Interestingly, both of the items these tastes apply to are relatively recent introductions. Apples were introduced by the British, as the name suggests, and betel nut is from Indian (‘mainland’) culture and also borrowed. A different term, *sál*, is used for green oranges, indicating that unripeness is not in itself a defining character.

5.1.6 *sìŋ* ‘pungent, spicy’

This term is applied to spices and fried food such as those listed in Table (6).

TABLE 6 – Items described as *sìŋ* ‘pungent, spicy’

garlic	p.lǔw
ginger	dìʔíŋ

An example in (11):

- (11) *p.lǔw* *sìŋ* *mìn*
 garlic pungent smells
 ‘garlic smells pungent’

5.1.7 *sǎʔ* ‘alkaline’

This word is only applied to uncooked taro (*n.gál*); as exemplified in (12):

- (12) *n.gál* *sǎʔ* *mìn*
 raw taro alkaline tastes
 ‘raw taro tastes alkaline’

Taro, *Colocasia esculenta*, is a tuber crop which must formerly have been of considerable importance, but which is being displaced by rice and other cereals. Fresh or poorly cooked taro is extremely alkaline and can irritate the throat.

Bartoshuk (1978) proposed that there were four ‘basic’ taste qualities, ‘bitter, sweet, sour, salty’, and the basic Kman taste terms fall into these categories, with the other terms recorded here applying to recent introductions and thus outside the traditionally defined categories.

5.2 Texture in the mouth

The following terms are recorded for textures in the mouth.

5.2.1 *lib`.n* ‘soft-textured, watery’

Applied to any food which is soft, pounded and watery, such as kedgery or dal, as well as mushrooms, *cinúŋ*, as exemplified in (13):

- (13) *cínúŋ lib`n mìn*
 mushroom soft feels in mouth
 ‘mushrooms feel soft in the mouth’

5.2.2 *hàlmákh* ‘soft but with consistent texture’

Applied to solid food, particularly staple starches, as those listed in Table 7:

TABLE 7 – Items described as *hàlmákh* ‘soft but with consistent texture’

cooked rice	<i>haku</i>
potato	<i>alu</i>

An example is (14):

- (14) *haku hàlmákh mìn*
 cooked rice soft feels in mouth
 ‘cooked rice feels soft in the mouth’

5.2.3 *címil* ‘crunchy’

Applied to foods that come in small hard pieces, such as those listed in Table 8:

TABLE 8 – Items described as *címil* ‘crunchy’

peanuts	<i>àyàyà sít</i>
popcorn ²	<i>bǒ phúm</i>

An example is (15):

- (15) *àyàyà sít címil mìn*
 peanuts crunchy feels in mouth
 ‘peanuts feels crunchy in the mouth’

5.3 Smells

The smells that have a distinctive term in Kman are restricted to urine and faeces.

5.3.1 *nyǐŋ* ‘smell of urine’

This is exemplified in (16):

² Popcorn might not immediately seem to be hard like peanuts, as prepared in Europe or America. However, local popcorn is significantly more difficult to bite into.

- (16) *t.shít nyǐŋ mìn*
 urine uric smells
 ‘urine smells like piss’

5.3.2 *nyǎm* ‘smell of dung, faeces’

This word is applied to the smell of human excrement and animal dung, as exemplified in (17):

- (17) *mántsú t.khri nyǎm mìn*
 cow dung faecal smells
 ‘cow dung smells of shit’

6 Conclusions

6.1 By comparison with regional languages

Kman has a wide variety of terms to describe smells, tastes and textures, apparently in contrast to regional Sino-Tibetan languages. A search for ‘taste’ in the online database STEDT (Sino-Tibetan Etymological Dictionary) suggests that many languages have little or no specialised vocabulary, and where tastes are specified, they are usually sweet, bitter and sour or astringent. Even the neighbouring Tani language Galo³ seems to have a very restricted set of taste and smell words. Kman is not rich in odour terms like African languages, but the two terms which it has are lexical creations of unknown etymology. Searching the dictionary (Post 2011) suggests that in Galo odours are restricted to generic terms, such as ‘bad’, or direct qualification by the item perceived to be the cause of the smell, such as a sweaty shirt. Only two tastes are listed, as in Table 9:

TABLE 9 – Odour terms in Galo

ᵸa¹u²	spicy; hot; chili taste
potee¹-polee¹	tingly to the taste

If Tani languages *are* restricted in this way, then Kman is apparently exceptional for the region. However, the lack of in-depth lexical work on other Mishmi languages or even the Tangsa⁴ languages immediately due south makes definitive statements problematic.

³ Galo osen as the Tani languages border the Mishmi languages directly to the west, and Galo has an extensive searchable dictionary, unlike other languages in the region.

⁴ Stephen Morey (pers. comm.) has listed comparable sensory terms for some Tangsa languages, including Mossang and Ngaimong, but these are not yet published.

6.2 Sensation and the cultural mindset

The application of the Kman sensory terms is constrained, and they cannot be applied to tastes other than those culturally prescribed. Nonetheless, this vocabulary does evolve, as witness their application to recently introduced plants. There is another remarkable feature of these terms in Kman, that smells and tastes seem to be constrained by the domestic world, with cooked foods and cultivated plants predominant. This is surprising because the Kman, like most peoples of Arunachal Pradesh, strongly favour wild foods, of both plant and animal origin, and furthermore are great collectors of medicinal plants. When characterising wild plants and animals, they do not refer to their smells using a specialised lexicon. This is in contrast to the situation in the Amazon, described in Shephard (2004), where a rich vocabulary has developed for predominantly wild, medicinal plants. In the African literature, animals play a much greater role, both as meat ('the smell of fresh dogmeat' – in the Kuteb language, or the 'smell of snakes' – in the Tarok language). None of the sensory terms identified have any obvious etymologies, although it is not impossible these are loans, since neighbouring languages are almost unknown. The emphasis on the domestic and cultivated plants makes it possible that this lexicon might be relatively recent, evolving at the time when a gradual switch from predominantly foraging to agricultural subsistence was taking place. This would be difficult to prove, but if it can be established that the pattern is similar among neighbouring peoples, such as the Tawra and Idu, then the likelihood would increase. Under all circumstances, this type of lexicon is woefully under-documented in the Himalayan region, but absence of evidence is not evidence of absence and this may yet be another field for researchers that is so far barely exploited.

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