Contexts of Use of a Rotated Palms Gesture among Syuba (Kagate) Speakers in Nepal

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Abstract

In this paper I examine the use of the 'rotated palms' gesture family among speakers of Syuba (Tibeto-Burman, Nepal), as recorded in a video corpus documenting this language. In this family of gestures one or both forearms are rotated to a supine ('palm up') position, each hand with thumb and forefinger extended and the other fingers, in varying degrees, flexed toward the palm. When used independently from speech this gesture tends to be performed in a relatively consistent manner, and is recognised as an interrogative gesture throughout India and Nepal. In this use it can be considered an emblem. When used with speech it shows more variation, but can still be used to indicate the interrogative nature of what is said, even when the speech may not indicate interrogativity in its linguistic construction. I analyse the form and function of this gesture in Syuba and argue that there are a number distinct functions relating to interrogativity. These can therefore be considered as a family of gestures. This research lays the groundwork for better understand of this common family of gestures across the South Asian area, and beyond.

Key words: Nepal, Tibetic, Co-Speech gesture, Emblem, interrogative

1. Introduction

Across India and Nepal there is a gesture in common use in which (usually) both forearms are rotated to a supine position so the palms of the hands are turned to a "palm up" position, with thumb and forefinger extended and the other digits folded to the palm or loosely extended to varying degrees. The forearms may be held forward or raised by elbow flexion in varying degrees towards a vertical orientation. When used without speech, this action is recognised as an interrogative gesture. It is also used in conjunction with speech. The examples described in this paper show that it is used in

association with verbal expressions which are marked linguistically as interrogatives, but also with other kinds of expressions, where it may indicate an implied interrogative or a related aspect of the speaker's epistemic stance towards the utterance, such as uncertainty or possibility. I refer to this gesture, whether used with speech or by itself, as the 'rotated palms' gesture, as the rotational movement and handshape are the most salient features of the gesture.

Figure 1 is a photograph of a woman in Nepal, taken just after the 2015 earthquakes. In this image you can clearly see the forearms are supinated, so the palms are oriented towards the speaker. The extension of the thumbs and index fingers can also be clearly seen here.

This gesture is most often translated in Nepali as a fatalistic के गर्ने *ke garne?* 'what to do?' This is particularly true when the manual gesture is combined with a shrug of the shoulders. In this image the woman conveys the feeling of helplessness than many in the country felt after the quakes ruined their houses and their lives. As this gesture is understood this way when used without speech, it can be considered to be an "emblem" (Ekman & Friesen, 1969;) or a "quotable gesture" (Kendon, 2004, p. 335). This gesture, used without speech, is common across Nepal and India. As well as the sense of 'what to do?' described above, when combined with a short upwards head flick it has the sense 'what are you doing?' or 'where are you going?'.

Figure 1 Woman in Nepal using the rotated palms gesture. Image © Brandon Bodhi Denton, used with permission

In this paper I provide an analysis the rotated palms gesture in the context of narrative speech in a video corpus of Syuba, a Tibeto-Burman language of Nepal (Gawne, 2013, 2017). This analysis includes a discussion of its formational features, and its various functions, through examination of contexts of use. In terms of how the gesture is performed, when used with speech it shows greater variation than when it is used without speech, although in all cases index finger and thumb extension are present as well as the forearm rotation.

In light of this analysis, I suggest that the various forms of the gesture described here constitute a "gesture family", in the sense defined by Kendon (2004, p. 281) who writes (p. 281) "a gesture family is a group of gestures that have in common certain kinesic features." Kendon continues with the observation that there is a "semantic theme for each family".

The comparative study of the contexts of use of the various forms of the "rotated palms" gesture in this article suggests that the different uses relate in some way to interrogativity. When used in conjunction with speech it marks the speech act as an interrogative or it can add implied interrogativity to utterances that are not constructed linguistically as interrogative. It can also add implied uncertainty or possibility, epistemic statuses that indicate a speaker's non-assertion. When used without speech, as we have seen, it is commonly understood to be the expression of a question of some sort. This common semantic theme unites these uses as a "gesture family".

The rotated palms gesture may not appear that unfamiliar to the reader, as it bears some relationship with the gesture that we know as the "shrug"(Streeck 2009: 189; Debras 2017; Jehoul et al. 2017), particularly the outward rotation of the forearms and the palm-up orientation. See also Kendon's (2004: 275-281) discussion of "PL gestures" (Open Hand Supine with lateral movement), which is a group within a larger "open hand supine" family. PL gestures are notable as "in many cases the movement begins with an outward rotation of the forearm so that one's impression of the hand or hands 'opening' as they move apart from one another" (p. 275). Kendon argues that what unites gestures of this type is that they display "non-intervention", by "removing the hands from the arena of action". I return to cross-cultural similarities and the embodied motivation for these gestures in the conclusion.

Before giving details of the analysis reported here, I provide a brief background on the Syuba language, and situate this analysis in the context of research on gesture in languages of the South Asian area (§2). I also outline the corpus that is used in the analysis and explain the basic features of grammatical interrogativity in Syuba (§3), before analysing the form (§4) and function (§5) of the rotated palms gesture.

2. Background

Syuba is a Tibeto-Burman language, spoken by approximately 1500 people, whose traditional villages are found in the Ramechhap district of Nepal. The language is closely related to the Yolmo language (ISO 639-3 scp), spoken in the Melamchi Valley and in isolated diaspora groups across Nepal. Syuba is mutually intelligible with at least some Yolmo varieties, although they consider themselves to be a distinct group.

Historically known by the exonym *Kagate* (ISO 639-3 syw), speakers of the languages have in recent years become more interested in the status and representation of their language, and now prefer the endonym *Syuba*. All Syuba speakers are multilingual, using Nepali as the language of trade outside their villages. While almost all children in the villages speak Syuba as their first language, they are educated in Nepali (Mitchell and Eichentopf, 2013).

Syuba was attested in the early 20th century as part of Grierson's (1909/1966) Linguistic Survey of India, which included languages such as Syuba that were spoken at the time by migrant workers in Darjeeling. No further documentation was made until the 1970s, when primary documentation resulted in a number of short publications (Höhlig and Hari, 1976; Höhlig, 1978). Since 2009 I have been working with Syuba speakers on the documentation of their language, including the development of a corpus of audio-video recordings, described in section 3. For more details on Syuba and the Yolmo varieties see Gawne (2013, 2017).

Gesture use by speakers of Tibeto-Burman languages is virtually unstudied.[1] Nepal is not only home to languages of the Tibeto-Burman family, but also a number of Indo-Aryan languages. Again, there is very little documentation of gesture in the languages of Nepal, other than the use of gestures as a research tool in a larger cross-linguistic and cross-cultural study of spatial description across Bali, India and Nepal (Dasen et al., 2009). A similar situation holds for almost all of the South Asian area, beyond the study of the form and history of mudras in Hinduism and Buddhism, symbolic handshapes used in religion and art.

The rotated palms gesture is used across a large geographic area. Figure 2 is a still from a recording of Pema Yolmo, a speaker of the Ilam variety of Yolmo, discussing weddings. The rotated palms gesture was used by Pema a number of times, and by other speakers of Ilam Yolmo I observed, in a community that has not been in contact with the Syuba for at least a century. Figure 3 is a photograph I took in Kathmandu of a woman gesturing out of her first floor window to family members on the street below. The gesture was followed by a beckoning gesture, giving a what are you doing? sense. In other observed uses the inclusion of a short upwards headflick can help indicate this. We also saw the woman in Figure 1, who lives in the Lamjung district in central Nepal, some distance from both Ramechhap and Kathmandu.

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[1] Other than an unpublished study on the relationship between gesture stroke and prominent word in utterances in Pwo Karen, spoken in southeastern Burma and northern Thailand (Hsieh, 2012).

Figure 2 Pema Yolmo talking about weddings (160505-19) [2]
Figure 3 A woman in Kathmandu gesturing out of her window

These images indicate that the rotated palms gesture is common across the communities related to the Syuba, as well as more generally in Nepal. My own observations, and discussions with those familiar with the area, indicated that this gesture, or a version of it, is common across the wider South Asian area.

The preference for two-handed performance of this gesture in the Syuba, and wider Nepal context, does not extend to all regions in which this gesture is found. Eric Pederson (p.c.) notes that in the Tamil-speaking areas of India one-handed performance of this gesture is the default. Siva Kalyan (p.c.) notes further that for Tamil speakers the gesture is only used with rhetorical questions, and a two-handed performance is preferred if the speaker is addressing a god, gesturing skyward. Both indicate that there is variation in both the specific form and function of the gesture across the area where it is attested.

Additional corroborating evidence for the wide areal distribution of the rotated palms gesture can be found in the sign languages of the area. Both the Indian (ISO 639-3 ins) and Pakistani (ISO 639-3 pks) sign languages have conventionalised a form of the rotated palm gesture as the general 'why-sign' to mark question structures (Zeshan, 2000, p. 39; Pfau & Zeshan, 2003).[3] As in the Syuba examples I present below, forearm supination and horizontal orientation of the palm appears to be common in Indo-Pakistani Sign Language. The examples given by Pfau & Zeshan (2003) also demonstrate only the pinky and ring fingers bent inwards and not curled towards the palm. This form is used to mark all interrogative questions, not just rhetorical ones.

The Indo-Pakistani Sign Language question sign is formally related to two other documented signs. The first is an indefinite marker, covering meanings including 'some', 'something', 'someone', 'sometime' and has the same handshape as the interrogative, but instead of rotating from the forearm, the arms moves back and forth

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[2] This is the filename of this recording, which can be found in the archive. More detail is given in §3.
[3] These language are both closely related to the less well documented Nepali Sign Language (ISO 639-3 nsp) (Woodward, 1993), for which no equivalent data is published.

on horizontal plane with the forearm supinated. The second is a discourse marker with a meaning given as "what should I say?' (Zeshan 2003, p. 206). This form uses two hands, with the palms and forearms supinated, and rotation is not marked as being a feature of performance.

The history and development of the related Indian, Pakistani and Nepali sign languages is not at all clear (Vasishta et al. 1978). Therefore, it cannot be said with any certainty that the question sign used in these varieties corresponds to the geographical distribution of the rotated palms gesture across the whole of Pakistan and India. It does indicate that at some point in the development of Indo-Pakistani Sign Language the rotated palms gesture was included in the grammatical repertoire.

The anecdotal evidence from spoken languages of the South Asian region, and the adoption of this gesture in interrogative functions in the sign languages of the area, indicate this is a widely distributed conventional gesture. As Morris et al. (1979) observed in their survey of symbolic gestures of Western European, areas in which a gesture is used can transcend language boundaries, and highlight larger spheres of cultural influence. The rotated palms gesture has been observed across Nepal and India, and is used by speakers of languages of the Indo-Aryan, Dravidian and Tibeto-Burman families. Performance and function of the rotated palms gesture may vary across the area where it is observed, however, close analysis of its use by Syuba speakers can provide a basis for further analysis across the region.

3. Corpus

The gestures analysed in this paper are drawn from audio-video recordings of Syuba speakers collected between 2014 and 2016. All recordings are archived with Paradisec (Gawne, 2009)[4] as well as ELAR.[5] Transcriptions were made in ELAN[6] and are also included in the online archives.[7] Each example in this paper includes a recording reference code, which can be used to find the original recording in the online archives. They also indicate the date a recording was made, so 140123-02 was the second recording made on the 23rd of January, 2014. Participants have not been anonymised as these recordings are openly available and Syuba speakers participated with a willingness to openly share their language.

Four hours of video recordings were transcribed in Syuba and then glossed and translated into English. Interlinear glossing is presented using the Leipzig Glossing Rules (Bickel et al., 2008). This collection of recordings is a general language documentation corpus, with minimal attempts to standardise across recording events, other than ensuring that speakers were well framed, adequately lit and comfortable. Participants spoke on whatever topic they wanted to, and for as long as they liked.

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[4] http://catalog.paradisec.org.au/collections/SUY1
[5] http://elar.soas.ac.uk/deposit/0388
[6] http://tla.mpi.nl/tools/tla-tools/elan/ Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands (Sloetjes and Wittenburg, 2008).
[7] All data in this paper are available under a Creative Commons Attribution-ShareAlike 4.0 International License unless copyright is otherwise specified

Genres in these recordings include narratives, song, descriptive texts and conversations. No particular genre effects have been observed, other than to note that in the performance of songs there were almost no gestures of any kind.

Of the 10 participants in these four hours of recordings, five used the rotated palms gesture. There are twenty-four tokens of the rotated palms gesture in total. Table 1 provides a summary of the speaker, file name and timecode for each token. A number is also given for each example, which indicates the file number of the video clip for each gesture. The short clips are available online as a FigShare collection,[8] to see the gesture in the full context of the narrative the archive materials can be accessed.

The speech string in the environment of each gesture is also given in Table 1, with brackets to indicate the performance of the gesture, and a translation into English. More detailed analysis of the speech-gesture alignment is given for key examples in the section on function (§5).

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[8] https://doi.org/10.4225/22/5b1a37144e1c1

Speaker	Clip	File	Timecode	Speech	translation
Karma	1	140123-02	2:28	[tìŋsaŋ]	now
	2		2:30	[ràŋsakya] làle	someone else
	3	140123-03	3:46	[] tɕí làpna?	what to say?
	4		3:53	[hazurbazur] màthúŋ	didn't see the market
	5		3:57	[hasapaʈal làpkendi] màthúŋ	say a hospital, didn't see
	6		4:06	[mèn mèndʑo mèàŋ]	there were no medicines
	7		5:16	[dì] rì	the jungle
	8		7:35	[] ɲíma gíkla	in one day
	9	140123-04	0:25	yènaka [láŋ]ti sàke	if (the dog) begged, it would eat
Jit Bahadur	10	140127-10	2:01	tàa ɲìi [tɕí ɕéegeran] kahani katha	and what do we think about, old stories
Pasang Maya	11	140128-01	10:59	[tàɕeni khyóra ɕíɕi]	now you are dead
	12	140128-02	6:01	[ŋà tɕí sàndi]?	what do I eat?
	13		6:41	súlaŋ [térti mèaŋ èke]	who do I give it to? there is no one
	14	140128-03	7:48	[tàa koɕolaŋ darilo mènɖo mìŋe]	'You can't light a fire in a river, can you?'
Larkel	15	141010-02	3:40	[tɕí sàgandi]	what to eat?
Sangbu	16	141022-02	4:20	tàa [ɲíi ònɖù]ba	now we, like that
	17		4:23	[pè mìkhú] yè	cannot do
	18		5:04	ɲìi tàa tètɕela mè[me thóŋkyok]	we now look like young grandparents
	19		5:05	tà[ɕe mílam tɕòŋra kàlsi]	Now, that is like a dream
	20	141022-03	1:11	tè p[ulu belaurini kàʑe kàʑe]	there, Phulu, Belauri too, how many?
	21		2:21	[thámdʑer lú]ki sà tèrkendi	all the sheep are given to eat
	22		5:50	[tɕí là] ɲídi	what do we say?
	23		6:53	[kàʑe ràmbu òdʑe bèla òo phírtɕa bàɲra]	it was so strong at that time, after sackcloth
	24		7:37	[kála kyàlbu] tɕòŋba	how we are like kings?

Table 1 Summary of the tokens included in this analysis

As the rotated palms gesture has functions that relate to interrogativity, it is worth outlining the basic features of grammatical interrogativity in Syuba. There is no change in word order, instead, the difference between a declarative utterance and an interrogative utterance can be noted through the rising intonation of interrogative utterances, and the context of utterance. There are three main question types: polar, alternative and content questions. Polar questions are structured to involve a yes-no choice. Alternative questions present two or more possible answers; this may be yes-no, or a provide a choice of options. Content questions are formed using one of a closed set

of interrogative pronouns. These questions restrict possible conforming answers much less than the other question types. Gawne (2016) provides a more detailed analysis of the structure of interrogatives in Lamjung Yolmo, a variety closely related to Syuba. As discussed in section 5.2, it is possible to have an utterance without interrogative grammatical features used with the rotated palms gesture in which case the gesture indicates that interrogativity or some idea of uncertainty or possibility is implied by what is being said. Analysis of uses of the rotated palms gesture in Syuba thus helps us build a richer picture of interrogativity beyond the known grammatical features already attested.

4. Form of the rotated palms gesture

In this section I describe the formal features of the rotated palms gesture as it appears in the Syuba corpus. This is done along four dimensions; handshape, orientation, handedness and trajectory.

This analysis demonstrates that while orientation and handedness appear to be more variable in performance, handshape and trajectory are key features of this gesture type. Trajectory, and particularly the rotation movement, is central to the performance of this gesture, which is why I have named it the 'rotated palms' gesture. While focus is on co-speech use I also make reference to the performance of the gesture as an emblem throughout this section.

4.1. Handshape

A typical emblematic performance of the handshape for this gesture is for the thumb and index fingers to be extended, and the other three fingers to be curled into the palm, although often the middle finger is less tightly curled in. Figure 4 is a still of a Syuba man taken at his wedding. Here the gesture is being used without speech in the din of the gathering, perhaps to ask someone what they are doing.

Figure 4 Rotated Palm gesture. Image © Ningmar Tamang, used with permission

The handshape of the co-speech performances is not often as distinct or consistent. In Figures 5 Karma is discussing the old traditional religious festivals that were observed in his village (140123-02) and in Figure 6 he is discussing village history more generally (140123-03), with the second recording made shortly after the first. At 2:28 in the 140123-02 he performs the rotated palms gesture with a loose handshape, while in 140123-03 at 7:35 the handshape is much more articulated. The still image in both figures represents the handshape at the apex of the stroke, when the rotation ceases.

Figure 5 Karma performing the rotated palms gesture in 140123-02 at 2:30
Figure 6 Karma performing the rotated palms gesture in 140123-03 at 7:35

The gesture in Figure 5 involves a much looser bunching of the fingers that in Figure 6. The thumb and index figures are still the most extended digits. The less clearly articulated use of the rotated palms gesture only occurs with the co-speech function of the gesture. It is possible that there are even less clearly articulated uses of the rotated palms gesture in co-speech contexts in the corpus that have not been included in the current analysis.

4.2.   Orientation

The prototypical orientation of the of the rotated palms gesture at the end of the movement trajectory (the "apex") in more emblematic uses is for the palms to face towards the speaker with the hand oriented vertically, fingers upward (see Figure 1 and Figure 4). In contrast, for all of the co-speech examples in the corpus the forearms are horizontal rather than toward a vertical position. which results in the hands being oriented horizontally.

Figure 7 and Figure 8 illustrate this preference for performing this gesture with horizontal palm orientation in the corpus.

Figure 7 Pasang Maya in 140128-01 at 11:59
Figure 8 Jit Bahadur in 140127-10 at 2:01

When I have discussed the orientation of this gesture with people from Nepal the vertical orientation is usually noted as a feature of this gesture. The photograph of the young man in Figure 4 indicates that the emblematic rotated palms gesture is more likely to be performed with vertical orientation, while the examples in the corpus with the horizontal alignment are more indicative of its use as a co-speech gesture. When used as emblems without speech the hands tend to be oriented vertically, perhaps because this makes the gesture more salient, which would explain why people identify the vertical orientation, even though the horizontal is the preferred orientation in these recordings.

One final note that I would like to make about the orientation of the emblematic use of the rotated palms gesture concerns an observed example outside of the Syuba-speaking context. While walking through the narrow lanes of Patan in Kathmandu I noticed that a Nepali-Newar bilingual friend was walking towards me. Although I knew that her house was in the area, neither of us expected to run into the other at this time. Being slightly out of earshot in an open public space, my friend performed the rotated palms gesture with both hands, and a tight handshape. The orientation of the forearms was supine, but the hands were pointing downwards - the trajectory being nothing more than a rotation of the forearms from the rest position at the side of her body as she walked. The meaning in this context was to express an interrogative proposition along the line of 'where are you going?' or 'what brings you to this place?'. The downward orientation indicated that this gesture was a private interaction in a public space. Although only a single token, and an anecdotal one at that, it indicates that the upwards

verticality of the emblematic form can be manipulated and it is, in fact, the handshape and rotation trajectory which are more important.

4.3.   Handedness

In section 2 I suggested that a prototypical performance of the rotated palms gesture involves the use of both hands. Indeed, I refer to this gesture as the 'rotated palms' (plural) gesture. Two handed performance is not the default in all linguistic or cultural areas where this gesture is a noted part of the repertoire.

When we look at performances of the gesture in the corpus we see that there are tokens where the gesture is performed with one hand (Figure 9), and tokens where it is performed with two hands (Figure 10). Of the five participants who use the rotated palms gesture in this corpus, two people (Karma and Jit Bahadur) exclusively used a one-handed version (total ten tokens), both of whom used their right hand. Two people (Pasang Maya and Larkel) exclusively used two-hands (total five tokens).

Figure 9 Jit Bahadur in 140127-10 2:01
Figure 10 Larkel in 141010-02 3:40

The only participant to use both a one-hand and a two-handed variant was Sangbu. In Figures 11 and 12 we see Sangbu perform both the one and two handed versions. The examples in these Figures are in such close proximity that the left hand does not return to a rest position after the gesture in Figure 11, but only moves down slightly before moving into the gesture in Figure 12.

Figure 11 Sangbu in 141022-02 5:04
Figure 12 Sangbu in 141022-02 5:05

Sangbu is also the only participant to use his left hand in a one-handed performance of the gesture. Of the nine tokens of Sangbu using a rotated palms gesture, only the one in Figure 11 was performed one-handed. What is important is that it demonstrates that both in the repertoire of an individual, and across the whole group, neither the singled-handed nor double-handed performance is uniformly preferred.

For all participants where multiple recordings are analysed in this corpus, these recordings were made sequentially in one location. Therefore, the preference for either one or two handed forms may be an effect of the posture or particular social context of a recording. Note, for example, in Figures 5 and 6 that Karma is sitting in an asymmetrical posture where one hand rests lower than the other, while in In Figure 9 Jit Bahadur is toying with a small twig in his left hand, and gesturing with his right. As these are the only recordings we have with both of these men, it is unclear if the position of their left hand influences the preference for gesturing with the right hand in these situations only, or if they are doing something else with their left hand because they prefer to gesture with only one hand.

It should also be noted that for participants who used two hands, both hands were not always equally extended at the apex of the stroke. Observe the performance of the two-handed rotated palms gesture by Pasang Maya in Figure 7 (§4.2) (140128-01 11:59). The thumb and index figure of the right hand are more fully extended away from the palm. The trajectory of the rotation is also slightly larger. Although two-handed performances are considered be preferred in the emblematic use of the rotated palms gesture, there appears to be variation, some of which may be due to individual speakers, or specific interactional scenarios.

4.4. Trajectory

The rotation of the forearms is a key feature of this gesture in all uses. Speakers may move their hands upward and even slightly outward from the body from a rest position, or may simply rotate the hands from the rest position or previous gesture hold. Figure 13 and Figure 14 are two still from Sangbu discussing life in the village in the days of his childhood (141022-03, 5:50). In Figure 13, at 5:50.395, Sangbu is holding a two-handed gesture that represents the bounded event that he is discussing. In Figure 14 (5:50.535) 140ms later, as part of the same gesture phrase, Sangbu has moved into the rotated palms gesture, with almost no change in position of his arms.

Figure 13 Sangbu 141022-03 5:50.395
Figure 14 Sangbu 141022-03 5:50.535

A similar lack of movement of the arms, in this case from the rest position, can be seen in Figures 7 and 8 (§4.2). Examples like these demonstrate that while rotation is a key feature of the performance of this gesture, any excursion away or upwards is not as crucial, but can occur.

4.5. Summary

Table 2 provides a summary of the variation in handshape, orientation, handedness and trajectory of the rotated palms gesture. For handshape (§4.1), the difference between 'tight' or 'loose' curling of the three outer fingers into the palm and the extension of the thumb and index finger are qualitative observations. 'Tight' indicates that the middle, ring and pinky finger were bent at the second knuckle as well as at the first knuckle, to give the curled effect, and the thumb and index finger were uncurled. What is important to remember though is that each of the gestures includes this handshape to some degree.

For orientation (§4.2), all recorded performances in this collection involve the forearm held horizontally at the apex of the gesture, however emblematic use has also been observed with the elbow more bent and the forearm oriented vertically. Handedness can vary between one-handed or two-handed (§4.3), although speakers generally prefer one or the other. The key trajectory feature (§4.4) shared by all performances of the gesture is a rotation of the forearm(s) and palms. Just as there is variation in how tightly the fingers are held, there is variation in whether the forearm and hand rotate with a movement that takes the forearm away from the rest or previous hold through a flexion of the elbow, or whether the rotation occurs directly from the rest point, or hold of the last gesture in a phrase.

Speaker	Clip	File	Timecode	Handshape		Orientation		Handedness		Trajectory	
				Tight	*Loose*	*Hor.*	*Vert.*	*1*	*2*	*Excursion & Rotation*	*Rotation only*
Karma	1	140123-02	2:28		X	X		X			X
	2		2:30		X	X		X		X	
	3	140123-03	3:46		X	X		X		X	
	4		3:53	X		X		X			X
	5		3:57		X	X		X			X
	6		4:06	X		X		X			X
	7		5:16	X		X		X			X
	8		7:35	X		X		X		X	
	9	140123-04	0:25		X	X		X		X	
Jit Bahadur	10	140127-10	2:01		X	X		X			X
Pasang Maya	11	140128-01	10:59	X		X			X		X
	12	140128-02	6:01		X	X			X		X
	13		6:41		X	X			X		X
	14	140128-03	7:48	X		X			X	X	
Larkel	15	141010-02	3:40		X	X			X	X	
Sangbu	16	141022-02	4:20		X	X			X	X	
	17		4:23		X	X			X	X	
	18		5:04	X		X		X		X	
	19		5:05	X		X			X	X	
	20	141022-03	1:11		X	X			X		X
	21		2:21	X		X			X	X	
	22		5:50		X	X			X	X	
	23		6:53		X	X			X	X	
	24		7:37		X	X			X	X	

Table 2 Summary of the formal properties of tokens included in this analysis

The key features are the handshape and the forearm rotation. This is also what connects the two-handed performance of the gesture in Nepal with the one-handed performance in Southern India, and the vertical emblematic use across Nepal with the horizontal use in the co-speech examples in this corpus. Within these co-speech uses, however, there is a great deal of variation as to whether the gesture is performed with a tight handshape, or a looser arrangement of the fingers, and whether the rotation of the hands also includes a movement excursion away from the rest position or previous gesture hold. Some of this variation is linked to the function of gesture, as described in the next section.

5. Function of the rotated palms gesture

There are three distinct, but closely related functions of the rotated palms gesture in this corpus, all of which are tied to the gesture's role as a marker of interrogativity. The first is use with utterances that have an interrogative grammatical structure, where the gesture indicates a rhetorical effect (§5.1). The second is use with utterances that are not grammatically interrogative, where it can indicate uncertainty or a hypothetical (§5.2). The third is use independent of a spoken utterance (§5.3). Although this final usage type occurs independent of speech, the examples from the corpus are still clearly related to the spoken context, and therefore share properties with both the emblematic and co-speech uses of this gesture family.

In this section examples include a still image of the apex of the stroke (after the rotation of the palms) along with the utterance, which is interlinearised and translated. Above the example preparation (~~~), stroke/hold (***) and recovery (-.-.-) are illustrated.[9]

5.1. *Use with interrogative utterances*

The rotated palms gesture can be used with an utterance that has an interrogative grammatical structure. Examples of the rotated palms gesture in the corpus that co-occur with an interrogative are found with content questions, as well as one example of a polar question, which is formed with a tag. Co-occurrence with an interrogative structure is usually for rhetorical questions where no answer is expected.

Example (1)(Figure 15) is from the story of an old woman, who lives alone and has no food. In this section of the narrative Pasang Maya is voicing the woman's thoughts about her predicament. The gesture is small, and the index fingers are not clearly extended. The gesture is performed performed twice, both times in the proximity of the interrogative pronoun. Figure 15 is of the first performance of the gesture.

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[9] These are the same annotation conventions as used in Kendon (2004, see p. 114).

Figure 16 Pasang Maya 140128-02 at 6:01

(1)   ~~~~~~~********.-.
        ŋà   *tɕí*   *sà-ndi*
        1s   what eat-NOM
        'What do I eat?'
        (140128-02 6:01)

The woman in the story does not expect her interlocutors (two young women who have come to visit) to answer, and indeed neither reply. Instead, the question, and the accompanying gesture, are part of a long litany of the woman's woes, a rhetorical illustration of the futility of her situation. The alignment of the stroke of the gesture with the interrogative pronoun is common; see also Larkel using the same gesture with the same temporal alignment in 141010-02 03:40.

      This temporal alignment is not the case for all questions with interrogative pronouns. Example (2) (Figure 16) comes from the same narrative as Example (1), just 40 seconds later. Pasang Maya is still talking as the woman, who is sad to have no one to share her limited food with. Here, the interrogative pronoun is not within the scope of the gesture phrase

Figure 16 Pasang Maya 140128-02 at 6:41

(2)   ~~~~~~~~~~~~~~~~~~~~~~~~*******

       sú-la-ŋ   *tér-ti*   *mè-aŋ*   *èke*

       who-DAT-also give-PFTV   NEG-also   COP

       'who to give it to? There is no one.'

       (141028-02 06:41)

After the gesture, her hands don't return to their previous rest state, but remain facing upwards, with all fingers curled inwards and her hands resting on her crossed legs. There are insufficient tokens of this kind to analyse whether this is a regular pattern for this kind of interrogative pronoun construction, or an idiosyncratic token with the performance of the gesture coming as an afterthought to the spoken question.

The corpus also contains one example of the rotated palms gesture with a polar question. In Example (3) (Figure 17) a jackal (traditionally a cunning character in Nepali folktales) is goading an old man into believing that the jackal has been industriously lighting fires in the river.

Figure 17 Pasang Maya 140128-03 at 7:48

(3)   ~~~~~~~~~~*************************
  tàa   koɕol-aŋ   darilo mènɖo   mìŋe
  now   river-also   fire   NEG.go   COP.NEG
  'You can't light a fire in a river, can you?'
  (140128-03 07:48)

In this example, the gesture is held across the whole utterance, and is not just performed to align with the interrogative tag. The hold on this gesture is much longer than any example we've seen so far, emphasising this riddling question is a key point in the story, where the jackal forces an old man to concede that this is a foolish proposition. Note that not only is the hold longer than in Examples (1) and (2), but the handshape is also more prominent. The use of more clearly articulated hands and a further rotation appear to have an emphatic function in examples like (3).

5.2.   *Use with non-interrogative utterances*

Not all co-speech performances of the rotated palms gesture occur with interrogatives. In this section I discuss examples of its use with non-interrogative grammatical structures. In these uses the rotated palms gesture indicates to the listener that the speaker is either posing a hypothetical or is uncertain about the content of the utterance.

Example (4) (Figure 18) is not a hypothetical, but indicates that with the passing of time, Sangbu's recollection of events has taken on a degree of unreality. The return phase at the start is a previous rotated palms gesture that Sangbu held with his left hand, from which he moves that hand directly into the preparation for this gesture.

Figure 18 Sangbu 141022-02 at 05:05 (also Figure 13 above)

(4)   ~~~~~~************.-.-.-.-.
              tàɕe   *mílam* *tɕòŋra* *kàl-si*
              now   dream like   went-PST
              'now, that is like a dream'
              (141022-02 05:05)

The long hold in Example (4), indicates that this reflection on events serves as a conclusion to an extended memory, the gesture emphasises, and is held across, Sangbu's summary of his feelings about those events. Again, as in Example 3 (§5.1) the prolonged hold appears to add more emphasis.

In this utterance the rotated palms gesture is not used as a clear interrogative. It serves to reduce the speaker's commitment to the propositional content. This is similar to an extension of one of the signs in Indo-Pakistani sign language, where a variation on the rotated palms gesture marks a lack of certainty, possibly as an extension of the emblematic sense of 'what to do/say?'

5.3. *Use in alternation with speech*

There are three examples in the corpus of the use of the rotated palms gesture that are not aligned with spoken content. The relationship between the gesture and speech in the examples in this section serves as a bridge between the co-speech and emblematic uses of the rotated palms gesture.

In the first example, the gesture apex occurs just before the spoken context (5) (Figure 19), with the hand returning to rest after the first word of the utterance.

Figure 19 Karma 140123-03 at 03:53

(5)   ~~~~~*****.-.-.-.-.
           hazurbazur   *mà-thúŋ*
           market(Nep)   NEG.PST-see
   'did not see the market'
   (140123-03 03:53)

This is followed by two more utterances performed with the rotated palms gesture (at 3:57 and 4:06), which also outline what the community were deprived of. In these subsequent utterances there is full overlap in the performance of the gesture and the speech. Here, the speaker is using the gesture in a sense similar to emblematic use asking the existential question 'what to do?' When there are no markets, hospitals or medicines available, the futility of the situation is marked by the use of the gesture. This is an extension away from the spoken content being a question, to the spoken content being a declarative, with a gesture acting as a meta-commentary marking interrogativity and speculation.

The second example is during Karma's description of life in the village when he was young. There is a moment where he pauses and is trying to think of something else to say. The apex of the rotated palms gesture (3:47.790) is 620 milliseconds before he asks 'what to say?' (3:48.410). By time he begins to speak again the hand has returned to a rest position. Both the gesture and the speech appear to perform the same function,

the gaze to the right of camera, where no one was positioned, results in a lack of eye contact with anyone during both the performance of the gesture and the spoken utterance indicates that neither are intended to be answered.

Figure 20 Karma 140123-03 at 03:53

(6)   ~***-.-.
    [   ]tɕí   là-na
                    what   say-COND
    'what to say?'
    (140123-03 03:46)

Sangbu also uses the gesture with an utterance in which he ponders what to say next (141022-03 5:50), although in that example the speech and gesture overlap in their timing. In Example (6) (Figure 20) there is no temporal overlap, with the rotated palms gesture operating independently, before the speaker decides to also ask the question.

    The final example (Example 7, Figure 21) is from the same recording of Karma. The apex of the gesture (7:36.416) is 1200 milliseconds before the start of the spoken content (7:37.616). In this example though, the spoken content continues the narrative. Karma is talking about how easy it now is to travel to Kathmandu. He stops to ponder before deciding that it is possible to reach the city in one day.

Figure 21 Karma 140123-03 at 07:35

(7)   ~~***.-.

                ɲíma   gík-la
           day   one-LOC
     'in one day'
     (140123-03 07:35)

Here, the gesture is operating as an emblem, occurring independent of speech, marking that the speaker is unsure of what to say next. The proximity to speech means that it still marks the following utterance to an extent as having reduced certainty, or coming after a period of consideration, but the lack of overlap in the speech and gesture means that it is not operating as directly on the scope of the spoken content as we saw in §5.2 for non-interrogative utterances.

      In the background section I outlined two emblematic uses of the rotated palms gesture; the first giving a sense of 'what to do?' and the second 'what are you doing?' This section indicates that there is also a use that means 'what to say?' which can co-occur with an utterance of the same, occur prior to utterances of the same (6) or occur prior to an unrelated utterance (7). It is possible that it can also occur in the absence of speech, perhaps in response to a direct question where the speaker is unsure of an answer, although such a use is not illustrated in the corpus. That this usage is emblematic, but derives from the performance of this gesture in the proximity of speech, is a further illustration that the division of emblematic and co-speech gestures is

somewhat arbitrary (c.f. Kendon 1995, 2004, pp. 177-184 for Italian and Seyfeddinipur 2004 for Iranian).

6. Conclusion

The key formal properties of the rotated palms gesture are forearm supination with fingers splayed and the thumb and index finger extended more prominently than the other fingers. In the Syuba community both single- and two-handed performances have been observed. While the key formal features remain consistent, functionally it can be considered as a family of related uses, with an underlying theme of interrogativity. At one end we have the stable emblematic functions, which can be seen across the larger South Asian area. These emblematic functions are most typically discussed as 'what to do?' particularly when accompanied by a shrug, and 'where are you going?' particularly when accompanied by an eyebrow raise or upward head flick; the first always considered to be rhetorical, the second can be answered with a gesture or not at all if the distance is too great. When used with speech, it is possible for the rotated palms gesture to occur with both grammatically interrogative and declarative utterances. Here it has a pragmatic function (as per Kendon 2004, p. 225); with interrogatives it helps indicate the rhetorical nature of the question, and with non-interrogatives it adds a level of uncertainty.

Syuba is by no means the only language where speakers use the rotated palms gesture. This gesture is found across the Indian subcontinent. With this analysis of a corpus I have provided a scaffold for future discussion of this feature. Close analysis of Syuba has also allowed for a more nuanced analysis of the pragmatics of interrogativity in this language and related languages, allowing us to observe interrogativity as an interactional move beyond those utterances with grammatical question structures.

There is also evidence of similar rotated palm gestures used to mark interrogative speech acts in other linguistic areas as well. I mentioned the shrug found in the European context in Section 1. Kendon (1988, p. 146) also notes that in Warlpiri signing an interrogative sign is performed with forearm supination, with the thumb and index finger fully extended and separated in a manner quite similar to what is illustrated in Figure 4. The family of the rotated palms gestures in the South Asian area may illustrate an action schema that is also drawn upon in other language families. Kendon (2004, p. 360) suggests that pragmatic gestures may have their roots in more concrete representative gestures (what Bressem & Müller 2014 refer to as 'action schema'). The rotated palms gesture, and similar gestures in other linguistic areas including the Warlpiri 'interrogative', the shrug, and Kendon's PL gestures, may be a candidate for an action schema where the common action is an outward rotation that "reveals" the hands, and by extension indicating that the speaker does not show any willingness for engagement in action. This rotation is the point of difference with what has been discussed for other open hand supine gesture types, where the hand is ready to engage in receiving or offering. Showing unwillingness to take action can manifest in the non-

committal shrug, or as in the Nepal context, indicate ceding the conversation to an interlocutor through a question.[10]

On a more general note, I hope that this analysis has provided some motivation to colleagues who work on the documentation and analysis of languages of the South Asian area to see the potential for analysis of the gestural component of the data they have collected. The Syuba materials analysed in this paper were not collected explicitly for analysis of the rotated palms gesture, or any particular feature, but have offered a wealth of insight into this particular gesture. Given the dearth of knowledge regarding the use of gesture in this part of the world, there is a great deal to be learned from the corpora and knowledge of linguists working in documentation and description of the world's linguistic and gestural diversity.

7. Acknowledgements

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