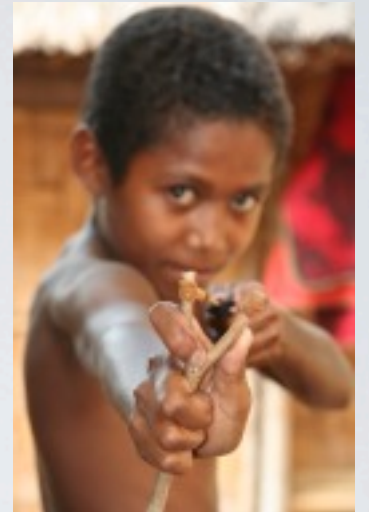


EMOTION AND COGNITION PREDICATES IN ABUI



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OUTLINE OF THE PAPER

Abui emotion and cognition predicates

- Semantic alignment
- Bodyparts involved
- Morphosyntactic properties

Emotion predicates in Eastern Indonesia

- Klamer 2001, Musgrave 2006, Dix Grimes n.d., Schapper 2011, ...

Emotion and cognition metaphors

- Maalej 2004, Lakoff and Johnson 1999, Kövecses et al. 2009, Levinson 2006, Shaver et al. 2001

Language contact in Wallacea and New Guinea

- Enfield 2003, 2008; Ross 1996, 2007; Mithun 2007; Matras 2009
- Matriarchal societies - type of language contact and its consequences (Reid)

PUZZLE AND OUTLINE OF THE ARGUMENT

- Abui and some neighboring languages have a rich body-part based set of emotion and cognition predicates
- Similar body-part based predicates have been reported elsewhere in E Indonesia as well.
- Body-part based emotion predicates are claimed as one of the linguistic area defining features (Musgrave 2006), but at the same time, body-part based metaphors for describing emotions are common worldwide (Levinson 2006,)
- Papuan languages have been reported to have a wealth of body-part based predicates to describe emotions and cognition, yet the WMP languages have much poorer inventories
- What kind of language contact pattern could replicate them in the Wallacea area (Klamer , Musgrave, Dix Grimes n.d.)
- Genetic evidence: matrilocal and matrilineal early Austronesian societies ([Lansing and others](#))
- Semantic convergence - metatypy covering large area - must identify which body parts are commonly used and how similar are they in neighbouring languages and where is the greatest diversity ([Ross, Enfield](#)), Role of women in language contact, linguistic complexity ([Dahl and others](#))

EMOTION AND COGNITION PREDICATES IN ABUI (PAPUAN, ALOR)

ARGUMENT MARKING IN ABUI

- a. *na a-ruidi*
[1sA]_A 2s.PAT-wake.up.CPL
'I woke you up' (A-PAT)
- b. *Fanmalei no-k yai*
[name]_N 1s.REC-THROW laugh.CPL
'Fanmalei laughed at me' (N-REC)
- c. *di palootang mi ne-l bol*
[3A]_A rattan take 1s.LOC-GIVE hit
'he hit me with a rattan (stick)' (A-LOC)
- d. *Simon di noo-dik*
[name 3A]_A 1s.GOAL-prick
'Simon is poking me' (A-GOAL)

ARGUMENT MARKING IN ABUI

- a. *ri oro luut-i*
[2PA]_A DST dance.CPL-PFV
'you were dancing over there' (A)
- b. *na-kaai*
1S.PAT-drop.CPL
'I stumbled' (PAT)
- c. *no-bui*
1S.REC-short
'I am short' (REC)
- d. *he-beeka*
3.LOC-bad
'it is bad' (LOC)
- e. *noo-lila*
1S.GOAL-hot
'I am hot, I feel hot' (GOAL)

PERSON MARKING ALTERNATIONS IN ABUI

	verb	PAT	REC	LOC	GOAL	BEN
a.	<i>fanga</i>	<i>ha-fanga</i>	<i>do-fanga</i>	<i>he-fanga</i>	<i>noo-fanga</i>	<i>nee-fanga</i>
	‘say’	‘request him’	‘ask for him- self’	‘say it’	‘scold me’	‘say for me’
b.	<i>liya</i>	<i>ha-liya</i>	<i>do-liya</i>	<i>he-liya</i>	<i>noo-liya</i>	<i>nee-liya</i>
	‘fly’	‘shoot it’	‘fly on his own’	‘fly on it’	‘fly to me’	‘fly for me’
c.	<i>faaling</i>	<i>*ha-faaling</i>	<i>do-faaling</i>	<i>he-faaling</i>	<i>noo-faaling</i>	<i>nee-faaling</i>
	‘listen’		‘listen for himself’	‘listen to it’	‘listen to me’	‘listen for me’
d.	<i>wik</i>	<i>ha-wik</i>	<i>no-wik</i>	<i>he-wik</i>	<i>noo-wik</i>	<i>nee-wik</i>
	‘carry’	‘carry him’ (child)	‘carry for myself’	‘carry it’	‘let me carry’	‘carry for me’
e.	<i>rumai</i>	<i>ha-rumai</i>	<i>no-rumai</i>	<i>he-rumai</i>	<i>noo-rumai</i>	<i>nee-rumai</i>
	‘strong’	‘strengthen it’	‘I feel strong’	‘it is strong’	‘rely on me’	‘strong for me’
f.	<i>fahak</i>	<i>*ha-fahak</i>	<i>*ho-fahak</i>	<i>he-fahak</i>	<i>noo-fahak</i>	<i>nee-fahak</i>
	‘embrace’			‘embrace it’	‘hug me’	‘hug for me’

SEMANTIC FEATURES OF RELEVANCE FOR ABUI AGREEMENT

type	feature	abbreviation
a. referential	specificity	[±SPC]
b. actor	instigation	[±INST]
	control	[±CTRL]
	volition	[±VOL]
c. undergoer	affectedness (potential change)	[±AFF]
	individuation	[±IND]
	change (non-quantised)	[±CHANGE]
	change of state (quantised)	[±COS]

SEMANTIC CHARACTERISTICS OF ABUI ARGUMENTS

feature	A	PAT	REC	LOC	GOAL	BEN	N
specificity	+	+	+	+	+	+	±
control	+	—	—	—	—	—	—
volition	+	—	—	—	—	—	—
instigation	+	±	±	±	±	±	—
affectedness	—	+	+	+	+	+	—
individuation		+	+	—	+	—	—
change	—	+	+	+	—	—	—
change of state	—	+	—	—	—	—	—

Kratochvíl 2011:627

ALOR-PANTAR ALTERNATIONS IN PERSON MARKING

language	O/U sets	alternation	function
Adang	3	+	animacy
Teiwa	1~2	+	animacy
Abui	5	+	affectedness, individuation
Kamang	7	+	affectedness?
Klon	3	+	affectedness
Kula	1~2	unclear	unclear
Sawila	2	-	n.a.
Western Pantar	1	+	affectedness ~ volition

Coordinated experimental approach (Abui, Adang, Kamang, Sawila, Teiwa, Western Pantar)

Kratochvíl et al. 2011

SEMANTIC FEATURES KNOWN TO AFFECT ARGUMENT ENCODING (SPLIT S, DOM, ETC.)

	semantic feature	examples
a.	Stative/dynamic	Colloquial Guaraní, Caddo (Mithun 1991), Loma (Arkadiev 2008) Taba, Dobel (Klamer 2008)
b.	Telicity	Georgian (Arkadiev 2008)
c.	Agency	Lakhota (Mithun 1991)
d.	Control	Central Pomo, Mohawk (Mithun 1991)
e.	Volitionality	Bats, Tabassaran (Arkadiev 2008) Kambera, Larike (Klamer 2008)
f.	Affectedness	Central Pomo, Caddo, Mohawk (Mithun 1991)
g.	Change of state	Tanglapui, Klon (Klamer 2008)
g.	Patientivity	Western Basque (Aldai 2008)

Kratochvíl 2011:597

'BODY-PART' BASED CONSTRUCTIONS

circumstance/stimulus/theme

experiencer

- a. *na piyei-l-a-ti na-nooting Kalangfat yaa ba*
 [1sA]_A dream-GIVE-DUR-PHSL [1s.INAL-spirit]_N [name]_N go QT
 'I just dreamt I (my soul) went to Kalabahi' (N-N)
- b. *Simon seng ha-tána da-yongfi*
 [name money]_N [3.INAL-hand]_{PAT} 3I.PAT-forget.CPL
 'Simon forgot where he put his money' (N-PAT)
- c. *o-mi kul-te nee-beeka*
 2s.REC-IN must-INCH 1s.BEN-pity
 'you certainly pity me' (REC-AUX-BEN)

Q: How productive is this? What does it all really mean?

Kratochvíl 2011:619

DOUBLE-PREFIXED VERBS IN ABUI

2 U prefixes + *mi* 'inside'

- a. *na* *Simon* *hee-no-m-pang*
[1sA]_A [name]_{BEN} 3.BEN-1s.REC-IN-reflect
'I am thinking for Simon' (to do something for him) (A-BEN-REC_I)
- b. *na* *Simon* *he-no-m-pang*
[1sA]_A [name]_{LOC} 3.LOC-1s.REC-IN-reflect
'I am thinking about Simon' (Simon is in my thoughts) (A-LOC-REC_I)
- c. *hen* *hee-na-minang* *ba na miyei*
[that]_{BEN} 3.BEN-1s.PAT-remember SIM 1sA come.CPL
'I remembered that and came' (BEN-PAT_I)

Q: How productive is this? What does it all really mean?

DOUBLE-PREFIXED VERBS IN ABUI

	case pattern	example	attested verbs
a.	N-N	(26)	in, on, resemble
b.	N-GOAL	(27a)	break on sb., engulf sb. (smoke)
c.	N-LOC	(27b)	put in st., belong to sb., engulf st. (smoke)
d.	N-REC	(27c)	own st., get soaked by st. (rain)
e.	N-PAT	(27d, 27e)	hurt (body part), need to urinate, fall into st.
f.	REC-LOC	(28a)	feel like, angry at
g.	LOC-GOAL	(28b)	sated (of food)
h.	LOC-REC	(28c)	miss, fed up with
i.	BEN-PAT	(28d)	smell because of st.
j.	GOAL-PAT	(28e)	lean on sb., fall on sb., bend over sb.
k.	LOC-PAT	(28f)	lean on, fall on st., land at, smell of st., sick of
l.	REC-PAT	(28g)	smell on sb., rub, calm down, be given to marry

emotion,
cognition,
character

Q: How productive is this? What does it all really mean?

DOUBLE-PREFIXED VERBS IN ABUI

	case pattern	example	attested verbs
a.	[A]-N-REC _I	(29a)	productive (reflexive/middle)
b.	[A]-REC _I -GOAL	(29b)	productive (middle)
c.	[A]-REC _I -PAT	(29c)	productive (middle)
d.	[A]-BEN-REC _I	(30a)	cognition and emotion verbs
e.	[A]-LOC-REC _I	(30b)	cognition and emotion verbs
f.	[A]-BEN-PAT _I	(30c)	cognition and emotion verbs
f.	[A]-LOC-PAT _I	(30d)	cognition and emotion verbs
g.	[A]-BEN _I -PAT _I	(31a)	cognition and emotion verbs (pragmatic overtones)
h.	[A]-LOC _I -PAT _I	(31b)	cognition and emotion verbs (pragmatic overtones)
i.	[A]-GOAL _I -PAT _I	(31c)	cognition and emotion verbs (pragmatic overtones)
j.	[A]-REC _I -PAT _I	(31d)	cognition and emotion verbs (pragmatic overtones)

Q: How many? What restrictions

Kratochvíl 2011:614

ABUI EMOTION AND COGNITION PREDICATES DATABASE

Systematic collection - using the list of emotion predicates from Schaver et al. 2001 and other collections (WordNet, SIL Semantic Domains, etc.)

- **400+ items (and growing)**, consulted with speakers, started in 2010
- **Morphological properties** - 1>2, 2>1, prefix alternations, presence of A argument, etc.
- **Syntactic properties** - 2nd argument (1, 2, 3, clause)
- **Licence** - can be used by young/grown-up/old, male-female, kin/non-kin
- **Target** - can be used to refer to young/grown-up/old, male-female, kin/non-kin

ABUI EMOTION AND COGNITION PREDICATES DATABASE

300 out of 400+ predicates include a body parts

Preliminary hypothesis

Internal body parts/organs are used to map emotions and properties

mouth-two - ‘cheat, be double dealing’

face-bright - ‘happy, cheerful’

face-turned.bad - ‘regret, ashamed’

inside-revolt - ‘reluctant, refuse’

Sensory body parts are used to map cognitive processes

ear-turn.away - ‘ignore’

eye-turned.red - ‘embarrass’

eye-mark - ‘know, understand’

eye-slip - ‘err, make a mistake (in thinking)’

ABUI EMOTION AND COGNITION PREDICATES DATABASE

- **-mi** ‘inside, internal bodyparts’
- **-rai** ‘milt’
- **-took** ‘stomach’
- **-kin** ‘guts’
- **-wea** ‘blood’
- **-ahel** ‘breath (in and out)’
- **-aking** ‘breath capacity’
- **-aakang** ‘bodily condition??’
- **-paai** ‘bodily condition??’
- **-nooting** ‘soul’
- **-pong** ‘face’
- **-ieng** ‘eye’
- **-min** ‘nose’
- **-wa** ‘mouth’ (including **-moi** **-wa** ‘voice and mouth’)
- **-wet** ‘tooth’
- **-wei** ‘ear’
- **-tang** ‘arm’
- **-toku** ‘leg’
- **-ui** ‘back’
- **-iyek** ‘butt’
- **-pikai** ‘head’
- **-mool** ‘face, expression’

BODY-PART BASED EMOTION PREDICATES IN EAST INDONESIA (KLAMER 1999; MUSGRAVE 2006; DIX GRIMES N.D.)

Musgrave 2006: Diffusion between AN and Papuan?

WMP	simple predicates (rarely body-parts)
CMP	Klamer 2002, Musgrave 2006 (found in languages without direct contact with non-AN - Kambera)
non-AN	common, various types

Contact phenomenon? > not conclusive (Musgrave 2006)

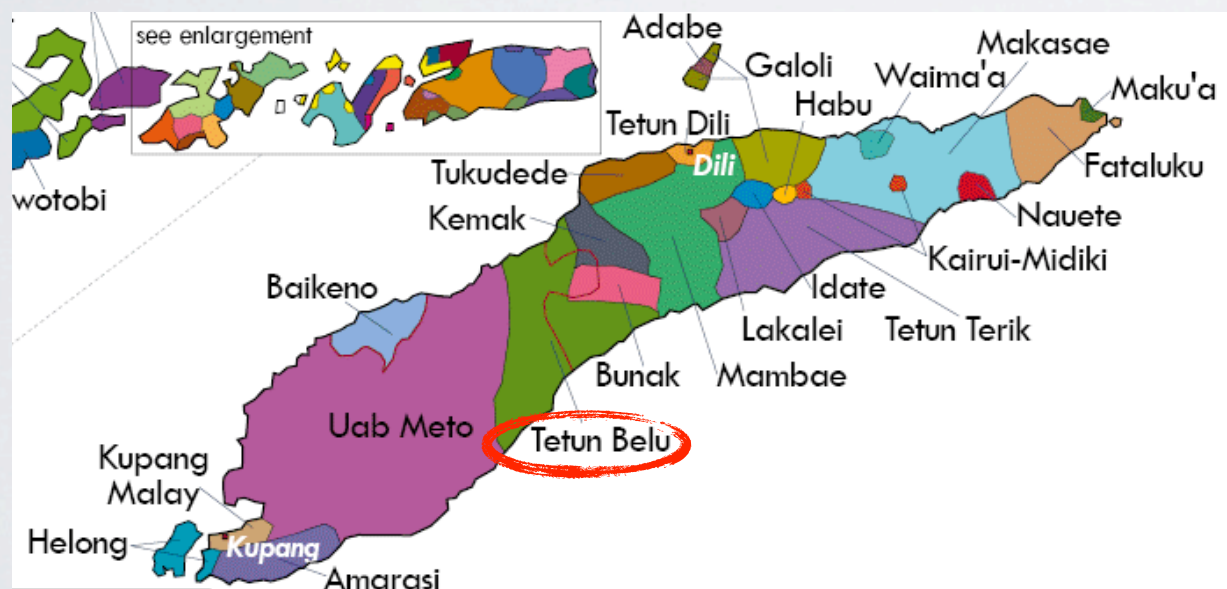
[we don't have enough data! and maybe wrong assumptions about language contact]

EMOTION PREDICATES IN TETUN (FEHAN & FOHO)

Body-part metaphors used to describe emotions

- not all emotions described with body parts (about 80%)
- *kakutak* 'brain', *neon* 'mind', *laran* 'insides', *nawan* 'breath', *ibun* 'mouth', *mata* 'eye', *ate* 'liver'

<i>kakutak</i>	<i>di'ak</i>	think well
brain	good	
<i>kakutak</i>	<i>kro'at</i>	think perceptively
brain	sharp	
<i>kakutak</i>	<i>loos</i>	think correctly, honestly
brain	sharp	
<i>kakutak</i>	<i>monas</i>	should understand but doesn't
brain	hard	
<i>nawan</i>	<i>naruk</i>	patient, thinking things through
breath	long	
<i>nawan</i>	<i>tuun</i>	no longer angry
breath	descend	
<i>nawan</i>	<i>badak</i>	quickly angry
breath	short	
<i>nawan</i>	<i>naksetik</i>	frustrated
breath	tight	



Dix Grimes n.d.

BODY-PART BASED EMOTION PREDICATES IN NON-AUSTRONESIAN LANGUAGES

COGNITIVE EVENTS IN BUNAQ (PAPUAN, TIMOR)

<i>Eme</i>	<i>da-mak</i>	<i>koen</i>	<i>niq.</i>	
mother	REFL-hear	beautiful	NEG	

‘Mother isn’t feeling well.’ [OS.07-02]

<i>Neto</i>	<i>r-ilek,</i>	<i>ni-e</i>	<i>muk</i>	<i>bare</i>	<i>muk</i>	<i>hotu-hotu</i>
1SG	REFL-listen	1EXCL-POSS	land	PROX.INAN	land	all

<i>g-o</i>	<i>lesin</i>	<i>liol.</i>
3-SRC	more	continue

‘I think that my land is better than all other lands.’ [Bk-24.042]

<i>Halali</i>	<i>ri-mil</i>	<i>ate</i>	<i>niq,</i>	<i>baqa</i>	<i>h-ua</i>	<i>gene</i>	<i>na</i>
3DU	REFL-inside	far	NEG	NPRX.INAN	3INAN-footprint	LOC	FOC

<i>h-oqon</i>	<i>besik.</i>
3INAN-do	exact

‘They two didn’t think long, (but) just did exactly as they were told.’ [Bk-4.091]

BUNAQ BODY-PART BASED PREDICATES (PAPUAN,TIMOR)

EXPRESSION	GLOSS	MEANING
WITH ALIENABLY POSSESSED NOUNS		
<i>tueq lilak</i>	alcohol crazy	‘drunk’
<i>ikan ... nuas / nuek</i>	fish stink / smell	‘stink of fish’
<i>pit saq</i>	throat dry	‘thirsty’
<i>aruq legul / rukut ...</i>	hair long / curly	‘be long-/curly-haired’
<i>eme / ama ... kereq</i>	mother / father single	‘share a mother/father’
WITH INALIENABLY POSSESSED NOUNS		
<i>g-epal koke</i>	3AN-ear deaf	‘be deaf’
<i>g-ewen buk</i>	3AN-face flower	‘be dizzy’
<i>g-ewen tomak</i>	3AN-face complete	‘be unknown’
<i>g-ewen danu</i>	3AN-face layered	‘be insane’
<i>g-iral bulu</i>	3AN-eye blind	‘be blind’
<i>gi-mil loi</i>	3AN-inside good	‘be happy’
<i>g-on laun / rono</i>	3AN-hand fast / slow	‘be good / bad workers’
<i>g-otok saqe</i>	3AN-liver ascend	‘get angry’
<i>g-otok wel</i>	3AN-liver burnt	‘be angry’
<i>gu-bul bel</i>	3AN-head wind	‘be smart’

Schapper 2010:87

BUNAQ LOANS FROM TETUN

Bunaq		Tetun	
2. <i>baruq</i>	‘bored’	< <i>baruk</i>	‘anger, bored’
<i>besik</i>	‘exact, precise’	< <i>besik</i>	‘be close’
<i>bokul</i>	‘fat, healthy’	< <i>bokur</i>	‘fat’
<i>hananu</i>	‘sing’	< <i>hananu</i>	‘sing’
<i>h-amos</i>	‘3INAN-clean (of garden)’	< <i>hamos</i>	‘clean (of garden)’
<i>koʔus</i>	‘cradle (of a child)’	< <i>koʔus</i>	‘be pregnant’
<i>mamal</i>	‘soft’	< <i>mamar</i>	‘soft’
<i>meak</i>	‘be reddish-brown’	< <i>meak</i>	‘rust’
<i>meʔi</i>	‘dream’	< <i>mehi</i>	‘dream’
<i>piar</i>	‘believe’	< <i>fiar</i>	‘believe’
<i>punu</i>	‘war, fight’	< <i>funu</i>	‘war, fight’
<i>tara</i>	‘know’	< <i>tada</i>	‘know’
<i>tekeʔ</i>	‘look at, examine’	< <i>hateke</i>	‘see’

Q: Borrowing in Bunaq seems to be much more frequent than in Alor-Pantar (more isolated, only one AN language + local Malay)

Schapper 2010:23

EMOTION PREDICATES IN TIDORE

‘In the domain of the body and its parts, we find **remarkably few loans** (cf. Section 4.3 below).

What might be expected in a situation of intense and prolonged language contact is that semantic patterns converge so that the semantics of a NMM term or expression neatly corresponds to an equivalent Tidore term or expression.

This is found, for instance, in the domain of spatial deixis where NMM is a perfect copy of Tidore (van Staden, 2000, forthcoming).

Yet, in the domain of the body there are some curious mismatches between the terms and their uses in Tidore and NMM.

For example, in many Austronesian languages the ‘liver’ is the seat of emotions, and this is also the case in various NMM expressions, for example, those relating to jealousy, happiness, nostalgia, etc. This is also not uncommon in Papuan languages.

In Tidore, however, not only the liver but also the heart serves as a seat of emotions. To have a **painful heart** (*nyinga gola*) means to be jealous, but to have a **painful liver** (*gate gola*) means to miss someone. In NMM a single expression **hati sakit** ‘sick/painful liver’ covers both.’

van Staden 2006:324

EMOTION PREDICATES IN ALAMBLAK

‘Fifteen terms in seven sub-domains of emotions are described here. The sub-domains include concepts similar to the English concepts ‘happy’, ‘sad’, ‘shame’, ‘anger’, ‘fear’, and ‘desire/love’. Several of the Alamblak emotion concepts are referred to by body-part images. The body-part images for emotions utilize the **heart**, **the thoughts/inner person**, and the **liver**.’

‘Kenneth McElhanon (1975, 1977) has done extensive studies on body image expressions in many languages of the New Guinea area and elsewhere. He has pointed out that **expressions of this type involving body parts are not to be dismissed as simply idioms**. He has determined, through extensive field work that **experiences that are identified with body parts are thought to reflect a duality**. There is a physical response in the locus of a body part that reflects a psychological experience in the soul of the person.’

Bruce and Bruce 2010:56-57

EMOTION PREDICATES IN YÉLI DNYE

In Yéli Dnye it is primarily the throat, and perhaps more broadly the neck. The absolutive form, *nuu* ‘throat’, normally collocates with positive affect, the locative form *nódo*, which means both ‘at the throat’ and ‘at the neck’, collocating with both positive and negative affect.

- a. *a nuu u tpile.*
 my throat his/its/her thing
 ‘A thing I really like’ (lit. ‘My throat its thing’)
- b. *a nuu u kópu ngê dê pyódu*
 my throat its word/matter ERG 3s/plImmPastPunct(preN) cause become
 ‘I am really fond of it’ (lit. ‘Its thing has made my throat’)
- a. *yi kópu a nódo ka t:a*
 that thing my neck Cert3sContHab hanging
 ‘That thing is hanging at my neck, i.e. I feel bitter about it’
- b. *yi kópu a nódo ka tóó*
 that thing my neck Cert3sContHab sitting
 ‘That thing is sitting at my neck, i.e. I know all about it’

Levinson 2006:236-237

BODY-PART BASED EMOTION PREDICATES OUTSIDE THE AREA

EMOTION PREDICATES IN CHINESE

- a. *chui-tou sang-qi* (hang.down-head lose-gas[energy]) ‘become dejected and despondent; hang one’s head in dismay’
- b. *hui-tou tu-lian* (gray/dusty-head earthy-face) ‘(*dial.*) dejected; despondent; depressed’
- c. *ji-shou cu-e* (aching-head knitted-forehead) ‘with aching head and knitted brows — frowning in disgust; with abhorrence’
- d. *yang-shou shen-mei* (raise-head stretch-brows) ‘hold one’s head high; feeling proud and elated’
- e. *qiao-shou qi-zu* (raise-head lift-feet) ‘raise one’s head and stand on tiptoe expecting; crane one’s neck and stand on tiptoe in pleasurable expectation; eagerly look forward to’
- f. *yan-jing qi-zhong* (extend-neck lift-heels) ‘crane one’s neck and stand on tiptoe; eagerly look forward to; anxiously expect’

EMOTION PREDICATES IN CHINESE

- a. *lian-re* (face-hot) 'feel ashamed'
- b. *lian-hong* (face-red) 'blush with shame or embarrassment'
- c. *hong-lian* (redden-face) 'blush for being shy; blush with anger; get angry'
- d. *beng-lian* (stretch-face) 'pull a long face; look serious or displeased'
- e. *ban-lian* (harden-face) 'straighten one's face; put on a stern expression'
- f. *shang-lian* (up.to-face) 'blush for drinking wine; grow dizzy with success or praise'

EMOTION PREDICATES IN CHINESE

- a. *fa pi-qi* (expand spleen-gas) ‘lose one’s temper; get angry; flare up’
- b. *dong gan-huo* (move liver-fire) ‘get angry; flare up; fly into a rage’
- c. *gan-chang yu-lie* (liver-intestines about.to-split) ‘be heartbroken; be deeply grieved’
- d. *gan-chang cun-duan* (liver-intestines inch-cut) ‘be heartbroken; be deeply grieved; overwhelmed by grief; sorrow-stricken’
- e. *chou-chang bai-jie* (worried-intestines hundred-knots) ‘with anxiety gnawing at one’s heart; weighed down with pent-up feelings of anxiety or sadness’
- f. *huichang jiu-zhuan* (intestines[ileum] nine-twists) ‘with anxiety gnawing at one’s heart; weighed down with grief’

EMOTION PREDICATES IN CHINESE

- a. *dan-lie hun-fei* (gallbladder-split soul-fly) ‘be frightened out of one’s wits’
- b. *wang-hun sang-dan* (dead-soul lost-gallbladder) ‘be scared out of one’s wits; be half dead with fright’
- c. *wen-feng sang-dan* (hear-wind lose-gallbladder) become terror-stricken, panic-stricken, or terrified at the news’
- d. *dan-zhan xin-jing* (gallbladder-tremble heart-startle) ‘tremble with fear; be terror-stricken’
- e. *dan-po xin-jing* (gallbladder-break heart-startle) ‘be scared to death’

BODY-PART BASED METAPHORS FOR EMOTIONS

ORIGIN OF EMOTIONS AND EMBODIMENT

‘...emotional feelings are appraisals of what is occurring internally and externally, taking into account bodily events and the external environment. Emotions are regulatory systems, while emotional feelings are perceptions about such emotions (also emotion self-perception). Just as humans have evolved cognitive mechanisms that function to predict the behavior of other creatures (Thompson & Derr, 2000), they have also evolved cognitive mechanisms to predict their own behavior. Emotion self-perception is such an adaptive mechanism for predicting one’s own future behavior.’ [Sokol and Strout 2006:120]

‘The mind is not merely embodied, but embodied in such a way that our conceptual systems draw largely upon the commonalities of our bodies and of the environments we live in. The result is that much of a person’s conceptual system is either universal or widespread across languages and cultures.’ [Lakoff and Johnson 1999:6]

EVOLUTION OF EMOTION METAPHORS

‘Emotions are reliable predictors of one’s impending behavior. **Emotion metaphor clearly extends beyond the individual, and serves to communicate such emotions to others. Emotion metaphor seems strongest in communicating the intensity of emotions:** for example, think back to the example of anger—she was *boiling* with anger. With such phrasing, an outside observer can gauge the intensity of the anger, and steer clear or be on guard. In this case, emotion metaphor becomes another external cue about a particular situation. Thus, we propose that **emotion metaphor evolved as a heuristic for communicating the intensity of one’s emotions to others.**’

If this is correct, then emotion metaphors are a crucial tool in contacts among strangers and the systems have to be largely synchronized to avoid conflicts if the interaction is long-lasting.

Sokol and Strout 2006:121

BODY-PART BASED METAPHORS FOR EMOTIONS

‘Kövecses points out that emotion concepts will generally evoke content relating to all aspects of experience, including the social, cognitive and linguistic content, an experience that he says is organized as a stable configuration.

...some aspects of emotion language and concepts are related to the body and thus are **universal**, but the differences in emotion language and concepts that are not identified as universal can be explained by examining differences in ‘cultural knowledge and pragmatic discourse functions that work according to divergent **culturally defined rules or scenarios**’

Q1: shared core of emotion metaphors > share human biology (related to bodily reactions)

Q2: culturally defined emotion metaphors > (borrowable?)

Sokol and Strout 2006:115-116

EMOTION PREDICATES AS LANGUAGE CONTACT EVIDENCE?

DIACHRONIC CONSEQUENCES OF LANGUAGE CONTACT

Trudgill (2010) points out that a number of variables must be taken into consideration, most notably:

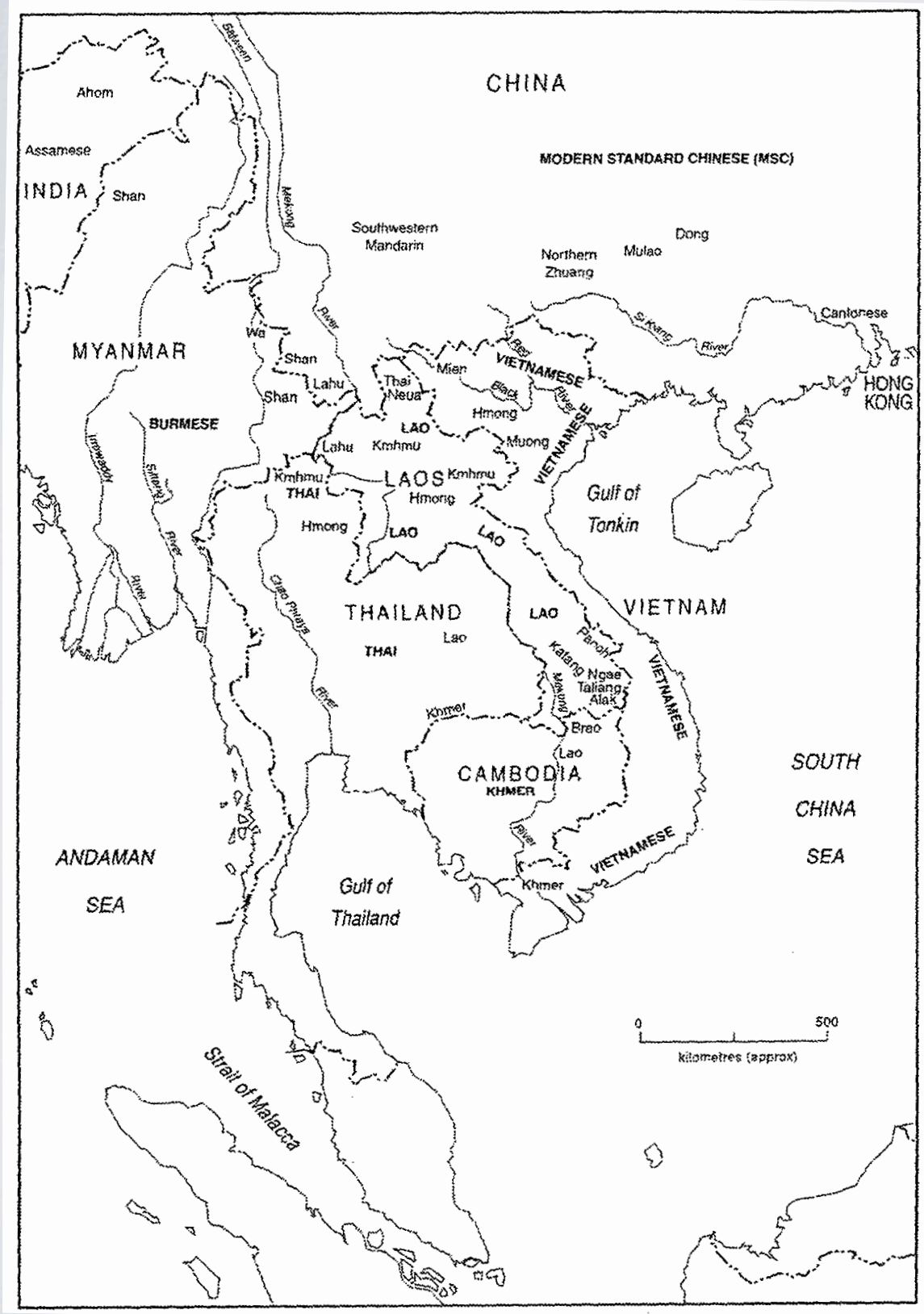
- **time of acquisition** - what seems to matter is the time when the contact language is acquired: *pre-* vs *post-critical threshold*: children vs adults learning)
- **frequency of contact** - obviously, more frequent contact is expected to have more influence than sporadic contact
- **duration of contact** - multilingual speakers can live in other communities for extended periods of their lives, or just have short-term interactions. The extended stay outside one's own community is not very likely to affect one's native language, as it is spoken by the community.

DIACHRONIC CONSEQUENCES OF LANGUAGE CONTACT

Various constellations of these three variables result in three prototypical contact scenarios, outlined below:

- **high contact, long-term pre-critical threshold contact situations** is characteristic of multilingual societies with multilingual families and communities as found in New Guinea, Caucasus, Amazonia, Pacific North West, possibly also Balkans.
- **high contact, short-term post-critical threshold contact situations** (modern urban centre migration, L2 acquisition, reverse acquisition (Romani, Yiddish, Turkish as a street language in Germany))
- **low contact** - typically in geographically isolated areas (Japan, insular societies - short term)

LANGUAGE CONTACT AND LANGUAGE COMPLEXITY - MAINLAND SE ASIA



	Mon-Khmer	Tai-Kadai	Hmong-Mien	Sinitic	Tibeto-Burman
Verb-object	+	+	+	+	-
Prepositions	+	+	+	±	-
Adjective-std. of comp.	+	+	+	±	-
Head-modifier	+	+	+	-	±
Head-relative clause	+	±	+	-	-
Possessed-possessor	+	+	-	-	-

Enfield (2003, 2008:300) discusses the diffusion of grammatical structures in Mainland South East Asia. These structures involve parallel grammaticalisations of various verbs across unrelated languages. They emerged during long term language contact.

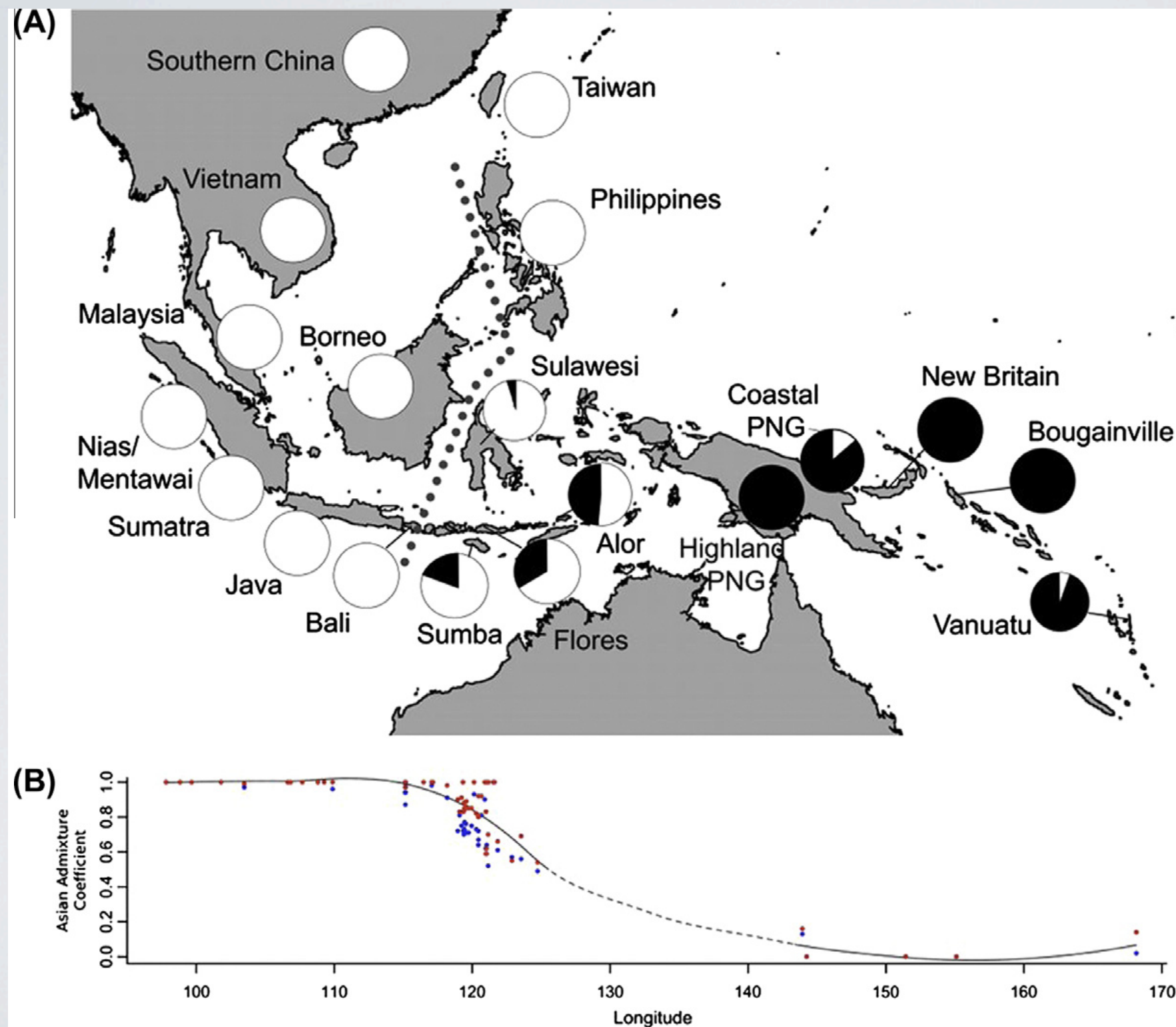
LANGUAGE CONTACT AND LANGUAGE COMPLEXITY - MAINLAND SE ASIA (ENFIELD 2003, 2008)

Below, the functions of the verb *get/acquire* are illustrated:

- | | | | |
|-----|-------------------------------------|--|-----------------|
| (1) | <i>He get fish.</i> | ‘He got fish.’ | lexical |
| (2) | <i>He fry fish get.</i> | ‘He can fry the fish.’ / ‘He managed to fry the fish.’ | modality |
| (3) | <i>He fry fish get fast.</i> | ‘He fried the fish fast.’ | manner |
| (4) | <i>He get fry fish.</i> | ‘He did fry the fish.’ / ‘He got to fry the fish.’ | mood |

LANGUAGE CONTACT SCENARIOS IN EASTERN INDONESIA

POPULATION HISTORY OF WALLACEA - LOCAL ADMIXTURE



Local admixture rates across the Indo-Pacific region.

(A) Pie charts showing mean regional admixture rates (Asian component in white; Melanesian component in black). Wallace's biogeographical line is shown as a dotted line. Regional admixture rates are shown for data reduction purposes; admixture rates for all 60 populations (with confidence intervals) are listed in the Supplementary Information for Cox et al. (2010). (B) Change in Asian admixture rates calculated from all SNPs combined (black line). Asian admixture estimated from autosomal and X chromosomal SNPs are indicated by blue and red points, respectively. Note the decline in Asian admixture beginning in Eastern Indonesia, as well as preferential retention of X chromosomal (red) versus autosomal (blue) diversity. Regions with no data indicated by a dashed line; from other evidence, the decline in the Asian component may be more pronounced than this. Reproduced unmodified from Cox et al. (2010).

(source: Lansing et al. 2011)

POPULATION HISTORY OF WALLACEA - LOCAL ADMIXTURE

It is clear from the genetic and archaeological evidence that ISEA was already populated when the Austronesians began their colonizing voyages. The absence of other languages in ISEA prompted Peter Bellwood's question: "Why are there not far more non-Austronesian [linguistic] enclaves surviving in ISEA, as there are in western Island Melanesia. . . ?" (Bellwood, 2010) Our model provides an explanation based on three assumptions: **the initial population of both indigenous peoples and Austronesian colonists was small**; the Austronesian settlements underwent a Neolithic population expansion; and Austronesian women occasionally married men from surrounding non-Austronesian villages. **The children of these marriages would have spoken their mother's Austronesian language, while the total population of Austronesian speakers grew.**

SOCIAL ORGANIZATION AND HUMAN EVOLUTION

- It has been demonstrated that **patriliney** coevolves with the adoption of pastoralism in Bantu societies (Holden and Mace 2003).
- Indo-European societies show dowry exchanges in their ancestral state (wealth exchange systems and marriage systems are co-evolving). (Fortunato et al. 2006)
- The most important factor for understanding the Y-chromosome conflicts with mtDNA is the sex-specific dispersal, which is regulated by post-marital residence rules.

Jordan et al. 2009:1957

SOCIAL ORGANIZATION AND HUMAN EVOLUTION

- 5500 BC - start of the AN colonialization of the Pacific
- 4000-4500 BC - AN enter to Philippines
- 3500 BC - AN move along New Guinea (Lapita Cultural Complex)
- “A matri-biased social organization in POc people would therefore have restricted female genetic diversity while increasing male diversity as non-Austronesian men married in. Matrilocality is thus consistent with the divergent mtDNA and Y-chromosome patterns seen in the Pacific human genetics.”

Jordan et al. 2009:1958 & references therein

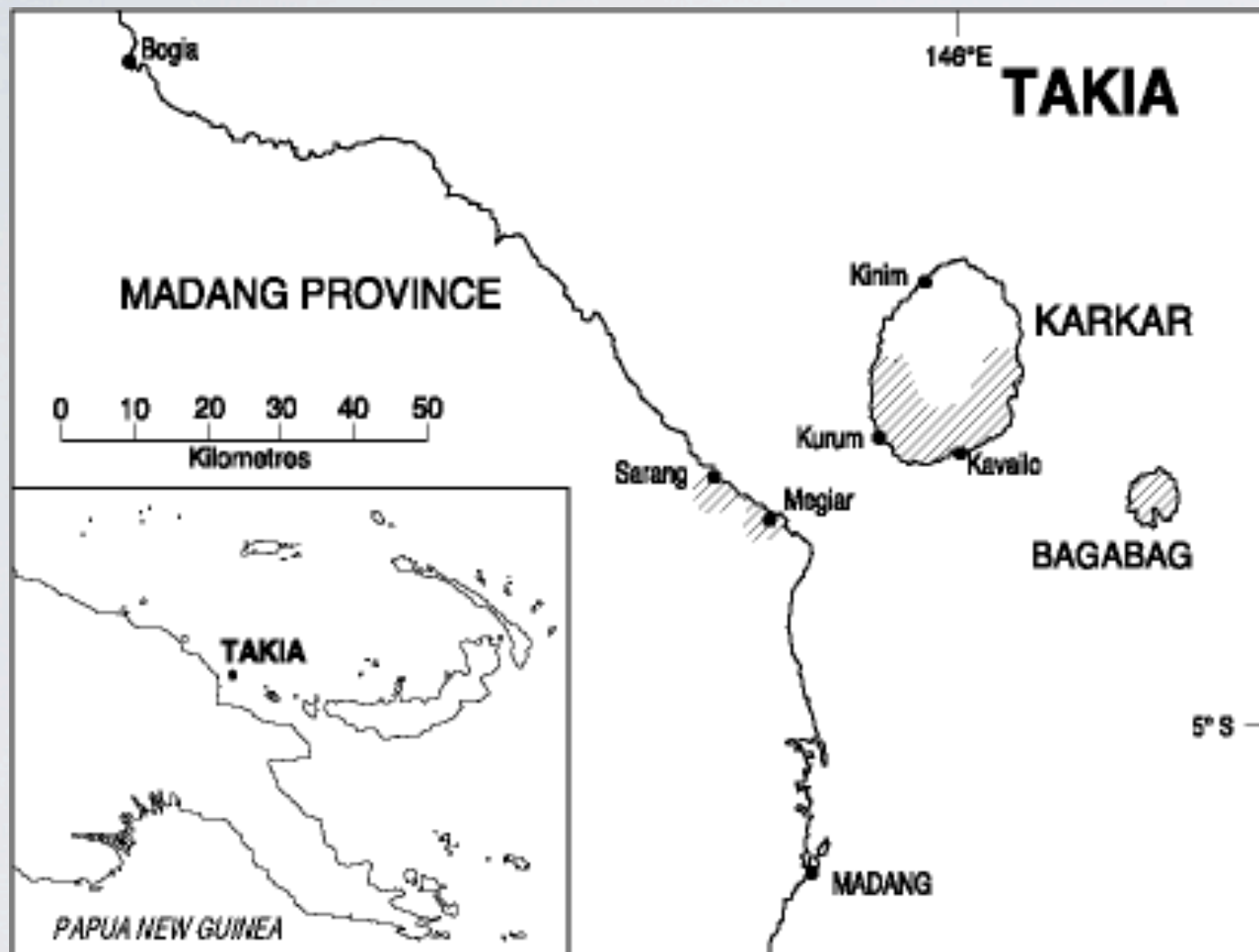
SOCIAL ORGANIZATION AND HUMAN EVOLUTION

- Both PAn and PMP are matrilocal (posterior probability = 0.70 and 0.99, respectively), suggesting that early Austronesian societies were pre- dominantly matrilocal, and that patrilocality was a later development in some Formosan (Taiwan) societies and the Austronesian family as a whole. Matrilocality is especially secure in PMP (0.99), and many daughter subgroups and societies (e.g. proto-Philippines, many Sumatran societies) still retain this pattern. More recently, residence switches to patrilocal in many societies surrounding the island of New Guinea (clades A, B and C), although some retain matrilocality.
- The PCEMP and POc nodes represent a rapid period of Austronesian expansion over a short period of time (Green 2003), where extensive contact with non-An-speaking societies on the islands of New Guinea is likely to have occurred. PCEMP, POc and the intervening nodes may have been originally matrilocal (or ambilocal), but over time, the majority of descendant groups may have switched to patrilocality, perhaps due to cultural diffusion or integration into systems of wife exchange. It is possible, given the higher rates of change from matrilocality to patrilocality than the reverse, that patrilocal residence was repeatedly adopted by Austronesian peoples across the Pacific. A switch to patrilocal norms could also occur without culture contact as a catalyst. Residence patterns may have shifted as adaptive responses to new sedentary lifestyles or the reduction of long-distance voyaging, both of which could diminish the ‘male absence’ factor that may drive the origin and/or maintenance of matrilocality (Keegan & Machlachlan 1989; Hage 1999).

Jordan et al. 2009:1960-1961 & references therein

METATYPY IN TAKIA AND WASKIA (ROSS 1996)

METATYPY IN TAKIA AND WASKIA (ROSS 1996)



Takia: 15,000 speakers, Karkar Island near Madang (north coast of PNG) (Austronesian, Bell family of the North New Guinea Cluster).

Waskia: 20,000 speakers, Karkar Island near Madang (north coast of PNG) (Trans New Guinea, Madang family) - original population of the island.

Ross 1996

METATYPY IN TAKIA AND WASKIA (ROSS 1996)

Takia (AN)

- (1) 'the palm of my hand'
= 'my hand's liver'
bani-g *ate-n*
hand-P:1S liver-P:3S
- (2) '(an) answer'
= 'face of word'
ru *nao-n*
word face-P:3S
- (3) 'I am waiting'
= 'I do/put my eye'
mala-g *ɲu-gane*
eye-P:1S S:3S-do
- (4) 'I am dizzy'
= 'my eye goes round'
mala-g *i-kilani*
eye-P:1S S:3S-go.round
- (5) 'I obey him'
= 'I follow his mouth'
awa-n *ɲa-ri*
mouth-P:3S S:1S-follow
- (6) 'I disobey him'
= 'I cut his mouth'
awa-n *ɲu-tale*
mouth-P:3S S:1S-cut
- (7) 'I exclude him'
= 'I fence off his face'
nao-n *ɲu-futani*
face-P:3S S:1S-fence.off
- (8) 'I correct him'
= 'I hold his ear'
kukudo-n *ɲ-abi*
ear- P:3S S:1S-hold
- (9) 'I am thinking'
= 'I put thought'
kankan *ɲu-gane*
thought S:1S-put
- (10) 'He believes (it)'
= '(a) truth in his guts'
ilo-n *lo rumok*
inside-P:3S in truth

Waskia (Papuan)

- a-giti-ɲ* *gomaɲ*
P:1S-hand <P:3S>liver
- den* *koma*
word <P:3S>face
- motam* *bete-sam*
eye do-S:3S
- motam* *gerago-so*
eye go.round-S:3S
- kuriɲ* *karotu-sam*
<P:3S>mouth follow- S:1S
- kuriɲ* *batugar-sam*
<P:3S>mouth cut-S:1S
- koma* *kalo-sam*
<P:3S>face fence.off- S:1S
- dogowa* *ilu-sam*
<P:3S>ear hold-S:1S
- kuamin* *tugu-sam*
thought put-S:1S
- gomaɲ* *niɲi nuɲuniɲ*
<P:3S>liver in truth

RESEARCH AGENDA

- Map emotion systems across East Nusantara and New Guinea (inventory of body-parts involved and metaphors used - conceptualisation of emotions - as outlined in Kövecses et al. 2009, Maalej 2004).
- Address the ‘universal emotion metaphors’ consensus and identify the ‘culture-specific categories’ (Maalej 2004)
- Understand other possible tool transfers in the area (agricultural practice, climate knowledge, kinship systems and bride-price settlements)
- Contribute to the growing body of research trying to understand conceptualisation of emotions

REFERENCES

- Bugenhagen, Robert. 2001. Emotions and the nature of persons in Mbula. In Jean Harkins and Anna Wierzbicka (eds.) *Emotions in crosslinguistic perspective*. Cognitive Linguistics Research 17:69–114. Berlin: Mouton de Gruyter.
- Dahl, Östen. 2009. Increases in complexity as a result of language contact. In Kurt Braunmüller and Juliane House (eds.) *Convergence and divergence in language contact situations*. Amsterdam: John Benjamins. pp. 41-52.
- Dix Grimes, Barbara. n.d. With our bodies and minds: exploring Tetun emotion terms. Manuscript. UBB Kupang.
- Enfield, Nick J. 2003. *Linguistic epidemiology: semantics and grammar of language contact in mainland Southeast Asia*. RoutledgeCurzon Asian linguistics series. London: RoutledgeCurzon.
- Enfield, Nicholas. 2008. Transmission Biases in Linguistic Epidemiology. *Journal of Language Contact*. 2 (1): 299-310.
- Foley, William A. 2010. Language Contact in the New Guinea Region. In Raymond Hickey (ed.) *The Handbook of Language Contact*. Chichester, West Sussex: Wiley-Blackwell. pp. 795-813.
- Fortunato L., and Jordan F. 2010. Your place or mine? A phylogenetic comparative analysis of marital residence in Indo-European and Austronesian societies. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 365 (1559): 3913-3922.
- Gil, David. 2001. Creoles, Complexity and Riau Indonesian. *Linguistic Typology* 5: 325–371.
- Gray, Russell D. & Fiona M. Jordan. 2000. Language trees support the express-train sequence of Austronesian expansion. *Nature* 405, 1052-1055.
- Jordan F.M., Mace R., Gray R.D., and Greenhill S.J. 2009. Matrilocal residence is ancestral in Austronesian societies. *Proceedings of the Royal Society B: Biological Sciences*. 276 (1664): 1957-1964.
- Klamer, M. 2001. Phrasal emotion predicates in three languages of Eastern Indonesia. In G. Booij and J. van Marle (eds.) *Yearbook of Morphology 2000*. Dordrecht/Boston/London: Kluwer Academic Publishers. pp. 97-122.
- Klamer, Marian. 2004. East Nusantara: Genetic, Areal, and Typological Approaches. *Oceanic Linguistics*. 43 (1): 240-244.
- Kortlandt, Frederik Herman Henri. 1985. A parasitological view of non-constructible sets. In Ursula Pieper & Gerhard Stickel (eds.), *Studia linguistica diachronica et synchronica: Werner Winter sexagenario anno MCMLXXXIII gratis animis ab eius collegis, amicis discipulisque oblate*, 477-483. Berlin: Mouton de Gruyter.
- Kövecses, Zoltán, and Szilvia Csábi. 2009. *Metaphor: a practical introduction*. New York: Oxford University Press.
- Labov, William. 2007. Transmission and Diffusion. *Language*. 83 (2): 344-387.
- Lakoff, George, and Mark Johnson. 1999. *Philosophy in the flesh: the embodied mind and its challenge to Western thought*. New York: Basic Books.

REFERENCES

- Lansing, J. Stephen, Murray P. Cox, Therese A. de Vet, Sean S. Downey, Brian Hallmark, and Herawati Sudoyo. 2011. An ongoing Austronesian expansion in Island Southeast Asia. *Journal of Anthropological Archaeology* 30 (3): 262-272.
- Maalej, Zouhair. 2004. Figurative Language in Anger Expressions in Tunisian Arabic: An Extended View of Embodiment. *Metaphor and Symbol*. 19 (1): 51-75.
- Marck, Jeff. 2008. Proto Oceanic Society was Matrilineal. *The Journal of the Polynesian Society*. 117 (4): 345.
- Matras, Yaron. 2009. *Language contact*. Cambridge, UK: Cambridge University Press.
- Mithun, Marianne. 2007. Grammar, contact and time. *Journal of Language Contact - Thema 1*. 133-55.
- Nichols, Johanna. 1992. *Linguistic diversity in space and time*. Chicago: University of Chicago Press.
- Musgrave, Simon. 2006. Complex Emotion Predicates in Eastern Indonesia: Evidence for Language Contact? In Yaron Matras, April M. S. McMahon, and Nigel Vincent (eds.) *Linguistic areas: convergence in historical and typological perspective*. New York, N.Y.: Palgrave Macmillan. pp. 227-243.
- Ross, Malcolm D. 1996. Contact-induced change and the comparative method: Cases from Papua New Guinea. In Mark Durie, Malcolm D. Ross (eds.) *The comparative method reviewed: Regularity and irregularity in language change*. New York: Oxford University Press. pp. 180– 217.
- Ross, Malcolm. 2007. Calquing and Metatypy. *Journal of Language Contact*. 1 (1): 116-143. Winford, Donald. 2005. Contact-induced changes: Classification and processes. *Diachronica*. 22(2): 373.
- Sokol, Rosemarie, and Sarah Strout. 2006. A Complete Theory of Human Emotion: The Synthesis of Language, Body, Culture and Evolution in Human Feeling. *Culture & Psychology*. 12 (1): 115-123.
- Trudgill, Peter. 2000. *Sociolinguistics: an introduction to language and society*. London: Penguin.
- Trudgill, Peter. 2010. Contact and Sociolinguistic Typology. In Raymond Hickey (ed.) *The Handbook of Language Contact*. Chichester, West Sussex: Wiley-Blackwell. pp. 299-319.
- Yu, N. 2002. Body and emotion: Body parts in Chinese expression of emotion. *Pragmatics and Cognition*. 10: 341-367.