Topography and Frame of Reference: conceptualising space in Oceania.

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Traditional universalist assumption

The most basic system of [spatial] reference is primary deictic reference. *Here the speaker is the relatum and the origin of the coordinate system... [This system has] two horizontal dimensions... The first one is the speaker's front/back dimension... the second horizontal dimension is the speaker's...left/right dimension.* (Levelt 1989:48-50)

Spatial conceptualisation assumed to be universally egocentric and anthropomorphising.

We have an innate spatial representation that corresponds to our innate physical characteristics.

We universally impose that asymmetry onto other entities.

But... variation in spatial behaviour

Considerable cross-linguistic diversity exists in linguistic systems of spatial reference.

Spatial language correlates with non-linguistic behaviour, so manifests a cross-modal conceptual representation (or compatible representations) of space. (Pederson et al 1998:574-584; Levinson 2003:130-142,154-168,178-188)

Ergo, there is no single universal conceptual representation of space.

This is evident in Absolute (aka geocentric) Frame of Reference. (Levinson 2003:34-50; Palmer 2003, 2004)

Not egocentric/anthropomorphising.

Diversity in external world orienting/anchoring phenomenon:

- landward-seaward/parallel to the coast (eg. Manam, Austronesian, Oceanic, Lichtenberk 1983)
- upriver-downriver/away from-towards river (eg. Embaloh (Austronesian, South Sulawesi, Adelaar 1997:69-70)
- uphill-downhill (elevational)/across on same level (eg. Nimboran, Trans-New Guinea, Steinhauer 1997)
- uphill-downhill (fall of land)/across (eg. Tzeltal, Mayan, Brown & Levinson 1993)
- etc

Neo-Whorfian interpretation

[T]he communal possession of a shared linguistic system… coerces our private conceptual systems into shared directions. (Levinson 1992:25)

[T]here is no way… a community-wide cognitive practice of this sort could come to be shared except through its encoding in language and other communicative systems like gesture… [T]he need to conform to these communicative systems… requires convergence in cognitive systems, not the other way around. (Levinson 1997:125)

...since you may want to describe arbitrary spatial experiences in the future, you must remember them in terms which will support that later linguistic description. (Levinson 2000:281)

A reappraisal: correlates with topography

Significant cross-linguistic regularities exist within the diversity.

Correlates exist between linguistic systems of spatial reference and the topography of a language community's environment.

Linguistic systems:

- vary predictably in diverse environments;
- are predictably alike in similar environments.

Variation in diverse environments

Separate languages spoken in diverse topographic environments tend to have systems of absolute spatial reference that differ in ways that correlate to topographic variation, no matter how closely related the languages are.

Individual languages spoken in a range of environments show similar diversity.

Diversity in three South Sulawesi languages

Makassarese (South Sulawesi, Makassar, coastal southern Sulawesi, Jukes f.c.:208-209)

raya	'landward'
lau'	'seaward'
wara'	'clockwise around peninsular'
timboro'	'anticlockwise around peninsular'

Embaloh (South Sulawesi, Bugis, riverine interior of Kalimantan, Adelaar 1997:69-70)

urait	'upriver'
kalaut	'downriver'
anait	'away from river', 'upward'
indoor	'towards river', 'downward'
suali	'across' (away from bank across river)

Aralle Tabulahan (South Sulawesi, Northern, mountainous interior of Sulawesi, McKenzie 1997)

watercourse	elevational
tama 'upriver', 'inward'	*dai'* 'uphill', 'upward'
sau 'downriver', 'outward'	*naung* 'downhill', 'downward'
	pano 'along' (same altitude along hillside)
bete' 'across' (same altitude to far side of river/valley)	

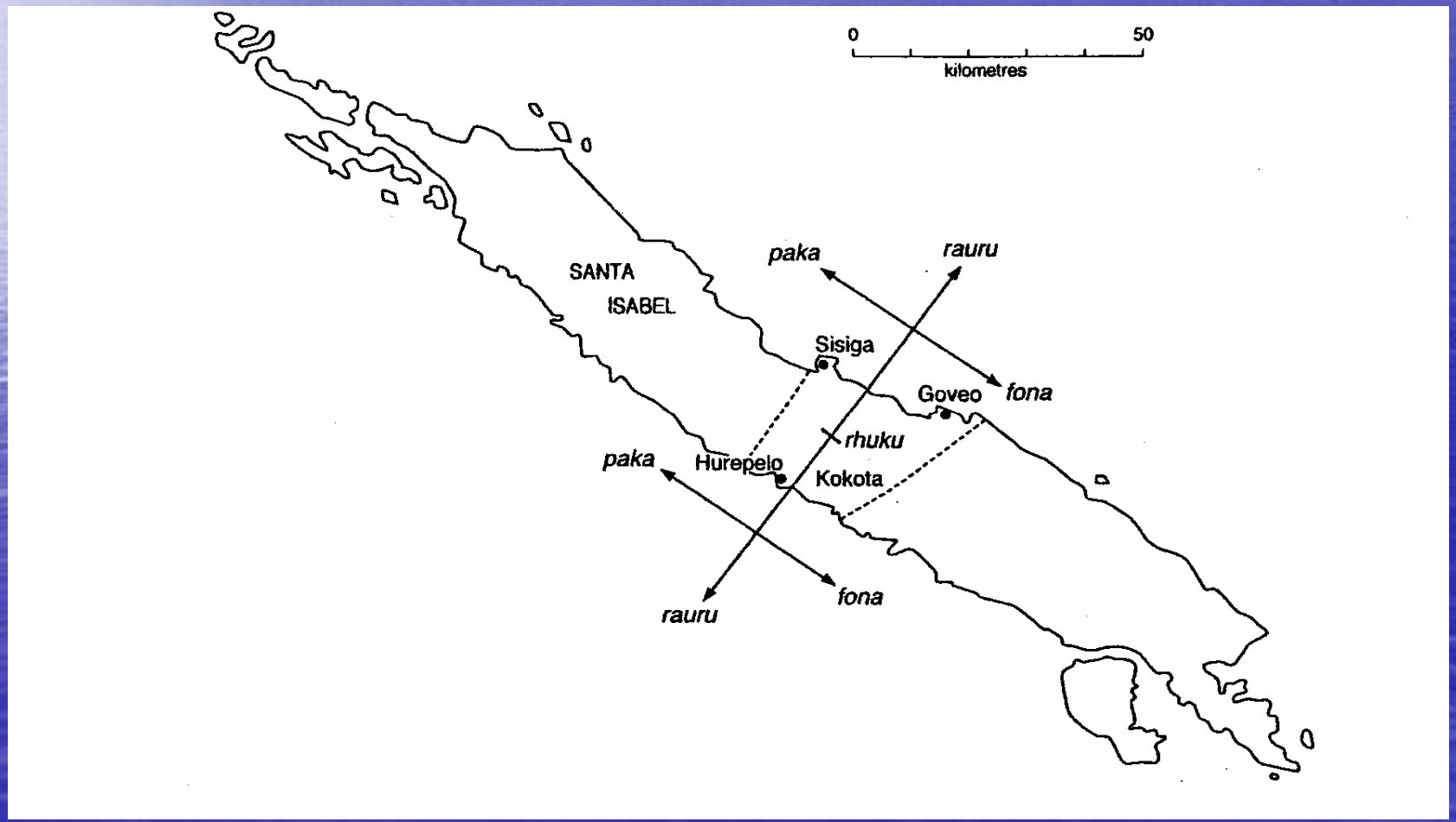
Inland and coastal Asmat

Asmat (Trans-New Guinea, Irian Jaya, Palmer 2002a:143-144)

	interior	coastal
en-	'upriver'	'northwest along the coast'
ni-	'downriver'	'southeast along the coast'
jes-	'away from the river'	-
ndei-	'towards the river'	-
jir-	'away from bank across river'	'away from shore'

Mirrored configuration of axes in Kokota

Kokota (Oceanic, Palmer 2002a, 2002b, f.c.a)



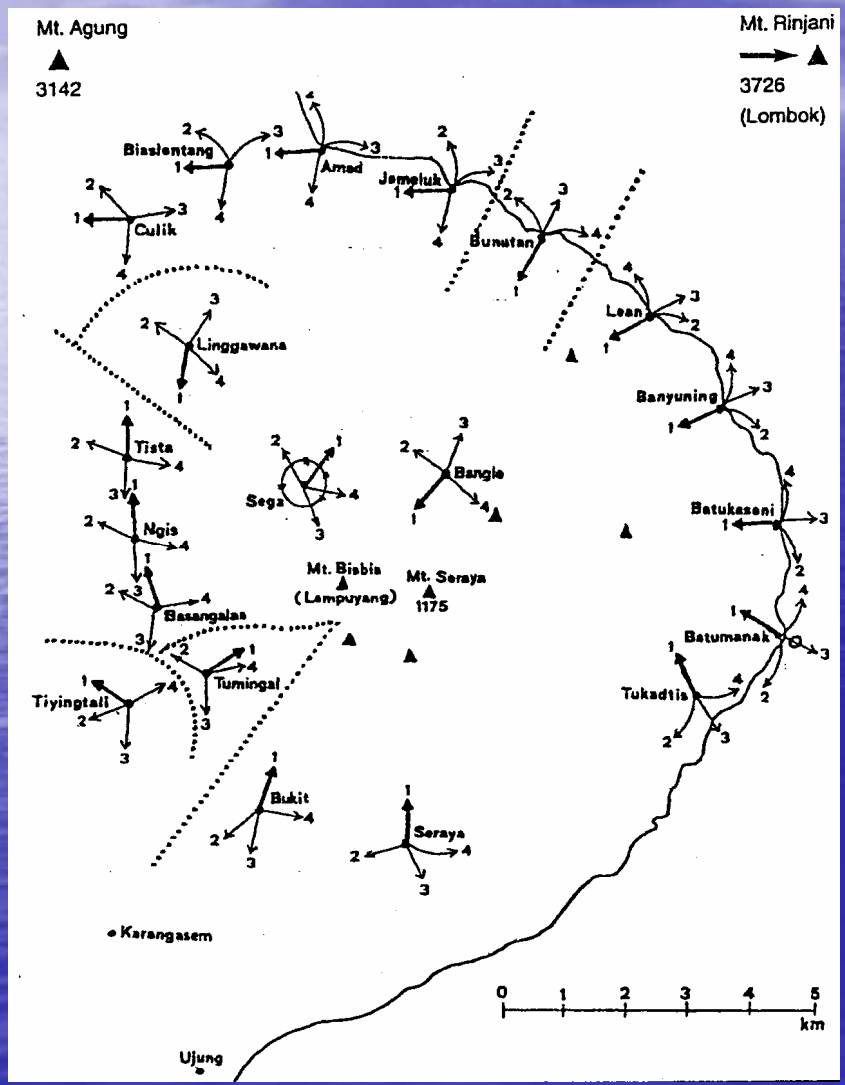
Mountain, sea and sun in Balinese

Balinese (Austronesian, Wassman & Dasen (1998:692-693)

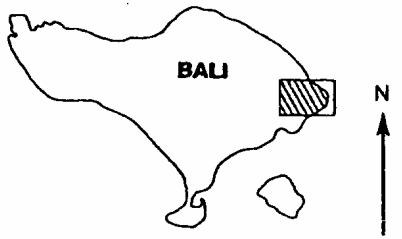
mountainward-seaward	east-west
kaja 'towards the mountain'	*kangin* 'the direction from which the sun rises'
kelod 'towards the sea'	*kauh* 'the opposite of *kangin*'

Balinese spatial orientation in North-East Bali.

(Wassman & Dasen 1998:698)



1 = kaja
2 = kauh
3 = kelod
4 = kangin
→ best direction in the quadrant
⇝ along the coast
▲ mountain
● village



Similarities in similar environments

Languages spoken in similar topographic environments tend to have similar systems of absolute spatial reference, regardless of genetic and areal affiliation.

Rivers

Asmat (Trans-New Guinea, Irian Jaya, Palmer 2002a:143-144)

Embaloh (Austronesian, Kalimantan, Adelaar 1997:69-70)

Gurindji (Australian, Central Australia, McConvell 1991)

Asmat	Embaloh	Gurindji	
en-/tep-	*urait*	*kanka-*	‘upriver’/’upstream’
ni-/tak-	*kalaut*	*kani-*	‘downriver’/’downstream’
jes-	*anait*	*kankul-*	‘away from river’
ndei-	*indoor*	*kanyju-*	‘towards river’
jir-	*suali*	*?*	‘across river away from bank’

Mountains and rivers

Aralle Tabulahan (Austronesian, Sulawesi, McKenzie 1997)

watercourse	elevational
tama 'upriver', 'inward'	*dai'* 'uphill', 'upward'
sau 'downriver', 'outward'	*naung* 'downhill', 'downward'
	pano 'along' (same altitude along hillside)
bete' 'across' (same altitude to far side of river/valley)	

Samo (Trans-New Guinea, New Guinea Highlands, Shaw & Shaw 1973)

watercourse	elevational
to- 'upriver'	*fo-* 'uphill', 'upward'
ya- 'downriver'	*mun-* 'downhill', 'downward'
sou- 'across' (same altitude to far side of river/valley)	

Dyirbal (Australian, North Queensland, Dixon 1972)

watercourse	elevational
dawal- 'upriver'	*day-* 'uphill'
balbal- 'downriver'	*bayd-* 'downhill'
guya 'across' (same altitude to far side of river/valley)	

Florutz German (Indo-European, Italian Tyrol, Rowley 1980)

watercourse	elevational
/in/ 'upriver', 'inward'	/ao/ 'uphill', 'upward'
/aos/ 'downriver', 'outward'	/o:/ 'downhill', 'downward'
	/um(-a)/ 'along' (same altitude, along hillside)
/du:r/, /he:r/ 'across' (same altitude, far side of river/valley/mountain)	

Atolls

Tokelauan (Oceanic, Polynesian, Hoëm 1993; Palmer f.c.b)

Marshallese (Oceanic, Micronesian, Palmer f.c.b)

Tokelauan	Marshallese	
namō	*ar*	'lagoonward'
tua	*lik*	'oceanward/backward'
ooj	*vao*	'wilderness ward'
uta	-	'isletward'

Implications

- How can we account for correlations between external world phenomena, conceptual representation, and linguistic structure?
- How do representations of perceptually accessed pre-existing external world phenomena end up in linguistic systems?
- What implications does this have for the relationship between language and thought?
- Three hypotheses (Palmer 2004)

Hypothesis 1

Perceptual input feeds directly into language with no mediating cognitive domain. The resulting linguistic structures then motivate spatial representations employed by nonlinguistic modalities.

- This involves claiming that (eg.) vision interacts directly with language without any mediating domain. It's not clear how this could happen.
- It also involves claiming that language mediates between perceptual modalities and all other modalities - kinesthetics, memory etc. This seems implausible.

Hypothesis 2

Perceptual input feeds into nonlinguistic conceptual representations, and separately feeds directly into linguistic structure. Correlations between linguistic and nonlinguistic representations occur because of comparable responses across domains.

- Again this involves claiming that perceptual modalities interact directly with language.
- It also involves claiming that representations constructed in language are structured in ways that correlate directly with representations independently constructed in other modalities. It's not clear what mechanism could ensure this correspondence.

Hypothesis 3

Perceptual input feeds into some nonlinguistic conceptual representation or representations. The resulting conceptual representations then motivate spatial representations employed by language.

- This means that perception plays a part in constructing a conceptual representation, and through that provides input into language. Humans respond to their environment in the way they think about space, and construct a linguistic system to express that.

A relativist question: ‘How can speakers of a language share the same way of thinking about space if they’re not directed to it by their language?’

An alternative question: ‘How can languages respond to phenomena in the external world, if not through the way people think about those phenomena?’

[T]he need to conform to communicative systems is not the only imaginable way in which Levinson's community-wide cognitive practice can come to be shared. The possibility remains that such practices may come to be shared at least in part as a result of universal human cognitive responses to certain perceptual input… (Palmer 2002a:152.)

No innate spatial representation

However, this evidence also does not support notions of innate universal mental categories.

Unlikely to be innate categories such as 'upriver', 'seaward', 'lagoonward' etc.

So, the evidence suggests there are no innate conceptual representation of space (*a la* Levelt).

Instead, cross-cultural evidence from Absolute Frame of Reference suggests innate human responses to the environment.

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