

Historical linguistics and hunter-gatherer populations in global perspective

10-12 August 2006, MPI-EVA Leipzig



Local Organizer:

Tom Güldemann (Max Planck Institute for Evolutionary Anthropology)

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Topics

1. Internal historical aspects

- What is the demographic range of hunter-gatherer speech communities?
- Are there special social practices of hunter-gatherers which are relevant for historical linguistics, e.g., linguistic avoidance, social networks transcending language groups, linguistic exogamy, lack of reference varieties and/or reinforcement of linguistic norms?
- What are the patterns of language contact among hunter-gatherer populations and how do these influence language change in them?
- What can be discerned from attested language spreads of hunter-gatherer populations in terms of their historical triggers, underlying social processes, speed, geographical patterns (e.g., correlating with ecological zones), degree of language replacement, etc.?
- What is the range of genealogical diversification in hunter-gatherer language families?
- What are the different patterns of language densities and by what are they determined (e.g., ecological factors etc.)?
- What is the typological profile of areas which predominantly consist of different hunter-gatherer language families (e.g., southern Africa, Australia, Bering Strait, Gran Chaco)?
- What are the differences between non-sedentary~low density and sedentary~high density hunter-gatherer groups?
- Can linguistic elements (e.g., vocabulary) be linked with archaeological signatures?

2. External historical aspects

- What are the patterns of language contact of hunter-gatherers with food producing colonizers (e.g., kind and stability of clientship, etc.)?
- What is the time depth of the earliest contact with food producing colonizers in a certain area?
- Are there differences in contact patterns of hunter-gatherers with agriculturalists vs. pastoralists?
- What are the circumstances of language shift of hunter-gatherers towards languages of their food-producing neighbors (e.g., Okiek, Pygmy, San, Dama, Negrito, Vedda) and do these target languages still betray linguistic traces of their substratum?
- Can hunter-gatherer substrates be identified in other linguistic populations who have incorporated hunter-gatherers?

- Are there cases where a formerly food-producing population (speaking a language of such a group) seems to have acquired a hunter-gatherer subsistence secondarily (e.g., Mlabri) and what can we learn from them?

3. Global geographical patterns

- What is the world-wide distribution of language families whose populations are predominantly/exclusively hunter-gatherers?
- Are there cases of hunter-gatherer populations with a coastal/seafaring rather than a terrestrial orientation?
- In the case that hunter-gatherers had a profound substrate influence on the first food-producing colonizers on a wider scale, is there any chance to correlate modern areal patterns with the global typological profile before the spread of food production?

Participants / Titles / Handouts

1. Africa

Franz Rottland (Kenya / Germany)

"Okiek languages in a historical perspective" (handout)

Serge Bahuchet (Laboratoire d'Ethnobiologie et Biogéographie Muséum National d'Histoire Naturelle, Paris, France)

"The ethno-linguistic status of the African rain-forest communities known as "Pygmies" ([handout](#))

Tom Güldemann (MPI EVA, Leipzig, Germany)

Southern African hunter-gatherers ([handout](#))

2. **Australia and Tasmania**

Patrick McConvell (AIATSIS, Canberra, Australian)

"Semantic change and borrowing as signature of upstream and downstream language spread in Pama-Nyungan (Australia)" (handout)

Barry Alpher

"Lexical innovations that define Pama-Nyungan" (handout)

Nicholas Evans (University of Melbourne, Australia)

"Tracks in the north Australian wordscape" (handout)

3. **Pacific**

Lawrence Reid (University of Hawai'i at Manoa, Honolulu, USA)

"Historical linguistics and Philippine hunter-gatherers" (handout)

Uri Tadmor (Max Planck Field Station, Jakarta, Indonesia)

"The linguistic consequences of long term patron-client relationship: Dayaks and Malays in Western Borneo" ([handout](#))

Mark Donohue (National University of Singapore, Singapore)

"Language, locality and lifestyle in New Guinea" (handout)

Malcolm Ross (The Australian National University, Canberra, Australia)

"Clues to the linguistic situation in New Guinea and northwest Melanesia before agriculture" ([handout](#))

4. Southern Asia

Anvita Abbi (+Pramod Kumar) (Jawaharlal Nehru University, New Delhi, India)

"Reconstructing pre-colonization knowledge-base of ecological environment and sociolinguistic practices of Andamanese" (handout)

David Watters (SIL)

"Kusunda: a typological isolate in South Asia" (handout)

Greg Anderson (Living Tongues Institute for Indangered Languages, USA)

"Proto-Munda and Proto-Austroasiatic: problems in diachronic linguistics" (handout)

Jørgen Rischel (Mahidol Inuversity, Salaya, Thailand)

"The Mlabri enigma: a primary hunter-gatherer language or the result of an ethnically and socially complex founder event?" (handout)

5. Northern Eurasia

Gregory Anderson (Living Tongues Institute for Indangered Languages, Salem, USA) & David Harrison (Swarthmore College, USA; Living Tongues Institute for Indangered Languages, Salem, USA)

"Siberian hunter-gatherers speaking the language of pastoral nomads" (handout)

Edward Vajda (Western Washington University, USA)

"Ket substrate elements in the Inner Asia" ([handout](#) and [map](#))

Michael Fortescue (University of Copenhagen, Copenhagen, Denmark)

"Polysynthesis in the (Sub-)Arctic: how recent is it and how might it have spread?" (handout)

6. North America

Richard A. Rhodes (University of California, Berkeley, USA)

"Ojibwe Language Shift, 1600-present" ([paper](#))

Jane Hill (University of Arizona, Tucson, USA)

"Uto-Aztecan hunter-gatherers: language change in the Takic spread and the Numic spread compared"
([paper](#) and [appendix](#))

Sally Thomason (University of Michigan, Ann Arbor, USA)

"Montana Salish and the Pacific Northwest Sprachbund" (handout)

7. South America

Patience Epps (The University of Texas, Austin, USA)

"Foraging as a way of life: language and subsistence patterns in the Amazonian Vaupés" ([handout](#))

Lucia Golluscio (+Alejandra Vidal, Silvia Citro) (Universidad de Buenos Aires, Buenos Aires, Argentina)

Chaco languages (handout)

Pedro Viegas Barros (Universidad de Buenos Aires, Buenos Aires, Argentina)

"Proto-Chon cultural reconstruction from the vocabulary" (handout)

8. General expertise + other interested people

Bernard Comrie (MPI EVA, Leipzig, Germany)

Juliette Blevins (MPI EVA, Leipzig, Germany)

Yurok (sedentary foragers)

Mark Stoneking (MPI EVA, Leipzig, Germany)

Population genetics

Schedule

Wednesday, August 9, 19:00 Informal dinner in restaurant Bayerischer Bahnhof (Bayrischer Platz 1)

Time	Thursday, August 10	Friday, August 11	Saturday, August 12
09:00-09:45	Serge Bahuchet <i>The ethnolinguistic status of the African rain-forest communities known as 'Pygmies'</i>	Malcolm Ross <i>Clues to the linguistic situation in New Guinea and northwest Melanesia before agriculture</i>	Richard A. Rhodes <i>Ojibwe language shift, 1600-present</i>
09:45-10:30	Tom Güldemann <i>Changing profile when encroaching on hunter-gatherer territory?: towards a history of the Khoe-Kwadi family in southern Africa</i>	Mark Donohue <i>Language, locality and lifestyle in New Guinea</i>	Jane Hill <i>Uto-Aztecan hunter-gatherers: language change in the Takic spread and the Numic spread compared</i>
10:30-11:00	BREAK	BREAK	BREAK
11:00-11:45	Franz Rottland <i>Okiek languages in a historical perspective</i>	Nicholas Evans <i>Tracks in the north Australian wordscape</i>	Sally Thomason <i>Montana Salish and the Pacific Northwest Sprachbund</i>
11:45-12:30	David Watters <i>"Kusunda: a typological isolate in South Asia"</i>	Barry Alpher <i>Lexical innovations that define Pama-Nyungan</i>	Patience Epps <i>Foraging as a way of life: language and subsistence patterns in the Amazonian Vaupes</i>
12:30-13:15	Greg Anderson <i>Proto-Munda and Proto-Austroasiatic: problems in diachronic linguistics</i>	Patrick McConvell <i>Semantic change and borrowing as signature of upstream and downstream language spread in Pama-Nyungan (Australia)</i>	Lucia Golluscio, Silvia Citro, Alejandra Vidal <i>Chaco</i>
13:15-14:30	BREAK	BREAK	BREAK
14:30-	Jørgen Rischel	Edward Vajda	Pedro Viegas Barros

15:15	<i>The Mlabri enigma: a primary hunter-gatherer language or the result of an ethnically and socially complex founder event?</i>	<i>Ket substrate elements in Inner Asia</i>	<i>Proto-Chon cultural reconstruction from the vocabulary</i>
15:15-16:00	Anvita Abbi & Abishek Avatans <i>Reconstructing pre-colonization knowledge base of ecological environment and sociolinguistic practices of Andamanese</i>	Gregory D. S. Anderson & K. David Harrison <i>Siberian hunter-gathers speaking the language of pastoral nomads</i>	Final discussion
16:00-16:30	BREAK	BREAK	BREAK
16:30-17:15	Lawrence Reid <i>Historical linguistics and Philippine hunter-gatherers</i>	Michael Fortescue <i>Polysynthesis in the (Sub-)Arctic: how recent is it and how might it have spread?</i>	
17:15-18:00	Uri Tadmor <i>The linguistic consequences of long term patron-client relationship: Dayaks and Malays in Western Borneo</i>	Jeff Leer <i>Speculations on the emergence of the Tlingit as a Northwest coast nation and their entanglement with the Tsimshian</i>	
		WORKSHOP DINNER	

Historical linguistics and hunter-gatherer populations in global perspective

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Abstracts received

Anvita Abbi (Jawaharlal Nehru University, New Delhi, India)

Reconstructing Pre-Colonization Knowledge-Base of Ecological Environment and Sociolinguistic Practices of Andamanese

Some of the oldest living languages of the world are spoken by not more than 500 people of hunter and gatherer tribes of the Andaman Islands. Various studies in the past, both linguistic and genetic, suggest that Andamanese population might be the last representatives of pre-Neolithic Southeast Asia. Perhaps, they represent the initial settlement by modern humans (Hagelberg et al 2002). Genetic and epigenetic data (Endicott et al 2003) suggest long-term isolation of the Andamanese for a substantial period of time, extensive population substructure, and/or two temporally distinct settlements. Geographical isolation, probably aided the survival of ancient human lineages in the Andamanese. According to recent study by geneticists (Singh et al 2005) they are the remains of the first migration of human population from Africa.

Living Andamanese tribes, at present, can be grouped into four major groups, i.e. the Great Andamanese, the Jarawa, the Onge and the Sentinelese. They are coastal and seafaring rather than terrestrial tribe. Out of these four only three, the Great Andamanese, the Onge and the Jarawa are accessible to colonizers. The Sentinelese live in isolation in an impenetrable island called Sentinel. The present paper deals with the reconstruction of knowledge-base of ecological environment and of sociolinguistic practices followed by the Great Andamanese, a name coined by the colonizers to refer to ten different tribes who once spoke ten different but partially mutually intelligible varieties of the same language. Traces of only four out of ten of the languages once spoken are seen in the current speeches of the Great Andamanese tribe. The findings are based on real fieldwork undertaken by the authors in the jungles of the Andaman Islands.

Authors have discussed a large number of lexical forms indicating ecological characteristics of pre-colonized islands such as mangrove, beaches, deep waters, stones and rocks, different islets, vegetation area, fauna, original names of various islands of the Andaman archipelago, the Jarawa jungles and that of Little Andaman. Some of the words represent lost sounds in the phonemic inventory of the present Great Andamanese.

Enough proofs of Great Andamanese being the non hierarchical and exogamous society are being provided in the current paper. The address and reference terms for elders other than those who form kin-group were always on first name basis, a practice which is followed till today by many. Girls also accompanied their father in hunting expedition be it in the sea or in the jungle and were also taught by their fathers how to make bows, arrows and turtle harpoons. Authors discuss turtle eating ceremony, the most important and the only one undertaken when a boy attains puberty. Moreover a marriage between a man and a woman would not be solemnized until they go alone for turtle hunting and bring the catch on their own. In addition, sociolinguistic practice of naming an unborn child reinforces the egalitarian status of male and female children in the society.

Present Great Andamanese is both a mixed language as well as a bilingual mixture. The substratum effect of Burmese, Sadari (the language of the recently habited/settled tribes living on a hilltop in North Andaman), Thai, Karen, and Hindi on the language can easily be attested. However, the earlier speeches were distinct but in close contact with each other. When density of population decreased tribes started marrying among different language speakers and thus emerged mixed language such as Great Andamanese. The proposed influence of Burmese and Thai on various Great Andamanese speeches opens an interesting but hitherto unexplored history of the migration and settlement of the Great Andamanese tribe as well as of the geographical landscape and ecological zones several thousand years ago. The authors believe that languages carry evidence of earlier environment, habitat and practices which are no longer in the memory of the community. Various manifestations of language are ecological and archeological signatures of the communities that maintain close ties to their environments.

The presentation is accompanied by short video strips of the life of a typical Great Andamanese in the jungles and beaches of the Andaman Islands.

Barry Alpher (Washington DC, USA)
Lexical innovations that define Pama-Nyungan

A number of grammatical features (pronouns, noun and verb inflectional paradigms) occur exclusively in Pama-Nyungan languages (Alpher 2004, Evans 2005), differentiating them from the other indigenous languages of Australia. These must be considered to have originated in a period of Pama-Nyungan unity—in proto-Pama-Nyungan, the language ancestral to the approximately 160 languages of the Pama-Nyungan phylogenetic family. However, while systematic phonological and lexical reconstruction of proto-Pama-Nyungan has begun (see Alpher 2004), the exacting task of determining which of the reconstructed forms are exclusive to Pama-Nyungan, and hence constitute a further argument for Pama-Nyungan as a phylogenetic group, has not yet been systematically undertaken. Difficulties presented by this task include the large volume of non-Pama-Nyungan lexical material that must be checked, as well as the problem of determining by standard historical-comparative means just which of these forms are common inheritances and which are loans (Alpher 2004: 119–122). In this presentation, I lay out and discuss a preliminary catalogue of that part of the proto-Pama-Nyungan lexicon that apparently lacks form-meaning resemblances (by cognation or borrowing) with forms in non-Pama-Nyungan languages—giving only passing consideration to forms which do bear such resemblances and which hence require more detailed investigation. The result is a conservative estimate of the amount and content of lexical innovation exclusive to Pama-Nyungan. Examples: Gold-standard: *ngulcu ('black'), *ngalfca ('taboo'), *karlu ('rat'). Two-language: *mangi ('image'), *purtulu ('ridge'), *pinpin ('flat'). Rejected for purposes of this discussion, but probably valid: *ka:la ('uncle'; Bardi gaarra), *mara ('hand'; Nunggubuyu marang). I then turn my attention to a few specific etyma of special cultural or geographical interest, some of them proto-Pama-Nyungan (for example 'taboo', 'image', 'rat') and some of them occurring in much more limited sets of languages ('top grindstone'), with an eye to determining what sorts of inferences are possible from them.

Sources:

Alpher, Barry, 2004, "Pama-Nyungan: phonological reconstruction and status as a phylogenetic group". In Claire Bower and Harold Koch (eds.), *Australian languages: classification and the comparative method*. Amsterdam: Benjamins, 93–126, 387–570, 681–686.
Evans, Nicholas, 2005, "Australian languages reconsidered: a review of Dixon (2002)". *Oceanic Linguistics* 44.1: 242–286.

Gregory Anderson (Living Tongues Institute for Endangered Languages, Salem, USA)
Proto-Munda and Proto-Austroasiatic: problems in diachronic linguistics

Questions raised by the enigmatic nature of cognate sets between (and among) the Munda and other Austroasiatic [AA] languages have yielded insights into both the methodology of diachronic research and into the structure of the original proto-AA language.

AA languages are used by extremely old speech communities of the South and Southeast Asia macro-region (e.g. Aslian-speaking Negrito populations of Malaysia), and are likely languages representing one of the earliest linguistic strata of the area. This paper provides an introduction to these issues.

In many ways, Munda and most other AA languages are very different from one another. In part these differences can be explained by opposing macro-areal influences that have affected each (Munda and Mon-Khmer) independently, in combination with other individual developments characteristic of particular subgroups. However, there are also a number of important shared features characteristic of various AA languages that are atypical of languages of either South or Southeast Asia. Certain of these unite earlier Proto-Munda structures with earlier forms of other AA sub-groups, and should probably be considered as retentions of original structures. These likely date to the time when speakers of proto-AA were still primarily engaged in a hunter/gatherer subsistence economy, which the majority of the modern groups of speakers do not.

One of the most striking details of comparative Munda linguistics is the presence of a large number of nouns with regular phonological and semantic correspondences in the root form of cognates across the Munda languages, but a frustrating lack of regular correspondences between the actual free-standing forms of the nouns themselves (see examples in (1)). Variation in form can even be seen in one language, cf. the forms for 'eye' in Sora. A range of different derivational processes seem to have been operative to create the varied free-standing forms of the nouns from the corresponding roots. These processes include

infixation, prefixation, compounding, and reduplication. In only rare cases (2) do all Munda languages show the same process linking the root with the free-form (i.e. producing the type of regular correspondence of form that is expected in other language families).

Similar observations can be made about sets of cognate nominal forms in virtually every AA sub-group. There are often quite regular correspondences between the sounds in the root themselves, but considerable variation in the free-standing forms of nouns used in different languages. In most cases, this reflects the use of different prefixes or compounding elements (3).

Another domain where the dichotomy between a root and a free-standing nominal form in Munda is seen is in the system of noun incorporation. Here, monosyllabic noun roots combine with verbal roots into inflectable verb stems. The so-called 'combining form' (usually the nominal root) is incorporated, which often shows regular sound/meaning correspondence among the languages, while, as mentioned above, the free forms of those same nouns usually show no such regular formal/structural correspondence (4).

Similar observations can be made about fossilized retentions of noun incorporation in other AA language sub-groups (it being seemingly not productive in any) where combining forms of nouns are cognate (with regular sound correspondence) across the languages (and indeed with Munda as well), but the free forms of the nouns are all different, cf. the forms in (5) from various Nicobarese languages.

(1)

Gutob	Remo	Gta?	Kharia	Juang	Sora	Gorum	Korku	Kherwarian	gloss
titi	titi	tti	tiʔ	iti	sʔi	siʔi	ti	ti - tii	'hand'
susunɟ	tiksunɟ	nco	--	ijiŋ / ŋ	jʔeŋ	jiʔiŋ	nangà	janga	'foot'
mɔd/?	mɔd	m-mwaʔ	moɖ	ɔmɔr/d	mʔɔd, amad	mad	mɛd	mɛt/d, (-e-, ɛ-)	'eye'

(2)

Gutob	Remo	Gta?	Kharia	Juang	Sora	Gorum	Korku	Kherwarian	gloss
sasaŋ	saŋsaŋ	ssia	saŋsaŋ	sa(ra)ŋ saŋ	saŋsaŋ	saŋsaŋ	sasaŋ	sasaŋ (cacaŋ-)	'turmeric'

[Sources: Ramamurti 1931; N. Zide field notes; A. Zide n.d.; Malhotra 1982; Biligiri 1965; Kullu 1981; Bhattacharya 1968; Pinnow 1960-ms.; Osada 1992; Deeney 1975; Campbell/Macphail 1954]

(3)

Bahnar	JöLöng	gloss
anah	tönah	'wood, tree'
köyaa	röyaa	'ginger'
röngaa	röngaa	'sesame'
tömoo	tömoo	'stone'

(Léger 1974: 124-5)

Bru	Kui	Pakoh	Katu	gloss
kəcah	kəcah-cah	kucah	kəcah	'charcoal'
ncʌj	ncɛ:	nce: ^T	ncaj	'body lice'
ʔəha:m	ŋha:m	ʔəha:m	ʔəha:m	'blood'
nluan ^B		kluanɟ	cəluŋ	calf, leg'

(Peiros 1996)

NyahKur(N)	NK(C)	NyK(S)	gloss
ɲc(h)ɯuʔ	ɲchɯuʔ	kənsɯuʔ ~ kəɲchɯuʔ	'worm, maggot'
ntoŋ	thɯŋthoŋ	kənthoŋ	'eel'

(Diffloth 1984)

(4)

(i) PSM *-ti 'hand'

Remo	Gtaʔ	Sora
<i>guiti</i>	(<i>næŋ</i>) <i>mbœʔsiæ ʔ-ti-ke</i>	<i>le:m-si-t-am</i>
wash-hand	I left wash-hand-PAST.B	bow-hand-NPAST-2
'wash hand'	'I washed my left hand'	'I bow to your hands'

Kharia	Juang
<i>gucte</i>	<i>gucti</i>
wash-hand	wash-hand
'wash hands'	'wash hands'

(ii) SM forms for 'hand' (< PSM *X-ti)

Language	'hand'	< *Form
Sora	<i>siʔi</i>	< *=ti + *-ʔ-
Gorum	<i>siʔi</i>	< *=ti + *-ʔ-
Juang	<i>iti</i>	< *N=ti
Kharia	<i>tiʔ</i>	< *=ti + *-ʔ-
Gutob	<i>titi</i>	< *Redpl=ti
Remo	<i>titi</i>	< *Redpl=ti
Gtaʔ	<i>titi</i>	< *Redpl=ti

(5) Nicobarese words for 'hand'

Central	Car	Shom Pen	Teressa	gloss
kane-tai	el-ti:	noai-ti:	mòh-ti:	'hand'

(Man 1975 [1888-9])

vs. Nancowry

-**tay** 'hand'

təŋ 'reach; up to' təŋtatay 'reach for' (cf. təŋnta 'reach at')

(Radhakrishnan 1981: 106)

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Gregory D. S. Anderson (Living Tongues Institute for Endangered Languages, Salem, USA) & K. David Harrison (Swarthmore College, Swarthmore, USA; Living Tongues Institute for Endangered Languages, Salem, USA)

Siberian hunter-gathers speaking the language of pastoral nomads

The Tofa and Todzhu peoples, hunter-gatherers of South Siberia, inhabit the extreme southern fringe of the boreal forest eco-region. This places them within shouting distance of the culturally very different steppe pastoral nomads, to whom they have long since assimilated linguistically. The Tofa and Todzhu are likely of Samoyed origin but underwent a linguistic shift to Turkic, specifically the Tuvan variety, at an undetermined time in the past.

Both Tofa and Todzhu continue to live off the land, using domesticated reindeer for transport (but not for food), and relying on hunting and subsistence gathering of boreal forest products. The date they acquired domesticated reindeer (likely from the Evenki, their neighbors to the north) is undetermined, as are the reasons for their linguistic shift to Turkic. A substantial substrate influence of an unknown (presumably Samoyed, though some have argued for Yeniseic) language renders Tofa (now moribund) and Todzhu (now rapidly in decline) quite divergent from South Siberian Turkic, and from Turkic as a family, at multiple levels of grammatical structure. Some such structures, e.g., the prolative case, represent a radical departure from Turkic but are common to other Siberian (hunter-gatherer) languages. At the same time, and somewhat surprisingly, the highly peripheral (to the Turkic family) Tofa also preserves some archaic Turkic structures that were subsequently lost to the rest of the family. For example an archaic form of the conditional mood was preserved in Tofa and lost in other extant Turkic varieties.

Evidence of the importance, scope, and character of hunting and gathering activities is encoded at multiple levels of these languages. We find, for example, in the phonology, a highly productive sound symbolic system reflecting human interaction with the ambient sound environment. In the morphology, we find a unique olfactory morpheme and a prolative case suffix. In the substrate lexicon we find numerous terms relating to game animals, and to specialized hunting and gathering activities. In the superstrate lexicon, we find many words that expressed notions relevant to pastoral nomads recast in terms of a hunter-gatherer economy. Beyond the lexicon proper, we find highly structured semantic systems that encode hunter-gatherer technologies: ecological calendars linked to animal and plant cycles; directional / topographic orientation systems, animal and plant taxonomies. In the course of our documentation of these two languages, we have amassed a rich corpus of hunting narratives, as well as songs, stories, myths, and lexica relating to traditional lifeways. These provide an incomplete, but intriguing glimpse into the transfer of hunting and gathering knowledge, with the lexical and grammatical structures that encode it, across a language shift and wide cultural gap.

Placing this in a broader context, Tofa and Todzhu may reveal certain types of changes, whether grammatical, phonological or lexical-semantic, characteristic of a linguistic shift that is largely unaccompanied by cultural shift.

Mark Donohue (National University of Singapore, Singapore)
Language, locality and lifestyle in New Guinea

There are a number of distinct bio-economic 'zones' in mainland New Guinea, in which different resources to some degree dictate different lifestyles. The fact that the match is not completely one-to-one, and that the discrepancies usually have geographical explanations, shows that social history has played a part in the dispersal of economic activity. Since geographic accessibility is also a prime predictor of linguistic influence, the possibilities for links between lifestyle and language, through the connecting factor of locality, seems high. The fact that New Guinea exhibits both a great linguistic genetic diversity as well as particularly forbidding terrain means that these simple predictions are often not so transparent. Additionally, the widespread cultural conservatism of New Guinea cultures means that often a lifestyle that would be predicted from one locality is found in a different locality, due to relatively recent social movements. I present case studies of different locales, representing different localities, in New Guinea, examining possible correlations between lifestyle and language features, and correlate the features observed there with the results of a broader examination of the New Guinea area as a whole.

Patience Epps (The University of Texas, Austin, USA)
Foraging as a way of life: language and subsistence patterns in the Amazonian Vaupés

The Amazonian Vaupés region, located on the border of Brazil and Colombia, is home to both foragers and agriculturalists: hunter-gatherer Nadahup peoples and fisherman-farmer East Tukanoan and Arawak groups. For several generations at least, these peoples have interacted so closely as to be symbiotic (cf. Silverwood-Cope 1972, etc.), occupying complementary ecological niches within the region (the riverine zones for the Tukanoans and Arawaks, the interfluvial forest for the Nadahup), and engaging in trade and other socio-economic relations. The patron-client nature of this symbiotic relationship is intriguingly similar to that described for the Mbuti Pygmies and Bantu of the Congo (e.g. Fisser 1988, Peterson 1978) and for various other foraging and agricultural peoples in other parts of the world, suggesting that aspects of the Nadahup-Tukanoan interaction are representative of the relationship between foragers and farmers more generally. Without some knowledge of the history and time-depth of the Nadahup-Tukanoan relationship, however, our understanding of it is so limited as to be almost meaningless. Questions abound: how long has this symbiotic relationship existed? How did it begin? Does it reflect a long-term, consistent, and stable pattern, or is the interaction a recent phenomenon marking the Nadahups' quick transition to agriculture? Or are the Nadahup peoples actually former agriculturalists who returned to a foraging lifestyle under the pressures of the European invasion, as is the case with other Amazonian peoples such as the Guajá (Balée 1999)?

In the absence of a deep historical or archaeological record, historical linguistics is one of the only keys to these questions. This paper offers some tentative answers through examination of the available linguistic data. It addresses the profound language contact that has occurred, through which the languages of the Nadahup foragers have assimilated many aspects of Tukanoan grammar. It also examines the relative amount of innovation found in different semantic domains of vocabulary across the Nadahup languages (those relating to useful native vs. domesticated plants, numerals, etc.), and the implications of this for our understanding of which concepts might have entered the language and culture more recently. It argues that these linguistic observations are most consistent with a scenario in which Nadahup foragers and Tukanoan agriculturalists have had a stable, on-going interaction for many generations, and the Nadahup peoples acquired their knowledge of agriculture from their neighbors, but chose to maintain their own way of life even when face to face with the new pattern.

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Nicholas Evans (University of Melbourne, Australia)
Tracks in the north Australian Wordscape

For most of our human past, our ancestors have been hunters and gatherers. Such societies violate many of the methodological assumptions made in interdisciplinary prehistory in the vein of Renfrew et al for the Indo-Europeans, Bellwood et al for the Austronesians, and Ehret for the Bantus. Demographically, they lack large-scale social groupings or prestige centres forming a focus of linguistic convergence. Technologically, they lack such crucial ingredients for correlating linguistic and archaeological records as metallurgy, pottery, cultivated plants or domesticated animals, making correlations between reconstructed vocabulary and archaeological signatures difficult. Yet if we are to have a unified account of world deep-time linguistic history, it is an understanding of hunter-gatherer cultures that holds the key, both because of the predominance of this mode of social organization through 99% of our human history (Livi-Bacci 1992), and because joining together phylogenetic units in deep time inevitably takes us back to hunter-gatherer phases of any part of the world.

As the only continent populated until recently entirely by hunter-gatherers, Australian languages offer special insights into these problems. Moreover, studies in the anthropological linguistics of many Australian speech communities offer rich insights into the social patterning of language differences in small groups (whose sizes range from stable population figures of not much more than 50 for some languages, to an upper bound of 3,000 in the case of a few of the more widespread dialect chains.) In many cases cultural traditions are sufficiently strong that linguistics can join forces with 'ethnoarchaeology' to study contemporary language use as it pertains to objects and processes capable of leaving archaeological traces.

In this paper I focus on one particularly diverse part of the Australian continent – Western Arnhem Land – and what it has to offer our more general understanding of hunter-gatherer linguistic prehistory. In particular, I will focus on:

- (a) the linguistic demography of this relatively densely-populated region, and the forces of alliance, borrowing, diversification and language succession at work in the observable past
- (b) the interplay of social structures (clans, higher-level social groupings like moieties and phratries) and linguistic ideologies (particularly the language <> land <> social group nexus) on the patterning of language change
- (c) the vocabulary domains which appear most promising for applications of Wörter und Sachen techniques, with a particular emphasis on knowledge and technology derived from uncultivated plants.

Michael Fortescue (University of Copenhagen, Denmark)
Polysynthesis in the (Sub-)Arctic: how recent is it and how might it have spread?

In many situations where polysynthetic languages are found it is difficult to assess how much of the complexity of the language(s) involved is due to purely internal developments and how much is due to areal influence from neighbouring languages. This applies also to sparsely populated and linguistically diverse areas such as the western North American and the eastern Asian Arctic/Sub-Arctic, where the degree of synthesis builds up around and across Bering Strait to form a uniquely extensive cline from moderately synthetic (Siberia) to highly polysynthetic (northernmost North America), tapering off again - patchily - further south. The question naturally arises as to why this should be so: does this cline represent a founder effect of the first migrations that entered the New World through the bottleneck of Beringia (born fortuitously by a polysynthetic family)? Or does it reflect something special about the typological dimension of polysynthesis – do highly synthetic languages left to their own devices just carry on getting more and more synthetic after some crucial point of no return is reached? Did successive later migrations bring languages of other types into contact with polysynthetic languages already in place, and could this have influenced their further structural development? It would be of considerable help in addressing these questions to know how to recognize an "old" as opposed to a "new" polysynthetic language. This paper attempts to unearth some of the features symptomatic of the distinction. The results will then be applied to a specific problem on the Asian side of the North Pacific, namely the question of the age of polysynthesis in the Amur-Sakhalin-Hokkaido region, where it has been suggested that there may be genetic links to at least some of the polysynthetic languages of North America, all borne by small mobile groups of hunter-gatherers. This leads to a final issue: does polysynthesis show some significant correlation with cultural and/or demographic factors – in particular with the hunter-gathering way of life?

Tom Güldemann (MPI-EVA / University of Leipzig, Germany)

Changing profile when encroaching on hunter-gatherer territory?: towards a history of the Khoe-Kwadi family in southern Africa

The history of southern African languages subsumed under Khoisan has been subject to a great deal of speculation, which, to a large extent, stemmed from our ignorance about them. In the last two decades our knowledge about these languages has grown considerably, however, and a number of earlier views have been revealed to be misconceptions -- or at least premature hypotheses, e.g. the idea of a Macro-Khoisan language family. Nevertheless, some insufficiently substantiated claims are still held as conventional wisdom in Khoisan studies. This talk will discuss the early history of the largest lineage subsumed under Khoisan, the Khoe-Kwadi family, and in so doing will address two frequently encountered assumptions in this research area, namely (1) that all southern African Khoisan lineages are indigenous to the region and (2) that they have always been associated with a hunter-gatherer subsistence. I will present linguistic and other evidence on these issues and argue instead that the ancestor population giving rise to modern Khoe-Kwadi speaking groups colonized southern Africa relatively recently and introduced a pastoral mode of life to the region. The extent of diversity found among modern Khoe-Kwadi speaking groups in terms of linguistic, cultural, and biological traits can be explained as the result of different types of contact with the hunter-gatherer populations indigenous to the area.

Jane H. Hill (University of Arizona, Tucson, USA)

Uto-Aztecan Hunter-Gatherers: Language Change in the Takic Spread and the Numic Spread Compared

Two sub-groups of Uto-Aztecan, Takic of southern California and Numic of the Great Basin, include languages that are spoken either exclusively (in the case of Takic) or almost entirely (in the case of Numic, where some Southern Numic groups were cultivators in the historic period) by hunter-gatherers. Takic groups spread into California, probably beginning at about 3000 years ago and reaching the Pacific Coast by about 1500 years ago. The Northern and Central Numic spread into Great Basin between 2000 and 1000 years ago. While my own view is that the Proto-Northern Uto-Aztecan ancestors of the Takic and Numic subgroups were maize cultivators, both of these spreads must have included a very early stage of agricultural devolution in which ancestral groups abandoned cultivation. Takic groups all exhibit the characteristic Californian patterns of subsistence, centered on acorn collecting, while Northern and Central Numic groups focus on annual seeds and resources such as pinyon nuts. The two spreads contrast in an interesting way. While there are definite complications, on a simplified view the Takic spread into southern California involved movement into a region that was fairly heavily populated, with Takic groups adopting the subsistence strategies of autochthonous Californians. At least part of the Numic spread, particularly that involving the Central Numic or Shoshone, involved movement into regions with very sparse populations; Bettinger and Baumhoff (1982) proposed that the Numic spread was made possible by innovations in subsistence strategy. Evans and McConvell (1998), based on materials from Australia, proposed that these two types of hunter-gatherer spreads will produce different linguistic results, because during spreads of the Takic type substratum populations will be incorporated into the spreading group. The paper will test this idea. The prediction is that Takic languages will diverge more sharply from the Uto-Aztecan prototype (as summarized, for instance, by Langacker (1977), while Numic languages will conform to it more closely. The measure of divergence will be the number of changes away from the Uto-Aztecan prototype in those Takic and Numic languages for which we have adequate documentation, using a sample of typological indicators from the WALS survey. Type of shift will also be considered, although I am not sure exactly what to expect. The incorporation of L2 speakers would predict a shift to less-marked feature realizations. However a countervailing tendency toward esoterogeny in the languages of aboriginal California was probably also operative.

Patrick McConvell (Australian Institute of Aboriginal & Torres Strait Islander Studies, Canberra, Australia)

Semantic change and borrowing as signature of upstream and downstream language spread in Pama-Nyungan (Australia)

Pama-Nyungan is a widespread language family in Australia, covering the bulk of the Australian continent except the central tropical north and Tasmania. It probably split off from a wider Australian phylum in the early to mid-Holocene, spreading from a homeland in North Queensland. It is characterised by a group of grammatical and phonological innovations, but the main focus in this paper is on vocabulary, for which several hundred quite robust reconstructed proto-PN items have been assembled by Alpher (2003 and ongoing). The focus in this paper is particularly on the terminology of kinship, and of animals, with some reference to artifacts.

The working hypothesis is that the PN and probably most other wide-scale language expansions involve two types of spread, one mainly by migration into and through sparsely populated corridors, and the other mainly by language shift on the part of populations outside these corridors. These have been called respectively 'upstream' and 'downstream' phases as they tend to move languages into more arid areas, and more well-watered areas, respectively, in the Australian context and probably elsewhere (McConvell 2001). There are some expansionist features of societies which can underpin such patterns which may be detectable in social organization vocabulary.

Elements of kinship terminology can provide a strong case for the existence of PN, even without other evidence; this is illustrated from some reconstructed grandparent terms such as **kami(ny)* 'mother's mother'. Most of the proto-PN kinship terminology can be fairly reliably reconstructed, enabling testing of currently debated theories of kinship evolution (eg Hage 2004).

In the spread of PN however, some kinship terms have changed meaning. Roots for mothers, uncles, nieces and nephews have become terms for cross-cousins and spouses, in a very distinctive pattern which indicates that Omaha skewing was the polysemy which permitted this transition. (McConvell & Alpher 2002). It is argued that this form of skewing is characteristic of an expansionist system.

Other types of semantic change relate particularly to 'upstream' change as people migrate into different ecological zones. Two different roots meaning 'fish' in eastern PN have become 'meat, animal' to the west, because of the movement of people into areas where fish were insignificant as a food source. Other species names change meaning as the original referents are left behind and the names are applied to similar species in the new environment.

On the other hand, when language shift occurs in a 'downstream' phase what tends to occur is massive borrowing of environmental terms from the languages of the zones which the new languages are penetrating. Kinship terms are also borrowed but these are not the entire set but new ones which are needed for a more complex system (McConvell 1997). These processes are illustrated from the Victoria River District in the Northern Territory.

Finally the question is discussed whether these patterns are in any way peculiar to hunter-gatherers as compared to food-producers. Theories of language expansion led by farming tend to assume that new technologies and economies expand together with languages, but important technology diffusions in the PN zone (e.g. intensive seed grinding, McConvell and Smith 2003) seem unrelated to language spreads. PN expansion could be linked to smaller, lightweight tool kits and backed artifacts in particular, but good linguistic evidence of old roots for this technology has so far eluded us.

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**Lawrence A. Reid (University of Hawaii, Hawaii, USA)
Historical Linguistics and Philippine Hunter-Gatherers**

This paper will address each of the three major topics of the workshop with reference to Philippine hunter-gatherer groups, primarily Negrito, but also the non-Negrito hunter-gatherer group, Tasaday. Data will be drawn primarily from earlier published materials (e.g., Reid 1987, 1989, 1991, 1994, 1997, Headland and Reid 1989, 1991) with additional information drawn from more recent published and unpublished materials (e.g., (Headland and Blood 2002). Specifically it will provide a discussion of the demographic ranges of the extant groups and the patterns of relationships with other Negrito groups. The competing patterns of close association with, and avoidance of non-hunter-gatherer groups as revealed from the types of linguistic relationship that hold between the two groups will be discussed. Different views as to the time-depth of the prehistoric relationship of Negrito groups with in-migrating neolithic Austronesian speakers to the Philippines will be evaluated, and evidence for retention of a non-Austronesian substratum in the languages of Negrito groups will be discussed. Finally, the coastal/seafaring Negritos of Northeast Luzon and the linguistic influence they have had on non-Negrito populations of the area will be described.

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**Richard A. Rhodes (University of California, Berkeley, USA)
Ojibwe Language Shift, 1600-present**

In this paper I would like to report on the known history of language spreads in the US and Canada in general area of the Great Lakes and Hudson Bay. I will concentrate on the various Cree and Ojibwe languages spoken in that region. All are very closely related, but not all mutually intelligible (*Ethnologue*, 2006). During the first 250 years of the historical period (1600 p.e.-present) these languages were spoken by populations which supported themselves primarily by subsistence hunting, but also by participation in the fur trade. The results of pressures from encroaching white migration caused ripple effects throughout the pre-reservation period, including interethnic warfare and migrations. The 19th century was particularly turbulent as whites began to appear in numbers and many of these groups were moved onto

reserves/reservations, some forcibly, resulting in the mixing of populations speaking different languages. Against this complex backdrop of social change, there was a hierarchy of languages reflecting the relative prestige of various groups (Rhodes, 1982). By the mid-1900's language use through much of this area had settled into a more or less locally steady state, with only single languages represented on individual reserves/reservations, and English beginning to take over.

The picture represented will show the difficulty of telling, at a time remove, what the outcome of particular population movements can be. The examples in this area represent every possible type of language spread: migration into unoccupied territory (repopulation of Michigan after the Iroquois war), migration with population replacement (Ojibwe supplanting Dakota in northern Minnesota), migration into a populated area with shift to the local language (Potawatomi settlement on reserves/reservations), migration into a populated area with shift to the migrator's language (English), and language spread without migration (Ottawa supplanting Southwestern Ojibwa in Michigan). To say why a particular shift took place, requires a more sophisticated and detailed account than is generally available based on a simple comparison of the archeological record with a language map. In particular mechanisms of shift in this area include ones that are invisible to such methods. They involve bilingualism limited to related languages, i.e., *de facto* diglossia, and long term stable bilingualism. When a diglossic or bilingual system is stressed, how can we predict which language will survive? If we fail to be able to answer that question, we fall into the trap captured in the famous quote generally attributed to the influential stage designer Lee Simonson: "Any event, once it has occurred, can be made to appear inevitable by a competent historian." Our theories of language shift must take into account factors less tangible than simple access to resources. These factors include prestige (which generally accompanies access to resources) and the interaction of language and identity.

J. Rischel (Mahidol University, Salaya, Thailand)

The Mlabri enigma: a primary hunter-gatherer language or the result of an ethnically and socially complex founder event?

The tiny Mlabri group on the Thailand-Laos border is becoming an exemplar of likely cultural reversion. Its language is, however, *not* a variety of a villager language although it has significant affinities with the Austroasiatic language (or rather: language cluster) Tin, spoken by villagers in the same area and belonging to the so-called Khmuic branch. In particular, there is a layer of shared words which antedate sound changes and morphological simplifications that have happened in Tin, and which can thus be formally distinguished from later loanwords in Mlabri (words borrowed – probably fairly recently – from a variety of food-producing groups, including the Tin themselves). On this basis I have suggested that the bonds between Mlabri and Tin date back to a "Tinic" ancestral language. In terms of phonology and morphology, Proto-Tinic (slightly antedating the "Pre-Tin" reconstructed by David Filbeck) was structurally closer to present-day Mlabri than to present-day Tin. It is, however, important to realize that most of Mlabri lexicon has so far no known provenance, be it as (i) old vocabulary belonging to the Tinic level, (ii) more recent loans, or (iii) innovations within Mlabri proper.

A priori, one might think of Mlabri as a hunter-gatherer language that was at some point profoundly influenced by Tin, but its speakers may not always have been hunter-gatherers. The PLoS paper by Oota-Stoneking (et al.) gives strong biological evidence in favour of a founder event involving straying villagers. I find this plausible also from a cultural and a linguistic perspective; the idea that Mlabri culture may be a secondary survival culture has actually been around for decades. As an example of evidence for a Khmuic connection I wish to mention the retention of an ancient set of numerals from 1 to 10, which in its entirety occurs only in Khmuic. They are not functional in enumeration or counting, but mastering the set as a formula is proof of one's ethnicity as a Mlabri (their cognates elsewhere in Khmuic serve magical purposes).

More specifically, the PLoS paper refers to the ethnic Tin as possible ancestors of the Mlabri; if I understand correctly that assumption does not so far rest on biological data but on linguistic and cultural evidence supplied by me and others. The Tin, like nearly all Austroasiatic groups of Mainland Southeast Asia, were probably villagers since time immemorial. Granting that a cultural reversion may have happened within an outcast Tin family it is hard to believe that they were entirely on their own. If so, they would hardly be speaking the Mlabri language we know. Grammar is particularly important in this context. Mlabri syntax is intriguingly different from Tin syntax and indeed from Austroasiatic in general, having

certain affiliations to Sino-Tibetan. I find no Sino-Tibetan impact on Tin proper, nor would one expect it since Mlabri and Tin are spoken in a geographical area which is traditionally Khmuic.

To me all of that suggests that among the founders there were also speakers of a quite different language. They may have been male food providers socializing with one or more village girls; interestingly, Mlabri still exhibits a sociolinguistic contrast between male and female vocabulary. If indeed they were of the male gender, such a mixed origin does not spell trouble for the biological hypothesis either. Culturally, however, the scenario becomes hazy: one cannot rule out the possibility that those non-Tins were carriers of some kind of hunter-gatherer culture prior to the founder event posited by the biologists.

Malcolm Ross (The Australian National University, Canberra, Australia)
Clues to the linguistic situation in Near Oceania before agriculture

Near Oceania consists of N.W. Melanesia (the Bismarck Archipelago and the Solomon Islands) and New Guinea. Human beings probably entered Near Oceania from Asia more than 40,000 years ago, and occupied the all of the region except perhaps the S.E. Solomons by 21,000 BP.

In today's Near Oceania forager communities are few, but advances in our understanding of the language map in the past decade allow us to make certain inferences about how the map looked before two major linguistic events that have occurred during the Holocene.

Working backwards, the second of these events was the arrival of Austronesian-speaking agriculturalists around 3300 BP. They were able gradually to colonize almost all the habitable areas of N.W. Melanesia, apparently because the earlier inhabitants were foragers with little demographic muscle. As a result, the present-day map of N.W. Melanesia consists of a scattering of isolated Papuan (i.e. non- Austronesian) languages amidst a mass of Oceanic Austronesian languages. The diversity of these Papuan languages is striking, and appears to reflect a diversity that existed in pre-Austronesian/pre- agricultural times.

In New Guinea, Austronesian speakers have mostly been able to gain only footholds along the coasts, largely because of relatively high population density resulting from the first event, namely the spread of Trans New Guinea (TNG) speakers from perhaps around 8000 BP, following the domestication of taro and banana, apparently in the New Guinea highlands. Today about two-thirds of mainland New Guinea is occupied by languages of the (Papuan) TNG family. The rest--the western two-thirds of the north coast and its hinterland and an area in the south, opposite Australia's Cape York--is occupied by twenty or so small families (some with only one language) with no obvious genealogical relationships to each other, to TNG or to the Papuan languages of N.W. Melanesia. The north coast area is the linguistically most diverse in the world.

The extreme linguistic diversity of those parts of Near Oceania that have not been overwhelmed by TNG or Austronesian languages appears to reflect the situation that existed around the Pleistocene/Holocene transition, before the spread of taro-based agriculture. Although the language distribution patterns in N.W. Melanesia and New Guinea today differ sharply from each other, both display relics of an early Holocene pre-agricultural language map with a phenomenal level of genealogical diversity. There is no obvious evidence of multiple migrations into New Guinea, and so it is a reasonable, if speculative, inference that this situation was the result of diversification that had occurred in situ over thirty millennia during the Pleistocene.

Franz Rottland (Kenya / Germany)
Okiek languages in a historical perspective

(1) Linguistic Unity and presumed Origin

All Okiek groups known speak Kalenjin (i.e. Southern Nilotic) languages as their main medium of expression. There are very few cases of language shift with a very reduced (and not active) knowledge of the former language. The Okiek are only aware of their neighbors, not of all groups called Okiek, but the grammatical, phonological and lexical features which the Okiek languages share make the assumption of an Okiek language branch (with a common point of departure) quite likely. If so, we have to deal with an internal development of Kalenjin. There is no indication of an "original" Okiek language other than Kalenjin – a fact which has led to a number of hypotheses concerning the existence of hunter-gatherers amid a larger (Kalenjin-speaking) community of food producers (e.g. language shift in favor of newcomers, late

specialization in a mixed economy). I shall present an overview of these hypotheses, which are all based on extra-linguistic assumptions.

(2) Language Use and Bilingualism

The present-day neighbors of the Okiek are (on the whole) either Kalenjin-speaking Kipsikiis or (Eastern Nilotic Maa-speaking Maasai. The Maasai knowledge of the Okiek is by far more interesting and even intriguing since (1) it shows the influence of Maasai groups which are no longer neighbors, and (2) - more importantly - it shows a deep-going adaptation of Maasai cultural (plus linguistic) values and practices which has led to the (ceremonial) use of the Maasai language when only Okiek speakers are present. This can be exemplified in some detail. There is nevertheless a subjective and objective Okiek identity (together with a friendly aloofness on their part), and a linguistic and cultural shift could only be projected further based on the accommodating attitude of the Okiek. Observation does not support this projection.

Uri Tadmor (Max Planck Field Station, Jakarta, Indonesia)

The Linguistic Consequences of long term Patron-Client Relationship: Dayaks and Malays in Western Borneo

The dichotomy between Dayaks and Malays is the most salient ethnic division line in Borneo. 'Dayak' is a general roof term for the aborigines of the island, who consist of hundreds of groups and tribes. They all speak Austronesian languages, albeit with tremendous diversity. Historically, Dayaks were mostly sedentary foragers, some of whom also practiced limited agriculture, although this may be a relatively recent development. They inhabited the interior of the island, and lived in large communal dwellings known as longhouses. Most Dayaks are now Christian, although until the 20th century they were mostly animists. The Malays, on the other hand, were traditionally urban dwellers and rural food producers, who lived in nuclear-family dwellings in coastal areas, and in recent centuries have also spread inland along the island's rivers. All Malays are Muslim, at least nominally.

This case study examines one Dayak group, the Kuwalan-Samandang, who live along two eponymous rivers in the interior of western Borneo. They speak a language of the Land Dayak (Bidayuhic) family. The Kuwalan-Samandang have been in contact with the Malays for centuries, perhaps millennia, including a long period which of virtual serfdom, which only ended in the 20th century. This long history of contact is evident in the Kuwalan-Samandang language, which is replete with Malay loanwords, although structural borrowing is limited. The local Malays speak a Malay dialect that exhibits an opposite pattern: very heavy structural borrowing, with relatively little lexical borrowing. The reasons for these different patterns of contact-induced change are directly related to the nature of their speakers' historical relationship. The technologically, politically, and economically superior Malays resisted lexical borrowing from the language of their Dayak clients, although sometimes they had little choice, for example in the case of indigenous flora and fauna. By and large they have preserved their Malay lexicon, as a manifestation of their ethnic identity and perceived superiority. However, they were unable to avoid structural interference, which is a more subconscious process, and their Malay dialect exhibits very heavy structural borrowing from Kuwalan-Samandang. These structural changes were reinforced (or perhaps even initiated) by a unidirectional assimilation process, whereby increasing numbers of Dayaks were converting to Islam and becoming Malays, while practically no Malays were converting away from Islam and becoming Dayaks, so to speak. The Islamized (and thus Malayicized) Dayaks spoke Malay with a Kuwalan-Samandang substrate, which eventually influenced the speech of the entire Malay community. The Dayaks, on the other hand, did not resist borrowing from the prestigious language of their Malay patrons. However, since social contacts between the two groups were limited, the borrowing was manifested mostly in lexicon. Eventually, the structure of the local Malay dialect became very similar to that of Kuwalan-Samandang, but in the process some structural features were borrowed as well.

**Sally Thomason (University of Michigan, Ann Arbor, USA)
Montana Salish and the Pacific Northwest Sprachbund**

From the viewpoint of the Pacific Northwest Sprachbund, Montana Salish is an outlier: it is the westernmost language that shares all the salient features of the linguistic area. Its local non-Salishan contacts, especially with Kutenai and Nez Perce, have resulted in a considerable amount of lexical borrowing and a number of suggestive shared structural features. This paper explores the linguistic consequences both of the apparently remote (in time and place) Pacific Northwest contacts and of the more recent local contacts with Salishan and non-Salishan languages. The traditional annual buffalo hunt was prominent among the settings for relatively recent local contacts between Montana Salish and its nearest non-hostile neighbors. Some general conclusions: Montana Salish probably shares features of the Pacific Northwest Sprachbund primarily because of its membership in the Salishan language family rather than through direct participation in Pacific Northwest cultural contacts; areal traits like the near-total absence of lexical borrowing from English indicate the spread of language-related cultural norms in the region; I have found evidence for the existence of borrowing routines for the nativization of loanwords from other Native languages; I have so far found no solid evidence that deliberate structural changes have been made in languages of this region, though such changes appear to be fairly common in languages of other hunter-gatherer populations around the world.

**Edward Vajda (Western Washington University, USA)
Ket substrate elements in Inner Asia**

The formerly widespread Yeniseic family, of which Ket is now the sole surviving member, once occupied a vast area from the Altai-Sayan Mountains and northern Mongolia northward across central Siberia to the Arctic Circle. This presentation explores the issue of substrate influence left by Yeniseic, spoken by small mobile bands of hunter-gatherer-fishers, on the languages of later-spreading pastoralist groups in Inner Asia. To substantiate the former location of Yeniseic-speaking groups, substrate river names of definite Yeniseic origin are mapped and connected to the known Yeniseic daughter languages, where possible: *ses, sas, zas, zes* (Ket dialects), *chas, ches* (Yugh), *sat, set* (Arin), *shet* (Kott), *ul* (Assan), *tat, dat, tet, det* (Pumpokol). Languages from genetically unrelated families that later took over large parts of this territory are then examined for possible Yeniseic substrate features. Verifiable Yeniseic influence on Selkup, Enets, Nenets, Ewenki, and South Siberian Turkic (Xakas, Tuvan, Tofalar, Chulym Turkic) appears largely limited to lexical borrowings for items of spiritual culture, social organization, or boreal hunting lifestyle. Occasional grammatical and phonological traits suggested by other linguists as deriving from Yeniseic substrate influence are more plausibly explainable as originating from different sources. These include the glottal stop feature of Nenets, the third-person pronoun *bu* of Enets, affrication in Western Buryat dialects, and pharyngealization of vowels (Tuvan).

The presentation then examines the question of Proto-Yeniseic influence on other proto-languages of Inner Asia before the spread of pastoralism into South Siberia. Evidence for the origin and earliest documented location of Yeniseic-speaking groups is considered. There is no concrete proof that Yeniseic-speakers were ever located farther south or east of this area. The purported linguistic connections with the pastoral Xiungnu (300BC-100AD) or the hunter-gatherer Dingling (first millennium BC) also remain conjectural and unsubstantiated. Once again, plausible Yeniseic influence on neighboring languages of this time period, such as Proto-Turkic, appears to be limited to the lexicon, but do include such interesting items as Turkic *tash* 'stone', sometimes claimed to be inherited from "Proto-Altaiic". The conclusion is that Proto-Yeniseic (or its daughter dialects) was likely spoken in South Siberia during the time of the spread of nomadic pastoralism in this area (700BC-500AD) and that Yeniseic may have contributed a limited number of lexical items to neighboring languages.

The much more substantial areal features of phonology and grammar uniting Yeniseic with other North and Inner Asian languages are then considered. In grammatical structure these include a system of bound enclitics or suffixes which function like a case system when added to nouns, and serve as clausal subordinators when added to finite verb forms. Areal phonological features shared by Yeniseic include a paucity of word-initial sonorants and lack of onset clusters. Specifically Yeniseic features such as phonemic tones deriving from complex consonant onsets and codas, as well as multi-slot prefixing finite verb structure are wholly absent from the surrounding languages. This suggests that Yeniseic did not play a significant role in the establishment of the Inner Asian linguistic area, but rather received substantial

influence from other languages. Confirmation of this comes from the evolution of the finite verb system, in particular. When a verb root was incorporated into the leftmost edge of the prefixing finite verb template, this rendered the original prefix positions as suffixes. In most productive Ket patterns of verb formation, for example, the original verb root on the rightmost edge has been reduced to an affix marking aspect and transitivity. This effectively rendered the Modern Ket verb into a suffixing structure, even though the order of the original prefixal classes was entirely preserved.

The surprisingly small amount of demonstrable Yeniseic influence on neighboring languages, given the family's once widespread distribution, apparently derive from two facts, if the recorded experience of Ket linguistic interaction can be taken as diagnostic. First, many Ket speakers generally were bilingual in another language, but speakers of neighboring languages rarely learned fluent Ket. Second, language shift between Ket and other languages tended to involve small groups of people merging with a larger population over a few generations, which failed to produce any transmitted creolization effect. Over time, this situation resulted in the gradual assimilation into Ket of phonological and grammatical features from neighboring languages, but generally only lexical diffusion from Ket into other languages.

José Pedro Viegas Barros (University of Buenos Aires, Argentina) Proto-Chon cultural reconstructions from the vocabulary

The Chon language family includes the following members: Tehuelche, Teushen, Selknam and Haush. The first two languages were spoken in continental Patagonia, the two latter ones in the Island of Tierra del Fuego. All of them, except Tehuelche, are extinct; Tehuelche is almost extinct. Chon peoples were hunter-gatherer communities in the Southern end of South America.

Continuous progress in the reconstruction of Proto-Chon vocabulary allows us to attempt to catch now a glimpse of the Proto-Chon culture. The starting point is the assumption that a set of cognate words for an object is evidence for the existence of the object in the original culture. In this paper, I consider only the cognate words maintained - on the one hand - in at least one Tierra del Fuego's language (i.e., Haush and/or Selknam), and - on the other hand - in one or both of the continental languages (i.e., Tehuelche and/or Teushen). Borrowings are also considered, because these lexical elements can provide interesting information not only about the kind and intensity of prehistoric contacts with other peoples, but also about the tendencies to linguistic replacement in particular semantic areas.

I present conclusions about flora, fauna, economy, technological level, family organization, and social traditions. The picture that emerges shows among other things the importance of coastal cultural aspects in Proto-Chon, contrasting strikingly with the well known terrestrial orientation of the historical Chon peoples.

David Watters (SIL) Kusunda: a typological isolate in South Asia

Kusunda, a linguistic isolate of Nepal, has been reported extinct since the mid 1980s. In 2004, three speakers were discovered, two of whom are fluent. A team of researchers at Tribhuvan University in Kathmandu, Nepal was able to devote a solid three months to the study of their language. A 240 page grammatical sketch -- Notes on Kusunda Grammar -- has been written, based on the research. The grammar was published in 2005 by the National Foundation for the Development of Indigenous Minorities, Kathmandu.

Until recent historical times, speakers of Kusunda lived as semi-nomadic hunter-gatherers in central and mid-western Nepal. Their language is very likely the sole survivor of an ancient aboriginal population once inhabiting the sub-Himalayan regions before the arrival of Tibeto-Burman and Indo-Aryan speaking peoples.

Though Kusunda has not escaped at least some areal influence from both Tibeto-Burman and Indo-Aryan, by and large, it remains both a linguistic and typological isolate -- i.e. it is phonologically, lexically, and grammatically distinct. In core vocabulary, for example, as in the Swadesh 100-word list, Kusunda has only three or four words that "might" be borrowed (all from TB); all the rest are native. Grammatically too, Kusunda does not adhere/conform to many of the widespread typological features of the area and maintains its own distinct character. Some patterns are unique, even surprising, among the languages of

South Asia. In this paper I will present some of the salient features that attest to a long history of non-convergence.