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**ABSTRACT BOOKLET**

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## **Variable Proper Names In Present Great Andamanese: A Morphosemantic Study**

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Present Great Andamanese (PGA) is an endangered and moribund language of the Great Andamanic family spoken by five terminal speakers residing in the Strait Island, Great Andaman Islands, in the territory of India. Great Andamanese were hunter and gather till the middle of the 20<sup>th</sup> century. Research by geneticists indicates that the Andamanese are survivors of the first migration from Africa that took place 70,000 years before the present. They are the last representatives of pre-Neolithic Southeast Asia. The language and culture of the tribes are rare in many respects (Abbi 2012, 2013) which also get represented in assigning proper names especially those which are used as reference terms for individuals. Discoveries of *rara* and *rarissima* have been associated with the knowledge about the capacities and limits of human languages (Cysouw and Wohlgemuth 2010). The current presentation is in the line of exposing a typologically rare feature.

While the PGA proper names used for human referents are not gender sensitive, they are changed six times in a life-cycle of a human being. These have been divided into six stages for the convenience of discussion and analysis. All six stages are not equidistant from each other in respect of length of time. Syntactically, proper noun used for male, stage 3 never occupies the subject position in a sentence. The others can occupy S/A/P roles. They all have the potentiality of being case marked. The natural ecology and human relationships play a significant part in assigning the names. As there is no counting system in the community, the specific human name serves as an indicator of the age of the referent.

The proper names assigned to geographical locations are symptomatic of the specific ecology of the area they refer to. Although semantically these are more transparent than those referring to human proper nouns, they are morphologically more complex than the latter. Small clauses and compounding are two common processes involved in its production. The current research not only throws light in the area of onomastics, but also unravels the morpho-semantic complexity of the structures.

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## The Linguistic Niche Hypothesis in the light of Word and Paradigm Morphology

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Following the research paradigm in *Sociolinguistic Typology* (ST) (Trudgill 2011) on language complexity (Wouters 2004, Sampson 2009, Miestamo 2008, among others), Dale and Lupyan (2010, 2012)<sup>1</sup> formulate what they call the *Linguistic Niche* hypothesis. According to their proposal, there is a significant correlation between population size and inflectional morphological complexity: languages spoken by smaller populations within a restricted geographical range have more complex inflectional systems than languages spoken by large populations distributed over wide geographical expanses. Such tendencies as demonstrated in this and previous research are quite intriguing.

There are two significant issues that need to be considered in evaluating their particular claim(s). The first concerns Dale and Lupyan's criteria and assumptions about morphological complexity and the second concerns the specifics of the inflectional encodings employed in their agent-based simulations. While the presentation will address both, the remainder of the abstract only focuses on the first.

Concerning morphological complexity, Ackerman and Malouf (2013), working within a Word and Paradigm systems-based perspective on morphology (Ackerman et. al. 2009, Blevins 2013, to appear, Bonami and Beniamine 2015, Sims to appear, among others), propose a distinction between two types of complexity considerations relevant for morphological analysis. *Enumerative complexity* concerns the number and types of morphosyntactic distinctions made in a particular language as well as the formal strategies utilized to encode these distinctions: this appears to be the notion of complexity addressed by Dale and Lupyan and by numerous typologists (this roughly corresponds to so-called *absolute complexity*.) *Integrative complexity*, in contrast, concerns the systemic cohesiveness characteristic of morphological organization: this is measurable in information-theoretic terms and appears to be the dimension relevant for the learnability of morphological systems (this even more roughly corresponds to so-called *relative complexity*). Despite the importance of morphological learnability for Dale and Lupyan's hypothesis, this latter notion of complexity plays no role in their analysis. We will explore how the consideration of systemic morphological organization, i.e. integrative complexity, impacts on their typological claim.

The implicit E-complexity/I-complexity distinction is important to Dale & Lupyan's hypothesis, insofar as they assume that higher E-complexity leads to more opportunity for inflectional irregularity, constituting a challenge for learning. Results on French and Portuguese based Creole morphology (Bonami, Boyé & Henri, 2011; Bonami & Luís, 2013) suggest, on the contrary, that relatively high I-complexity may arise even in systems that are quite impoverished in terms of E-complexity. This means that Creoles can actually be more complex than their lexifiers, depending on the nature of the complexity dimension quantified.

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<sup>1</sup> See Winter and Benz (2014) for a critical evaluation and refinements on the LNH with respect to case-marking.

We argue that while a *linguistic niche* perspective on morphology is important for understanding morphological organization, it involves a more careful connection with recent research in developmental systems biological and psychological models (Bateson and Gluckman 2011, Odling-Smee et. al, 2013 Ackerman and Nikolaeva 2013, among others) than assumed in the Linguistic Niche Hypothesis as formulated. The presentation suggests that a systems perspective can provide insights into grammatical phenomena that may otherwise be unavailable without it.

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## Verbal stem alternations in Kuki-Chin languages

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Kuki-Chin languages form a major branch of Tibeto-Burman language family with about 50 languages spoken in Myanmar, India, and Bangladesh. The morpho-syntactic patterns that are often singled out as defining features of the branch include verbal stem alternations, pronominal verb agreement, and syntactic ergativity. Despite identifications of such features, little is known about whether and to what extent they behave similarly across the family. Taking this into account, I specifically choose the verbal stem alternations to see how they pattern in a few representative Kuki-Chin languages, namely, Mizo, Paite, Falam Chin, and Lai. I show that there are certain ways in which these languages dedicate their verbal stems similarly. For example, they commonly dedicate stem-1 in finite and independent clauses and stem-2 in non-finite, subordinate, and nominalized clauses (e.g. *Ka-thûû-* “I sit.” vs. *kâ-thut-nâ-* “my seat.” in Mizo and *nǎ* “to eat” vs. *něk-* “eating” in Paite). In some cases, such similarities extend to more micro-level in that all the languages above dedicate stem-1 for agent nominalizations (e.g. *hòw-tùù-* “teacher”, *óně-* “one who eats”, and *mawtaw mawng-tu-* “a person who drives” in Mizo, Paite, and Falam Chin respectively.). On the other hand, there are some ways in which they dedicate their stems dissimilarly. For example, whereas Falam Chin dedicates stem-1 in ergative constructions, Lai dedicates stem-2 for such constructions (e.g. Falam Chin stem-1: *cing-* “plant” vs. Lai stem-2: *ba?* “hang up” in ergative constructions). The syntactic distributions of verbal stem alternations in the Kuki-Chin languages, as mentioned above, point to more similarities than differences. Given the situation, I would argue that while the instances of similarities are more likely to reflect proto-Kuki-Chin (or in some cases even proto-Tibeto-Burman) characteristics, the instances of differences are more likely to suggest language specific developments.

## The obviative as a differential object marker in Michif

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**Introduction** Michif is a mixed language, with two main parts in its lexicon: the nominal one is French, while the verbal one is Cree. One feature of the Cree component is *obviation*, reflected both in verbal and nominal morphology. Its basic function is to distinguish two or more third-person participants within a given sentence or stretch of discourse. Thus, in oral narratives, the *obviative* *-(w)a* is used to introduce a hitherto unknown participant by contrast with the unmarked form which is called the *proximate*. Except if s/he is a persistent topic, no participant is inherently tied to a proximate or obviative status solely by virtue of their inherent semantic features.

**Problem** The French origin of Michif nouns would seem to imply that the proximate/obviative contrast should have disappeared there. In fact, whenever two overtly expressed third-person NPs occur as arguments of a transitive verb, one of them is marked as obviative according to the animacy hierarchy PROPER NAME > HUMAN > ANIMATE. The closer its referent to the top the better the chances of an NP to get obviative marking (Bakker 1997). Now this is reminiscent of what happens in cases of DOM cross-linguistically.

**Method** I therefore decided to check the actual use of (nominal) obviatives in the Michif version of Cinderella (Bakker and Fleury 2007, the only natural narrative I have access to). I counted all the instances of the obviative and noted the syntactic function of the nouns it marks and compared them to the unmarked proximate.

**Results** Obviative marking is indeed used with proper names, most human and one animate NPs. But, crucially, the obviative seems to have shifted from an originally INFORMATION STRUCTURE (IS) marker (in Cree) towards a more SYNTACTIC ROLE marker. With just a couple of (readily explainable) exceptions, it marks the corresponding NP's syntactic role as OBJECT of the verb. Since its use depends on the animacy hierarchy, I propose to treat it as a case of (restricted) DOM.

**Conclusion** Michif thus provides another case of an IS marker evolving into a DOM marker. This lends further support to the idea that DOM markers tend to evolve from IS ones (Iemmolo 2010, Dalrymple and Nikolaeva 2011).

**Examples** (Bakker and Fleury 2007), glosses mine

(1) *la fâm ana kî-kitimah-êw anihî Sandrieuz-a*  
ART:F:SG woman DEM:PROX PST-abuse-3→3OBV DEM:DIST:OBV Cinderella-OBV

‘That woman abused Cinderella...’

(2) *awa lom [...] kî-wîkim-êw onhin la fâm-a*  
DEM:PROX man.DEF [...] PST-marry-3→3OBV DEM:PROX:OBV ART:F:SG woman-OBV

‘This man ... married that woman...’

(3) *Li shyaen awa [...] nawashwât-êw anihî li sha-wa*  
ART:M:SG dog DEM:PROX [...] pursue-3→3OBV DEM:DIST:OBV ART:M:SG cat-OBV

‘The dog [...] pursues the cat...’

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## **Evidentiality and Epistemic Modality Combine in The Estonian Morpheme *-vat* but are Separate Categories in Acquisition**

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*Introduction.* The categories of evidentiality and epistemic modality are often seen as semantically related. It is not clear, however, what the exact nature of combining these semantic categories is. We propose a simple experimental toolkit to tease apart these meanings and to explore the development of the combined semantics.

*The problem.* In typology, the beginning of the 21st century has witnessed heated debates on the cross-linguistic nature of categories (see an overview Haspelmath 2010). By now, the debate has sparked interest out of the confines of typology. Simultaneously, various subfields of linguistics show a rapid growth of interest in evidentiality and epistemic modality (general linguistics, pragmatics, morphology, syntax, semantics, language philosophy, psycholinguistics, anthropological linguistics, typology, and cognitive linguistics). Van der Auwera & Plungian (1998), de Haan (1999) and numerous other works clarify the semantic relationships between the two categories. Since Aikhenvald (2004), evidentiality has been strictly severed from epistemic modality; the uncertainty about the elusive nature of the relationship between the two categories lingers on.

*The proposal.* We propose that the relationship between evidentiality and epistemic modality is best studied by combining methods from various subfields of linguistics and related disciplines: eliciting the intuitions of native speakers, corpus linguistics, language acquisition, and experimental linguistics.

*The method.* Firstly, we carried out a corpus study on Estonian evidentials and evidential strategies. The goal was to capture the communicative and epistemic environment where these elements naturally occur. We classified the data according to native speakers' judgments. Secondly, we conducted experiments to clarify the evidential and epistemic modal aspects of the Estonian morpheme *-vat*. Two experiments were designed to establish the age of the acquisition of the two aspects of meaning. The first experiment captured the age of the acquisition of the evidential meaning: four, six, and nine-year-old children were asked to identify the source of the information. The second experiment captured the age of the acquisition of the epistemic modal meaning. The same children performed a forced choice task guided by grammar: affirmative indicative, negative, and evidential sentences. Finally, we analysed a corpus of comments collected online from adult speakers of Estonian, who were asked to comment on their choice of grammar.

*Results.* The corpus study showed that evidential morphemes may either be related to epistemic modal semantics by inference only (the *da*-infinitive construction) or already as part their

grammatical meaning (*-vat*). Four-year-olds did not understand the evidential and modal *-vat*. Six-year-olds showed an increase in understanding the evidential meaning. Nine-year-olds demonstrated full understanding of the evidential and an increase in the understanding of the epistemic modal aspect of the evidential. The comments of adult Estonians about their linguistic choice revealed the combined evidential and epistemic nature of the morpheme *-vat*.

*Conclusion.* We established with corpus and experimental methods that indirect evidentials diverge in how they combine with the epistemic modal meaning or use. Estonian children develop the correct understanding of the morpheme *-vat* as an epistemic modal only after learning the evidential meaning of it. They represent two separate meanings prior to merging them in a combined category that characterizes the adult Estonian *-vat*.

## Nominal clause-chaining in lowland South American languages

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Clause-chaining structures, an areal phenomenon in New Guinea languages (NG), are defined by the presence of narrative segments linked to each other by repetition of a verbal clause belonging to a prior segment (often the last clause) and the initial clause of the subsequent segment. De Vries (2005: 377) describes this as the basic type of ‘tail-head linkage’ (THL) and also describes switch reference and event sequencing constructions in a ‘marked’ THL; some NG have both. While verbal THL has been observed in some lowland South American languages (LSA) (Caviñena, Guillaume 2011; Mbyá-Guarani, Dooley 2010), Guillaume (2011) questions whether ‘clause-chaining’ should be used in reference to the nominal structures in LSA clause-linkage. Using evidence from Southern Cariban Kalapalo (2, 3) I argue in support of Seifert (2010) who claims that the Witotoan Bora ‘connector pronoun’ *áá-* (1) is a nominal feature that creates structures similar to NG THL. Contrasting with explicitly repeated verbal THL in NG, nominal structures in Bora and Kalapalo create abstracted clausal overlaps in which content is not explicitly repeated but referenced by the lexical connector hosting grammatical features. In the examples, Bora uses noun classifiers and case markers while Kalapalo uses event-property denoting clitics hosted by NP, and de-verbal nominalizations. Dooley 2010:10 calls these ‘linking clause-external modifier(s)’.

### (1) Bora (Witotoan)

(8a.) *árahjúcuu-be*            *cáátu*    *cúva*  
smell-CL.M.SG            paint    smell  
‘He smelled the smell of the paint’.

b. *áá-né-llíí*                            *ücüí*    *i-óómi-ñeom in*  
**CON-CL.INAN-BEN**            quick    3.SUB-return-CL.INAN  
‘And therefore (lit for the benefit of that) he returned quickly.’ (Seifert 2010: 903)

In Kalapalo the anaphoric focus demonstrative (*ule*, AFR) references the preceding clausal argument and connects it to the following clause. It may also reference the prior segment or episode. In (2ii) both *ule* and the adnominal demonstrative *igei* host compounded event-property denoting clitics (boldfaced) which indicate the nature of the connection between the events described by the preceding (2i) and subsequent (2iii) clauses.

### (2) Kalapalo (Southern Cariban)

i. *i-tsu-pe-ta*                            *fe-tsape*            *e-iñandsu....*  
3-enclose-TRN-CONT    OD-DEO            2-sister....  
‘Your sister must be enclosed ...’

ii. *ule-gote = ale = hale*            *igei = hale*,  
AFR-CONC-UT=NO            ADEM=NO  
‘Although that was being done (to her), now

iii. *ah i-ñe-tifigi*                    *i-feke*  
EXP 3-dislike-INCN    3-ERG  
the fact is that she didn’t like him (=her not liking him) any more’. (Basso 2014: 189)

Another common feature of LSA clause-linking is interclausal reference marking in which same/switch reference functions beyond argument reference ; e.g. Sparing-Chavez 1998; Overing 2009; Valenzuela 2003). In Kalapalo, interclausal reference (marked on the NP argument: in (3i)) which is a de-verbal nominalization; in (3ii) the marking clause is the ergative argument:

(3) **Kalapalo**

- i. *i-fe-ki-pigĩ = mbedya-fa*                      *i-feke = lefa.*  
 3-nice-like-VPE=SE.DA-PTP      3-ERG=MT

‘And he found it pleasant(=it’s liking by him) (as a result of what he drank)’.

- ii. *ku-m-iĩaŋo-feke = mbe,*                      *uŋele-feke ki-pigĩ,*                      *iĩaŋo-feke....*  
 1+2-C-liquid.food ERG-SE,      ANA-ERG like-VPE,                      liquid.food-ERG....

‘(That same) porridge of ours (he drank), that was his liking, the porridge....’ (Basso, 2014: 195-199)

Functions of THL (de Vries 2005:378) - referential coherence, processing ease, thematic continuity or thematic discontinuity - occur with these LSA non-verbal clause-linking features. In light of data considered here, I argue that nominal discourse cohesion structures in LSA have an affinity with NG THL and should be included in the typological notion of ‘clause-chaining’.

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## Non-selected arguments as epistemic marking

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The paper proposes an analysis of a sub-type of non-selected arguments called “attitude holder datives” (see Camilleri & Sadler 2012), as a form of epistemic marking. An example of an “attitude holder”-construction (AH) is the “ethical dative” in German:

German (Bosse et al. 2012: 1197)

- (1) Du sollst *mir* nicht wieder fernsehen!  
you shall me.DAT not again watch.television  
'You shall not watch TV again and I want this to come true.'

In (1), the speaker's attitude regarding the content of the proposition is signaled by the presence of the first person dative *mir*. While the ethical dative in German is restricted to directives and exclamations, this is not the case for other languages that feature comparable forms (see below).

The suggestion that non-selected arguments (e.g. ethical datives) may be considered as a form of evidential (*viz* a specific instance of epistemic marking) has been raised by e.g. Rooryck (2001), but a developed analysis of this suggestion remains to be formulated in detail. According to Bosse et al. (2012), AH-constructions are entirely “not-at-issue”, meaning that its meaning targets aspects of the speech situation and not the proposition as such. This analysis is supported by the syntactic projection of AH-constructions, the position of such constructions at the edge of the clause as “weak or clitic pronouns”, and a restriction to first and second person dative forms since the “attitude” in question is the speaker's, and/or the addressee's (Bosse et al. 2012: 1197-1198). A comparison to AH-constructions in languages such as Lebanese Arabic (Haddad 2013), Chechen (Molochieva 2012), Jaminjung (Schultze-Berndt & Faller 2009) and Kogi (Bergqvist forthcoming) confirms these observations, but also provides evidence for analyzing AH forms as epistemic markers.

The paper traces the development from ‘participant role’ to ‘attitude holder’ and observes a development of other meanings/functions that include evidential and intersubjective notions, such as ‘perceptual access’ and ‘knowledge asymmetry’ (see Bergqvist 2012). The grammaticalization of person markers to signal aspects of the speech participant's attitudes may be viewed as a cline: on one end a marker has many of the properties associated with an argument of the verb, whereas on the other end it has lost these and instead functions as a form of evidential, sometimes with intersubjective shades of meaning, and sometimes paradigmatically related to other evidential forms.

The proposed analysis details the grammatical status of forms (as particles or lexemes), their referential properties (e.g. attitude, expectation, perception) and issues related to the notion of ‘viewpoint’/‘perspective’, which can be the speaker's, the addressee's or both speech participants'. As a result, the paper adopts a wider notion of epistemic marking to encompass the attitudes and expectations of the speech participants concerning information/knowledge, a proposal that aligns with the “not-at-issue” (i.e. illocutionary) status of investigated forms, (see Bergqvist submitted).

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## Reexamining Amazonia as a linguistic area: A view from morphosyntax

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The Amazon basin is home to an incredible diversity of different language families and linguistic structures. Within this diversity there exist a number of reoccurring linguistic patterns and cultural practices that transverse genealogical affiliations. It has been argued in earlier work such as Derbyshire (1987) and Dixon & Aikhenvald (1999) that Amazonia itself constitutes a linguistic area, showing multiple linguistic features that display an areal distribution with regards to the rest of the continent, especially the Andean region.

With the recent increase in the availability of descriptive materials on the indigenous languages of the Americas, it is now possible to examine the notion of Amazonia as a linguistic area from a quantitative perspective. In this paper, I use a genealogically and geographically stratified sample of 80 languages from over 40 different linguistic families and isolates to explore the areality of different morphosyntactic features of South American languages. The data are drawn primarily from the *South American Indigenous Language Structures* database (Muysken et al. 2014) and are supplemented with additional languages. The grammatical topics considered are argument marking strategies, noun phrase structure and tense, mood, aspect and evidentiality marking.

In order to test the areality of linguistic features on the South American continent, this paper adopts the 'predictive areality' approach of Bickel & Nichols (2006), whereby a specific geographic region is treated as a predictor variable to explain an observable typological distribution of a feature. The geographic regions used in this study are drawn from independent geomorphological criteria such as major rivers and ecological zones, as well as cultural criteria such as those used in the culture areas proposed in Murdock (1951).

In line with earlier observations in Payne (1990), the results show that the geographic distribution of many morphosyntactic features on the continent clearly shows an East vs. West distinction rather than an Amazonian vs. non-Amazonian one, controlling for shared inheritance, chance and multiple testing. Since the diffusion of linguistic features is best thought of as a socio-historical process, such results have considerable implications for our understanding of the prehistory of the peoples of the continent.

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## Equilibrium typology: The discriminative-deductive tradeoff

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It is usually assumed that regularity in a linguistic system is desirable or normative and that suppletion and other irregularities represent deviations from the uniform patterns that systems (or their speakers) strive to maintain. From a discriminative perspective, the situation is exactly reversed. To the extent that patterns like suppletion enhance the discriminability of forms, they contribute to the communicative efficiency of a language. In a discriminative model, such as that of Ramscar et al. (2013), the only difference between overtly suppletive forms such as *mouse/ mice* and more regular forms such as *rat/ rats* is their effect on the rate at which a speakers' representation of a specific form/meaning contrast becomes discriminated from the form classes that express apparently similar contrasts. Both suppletive and regular patterns facilitate clusterings that contribute to the discrimination of alternatives.

From a discriminative perspective, it is regularity that stands in need of explanation. Learning models offer a solution here. Unlike derivation, inflection is traditionally assumed to be highly productive, defining uniform paradigms within a given class, except where forms are unavailable due to paradigm 'gaps' or 'defectiveness'. Yet corpus studies suggest that this expectation is an idealization. Many potentially available inflected forms are unattested in corpora. As corpora increase in size, they do not converge on uniformly populated paradigms. Instead, they reinforce previously attested forms and classes while introducing progressively fewer new units. The forms of a language obey Zipf's law at all sample sizes. Speakers must be able to extrapolate from a partial sample of their language, and regular patterns subserve this need. In order for a collection of partial samples to allow the generation of unattested forms, the forms that speakers do know must be organized into systematic structures that collectively enable the scope of possible variations to be realized. These structures correspond to form-based lexical neighbourhoods, whose effects have been investigated in a wide range of psycholinguistic studies. From the present perspective, neighbourhoods are not independent dimensions of lexical organization but, rather, constitute the creative engine of the morphological system, permitting the extrapolation of the full system from partial patterns.

This talk outlines how typological variation can be modelled in terms of different states of equilibrium between the pressures of discriminability and extensibility.

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## Typology, system-level analyses of morphology, and default-Inheritance

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Default inheritance analyses of inflection, such as those of Network Morphology (Baerman 2012; Brown & Hippisley 2012; Corbett & Fraser 1993) treat morphology as a network that specifies sets of realizations. Nodes in the network can therefore be understood as descriptions of paradigms, and the relationship of defaults and overrides could be understood in terms of competing paradigm systems. In some Network Morphology representations morphological classes, because they are nodes in the inheritance network, have a different formal status from the attributes and values that describe the inflectional realizations. They represent systematic relationships between realizations, rather than featural information associated with them. In other Network Morphology representations morphological classes are treated in terms of attributes and values that index particular elements of the morphology.

We illustrate how the two different types of Network Morphology analysis pick out different types of systematicity in morphologically complex systems, illustrating with the verb stem and tone patterns of Tlatepuzco Chinantec. Chinantecan is a Meso-American language family belonging to the larger OtoManguean grouping, which is well-known for the complexity of its morphological systems (Palancar Forthcoming), involving a variety of tone, stem and affixal patterns to realize morphosyntactic distinctions. One analysis is implemented along the lines of Baerman's (2012) account of nominal case and number realization in the Western Nilotic language Nuer, where deviations from default patterns can be identified by using morphological indices in the lexical entries. In the Baerman-style analysis implicative relations are treated as if-then statements. An important virtue of Baerman's system is that any index information that is not usable by the system is ignored. The alternative analysis of the Tlatepuzco data treats all morphological class information as nodes in the inheritance structure with implicational relationships between realizations arising as result of the nodes they are located at.

Both types of representation can be used to implement Palancar's (Forthcoming) and Baerman & Palancar's (2012) analysis of Tlatepuzco. For the purposes of typology we argue that the two different types of analysis tells us different but equally important things. Treating the morphological class information as nodes at which realizations are stored allows us to observe clearly the sub-class and super-class relationships, while the approach that encodes realizations in terms of if-then implications allows us to quantify how well behaved lexical items are in terms of the overall system.

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the case prefix is unusual: in vowel-initial cases the case is indeed a prefixed consonant, but where nouns begin with consonants, it involves a mutation to that initial consonant. Mutation as a case-marking device is not common, although it does occur in Fula, in Chemehuevi and in the Celtic languages.

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## **Diachronic typology addresses phoneme inventories**

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The originality of Joe Greenberg's body of work was the demonstration that languages of wide geographic and genealogical affiliation change in the same way over time, so that similarities in structure reveal common dynamic pathways of change. His theories thus presage the more recent modeling of complex adaptive systems. Such modeling, whether done formally or informally, requires the identification of the mechanisms of change, which should be apparent when diachronic change is taking place. Some formal modeling of vowel and consonant inventories has been successful in simulating basic consonant and vowel systems (Lindblom, MacNeilage and Studdert-Kennedy 1984, de Boer 2000), but what has not been demonstrated is that the 'constraints' selected for the models actually correspond to the sound changes that create phoneme inventories. In general, these models predict that maximal perceptual distinctiveness interacts with minimal articulatory cost to determine vowel and consonant inventories. However, the sound changes that affect changes in phoneme inventories seem to be more heavily influenced by articulatory factors, in particular assimilation to context. This paper gives a preliminary attempt to reconcile common patterns in sound change with resulting phoneme inventories, using a large crosslinguistic sample of phonetic changes to gauge common sound changes.

## Constructing Caribbean property concepts through ADVERBs

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This paper illustrates a type of parts of speech (PoS) system typical of the Caribbean family not predicted by typological constructional theories of parts of speech.

In Ye'kwana (Caribbean, Venezuela), most words used in the function of modification of a referent (Nmodification) require overt coding on a word that belongs to a different PoS than those of action words (VERBs) and object words (NOUNS) (1a). The form of these overtly coded words is the same needed in referring function (1b).

(1a) *judume-ato kudaka n-enajü-i*  
black(A)-NZR fish(N) 3/3-swallow(V)-RPP  
'[the/a] black fish swallowed it'

(1b) *möötö kün-eja'ka-i yadanawi judume-ato*  
then(A) 3.DIS-be\_created(V)-RPP non\_indian(N) black(A)-NZR  
'then were created non-indigenous blacks'

Only few NOUNS (+/-10) are usable in Nmodification (e.g. *inchomo* 'elder/old', *amoi* 'prohibition/prohibited', *owano* 'acquaintance/known'). Thus in Ye'kwana, like in other Caribbean languages (Meira and Gildea 2008), Nmodification is not carried by a word of a dedicated PoS, but mainly by an overtly coded word of a distinct PoS from NOUNS and VERBs. Words of this PoS are used with no overt coding in (non-eventive) predication with or without a copula (2a), comparative constructions, predicate modifier constructions (Pmodification) (2b) and in "secondary predicates" or participant oriented adjuncts (Himmelmann and Schultze-Berndt 2005) (2c).

(2a) *tamjö'ne tüwü (na)*  
red(A) 3SG 3.COP  
'S/he [is] fast'

(2b) *yanwa n-onuku-i tamjö'ne*  
man(N) 3-go\_up(V)-RPP fast(A)  
'[the/a] man went up fast'

(2c) *nudö ewü w-akötö-jötü-a*  
alive(A) 1SG 1/3-cut(V)-PLURAC-NPST  
'I cut [his hands] ([while] he is) alive'

This PoS can adequately be labeled ADVERB as Pmodification is its most frequent non-overtly coded function in texts. Having a third main PoS containing property concepts that need overt coding for Nmodification is typologically rare: both Croft's (2001) and Hengeveld's (1992) typologies make their third main PoS of adjectives.

Additional support for analyzing the third PoS as ADVERBs is found in dependent clauses in which the VERB is ADVERBialized. These have the same functional potential as basic ADVERBS (illustrated as "converbs" (3a-b) and secondary predicate (3b')), but not as

"participles" (verbal adjectives): dependent clauses in Nmodification function require a nominalized VERB (see Van Lier 2009 on the relation PoS-dependent clauses).

(3a) *w-aminñō'ka-a*      *t-aijuku-e*  
 1/3-kill(V)-NPST    AZR-hit(V)-AZR  
 'I kill it [by] hitting.'

(3b) *kün-aijuku-i*      *tüw-ünükü-e(-:ne)*  
 3/3.DIS-hit(V)-RPP    AZR-sleep(V)-AZR(-INTENS)  
 'he<sub>i</sub> hit him<sub>j</sub> [while he<sub>i/j</sub> was] sleeping /b'(until he<sub>j/\*i</sub> slept)'

Possibly a previous state of the language did not have an ADVERB PoS: more than half of the 200 identified ADVERBS in Ye'kwana seem to have been derived from NOUNs. However, the few attested synchronic NOUN words express a property concept (e.g. *ködöi* 'sickness', *jodu* 'strength') instead of a property in relation to an object word — which is expressed with a nominalization on the adverbialized form (*ködöi=je-ato* 'sick (one)', *jodu=je-ato* 'strong (one)'). This scenario had been predicted as "truly unusual" by the typology (Croft & Van Lier 2012:64). Here historical and comparative evidence point to an original PoS system in Cariban that had neither ADJECTIVES nor ADVERBS, but NOUNs, VERBS and POSTPOSITIONs in which Nmodification required overtly coding a postpositional phrase in the same way as for a referential construction.

### Abbreviations

A=adverb; AZR=adverbializer; COP=copula; DIS=distant; INTENS=intensifier; N=noun; NPST=non-past; NZR=nominalizer; PLURAC=pluractional; RPP=recent past perfective; SG=singular; V=verb

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## Polar-alternative questions: Korean A-not-A

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The main scholarly view on polar-alternative questions (PAQs) is captured by the following quote from König and Siemund (2007): “alternative questions (AQs) have a lot in common with polar questions (PQs)... [they] do not seem to show any striking typological variation” (p. 292). The six PQ-forming strategies identified by König and Siemund are intonational marking, interrogative particles, interrogative tags, disjunctive-negative structures, change in the order of constituents, and verbal inflection. On K&S’s view, the A-not-A construction found in Chinese (Huang et al. 2009) and Korean is simply a disjunctive-negative PQ structure. However, K&S overlook a significant difference between PAQs (like the A-not-A construction) and PQs: the type of response that is appropriate for each sort of question. Whereas a defining characteristic of PQs is their acceptance of a “yes”/“no” reply, the Korean PAQ in (1) requires a more substantial response (cf. Huddleston 1994): *ca* ‘(she is) asleep’ or *an-ca* ‘(she isn’t) asleep.’

- (1) ciwu-nun      ca-ni      an-ca-ni /(ca an-ca) ?  
Jiwoo-TOP    sleep-INT    not-sleep-INT/ sleep not-sleep  
‘Is Jiwoo sleeping or not?’

In the literature constituent questions are distinguished from PQs by the [WH] feature, while AQs are distinguished by their disjunction structure (Han & Romero 2004); the combination — (English) PAQs — are considered to result from deletion of elements from a bi-clausal construction containing two full clauses with disjunctive coordinators (Huddleston & Pullum 2002). This study will examine the structure of PAQs in Korean from a typological perspective. Based on the structural difference between Korean PAQs and the other types of questions, I motivate the need for a PAQ operator, similar in function to the abstract sentence-initial Q morpheme posited for English direct questions by Katz and Postal (1964).

Building on this claim, I discuss the possible typological characteristics of PAQs cross-linguistically. I hypothesize that, if a language has a PAQ in main clauses, PAQ is available in embedded clause, as in (2). The reverse generalization does not necessary hold; for instance, only embedded A-not-A questions are attested in Turkish (Yanilmaz 2012).

- (2) ciwu-ka      ca-nun-ci                      an-ca-nun-ci                      kwungkumhata.  
Jiwoo-NOM    sleep-NONFINITE-INT    not-sleep-NONFINITE-INT    wonder.DECL  
‘I am wondering whether or not Jiwoo is sleeping.’

Additional characteristics of Korean PAQs that may find cross-linguistic correlates include: (i) the head of PAQ in embedded clauses shows different morphological marking from its counterpart in main-clause PAQs; (ii) the affirmative predicate always precedes the negative predicate; (iii) the affirmative and negative predicates can form a single clause without a disjunction marker; and (iv) the negative phrase can be morphologically reduced.

This study is a first approach to a typological investigation into the structure of PAQs; the broader availability of PAQs cross-linguistically and the frequency with which the characteristics of Korean PAQs are attested in other languages remain objects for future study.

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## **Cross-linguistic investigations of the organizational scales in phonological systems**

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Since Prague School's seminal work on phonological systems, it has been clear that some phonological contrasts may play a more significant role than others in keeping words distinct in a language. This relates to the notion of *functional load*. However, despite its capacity to highlight functional aspects of the organization of the lexicon, it has been mostly considered as a minor embellishment to the studies of more 'standard' inventories of phonemes.

We propose a cross-linguistic investigation of the properties of phonological systems based on the computation of entropy-based functional loads at various levels: features, segments, and syllables. Do features carry distinctions between words in a more balanced fashion than segments do? Do combinations of segments into syllables equally contribute to differentiating words across languages?

This multi-scale approach reframes previous studies of segmental and supra-segmental (tones, stress) functional loads: indeed, it adds 'vertical' integrative processes to 'horizontal' constraints such as morphosyntactic rules, ease of production versus sufficient perceptive contrast etc. With respect to these matters, it emphasizes a fraction of linguistic diversity that is not easily revealed when considering only phonological inventories, and thus broadens typological perspectives.

**The expression of position and posture in Amazonian languages**  
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The linguistics of posture verbs (i.e. verbs which encode configurational information on the dimensions and vertical or horizontal orientation of the Figure) has received quite some attention from many researchers since the mid-90s (e.g. Kuteva 1999; Newman 2002, among others), but especially from those working on topological and spatial relations at the MPI Nijmegen (e.g. Levinson & Wilkins 2006; Ameka & Levinson 2007).

Newman (2002) contains a score of articles that together show a great diversity in the expression of position and posture in the languages of the world, as well as the recurrence of the basic principles that can account for this diversity. While most languages discussed are from (South-)East Asia, Oceania and Australia, there is only one chapter on a South American language, the Amazonian isolate Trumai. Over a decade later, little more research has been done on posture verbs in South American languages (we are aware of Trumai [ISOLATE], Kamaiurá [TUPI-GUARANI], Ese Ejja [PANO-TACANAN], Tanimuka [TUCANOAN], and Piratapuyo and Wanano [TUCANOAN]; see also Ospina Bozii 2013).

In our talk we intend to present ongoing research that completes part of the Amazonian picture, making an attempt at a more fine-grained description of the semantic map of posture and positional verbs (see Ameka & Levinson 2007) found in ca. 25 Amazonian languages. The main focus will be on Basic Locative Constructions that situate an entity in physical space, but, where applicable, we will discuss metaphorical extensions of the posture verbs.

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**From synchronically oriented typology to source oriented typology:  
Implicational universals as emergent phenomena**

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Implicational universals and explanations thereof usually refer to a combination of synchronic patterns, not how they actually develop cross-linguistically. Yet, these patterns arise from several different processes.

This is illustrated in the paper through cross-linguistic diachronic evidence about various patterns predicted by number marking, alignment, possession, and word order universals.

This evidence shows, for example, that the same phenomena (e.g. overt marking, particular alignment systems) originate differently when they are restricted to particular contexts and when they are not so restricted.

Co-occurring constructions (e.g. overt markers in different contexts, different word order dyads) may originate independently or as subtypes of the same source construction. Not all of the processes leading to particular patterns always conform to the relevant universals (for example, among different processes leading to zero marking for singular and overt marking for plural, some also lead to the opposite pattern, prohibited by the relevant universal).

In line with previous work in phonology (Blevins 2004, Bybee 2006), these facts suggest that implicational universals emerge from many particularized diachronic processes, not amenable to a unified explanation. Explaining implicational universals requires qualitative and quantitative data on these processes, rather than on the resulting patterns in themselves.

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## **From typological universals to functional motivations and back again**

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Typologists frequently propose functional motivations for typological universals: a simple example is to motivate the crosslinguistically highly frequent SV word order (Greenberg's Universal 1) in terms of a preference for topic to precede comment (Tomlin 1986:37). Such explanations link individual speaker behavior to crosslinguistic patterns which a speaker has no direct knowledge of. Hence the explanation must be due to an inherent property of human beings (cognition, social interaction, etc.). Yet how does individual speaker behavior lead to constrained typological variation? We propose a two-step model, in which speaker behavior leads to linguistic innovations, and then community-level processes lead to the conventionalization of innovations in such a way that constrained typological variation emerges across languages (Croft 1995, 2000). This contrasts with a one-step model in which innovations in child language acquisition result in changes in community linguistic norms (Culbertson et al. 2012). A test case for the two models is the maintenance of typological diversity: if SV order is functionally motivated, why does VS order successfully conventionalize in a significant minority of languages? We show that the one-step model cannot maintain typological diversity under reasonable parameters, by modeling documented histories of article grammaticalization and typological data on articles from WALS.

## Towards a (morpho)phonological typology of demonstratives: iconicity or something else?

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Our paper proposes a (morpho)phonological typology of proximal and distal demonstratives. The focus lies primarily on phonology, albeit Type 3 of the typology also includes a morphological component. The functions the discussed demonstratives have (e.g., may they also be used to refer to time or not) are thus not considered in our study. Moreover, only the most basic proximal ('this') and distal ('that') forms are taken into account. This means that only two forms are considered from each discussed language, and, for example, potential more fine-grained distinctions based on proximity are not relevant to our discussion. Our sample comprises 89 languages that represent very well the linguistic diversity of the world's languages, although the study is not based on a systematic sample. Four different types are distinguished:

1. Vowel type : front vs. back; closed vs. open vowels
2. Consonant type: front-back consonants
3. Additional element -type
4. Varia

In the first type, the proximal demonstrative includes a front (or closed) vowel, while the distal demonstrative has a back (or open) vowel (e.g., Betta Kurumba *i* 'this', *a* 'that', Coelho 2003: 181). In the second type of languages, the discussed demonstratives are distinguished based on whether the consonants involved can be classified as front or back; typically front consonants (e.g., labial and coronal) appear on proximal demonstratives, while distal demonstratives are associated with back consonants (such as velar or uvular consonants). An example is provided by Bunaq, where *bari* marks 'this' and *baqi* 'that' (see Schapper 2009: 239). In the third type, the distal demonstrative has an additional element, making it longer in form than the proximal one (e.g., Òko *òne* 'this', *ònébé* 'that', Atoyebi 2009: 188). Finally, a number of strategies are used by the languages of the fourth type, all different from the previous strategies.

The occurrence of the first two types can be explained by iconicity; front or closed phonemes appear on the proximal demonstratives, while back/open phonemes are related to distal demonstratives. This means that proximal demonstratives are pronounced at the front and high part of the oral cavity while distal demonstratives are pronounced lower and more back, which can be said to reflect the proximal/distal nature of their referents in the physical world. The first two types present the most popular strategies used. The third type can be explained by markedness; the distal element is formally more marked than the proximal demonstrative. However, iconicity is relevant also to this type: some languages clearly use less linguistic substance for referring to entities close to the speaker, while longer (morpho)phonological forms are used for the distal demonstratives. Iconicity is thus demonstrated in 55/89 languages in our data. In the fourth type, some languages share individual strategies but systematic generalizations are difficult to make.

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## The Weight Typology of Edge Geminate

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It is well-known that geminate consonants are more common in intervocalic position than in word-initial or word-final position. Although edge geminates (henceforth, EGs) are less common, their weight properties are of interest because they differ in structure from intervocalic geminates. Such geminates are typically heterosyllabic, but EGs are (at least superficially) tautosyllabic, within an onset (word-initial geminate) or coda (word-final geminate). Our paper has two goals: the first is to present a typology of the weight properties of EGs. Specifically, does the EG make that edge syllable heavy (i.e. does it add a mora to the syllable)? The second goal is to posit implicational universals predicting whether an EG patterns as heavy or light.

Consider the weight of word-initial geminates. Researchers such as Davis (2011), Muller (2001), Topintzi (2010) and Kraehenmann (2011) show that such geminates vary as to their weight depending on the language. In Trukese, Luganda and Pattani Malay, an initial geminate contributes to syllable weight whereas in Leti (Hume et al. 1997) and Baghdadi Arabic (Blanc 1964) it does not. The Trukese evidence comes from a variety of phenomena including a bimoraic minimal word constraint disallowing nouns of the shape CV and CVC, but allowing the shapes CVV and GV (where G = geminate). The Pattani Malay evidence comes from stress where primary stress falls on an initial syllable only if this syllable starts with a geminate. On the other hand, initial geminates fail to contribute weight in Leti and Baghdadi Arabic. In both these languages GV words do not satisfy a bimoraic minimal word constraint nor do GV initial syllables attract stress, although stress is weight-sensitive in these languages. Regarding word-final geminates, it can be shown that their weight varies depending on the language. In Cairene Arabic, final CVG syllables act as bimoraic in attracting stress on them whereas final CVCs do not do so. In contrast, Hungarian final geminates fail to pattern in a way suggesting they are moraic (Siptar & Törkenczy 2000).

Besides offering a typology showing the weight properties of EGs, we tackle the more difficult matter of determining factors that might predict weight behavior of EGs. In doing this, we consider the relationship between EGs and edge consonant clusters in the language under consideration and posit two implicational universals: (1) If a language has an EG but no consonant clusters on that edge, then the EG patterns as moraic. (2) If a language has an EG that patterns as nonmoraic and allows for consonant clusters on that edge, then that cluster must pattern as nonmoraic too. (1) is instantiated by Trukese which lacks initial clusters altogether but where the initial geminate patterns as moraic. (2) is instantiated by Baghdadi Arabic which has weightless initial geminates and also possessing weightless initial clusters. Our current database reveals no exceptions to these. We offer some preliminary thoughts as to why this occurs and suggest that the moraic analysis of geminates offers interesting insights.

## Sociopragmatic motivation and the notion of “hierarchy”

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The linear 1 > 2 > 3 person hierarchy has at best an awkward fit with cross-linguistic data (Filiminova 2005, Zuñiga 2008, Macaulay 2009, Witzlack-Makarevich et. al. 2010). While the position of 3<sup>rd</sup> person relative to the Speech Act Participants, rooted in universal principles of deixis (Benveniste 1956, Zuñiga 2006), is cross-linguistically reliable, languages show bewildering variation in treatment of **local** (SAP←→SAP) scenarios. Heath (1991, 1998) shows that local indices tend to be idiosyncratic constructions serving sociopragmatic needs associated with the social awkwardness of both 1<sup>st</sup> person and 2<sup>nd</sup> person reference, and especially scenarios involving both. I will present Tibeto-Burman data supporting Heath’s suggestion, thus arguing against a comprehensive person hierarchy.

Tibeto-Burman languages show a wide range of argument indexation patterns. Hierarchical indexation is reported in the Kiranti, Nung, Jinghpaw, Northern Naga, rGyalrongic branches and marginally in Kuki-Chin. The last three also have explicit inverse marking in at least some languages. A recurrent tendency to innovate a canonical inverse from different sources affirms the naturalness of the SAP vs. 3 distinction. But we see a wide range of developments in local marking, rarely reflecting a straightforward ranking of the two SAP’s, for example, the extension of inclusive plural indices to mark either 1→2 or 2→1. The standard hierarchy predicts 1 indexation in both, but this is rare. Many TB languages instead index the O argument in both, often with added marking in one or both. The added marking may be PL, 1PL, passive or impersonal. A few languages index both participants in 2→1, more do so in 1→2. These data do not reflect any consistent hierarchy, even within a language. They are better interpreted as avoiding explicit reference to the A in SAP←→ SAP situations – leaving it implicit in 1→2, suppressing its existence altogether in 2→1.

These data are inconsistent with the idea of even language-specific person hierarchies, much less a universal one. While there is a clear opposition between the two SAP’s and all other arguments, the SAP’s cannot be hierarchically ranked. Rather, their interaction with one another is subject to complex and somewhat language-specific factors presumably involved with politeness and face maintenance.

This paper will present comparative Tibeto-Burman data showing a) the recurrent tendency to emphasize SAP > 3 through innovation of inverse marking or similar constructions, b) the wide disparity in local indexation patterns, and c) particular recurrent tendencies in local marking which can be interpreted as pointing toward sociopragmatic imperatives, e.g. to replace singular with plural indices, to have unique marking of 1→2, to have the same marking for 2→1 as for 3→1. I will argue that this demonstrates that the relations between the SAP’s are not of the

same kind as the robust deictic SAP > 3 opposition, and thus that there is no need to talk of a “person hierarchy”, only of a two-way deictic distinction.

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## The morphosyntactic status of proper names in Mapudungun with special attention to differential object marking

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In Mapudungun, an Araucanian language (Southern Cone) spoken in Argentina/Chile, anthroponyms, when functioning as direct objects, are always indexed by the verbal object marker (DOM) *-fi*. This marker also appears with common nouns whose referential semantics show features such as [human], [definite], [given], [accessible], [important] (cf. Zúñiga 2010), features that they share with proper names.

In contrast to proper names, the insertion of *-fi* cannot be predicted for other classes of nouns. However, the distribution of *-fi* among common nouns (not proper names) show significant statistical asymmetries (this property will be called here soft constraints).

As for speech-act participants, finite verb forms use other agreement markers. The direct object marker *-fi* refers to speech act participants as objects only in non-finite verb forms, for instance in subordinate clauses.

This means that proper names in Mapudungun form a referential class of expressions of their own and, as predicted by the definiteness hierarchy (cf. Aissen 2003), could be described as occupying an intermediate position between personal pronouns and common nouns. This result can be compared with coding asymmetries of direct objects in other non-related languages; cf. the following table.

	Pers. Pronouns	Proper Name	Definite NP	Indefinite NP	Non-specific NP
Catalan	Preposition <i>a</i>	∅			
Pitjantjatjara	Accusative <i>-nya</i>		-∅		
Hebrew	Preposition 'et			∅	
Turkish	Accusative <i>-(y)i/ı</i>				-∅
Mapudungun	<i>-fi</i> (non-fin.)	<i>-fi</i>	<i>-fi</i> (55%)	<i>-fi</i> (16%)	-∅

In terms of morphosyntactic alignment, Mapudungun could be described – to some extent – as conforming to the pattern 'hierarchical', where "A and P are treated dependent on their relative ranking on the referential and/or ontological hierarchies" (cf. Siewierska 2011). Whereas hierarchies accounting for DOM require only one argumental role (P) in order to be described, a hierarchical alignment pattern involves the consideration of both transitive arguments (A and P), which could also be called as "co-argument sensitive marking" (cf. Witzlack-Makarevich et al. 2012). A hierarchy sensitive to different transitive scenarios can indeed be stated for Mapudungun, however, proper names do not play a specific or different role there.

So, proper names in Mapudungun are a) governed by hard constraints with regard to DOM like pronouns and unlike common nouns, b) support to some extent the predictions given by the definiteness hierarchy, but challenge them due to the presence of "soft constraints", and c) do not form a distinctive class in the co-argument sensitive hierarchy (Animacy Hierarchy).

The proposed paper will describe in detail the grammatical behavior of proper names, in particular with regard to the direct object marking, compared to the grammatical coding of pronouns and common nouns in the same syntactic slot. In addition, functional explanations for the grammatical behavior of proper names in Mapudungun will be proposed.

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## Relativization and nominalization

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There is a well-known connection between relativization and nominalization in certain languages (e.g. in Turkish, Sino-Tibetan, Uto-Aztecan) (e.g. Bickel 1999; Comrie and Estrada-Fernández 2012; DeLancey 1999; Genetti et al. 2009; LaPolla 2008; Haig 1998; Shibatani 2009); but the relationship between relativization and nominalization has never been systematically investigated from a cross-linguistic perspective. Drawing on data from a balanced sample of one hundred languages, the current paper provides an overview of nominalization processes in relative clauses and analyzes correlations between the degree of nominalization and other parameters of relative clauses.

Nominalization is a complex phenomenon involving a wide range of features, e.g. the use of case affixes, determiners, and nominal cross-reference markers on the (relative) verb, the loss of verbal morphology and speech act markers, and the occurrence of genitive or oblique arguments (cf. Comrie and Thompson 2007; Cristofaro 2003; Koptjevskaja-Tamm 2003; Malchukov 2006). Since these features can be combined in a single relative clause, one can conceive of nominalization as a continuum (Lehmann 1988), which I will analyze by means of a new coding schema that allows me to distinguish different degrees of nominalization and to analyze the scale of nominalized relative clauses by means of non-parametric statistical tests for interval/ordinal data (Baayen 2008). The analysis shows that more than half of all relative clauses in my sample are expressed by nominalizations; but these constructions cluster in particular geographical areas.

Having analyzed the morphological structures of nominalized relative clauses, I will show that the degree of nominalization correlates with other aspects of relativization:

- First, nominalized relative clauses tend to precede the noun they modify. A number of studies have pointed out that prenominal relative clauses are often reduced and nominalized (Lehmann 1984), but this has never been tested against a large and balanced language sample. The current study shows that there is a highly significant correlation between clause position and the degree of nominalization.
- Second, in the majority of languages the order of relative clause and noun is fixed, but (strongly) nominalized relative clauses are often fairly flexible with regard to their position. About 60 percent of all nominalized relative clauses can be placed before or after the modified noun, which is very rare with non-nominalized relative clauses.
- Third, while non-nominalized relative clauses are often exclusively used as noun modifiers, nominalized relative clauses can also often occur without the head noun as ‘free’ relative clauses. There is a highly significant correlation between the degree of nominalization and ‘head omission’.
- And finally, the degree of nominalization correlates with the relativization strategy. Relative pronouns, resumptive pronouns, and word order are frequent cues for the

relativized role in non-nominalized relative clauses; whereas nominalized relative clauses are commonly formed by the ‘verb-marking strategy’ (Comrie 2003).

In sum, the paper shows that nominalization is an important parameter for the cross-linguistic analysis of relative clauses that correlates with other parameters of relativization and sheds new light on some of the classic typologies of relative clauses.

## Evidence for the Suffixing Preference

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Haspelmath (2011) argues that there are no good criteria for distinguishing affixes from separate words, so that claims that make reference to a distinction between words and affixes are suspect. He claims that there is therefore no good evidence for the suffixing preference (Greenberg 1957), since that assumes that one can distinguish affixes from separate words. He implies that decisions that linguists describing languages make in terms of what they represent as words may at best be based on inconsistent criteria and he has suggested that we have no way of knowing whether the apparent suffixing preference reflects anything more than the fact that the orthography of European languages far more often represents grammatical morphemes as suffixes than as prefixes.

In this paper, I provide evidence that the suffixing preference is unlikely to be an artifact of orthographic conventions, at least as it applies to tense-aspect affixes. I examined the phonological properties of tense-aspect affixes in a sample of over 500 languages, distinguishing two types on the basis of their phonological properties. Type 1 affixes are either ones that are nonsyllabic, consisting only of consonants, or ones that exhibit allomorphy that is conditioned phonologically by verb stems. Type 2 affixes are those that exhibit neither of these two properties. The reason that this distinction is relevant is that grammatical morphemes of the first sort are almost always represented as affixes rather than as separate words in grammatical descriptions, so that we can safely assume that in the vast majority of cases, grammatical morphemes of this sort that are represented as affixes really are such. Haspelmath's suggestion that the suffixing preference might be an artifact of orthographic conventions thus predicts that we should not find a significant difference in the relative frequency of Type 1 prefixes and suffixes, but only with Type 2 prefixes and suffixes.

The results of my study show that this prediction is not confirmed. They show that for both types of affixes, suffixes outnumber prefixes by a little over 2.5 to 1. The number of languages in my sample with Type 1 suffixes outnumber the number of languages with Type 1 prefixes by 181 to 67, or around 2.7 to 1, while the number of languages with only Type 2 suffixes outnumber the number of languages with only Type 2 prefixes by 223 to 85, approximately 2.6 to 1. Thus the prediction that the suffixing preference should be found primarily with Type 2 affixes, is not borne out. To the contrary, we find the same suffixing preference among both types of affixes.

This provides evidence that, at least for tense-aspect affixes, the suffixing preference is real and not an artifact of orthographic conventions.

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## Haspelmath's (1997) semantic map for indefinite pronouns: The view from Me'phaa

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Typologists and cognitive linguists have used semantic maps to identify (potentially) universal conceptual space and map cross-linguistic differences onto such (Anderson, 1974; Haspelmath, 1997, 2003; van der Auwera & Plungia, 1998; Croft, 2003). Haspelmath (1997) proposed a semantic map for indefinite pronouns (e.g., *somebody*, *somewhere* in English) based on a comprehensive survey of data from 40 typologically diverse languages. Two empirical tests in recent years have by and large reproduced and validated the original map (Croft & Poole, 2008; Regier, Khetarpal, & Majid, 2013). However, it remains to be shown whether investigating languages beyond the 40-language sample will provide further support for Haspelmath's proposal.

This talk presents evidence from Me'phaa (Otomanguan; Mexico) to show that further refinement of Haspelmath's theory is necessary. Central to Haspelmath's (1997) proposal is a theory utilizing the semantic map in Figure 1 to explain how indefinite pronoun systems encode multifunctionality across nine core functions (Haspelmath, 1997; Croft, 1983). Their distribution on the map is conceptual, based on similarity in meaning, and a specific language's indefinite paradigm can be overlaid on the map to produce a language-specific distributional schema (Haspelmath, 1997:68).

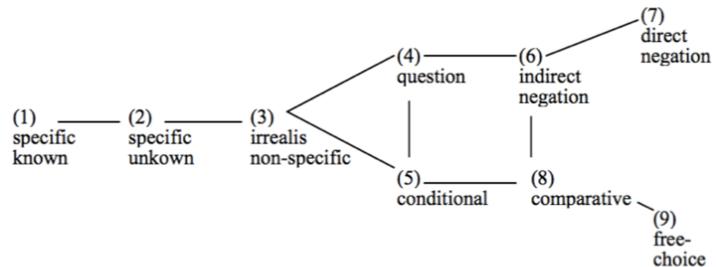


FIGURE 1. HASPELMATH'S SEMANTIC MAP FOR INDEFINITE PRONOUNS

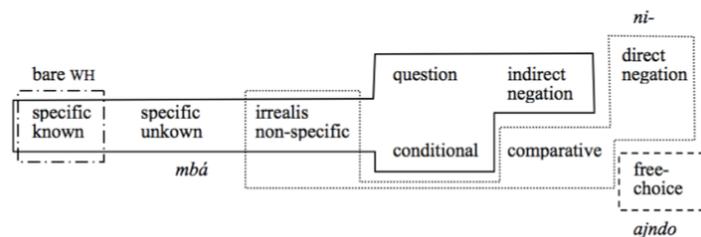


FIGURE 2. THE ME'PHAA DISTRIBUTIONAL SCHEMA

Additionally significant is that the map is implicational, with a principle of adjacency underlying the distribution of forms across the map. Thus, a particular pronoun form should not extend to non-adjacent meanings in the cartographic space. That is, multifunctionality should spread to contiguous sectors, not skipping over functions. Moreover, Haspelmath also noted a particular distributional pattern affecting how the middle section is partitioned. Specifically, combinations under three functions are not attested in the area connecting 4, 5, 6, and 8.

This talk shows how Me'phaa partitions the map in expected and unexpected ways. The Me'phaa indefinite paradigm comprises three series, whose distribution is in Figure 2. Regarding multifunctionality, the *mbá*- and bare WH-series conform to Haspelmath's theory. The *ni*-series, however, violates the principle of adjacency, spanning discontinuous functions, and it only has one middle function. It is used for 7 (direct negation; (1a)) and 8 (comparative; (1b)), though no pathway connects these. Members in this series are also used for function 3 (irrealis non-specific; (1c)), but not for 5, or 6 and 4 (either of which would create a contiguous path).

- (1) a. tú-niin                    **ni-mbá**                    mo-mbáyí'  
 NEG:PFV:PL-do:3PL NEG-INDEF:INAN IRR-help:3PL>1SG  
 ‘They didn’t do anything to help me.’
- b. ikhaa ríge            khafé' ríphu ndaskó'    **ni-mbá**                    rí            ní-ñã            nakí  
 FOC DEM:INAN coffee very delicious NEG-INDEF:INAN REL:AN PFV:AFF-taste:3SG PST  
 ‘This coffee is more delicious than anything I’ve tasted before.’
- c. **ni-mbá-a**            magoo má-to'og  
 NEG-INDEF-AN can IRR:AFF-enter:3SG  
 ‘No one can enter.’

This talk discusses the implications of these and other aspects of Me'phaa indefinites for Haspelmath's theory. Particular attention is given to the consequences for the semantic map. Me'phaa provides critical insights into the typology of indefinites and what is possible regarding multifunctional distribution. As an underrepresented Otomanguean language, Me'phaa also highlights the importance of addressing the genetic bias toward Indo-European languages and the areal bias toward European languages that Haspelmath was well-aware of in his study (Haspelmath, 1997:17).

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## Phonological correlates of highly complex syllable structure

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The current project examines correlations between complex syllable structures and phonemic systems as part of a larger study investigating the nature and development of highly complex syllable structure. While numerous diverse works have sought to explain dominant typological patterns of syllable structure (Kawasaki-Fukumori 1992, Maddieson and Precoda 1992, Browman and Goldstein 1995, Content et al. 2001, Nam et al. 2009), scarcer research is to be found on the characteristics of less frequent patterns involving complex syllabic structures, e.g. the six-consonant coda in Upper Chehalis *q<sup>w</sup>á?stq<sup>l</sup>s* ‘headache’ (Kinkade 1963). Here I explore other phonological subsystems of languages with such structures, and find evidence for certain phonological correlates of highly complex syllable structure.

Maddieson (2006, 2013a) determined that there is a highly significant positive correlation between consonant phoneme inventory size and syllable complexity (as divided into three categories: simple, moderately complex, and complex), suggesting that the complexity of these two subsystems of phonological structure are mutually reinforcing. Here I investigate relations between syllable structure complexity and phoneme inventories within the languages of the complex syllable structure category in Maddieson (2013a). For each of the 151 languages, I counted the number of consonant phonemes and vowel qualities following procedures described in Maddieson (2013b, c). I also noted the presence of certain classes of consonants in the phoneme inventory of each language: uvulars, glottalized stops or affricates, glottalized continuants, and palatalized, labialized, and pharyngealized consonants. Results were then compared between languages with onset or coda clusters of four obstruents or more (15 languages, “highly complex”) and the rest of the languages in the sample (136 languages). Languages in the highly complex syllable structure group were found to have an average of 30.4 consonants in their phoneme inventories, compared to an average of 26.2 for languages with less complex syllable structure, indicating that the trend established by Maddieson (2013a) also holds within the complex category. Additionally, languages in the highly complex group were found to have a smaller average number of vowel qualities (4.7, compared to an average of 6.4 for the other languages). Finally, languages in the highly complex group were found to have more of the consonant types listed above in their phoneme inventories (see Table 1). This suggests that the languages from the highly complex group have different kinds of consonants, particularly those which can be analyzed as having elaborated or complex articulations (Lindblom and Maddieson 1988).

In addition to contributing to the literature on phonological complexity, the findings of this study build towards a phonological characterization of languages with highly complex syllable structure. I will discuss how the observed patterns might hint at a diachronic co-development of certain subsystems of the phonology, leading to the observed phonological type.

<b>N special consonant classes present</b>	<b>N languages, highly complex group (15)</b>	<b>N languages, other complex group (136)</b>
0	3 (20%)	70 (51%)
1	1 (7%)	29 (21%)
2	1 (7%)	20 (15%)
3	7 (47%)	10 (7%)
4	3 (20%)	6 (4%)
5	0 (0%)	1 (1%)

Table 1.

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## Is there evidence for a hierarchy in the synchronic patterning of syllable onsets?

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A widely accepted measurement of syllable complexity considers the kind of consonant occurring in the second position within a two-consonant onset; for instance, Maddieson (2013) analyzes stop+glide and stop+liquid shapes as less complex than stop+stop or fricative+stop shapes. This follows from the frequently reported pattern that consonant+glide and consonant+liquid onsets are more frequent and freely occurring cross-linguistically than other cluster types (Ladefoged and Maddieson 1996). Common accounts for this pattern appeal to the notion of sonority (Clements 1990, Zec 1995). This suggests an implicational hierarchy may exist for the synchronic distribution of the second member of onset clusters in a language: **glides > liquids > obstruents** (i.e., a language with obstruent-obstruent onsets must also have obstruent-liquid and obstruent-glide onsets). The existence of such a hierarchy could then be used to infer a path of diachronic development of consonant clusters, following the tradition of Greenberg (1978) and others.

To test that hypothesis, we determined the synchronic typological distribution of two-consonant onset clusters within a stratified probability sample of 82 languages controlled for genealogical relations. For each language, the shape of all occurring two-consonant onset clusters with regards to sonority class were coded. Onset clusters of two consonants occur in 40 languages of the sample; these languages were further analyzed for the current study.

We found that **(i)** 28/40 languages with two-consonant onsets have obstruent-lateral or obstruent-rhotic shapes, consistent with previous reports that liquids are universally freer to occur as a second member of onset clusters. **(ii)** Of the 28 languages with obstruent-liquid onset types, the majority (20) have both obstruent-lateral and obstruent-rhotic shapes. Finally, **(iii)** further analysis did not support the existence of an implicational hierarchy in the synchronic distribution of onset clusters within languages.

Of the 15 languages in which two-obstruent onsets occur, only 8 are also found to have both obstruent-liquid and obstruent-glide onsets in their syllable inventories, despite the presence of liquids and glides in their consonant inventories. Similarly, of the 10 languages which have obstruent-liquid as the most complex two-consonant onset and which also have glides in their consonant inventories, only 6 of these were also found to have obstruent-glide onset shapes occurring synchronically. Strikingly, of the 14 languages whose synchronic syllable inventories might support a hierarchical development of consonant clusters, nearly half of them - Abkhaz, Chepang, Modern Greek, Norwegian, Palula, and Balochi - are located in the Eurasia region.

We do not find support for a sonority-based hierarchy in the diachronic development of consonant clusters. Instead the data suggest a strong preference for liquids more generally in the second position of an onset cluster, an observation strengthened by the finding that consonant-lateral and consonant-rhotic onsets tend to co-occur synchronically within languages. Additionally, our data suggest that any perceived hierarchy in the development of onset structures may instead reflect a common pattern of a geographic area typically overrepresented

in linguistic documentation, thus underlining the need for balanced language samples in typological research.

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## **Exploring the relationship between linguistic diversity and language contact: An Amazonian perspective**

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In global perspective, Amazonia stands out as region of extraordinarily high linguistic diversity, which is particularly striking both in terms of the number of distinct genetic units represented, and the tendency for these to have very few members (as seen e.g. in the disproportionately high number of isolates). These facts imply two parallel processes over time: 1) the maintenance of linguistic distinctions, and 2) restrained cladogenesis (splitting). These processes must have applied in Amazonia to a degree that can be detected hardly anywhere else in the world, with the possible exception of New Guinea. While the motivations behind them are undoubtedly complex (cf. Gavin et al. 2013), I have argued in recent work (forthcoming) that they are associated with particular, socioculturally grounded patterns of interaction that are widely attested among indigenous Amazonians. These interactive dynamics on the one hand foster an awareness of existing linguistic distinctions and their social relevance, which in turn encourages the maintenance of distinct codes; and on the other facilitate the diffusion of innovations, both across languages and among those who identify as speakers of the same language, thus constraining cladogenesis.

In this paper, I explore the quality and quantity of interaction that has pertained among speakers of diverse Amazonian languages over time, as evidenced by the effects of language contact. This exploration is guided by two questions: how the regional dynamics of contact among speakers may have shaped the development of Amazonia's particular patterns of linguistic diversity, and conversely, how Amazonian sociocultural practices may have directed the outcomes of language contact in particular ways. I present results from an extensive survey of lexical and grammatical data, which includes a controlled word list of about 350 items (basic vocabulary, flora/fauna, culture terms), drawn from a comprehensive set of northern Amazonian languages (over 125 languages from 34 families/isolates, plus selected southern languages), and a set of typological features (based loosely on WALS), coded for over 75 northern languages and additional representatives from other regions (also informed by SAILS and SAPHon). These data indicate that vocabulary has been generally resistant to borrowing, in keeping with speakers' active resistance to the mixing of codes, but that many structural features have diffused, presumably as a less consciously accessible effect of multilingualism (see, e.g. Seifart 2011, Aikhenvald 2002, Bowerman et al. 2011). However, more fine-grained inspection reveals typologically intriguing distinctions among different linguistic domains: For example, loans and *Wanderwörter* among flora-fauna vocabulary are relatively numerous, even though many of these terms might be considered core vocabulary in that their referents are widely distributed across the region. Similarly, prosodic phonological features tend to pattern areally, while segmental and phonotactic features correspond more closely to genetic divisions. In addition to providing insights into the dynamics of contact and diversity, these results also speak to the question of the relative accessibility of different linguistic features to contact-driven change, and

the regional processes that may drive their cross-linguistic variability (e.g. Dediu & Levinson 2012, Wichmann & Holman 2009).

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## A Universal on Generalized Sluicing

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I propose an implicational universal regarding the existence of reduced embedded y/n-questions, alternative questions, and wh-questions in languages of the world. Starting from Ross (1969), sluicing – ellipsis in embedded wh-questions – has been extensively written upon.

(1) *Mary baked something, but I don't know [what Mary baked].*

The notion of sluicing can be generalized for other types of embedded sentences, Van Craenenbroeck and Liptak (2006, 2013). In some languages a similar construction is possible for the focus of a yes/no question or of an alternative question, as illustrated schematically in (2a-b) and by Lingala data, Miller (2014), in (2a'-b') :

(2) a. Y/N question

*The cat caught something, but I don't know whether it caught a mouse.*

b. alternative question

*The cat caught something, but I don't know whether it caught a mouse or a bird.*

a'. Y/N question

Mary	alambaki	eloko	kasi	ngaji	najebi	te	soki	loso
Mary	cook.PST <sup>2</sup>	something	but	I	know.PRS	NEG	whether	rice

'Mary cooked something but I don't know whether (Mary cooked) rice.'

b'. alternative question

Mary	alambaki	eloko,	(kasi)	ngaji	nakanisi	te	Sue
Mary	cook.pst	something	but	I	think.PRS	COMP	Sue
ajembi	soki	loso	tope	madeso			
know.PRS	whether	rice	or	beans			

'Mary cooked something and I think that Sue knows whether (Mary cooked) rice or beans.'

I call Y/N-sluicing the construction exemplified in (2a), and or-sluicing the construction in (2b). In many languages, only or-sluicing is grammatical along with wh-sluicing, as is shown in (3) for Kannada (Dravidian).

(3) a. namma            bekku yeen-oo            tin-tu  
our                    cat    what-EMP            eat-3.SG.N

aadare [[yeen-u            anta] nana-ge            got-illa]  
but    what-NOM    COMPI-DAT            know-NEG  
'Our cat ate something, but I don't know what.'

b. (...) aadare [[hakki-n-oo    ili-n-ooanta] nana-ge            got-illa]  
but    bird-DISJ    mouse-DISJ    COMPI-DAT            know-NEG  
'Our cat ate something, but I don't know whether (it ate) a bird or a mouse'

c. \*(...) aadare [[hakki-n-aa    anta] nana-ge            got-illa]  
but    bird-Q            COMPI-DAT            know-NEG  
'Our cat ate something, but I don't know whether (it ate) a bird.' (intended)

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<sup>2</sup> Glosses: COMP complementizer; DAT dative; DISJ disjunction; EMP emphatic; N neuter; NEG negation; NOM nominative; PRS present; PST past; Q question particle

Finally, in Amharic (Semitic, Afroasiatic); Degema (Edoid, Niger-Congo), Kaingang (Gê), Khmer (Austroasiatic), and Chechen (NE Caucasian) ellipsis of this type is impossible in any embedded question. When grammatical, these constructions satisfy all standard tests for sluicing, as discussed in (Merchant 2001), that is, their syntax is similar to that of wh-sluicing. Their appearance in languages of the world is subject to the following implicational universal:

- (a) If a language allows y/n-sluicing, it will also allow or-sluicing and regular sluicing.
- (b) (b) If a language allows or-sluicing, it will also allow regular sluicing.

The universal has been verified for Polish, Russian, Serbian, Lithuanian, Hebrew, Hungarian, Tyvan, Yakut, Turkish, Lingala, Hindi, Persian, Digor and Iron Ossetic, Italian, French, Brazilian Portuguese, German, Slovenian, Albanian, Bulgarian, Georgian, Svan, Basque, Kannada, English, Dutch, Romanian, Finnish, Greek, Amharic, Chechen, Lezgian, Degema, Mandarin, Kaingang, Khmer, Twi, Adyghe, and Vietnamese.

## Typological tendencies of the standard marker in comparative constructions: a sample from Uto-Aztecan languages spoken in Northwestern Mexico

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Over the past few decades a number of researchers have done typologies of the comparative constructions in the world's languages (Stassen 1985, 2013, Cuzzolin and Lehmann 2004, Dixon 2008, Haspelmath 2013). This work develops diachronic-typological account of comparative constructions in five Uto-Aztecan languages spoken in Mexico in the states of Sonora, Chihuahua and Durango (Pima Bajo, Guarijío, Tarahumara, Northern and Southeastern Tepehuan).

The study suggests that while the grammatical characterization of these constructions is relevant, the diachronic approach which considers the different types of constructions available in these languages captures the significant differences observed among them. There are five main elements to observe in the comparative constructions cross-linguistically: i. the comparee (topic of comparison), ii. the standard (standard of comparison), iii. the degree-marker (index), iv. the standard-marker (marker of comparison), and v. the parameter (predicate). In addition, two different types of classifications have been proposed for comparative constructions: the conjoined comparative, the locational comparative, the particle comparative, and the exceed (or verbal) comparative (Stassen 1985, 2013), or the mono-predicate comparatives, and the double-predicate comparatives (Haspelmath et al. 2013). Our analysis shows that the different type of comparative constructions in the languages under study can be arranged along a continuum which include different types of comparative constructions, several of them available to encode the standard: (a) the antonymic construction, (b) the paratactic adjunct construction, (c) the postpositional construction, (d) the subordinated construction, (e) the emerging standard marker construction which is usually the result of either a degree-marker plus a subordinator or a subordinator plus at least two distinct kind of cliticized elements; pronominal or relational elements, and (f) the embedded-standard construction. The data below illustrate the extremes of this continuum: the antonymic (1) and the embedded (2) types.

Pima bajo

- (1) *Hig si' gi'id aan si' liid.*  
3SG.SBJ INT big.COP 1SG.SBJ INT small.COP  
'He's bigger than me.' (lit. he is very big, I'm very small)

Northern Tepehuan

- (2) *Gin mara [giñ=ipani] koi.*  
1SG.POSS son 1SG.NSBJ=DEGREE.M sleep.PFV  
'My son slept the same as me.'

The final analysis of the comparative constructions in different languages from the same family show how different elements compete to grammaticalize a potential standard marker in order to accommodate the notion of comparison. Thus, Guarijio and Tarahumara favor the grammaticalization of a postposition, whereas Pima Bajo, Northern and Southeastern Tepehuan support the use of a subordinator as standard marker. The understanding of the typological differences and the routes of grammaticalization is crucial for a diachronic syntactic analysis that explains how the different comparative constructions have evolved and how languages in this group show innovative patterns that are motivated by universal principles of language change. In sum, the significance of this work supports some of the observations proposed by Heine and Kuteva (2002) for comparative constructions and at the same time show that not all languages develop the same degree of complexity of comparative constructions.

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## The linguistic representation of surprise and its cognitive correlates

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This paper presents the first crosslinguistic study that compares three linguistic functions that have been related in the literature to the expression of surprise: thetics, miratives and exclamatives. The aim of the research is to investigate the formal and functional distinction between these functions, as well as their relationships in conceptual space (see Croft 2001; Haspelmath 2003). Thetics are defined as statements that point to the existence of a state of affairs and which do not have a subject-predicate structure (see Lambrecht 1994; Sasse 1987 among others). On the other hand, miratives are defined as grammatical markers of surprise or unexpected information (see DeLancey 1997; Aikhenvald 2012 among others). Finally, exclamatives are defined as sentences that express surprise towards the unexpected scalar extent of a property (e.g. *How sweet of you!*; see Michaelis 2001 among others).

In order to compare these functions, a diversity sample of 76 languages was constructed using the guidelines in Dahl (2008). The data consists of 360 constructions (202 thetics, 43 miratives and 115 exclamatives). The structural information was coded and analyzed using multidimensional scaling (MDS) –specifically, Poole’s (2005) unfolding algorithm, which has been successfully applied to typological analysis by Croft and Poole (2008).

The results show a ranking that establishes a coherent form-function mapping and a representation of the relationships of the functions in conceptual space, which orders forms in a continuum from thetics to exclamatives, with miratives constituting an intermediate stage. The forms in the continuum go from less to more structurally complex. Regarding thetics, the ranking suggests a distinction, not previously mentioned in the literature, between two pragmatic thetic functions: reference to an entity or an event that is perceived as part of the background scenario and reference to an entity or event towards which the speaker is requesting the addressee’s attention. On the other hand, regarding miratives and exclamatives, the ranking presents both as clearly differentiated functions, exclamatives being structurally more complex.

These findings suggest that the expression of surprise is iconic, and that more structurally complex forms convey a higher degree of surprise. The continuum can also be regarded as a path of grammaticalization, since the forms are ranked from a lower to a higher degree of subjectification (Traugott 1989). Furthermore, I argue that the MDS representation of the conceptual space from thetics to exclamatives provides us with a linguistic model that has interesting psychological and neurobiological correlates. The functions can be distinguished as the mere perception of an event (thetics), the assessment of the event as surprising (miratives) and the relocation of information (exclamatives). This model is consistent with Crick and Koch’s (1997) theory of consciousness, which argues that two types of awareness exist: fleeting and working awareness. The model is also consistent with Reisenzein’s et al. (2012) cognitive-evolutionary model of surprise: unexpectedness is the result of perceiving an event as schema-discrepant (mirative stage), which leads to a subsequent update of the correspondent schema (exclamative stage).

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## Advanced tongue root harmony in Sibidiri Idi, a language of Southern Papua New Guinea?

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Advanced tongue root (ATR) harmony is “[o]ne of the best-known and most-discussed features of African phonology”, while such systems of vowel harmony have been claimed to be “apparently unknown elsewhere in the world” (Clements & Rialland 2008: 50, 49). In this talk, I will propose on the basis of first-hand data that the Papuan language Idi (Pahoturi River family) as spoken in Sibidiri, Trans-Fly region (cf. Evans 2012) has ATR harmony, not unlike the systems found in Africa (see e.g. Archangeli & Pulleybank 2002 on the Bantu language Kinande).

At a phonetic level, Idi has six vocoids, [i], [e], [æ], [a], [o] and [u]. [a], [e] and [o], as well as [æ], [i] and [u], form harmony sets. [e] and [i] are moreover in complementary distribution with [j], as are [o] and [u] with [w]. I therefore subsume them under two phonemes, /w/ (realized as [o], [u] or [w]), and /y/ (realized as [e], [i] or [j]). While the choice between the realization as a vowel or a glide is a matter of phonotactics, I argue that the distribution of [e] vs. [i], [o] vs. [u], and [a] vs. [æ] is determined by a lexical-morphological feature [ATR], represented as >. For example, the neutral stem /lw/ ‘oven’ is realized as [lo], while the ATR-stem >/lw/ ‘tree’ is realized as [lu]. Similarly for /bym/ ‘sea’ → [bem] vs. >/bym/ ‘us’ → [bim]. The vowels [a] and [æ] alternate, for instance, in the realization of the General case suffix: /lw-a/ ‘oven-gnr’ → [loa] vs. >/lw-a/ ‘tree-gnr’ → [luæ].

The system of vowel harmony also determines the realization of epenthetic vowels, which are inserted in consonant-only syllables and to prevent illicit syllable contacts. They are realized as [ʌ] in neutral contexts (e.g. /tt/ → [tʌt]), and as [ɪ] in ATR-contexts (e.g. >/ysgnyn/ ‘he dropped it’ → [yɪsɪgnɪn]).

The status of ATR as a lexical-morphological feature is confirmed by the fact that it may have a morphological function. In the Remote Past, it functions as a marker of the ventive inflection: /ytramyw/ → [jʌtrameo] ‘they carried her away’ vs. >/ytramyw/ [jɪtræmiu] ‘they brought her here’.

While the system works straightforwardly for large parts of (morpho)phonology, there are some complications, in particular, systematic cases of disharmony. Most strikingly, the suffix used for the second person in the Remote Past is invariably realized as [æ]. For example, ‘you built it’ (Remote Past), phonologically /by-gw->a/, is disharmonically realized as [begojæ] (with an epenthetic glide, cf. [1]). As ATR is expected to spread, we would expect \*[bigujæ]. In combination with auxiliaries, the ATR-feature does spread (cf. [2]):

- (1) by-gw->a → [begojæ]  
3O.RemPast-build-2Sg
- (2) n-ŋam->a → [nɪŋæmæ]  
RecPast-PlAct-2Sg

In my presentation, I will provide an overview of the basic system and discuss exceptions and systematic cases of disharmony, making reference to African languages exhibiting similar systems for comparison (e.g. Kinande, cf. Archangeli & Pulleyblank 2002), and to systems of vowel harmony found in Northern Australia, e.g. in Jingulu (Pensalfini 2002).

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## **Impersonals in cross-linguistic perspective: Converging evidence from typology and corpora**

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In using the term **impersonals** we refer to pronominal expressions like *man* or *men* in various Germanic languages (e.g. Swed. *man* in [1]), as well as specialized verb forms like impersonal passives in Finno-Ugric (e.g. Estonian, cf. [2]).

(1) Swedish

*Man skall into tro allt som sags på TV.*

‘One should not believe everything that is said on TV.’

(2) Estonian

*Pärast suurt söömist kaalutakse            nii            mõnigi kilo rohkem.*

after big eating weigh.PRES.IMP so several kilo more

‘After a big feast, one weighs several kilos more.’ (Blevins 2003: 485)

In our talk we will present the results of a study which combines **typological data** with quantitative, **corpus-based investigations** of selected languages. Our study primarily addresses **two questions**: (i) How are impersonals interpreted?, and (ii) What determines their distribution, in individual languages and cross-linguistically?

The **interpretation** of impersonals is either **universal** or **existential**, often depending on the sentential context. For instance, (1) and (2) above express universal quantification, as the statements made are meant to apply to all human beings. By contrast, (3) and (4) have an existential interpretation and can be paraphrased using *somebody*.

(3) Swedish

*Man arbetade i tre månader för att lösa problemet.*

‘They worked for three months to solve the problem.’ (Egerland 2003: 1)

(4) Estonian

*Õues kakeldi.*

outside fight.past.imp

‘People/they were fighting outside.’ (Blevins 2003: 483)

Moreover, impersonals may either be **inclusive** (intended to apply to the speaker and the addressee), as in (1) and (2), or they may be **exclusive**, as in (3) and (4).

The **distribution** of impersonals is crucially determined by two factors: (i) the **veridicality** of the clause containing them (veridical vs. non-veridical, cf. Zwarts 1995), and (ii) the **event structure** of the relevant predication (generalizing vs. episodic). While the strategies considered so far are used in all types of contexts, many strategies are contextually restricted. For example, Armenian *mard* (as a noun, ‘man’) is used in generalizing and/or non-veridical contexts (cf. [5]), but not in episodic/veridical ones (cf. [6], which only allows a nominal/indefinite interpretation of *mard* ‘man’).

- (5) Armenian (generalizing/veridical)

*Mard aprum e miayn mek angam.*  
person live.PTCP.PRS AUX.3SG only one time  
'One only lives once.'

- (6) *Yerb ghekarar-ə ners mtav mard nkatets' vor hognats er.*  
when boss-DEF in entered man noticed that tired he.was  
'When the boss entered, a man (\*one/people) noticed that he was tired.'

We use the same set of **features** for our typological study, where they serve as the atoms underlying a **semantic map** (cf. Gast & van der Auwera 2013), and in our corpus-based investigations, where they function as **variables** in **multivariate statistical modelling**. We intend to show that generalizations over lexico-grammatical constraints are mirrored in probabilistic patterns in corpora. For example, the cross-linguistic distribution of impersonals based on a numeral 'one' is mirrored in the frequencies with which impersonal *one* in English occurs in specific contexts in corpora. Our study is based on typological data from twenty languages and on quantitative corpus data from Dutch, English, German, Italian, and Russian.

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## Overt and zero marking of spatial relations in Cappadocian Greek: synchrony, diachrony, typology

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A bulk of research has demonstrated that languages differ with respect to the pattern used to mark the distinction between Goal, Place and Source (Creissels 2006). Among the major findings is that all polysemic patterns in the tripartite distinction Goal—Place—Source are possible, but some permutations are more dominant than others; e.g., Goal—Place polysemy is particularly common (Lestrade 2010, Nikitina 2009). Most studies to date have been concerned with instances whereby the locative role receives an overt marker. Recent work by Stolz *et al.* (2014), however, has drawn attention to the phenomenon of zero-marking of spatial relations showing that the generalisations formulated for overt markers generally hold for zero marking, as well.

In this paper, we investigate overt and zero marking of Goal, Place and Source in the varieties of Cappadocian Greek, which fall into three different categories based on the inventory they use to mark the three spatial relations:

- (a) conservative varieties, in which Goal and Place are syncretically marked by the inherited preposition EIS whereas Source is marked by the inherited preposition APO;
- (b) the intermediate varieties of Phloítá and Sílli, in which Goal and Place are syncretically marked by either EIS or zero, the distribution of which is syntagmatically conditioned (in the sense of Stolz *et al.* 2014), whereas Source is marked by APO; and,
- (c) the innovative variety of Ulaghátsh, in which Goal and Place are syncretically marked by zero whereas Source is marked by APO.

Both EIS and APO form Prepositional Phrases of the type [EIS/APO + NP<sub>ACC</sub>]<sub>PrepP</sub>. In the cases where zero is used, we find bare accusative-marked NPs.

We first observe that the reorganisation of the system used for the marking of spatial relations in Cappadocian may have had a local effect—in our case, the loss of a member of the prepositional paradigm—but kept the original global picture intact (Goal = Place ≠ Source), thus conforming to crosslinguistically robust tendencies (Lestrade 2010, Nikitina 2009).

We subsequently focus on the consequences of the diachronic replacement of EIS by zero for the marking of Goal and Place in Ulaghátsh Cappadocian with the aim of highlighting the variety's typological rarity. The major consequence in that connection was that the functions originally encoded by EIS (*inter alia*, GOAL, PLACE, RECIPIENT) were added to the set of functions that were already encoded by bare accusative-marked NPs. This included PATIENT and THEME, which normally occupy the direct object position as complements of (di-)transitive verbs. In this respect, Ulaghátsh Cappadocian belongs to the rare type of language in which the same means of formal marking is used for the encoding of direct object, indirect object, goal and place (see

Blansitt 1988). What is more, the fact that accusative and nominative forms of nouns are identical in the variety has the even rarer consequence that the markers used for the direct object (PATIENT, THEME), indirect object (RECIPIENT, ADDRESSEE, BENEFICIARY), GOAL and PLACE functions are always formally identical to those used for the subject functions (AGENT, EXPERIENCER, THEME).

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## Phrasal-Phonological Alternations in Malayic Languages

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This paper presents a typology of phrasal phonological alternations in the Malayic subgroup of the Austronesian language family. Our focus is on phenomena instantiating the following abstract template:

(1) [ M ... M F ] [ M ... M F ] ... [ M ... M F ]

In (1), an utterance is parsed into phonological phrases (indicated with brackets). Each phrase consists of a sequence of units (syllables, feet or words, depending on the example), where within each phrase, the last unit is marked as final (F) while any or all preceding units are marked as medial (M). In spite of the abstract unity, as represented in (1), the actual phonological realization of the M/F marking distinction, as well as other properties of the alternation, vary widely from language to language. Examples of such alternations in three Malayic languages are provided below, with Standard Indonesian as the point of reference:

(2) Standard Indonesian:	<i>satu kali</i>	'one time'
Kupang Malay:	<i>sawt kali</i>	[metathesis in M form]
Jakarta Indonesian:	<i>satu kali?</i>	[excrecent glottal in F form]
Tapan:	<i>satu kaliŋ</i>	[excrecent nasal in F form]

We present a typology of phrasal-phonological alternations consisting of the following nine properties:

- (2)(a) *phonological substance of alternation*: stress, excrecent nasals, preoralization of nasals, excrecent glottals, epenthetic vowels, truncation and metathesis, *n~ŋ* alternation, or stem gradation;
- (b) *unit hosting alternation*: syllable, foot, or word;
- (c) *diachronic directionality*: whether the original form is medial or final;
- (d) *synchronic directionality*: whether the underlying form is medial or final;
- (e) *weight*: whether the medial or final form is heavier;
- (f) *discreteness*: whether the alternation is discrete or scalar;
- (g) *obligatoriness*: whether the alternation is obligatory or optional;
- (h) *percolation to acrolect*: whether the alternation also occurs when speakers switch to their acrolectal variety of Standard Malay/Indonesian;
- (i) *domain type*: phrasal phonological, lexical, morphophonemic, or grammatical.

The last property captures the fact that in many Malayic languages, similar alternations can be observed in other linguistic domains; we argue that this due to a historic process whereby what was once a phrasal-phonological alternation sheds its rhythmic nature and is incorporated into the lexicon, morphophonology or grammar.

In this paper we provide examples of phrasal-phonological (or erstwhile phrasal-phonological) processes from over 20 dialects and languages from across the Malayic

speaking area. In conclusion, we briefly consider examples from other languages, including tone sandhi in Southern Min Sinitic and metathesis in the Austronesian languages Uab Meto and Rotuman, suggesting that such phrase-final phonological alternations may be an areal feature characterizing a wide swathe of Southeast Asia and the Pacific.

## Information load determines optionality in Cariban

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In four Cariban languages, one or more former action nominalizations now serve as main clause verbs: Present and Past in Akawaio (Fox, 2003), Universal and Past in Makushi (Abbott, 1990), Imperfective in Ye'kwana (Cáceres & Gildea, 2013), and Progressive in Kari'nja (Yamada, 2010). These new verb forms also continue to occur in subordinate contexts (SC) in all four languages. These forms were reanalyzed as main clause verbs in a specific source construction: the nominalization was the predicate noun of a predicate nominal construction, cf. the Akawaio examples in (1a-b):

- |      |                      |      |                                   |           |
|------|----------------------|------|-----------------------------------|-----------|
| (1a) | ö-rediomörö          | (1b) | ö-dö-'pī                          | mörö      |
|      | 2-radiothat.INAN     |      | 2-go-PST.NZR                      | that.inan |
|      | 'That is your radio' |      | etym. 'that is your (past) going' |           |
|      |                      |      | modern: 'You went'                |           |

After (1b) is reanalyzed as a simple past clause, the pronoun *mörö* is no longer a subject, does not seem to carry any semantic meaning, and has become optional.

We investigate the properties of MC-'*mörö*' in the broader language system, notably comparing the structure of MCs with that of SCs. It appears that, apart from the presence of MC-'*mörö*' in MCs and a SC-head in SCs, MCs and SCs exhibit the exact same structure. MC-'*mörö*' and the postposed SC-heads thus stand in a neat paradigmatic distribution, allowing for a reinterpretation of MC-'*mörö*' as a simple MC-marker that retains no synchronic pronominal properties.

Using the information theoretical concept of information load (Shannon, 1948), we argue that, due to its paradigmatic distribution and additional measurable subphonemic features in MC-'*mörö*'s context, the informativeness of MC-'*mörö*' itself is very low, leading to its apparent optionality. We compare the case of Akawaio '*mörö*' with similar cases in Makushi, Ye'kwana, Panare, and Kari'nja, and with other cases of optionality (Wasow et al. 2011).

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## Beyond Structuralism: Exorcising Saussure's Ghost

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This paper deals with the lingering corrosive effects of F. de Saussure's (1915) four core dogmas of structuralism on functionally-, typologically-, diachronically-oriented linguistics. The four are:

- (i) **The arbitrariness doctrine** and its effect on the notions "explanation" and "theory".
- (ii) **The idealization doctrine** (langue vs. parole) and its destructive effect on the notions "data" and "theory".
- (iii) **The segregation doctrine** (synchrony vs. diachrony) and its effect on making synchronic typology a-theoretical and detaching diachronic theory from language behavior.
- (iv) **The "internal linguistics" doctrine** (a.k.a. "pure linguistics") and its effect on cutting off linguistics' cross-disciplinary explanatory links (cultural anthropology, cognition, neurology, bio-evolution).

I will trace the intellectual provenance of (i) via Aristotle, the Logical Positivists, Bloomfield and Chomsky; (ii) via Plato and Chomsky; (iii) back to (ii) and thus indirectly via Plato and Chomsky; and (iv) back to (i) and thus indirectly via Aristotle, Bloomfield and Chomsky. I will then suggest that a variationist, developmental, on-line-behavior orientation to language, in effect merging synchronic and diachronic theory, is fully consonant with evolutionary-developmental biology (evo-devo; West-Eberhard 2004). Data from the diachrony of passives will be then cited to illustrate how synchronic typology is only comprehensible as a diachronic typology.

## NP Incorporation in Coptic? A cross-linguistic rarity and its implications

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Coptic, the latest stage of Ancient Egyptian (Afroasiatic), has a cross-linguistically unusual system of marking grammatical relations, taken here as language-specific descriptive categories. On one hand, it has both Differential Object Marking and Differential Subject Marking, a cross-linguistic rarity; on the other hand, it has a ‘marked A/S vs. marked P’ system of case-marking (Creissel 2009, Grossman 2014), in which both the nominative and the accusative carry overt case-markers, but neither is identical to the basic or ‘citation’ form, such that it is neither a ‘standard nominative’ nor a ‘marked nominative’ language (König 2008). As such, Coptic presents a type of grammatical relations system that is rare both within Afroasiatic and in the world’s languages.

The present paper focuses on another cross-linguistically unusual aspect of Coptic grammatical relations, in the domain of Differential Object Marking. Unlike most cases of DOM, which have a split formally encoded by an opposition between an overt marker (‘accusative’) and a lack thereof, Coptic DOM involves the opposition between an overt accusative marker and P-incorporation, the latter of which is shown by two properties: (1) the inability of the noun (phrase) to bear overt case-marking, and (2) the verb and the P constitute a single morphosyntactic and prosodic unit, realized by the attachment of the P to a bound form of the verb.

- |     |                                       |                |               |                 |
|-----|---------------------------------------|----------------|---------------|-----------------|
| (1) | <i>a-n-čimi=men</i>                   | <i>m-pi-ma</i> | <i>n-sônh</i> | Case-marked P   |
|     | PST-1PL-find=PTCL                     | ACC-DEF-place  | MOD-bind      |                 |
|     | ‘We indeed found the prison’          |                |               |                 |
| (2) | <i>mp-ou-čem-boêthos=de</i>           | <i>nn-adam</i> |               | P-incorporation |
|     | PST.NEG-3PL- <b>find-helper</b> =PTCL | ACC-Adam       |               |                 |
|     | ‘A helper was not found for Adam’     |                |               |                 |

Even more strikingly, P-incorporation is not limited to bare noun lexemes (or ‘roots’), as it occurs also with full noun phrases.

- |     |  |   |                                |                 |
|-----|--|---|--------------------------------|-----------------|
| (3) | <i>a-p<sup>h</sup>[nou]t<sup>i</sup></i> | <i>t<sup>h</sup>amio</i>                              | <i>n-ni-t<sup>h</sup>êrion</i> | Case-marked P   |
|     | PST-G(o)d                                | create  | ACC-DEF.PL-beast               |                 |
|     | ‘God created the beasts’                 |   |                                |                 |
| (4) | <i>a-p<sup>h</sup>[nou]t<sup>i</sup></i> | <i>t<sup>h</sup>amie-t<sup>i</sup>-p<sup>h</sup>e</i> |                                | P-incorporation |
|     | PST-G(o)d                                | <b>create-DEF-heaven</b>                              |                                |                 |
|     | ‘God created Heaven’                     |   |                                |                 |

Such phenomena are known to exist, where they are either acknowledged to be a rare type of incorporation (Aikhenvald 2007) or are considered to be ‘pseudo-incorporation’ (Massam 2001). In this paper, I will argue for Aikhenvald’s position, based on Croft’s argument against ‘cross-linguistic methodological opportunism’ (2010).

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## Marking of nominal categories on proper nouns

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Proper nouns are categorized as a subclass of nouns (or nominals), however, they often behave differently from common nouns in terms of overt marking of grammatical categories. While the morpho-syntactic differences between pronouns and common nouns have been investigated extensively, hardly any studies have dealt with the differences between proper nouns and common nouns. I will present a crosslinguistic survey that compares the marking of the two categories definiteness and case for proper and common nouns. For the overt marking of a nominal category, there are five logical possibilities:

1. the category is not overtly coded on both common nouns and proper nouns
2. the category is overtly coded on common nouns only and not on proper nouns
3. the category is overtly coded on proper nouns only and not on common nouns
4. the category is overtly coded on both proper nouns and common nouns, but the two types combine with distinct markers (and possibly distinguish a different number of feature values)
5. the category is overtly coded on both proper nouns and common nouns, identical markers are used for both types of nouns

The most interesting scenarios are 2 – 4, i.e. the ones that differentiate between proper nouns and common nouns. I will concentrate on those three types in my paper, but will also give an overview of the frequency with which definiteness and case are overtly coded on proper nouns. Scenario 2 (lack of marking on proper nouns only) is exemplified by the definite article in English, which does not combine with proper nouns (but see below for the discussion of a special case). I am not aware of any instances of Scenario 3 (lack of marking on common nouns only). Further research is needed, but, as of yet, there appears to be a universal tendency that proper nouns do not distinguish more categories than common nouns. Scenario 4 can be found in Tagalog (Central Philippine) and Libido (Eastern Cushitic). In Tagalog (Schachter & Otnes 1982: 74, 79), distinct forms of the role markers are used for common nouns (*ng* ‘non-topical actor/undergoer’, *ang* ‘topic’) and proper nouns (*ni* ‘non-topical actor/undergoer’, *si* ‘topic’). Libido distinguishes no declension classes for common nouns (but feminine nouns have an overt gender-marker), proper nouns on the other hand are grouped into five declension classes (three for masculine and two for feminine ones). While the form of a noun used as direct object (Accusative) is identical to the Citation Form for common nouns, Accusative and Citation Form are distinct for the majority of declension classes of proper nouns (Crass 2014).

I exclude from my investigation cases in which the marker of a nominal category has different functions for proper nouns and common nouns. Such a case is, for instance, the special pragmatic function of the English definite article when combined with proper nouns (cf. *I saw THE Will Smith*, roughly meaning ‘I saw the well-known actor Will Smith’). Another example, from a different nominal category this time, is the so-called ‘associative plural’ that is found

especially frequently with proper nouns. Those cases are certainly very interesting from a pragmatic point of view, but they fall beyond the scope of my investigation.

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## **Form and function of proper names – dimensions of the morphosyntactic diversity**

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The goal of this paper is to present a typologically informed systematic overview of the essential functional and formal properties of anthroponyms. Anthroponyms are not only terms of address and reference. They often encode certain semantic and social meanings that go beyond the pure referential function. The dimensions of these secondary meanings/ functions will be explicated in this paper. Formally, anthroponyms are not only simple words, but show an enormous internal and external complexity. Especially the external syntax of anthroponyms, i.e. the phrase structure and the usage of anthroponyms as argument of the clause will be dealt with. A proper name phrase will be postulated that is different from a classical NP. Further dimensions of typological variation such as anthroponyms and the problem of parts of speech, and anthroponyms within the Animacy Hierarchy will be discussed. The data for this study are taken from grammatical descriptions of a wide array of languages.

## Complex Predicates in Northern Australia: Nexus and Serialization

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This paper explores two aspects of complex predicates (CPs) in languages of Northern Australia. CPs consist of (one or more) uninflecting open-classed coverbs (e.g. *nangh berrh* in (1)) and an inflecting verb (IV) belonging to a closed class (*la-ng*). It has been argued that these types of CPs constitute an areal feature structurally distinct from other CP constructions such as serial, light verb, and auxiliary constructions (McGregor, 2002; Schultze-Berndt, 2000).

(1) Wagiman

<b>guruwutj-yi nangh</b>	<b>berrh</b>	<b>la-ng</b>
car-ERG	knock.down.PFV throw.PFV	3SG.throw-PPFV
`A car knocked them down' (Wilson, 1999, 71)		

First, the nexus between coverb and inflecting verb is examined. Schultze-Berndt (2000) observes that complex predicates form a continuum ranging from the *phrasal* verbs of Jaminjung (e.g. *yirr gani-bili* - 'he left' (Schultze-Berndt, 2000, 533)) and Bardi, to languages such as Gooniyandi (*bij-goowa-ya-w-arni* - 'it might be arriving' (McGregor, 2002, 43)) where the two components are so tightly *fused* that they have lost any structural and semantic independence, and may be treated, synchronically, as unanalyzable verb roots. Some languages have both types of CPs, and developments into fused types within grammaticalization processes have been described (for example, for Ngan'gityemerri (Reid, 2003)). In other languages such as MalakMalak, fused constructions are semantically and phonologically restricted and have lost some of their historical variety (Birk, 1976). However, a systematic analysis of the factors contributing to grammaticalization has not yet been attempted.

Secondly, Bower (2010, 66) identifies a connection between a language allowing coverbs as semi-independent predicates without an inflecting verb and the ability to stack them in serial coverb constructions as exemplified in (2).

(2) MalakMalak

<b>pi,</b>	<b>dae</b>	<b>yuenduen</b>	<b>wayalk</b>	<b>pi</b>	<b>taty-ma</b>	<b>ka</b>
move	meat/animal	3SG.M	go.hunting	move	hit-CONT	come
`the animal (crocodile) goes out hunting and comes back'						

As a result, a number of languages allow for serial coverb constructions, however, most are semantically limited to e.g. manner of motion description as in Jaminjung (Schultze-Berndt, 2006), or serialized posture verbs in Ngan'gityemerri (Reid, 2002). Some languages such as Wagiman, MalakMalak, and Kamu (Harvey, 1989), however, show much greater variety and flexibility with regards to serial coverb constructions. In example (2) four coverbs combine to encode two subevents in one CP construction.

In this paper, I undertake a systematic survey of the nature of complex predicate constructions in languages of Northern Australia with regards to the nexus between the coverb and the IV and its relationship to the type of serialization a language allows. I argue that when two multi-verb constructions combine in a single language, its ability to form fused CP constructions is greatly diminished. At the same time, serial coverb constructions are directly linked to the occurrence of semi-independent predicates, however, the majority of serialized expressions are within complex predicates. As a result, this paper will present a typological overview of the different types of complex predication in Australian languages and make predictions for future developments.

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## Quantitative Phonological Comparisons of Corpora Using Cross-Language Categories

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This paper describes algorithms and data structures to assign measurements to language corpora, in a way that allows quantitative comparison across languages. Viewing the measurements as points in a multi-dimensional space, the distance between them is a measure of how different the corresponding corpora are from each other. Points that cluster together are typologically similar in a quantifiable way. This method is applied to frequency distributions of phoneme n-grams. By partially overcoming the difficulty of comparing phonemes that are phonetically different, it enables comparisons across a wide range of languages.

A series of corpora, each considered to be a representative sample of an individual language, are transcribed into IPA symbols. The corpora are obtained from An Crúbadán, a collection of over 2000 languages downloaded from the Internet. A minimum size of 2000 words is required; filtering is done to remove foreignisms, acronyms, and other items that are not native words. Rules for converting the graphemes to phonemes are obtained from various sources, the most comprehensive of which is SIL International. The total transcription process is currently in place for 123 languages.

Each IPA symbol is mapped to a set of categories that represent phonetic characteristics (voice, manner, place, etc) that exist in all the languages to be compared. The categories form a vector  $\mathbf{c}$ , where each  $c_i$  is a numeric measure of the phonetic characteristic;  $c_i = 0$  means that the characteristic is non-contrastive in the particular language.

The orthographic words of each corpus are grouped into phrases based on punctuation. Within each phrase, spaces between words are removed. This is intended to represent the fact that pauses do not occur in actual speech except between phrases. The resulting phrases are divided into n-grams, where "n" currently = 3, but could assume other values.

The text frequency  $f$  of each n-gram is multiplied across  $\mathbf{c}$  to give a vector  $\mathbf{g}$ . The vectors  $\mathbf{g}$  of all the n-grams are added to give a vector  $\mathbf{m}$ , a measure of the phonology of the language. This vector  $\mathbf{m}$  can be thought of as specifying the location of the corpus within a multi-dimensional phonology space. The Euclidian distances  $\mathbf{d}$  between the measures of the languages are then computed. These are quantitative measures of the phonological differences between the languages. Languages that turn out to be close to each other may be considered parts of typological groups. We will present statistical results relating the distances between languages to their genetic relationships and potential Sprachbund connections.

This method is capable of being generalized to any language characteristics that can (a) be represented by a frequency distribution, and (b) be classified into cross-language typological categories. Thus, it can potentially be used for typological studies of morphology or syntax.

Descriptions of the data sources, algorithms and data structures will be made available, such that they can be implemented in different kinds of computer software.

## The antipassive in accusative languages

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The term ‘antipassive’ refers to a particular grammatical construction, which exists only in contrast to its corresponding transitive predication (Dixon 1994; Polinsky 2005). Illustrated in (1b), a prototypical antipassive is defined syntactically as a formally intransitive construction in which the AGENT of the corresponding transitive construction is encoded as the UNIQUE core argument, whereas the PATIENT loses its properties of core argument. Semantically, both constructions are said to be denotationally similar, referring to the same type of event.

- (1) Chukchi (Kozinsky *et al.* 1988: 652)
- a.     *ʔaačək-a*       *kimiʔ-ən*       *ne-nlʔetet-ən.*  
youth-ERG    load-ABS       3PL-carry-3SG/AOR  
‘The young men carried away the / a load.’
- b.     *ʔaačək-ət*       *ine-nlʔetet-gʔet*       *kimitʔ-e*  
youth-ABS    AP-carry-3PL/AOR    load-INSTR  
‘The young men carried away the / a load.’

Since the term ‘antipassive’ was originally proposed for ergative languages (Silverstein, 1972), the phenomenon has been extensively discussed in individual ergative languages and was associated with ergativity alone (Dixon 1979; Bok-Bennema 1991; Spencer 1995; Aldrige 2012). The question that rises is whether the correlation between antipassive and ergativity is justified crosslinguistically. In other words, to what extent is it legitimate to insist on the dependency of the antipassive and ergative alignment?

Situated at the interface of semantics and (morpho-)syntax, this talk discusses the relationship between the antipassif and accusative alignment from a typological perspective. Special attention is given to genetically unrelated language families: Austronesian, Turkic, Indo- European ones, in addition to some African phyla. The main goal is to provide some empirical evidence in order to show that antipassive constructions exist in accusative languages much in the same way as they do in ergative languages. Although they may reveal formal or functional differences (Table 1), these constructions can still be fully recognized as antipassives, based on widely accepted definitions proposed in the literature.

	<b>Accusativity</b>	<b>Ergativity</b>
<b>Antipassive</b>	polyfunctional verbal markers	polyfunctional or dedicated verbal markers
	semantic and pragmatic functions	semantic, pragmatic and/or syntactic functions
	lexical restrictions	lexical restrictions hardly ever mentioned
	lexicalisation effects	lexicalisation effects hardly ever mentioned

**Table 1.** Formal and functional differences in antipassive constructions between accusative and ergative languages.

This talk contributes to the field of typology both on diachronic and synchronic levels. Diachronically, it shows the relationship of the antipassive with reflexivity and reciprocity. It explains the possible evolution of antipassive from these two notions, examining functional similarities between: (a) reflexive and antipassive; and (b) reciprocal and antipassive. Synchronically, it provides strong arguments against the common view according to which antipassive constitutes a mirror image of the passive (Polinsky 2005).

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## Abbreviations

ABS	absolutive	INS	instrumental
AOR	aorist	PL	plural
AP	antipassive	SG	singular
ERG	ergative		

## A Typological Study of Interrogative Words for PERSON in Sinitic Languages

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In a crosslinguistic study of 79 languages by Ultan (1978), the observation is made that even given that the number of interrogative words may be extremely variable across languages, one contrast nearly always present is that between personal and impersonal interrogative pronouns (cf. English *who* and *what*). Cysouw (2004) shows that the interrrogative categories of PERSON and THING are commonly expressed by an unanalyzable or irreducible morpheme. In this paper, we test out these two hypotheses regarding WHO and WHAT for Sinitic languages which in the main show quite substantial differences in their inventories of interrogative pronouns and expressions.

According to the data we have collected, PERSON is surprisingly not an independent interrogative category in most southern Sinitic languages, in our sample based on the ten main groups. In our sample of over 300 Sinitic languages, there are five main morphological strategies. Type A languages employ an irreducible, lexically- specialized morpheme SHEI 谁 *who* to ask for WHO. Type B languages use phrases which are formed by the interrogative morpheme WHICH and a CLASSIFIER, compatible with the noun *ren* 人 'people'. Type C languages employ the phrase WHAT+PEOPLE to ask for WHO. Type D languages use the phrase WHICH+PEOPLE to ask for WHO. Type E languages which employ the phrase WHAT +CLASSIFIER to ask for WHO are very rare in our sample. Nearly all Northern Sinitic languages belong to Type A languages. In most Southern Sinitic languages the word SHEI 谁 *who* cannot be found.

We also conduct the research on the interrogative words for PERSON from a diachronic perspective. We find that the word SHEI 谁 *who* can be traced back to Early Archaic Chinese. Why did SHEI 谁 *who* disappear in most contemporary Southern Sinitic languages? We propose the following hypothesis: the preservation of SHEI 谁, the specific and monomorphemic word for WHO, in Northern Sinitic languages could have been reinforced by protracted language contact with Altaic languages, while the loss of SHEI 谁 *who* in most Southern Sinitic languages could equally be a measure of their long-term language contact with co-territorial Hmong-Mien (Miao-Yao) and Tai-Kadai (Zhuang-Dong) languages, leading to preferential treatment for the analytic type of strategy, with composite forms, favored among a choice of native strategies.

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## A Typology of Focus Encoding in African Languages

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The encoding of focus in African languages has long been recognized for its morphosyntactic complexity and diversity. The use of verbal morphology to express focus is particularly common (Creissels et al. 2008:149), as are specific syntactic positions such as the immediate after verb position described for Aghem (Niger-Congo: Cameroon) (Watters 1979). However, so far this observation has relied on individual examples. This talk reports on the results of a new typological survey of morphosyntactic encoding of focus in Africa. Key findings include the discovery of a previously unrecognized strategy of focus encoding, as well as statistical asymmetries of focus encoding strategies associated with subjects as opposed to objects.

The database created for this study is comprised of 702 constructions from 135 languages which morphosyntactically encode focus, understood here as a necessarily heterogeneous category encompassing assertive and contrastive focus. This sample attempts to be balanced in its representation of languages across genera, and as such represents 48 genera from all four major phyla of African languages. An analysis of the morphosyntactic properties of these constructions reveals six primary strategies for encoding focus, namely (i) syntactic position, (ii) focus particles, (iii) verbal morphology, (iv) nominal morphology, (v) the use of proforms or copies, and (vi) clefts. These six strategies are used either individually or in combination within a single construction, and more than one focus construction can be used in a given language. Based on the findings of this database, some general patterns are now clear. For instance, correlations can be found concerning the grammatical role of the focused element, providing further evidence for a dichotomy between subjects and objects. More than 60% of focused objects, but only 21.6% of subjects in the database make use of syntactic positions to encode focus. On the other hand, subjects make use of verbal morphology for encoding focus more often than objects do.

Aside from the general distribution of focus encoding strategies, a number of interesting patterns come to light. One such pattern concerns what can be referred to as *depotentialization*, in which constituent focus is encoded by decreasing the number of morphosyntactic distinctions that can be encoded in the clause. This can affect the encoding of tense, mood, and aspect as well as nominal case morphology and agreement markers. All told, twenty-six languages in the database (roughly 20% of the sample) make use of at least one depotentializing construction to encode constituent focus. While descriptions of these languages provide details of morphological variation and restriction as a result of focus structure, the database provides the evidence needed to demonstrate the use of depotentialization as a widespread strategy of focus encoding, limited neither to a specific phylum nor to a specific linguistic area.

While the complexity of focus encoding in specific African languages is well-known, for the first time, we have a comprehensive overview of encoding strategies. This large-scale typological investigation is designed to explore areal, genetic, and typological correlations of focus marking. The database also allows for the exploration of broad patterns of morphosyntactic encoding strategies which go unnoticed by investigations of individual languages.

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**SAP object indexation and the absence of rigid morphosyntax:  
Areal and geographical typological features of Karbi grammar**

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There are two recent approaches towards typologies of languages of the greater Eastern Himalayan region. One is an ethnolinguistic approach that aligns typology with geography: ‘hills vs. valley languages’ (e.g., DeLancey 2013, 2014), the other is to identify micro-linguistic areas with converging typological features (e.g., Bickel and Gaenszle 2015). Both approaches yield useful lines of explanation to piece together various aspects of Karbi grammar (Tibeto-Burman; Northeast India). The examples of SAP object indexation and the absence of rigid morphosyntax illustrate, however, that the two approaches may actually align Karbi with very different kinds of languages.

Karbi SAP object indexation employs the second person proclitic *nang=*, which also marks motion towards a reference point (Konnerth 2015). While the extension of 2nd person indexation to a cislocative marker appears to be unique to Karbi, the 2>SAP:O development has intriguing parallels in languages of the greater Eastern Himalayan region, all of which, however, unlike Karbi, have full agreement paradigms. The extension of second person to SAP object is also found in non-cognate constructions in the Kuki-Chin branch of Tibeto-Burman (Purum: Sharma and Singh 2008), where we additionally find the apparent use of second person forms as first person object markers (Daai Chin: So-Hartmann 2009; Aimol: field notes). The recruitment of new markers for first person object indexation is additionally found in the only distantly related Kiranti branch of Tibeto-Burman, argued to be motivated by contact with Maithili (Indo-Aryan; Bickel and Gaenszle 2015). The concern with first person or SAP object configurations in Karbi and Kuki-Chin reflected in the development of specially designated constructions may therefore turn out to have an areal basis that includes Kiranti and Maithili.

However, while the Karbi second person proclitic occurs in almost all SAP:O events in texts, it is not morpho-syntactically obligatory. It further turns out that the non-obligatoriness of grammatical markers is a widespread characteristic of Karbi: Both core and adjunct NPs may remain unmarked for their clausal role; the applicative marker on the verb may be absent in an applicative construction; the irrealis suffix is not obligatory in relative clauses with future reference; and even two of the most frequent affixes, the nominalizer *ke-* and the possessive/modified marker *a-*, which have to be considered the very core of Karbi syn- and diachronic morphosyntax, are not actually obligatory. The absence of rigid morphosyntax aligns Karbi with other ‘valley languages’ in the region. Based on the fact that the valleys are high-contact zones, periods of large-scale incorporations of non-native speakers into communities can be argued to lead to the loss of morphosyntax that is paradigmatic, redundant and opaque, and to greater utilization of pragmatic principles (DeLancey 2013; DeLancey 2014).

SAP object indexation and the non-obligatoriness of grammatical markers can thus both be motivated by areal and geographical tendencies. However, they typologically align Karbi with very different kinds of languages: those with rich and often fused morphological systems in agreement marking and elsewhere, and the ‘valley’-type languages with transparent and recently grammaticalized morphology.

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## Antonyms and derivational negation: A pilot study of cross-linguistic variation

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Typological research on negation has mainly focused on clausal negation and on indefinite pronouns in the scope of negation (see Miestamo 2007 for an overview). Derivational affixes expressing negation (e.g., *un-* in *unhappy* or *-less* in *powerless*), have so far not figured in systematic typological studies. Zimmer's (1964) seminal study of affixal negation with adjectives is mainly restricted to a few well-known Indo-European languages; other families are given less attention. Semantically, derivational negation is closely connected to antonymy, which can be expressed by unrelated lexemes (lexical antonyms: *small* vs. *big*) or by means of overt derivational negation (morphological antonyms: *happy* vs. *unhappy*). Lexical and morphological antonymy do not necessarily exclude each other. E.g., Russian has regular triads of the kind *bol'soj* 'big' – *malen'kij* 'little' – *nebol'soj* 'NEG.big', and even tetrads, such as *dobryj* 'kind' – *zloj* 'mean' – *nedobryj* 'NEG.kind' – *nezloj* 'NEG.mean'. Antonymy has been a popular topic in semantic theories and in logic (see Horn 2001). A central distinction is the one between contradictory vs. contrary opposites; the former are either–or (dead vs. alive), whereas the latter show a middle ground between the two poles (small vs. big). It has been suggested that languages have “canonical antonyms”, i.e. “a limited core of highly opposable couplings” (speed: slow/fast, luminosity: dark/light, strength: weak/strong, size small/large, width: narrow/wide, merit bad/good and thickness thin/thick) (Paradis & al. 2009). However, systematic typological studies of antonymy are lacking.

This talk presents a cross-linguistic pilot study of antonymy and its expression by both lexical and overt morphological means. Our pilot sample includes 20 languages from different families and geographical areas. The data come from dictionaries and grammars as well as from a questionnaire sent to language experts. We focus on antonymy in property words (adjectives), more specifically in such forms that can be used as adnominal modifiers, with the goal to find correlations between semantic and formal properties of antonyms. From the formal point of view, we will pay attention to the type of marking (e.g., prefix vs. suffix), to the number of different derivational negators in a language, whether these markers can be used on other word classes than property words and how they are related to other negative markers in the language, primarily to clausal negation. Taking in semantics, we will observe what types of opposition (contrary vs. contradictory, scalar vs. non-scalar etc.) and which domains (evaluation, size, dimension, temperature etc.) are expressed by lexical antonyms vs. each attested type of overt morphological marking. Specific hypotheses to be tested against the cross-linguistic data include the following. Evaluatively positive members of an antonym pair are more likely to accept morphological negation (*unclever* vs. *\*unstupid*). The existence of a lexical antonym may block the possibility of morphological marking and if triads (or tetrads) exist, there will be cross-linguistically recurring ways in which the meanings of the lexical vs. morphological antonyms are related to each other. Morphological antonyms built with elements similar to clausal negators in the language will tend to involve contradictory rather than contrary opposites.

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## Lexical typology of adjectives: contribution of Russian Sign Language

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This talk will be devoted to the contribution of sign language data, and Russian Sign Language (RSL) particularly, to validating the Frame approach to lexical typology (as set out in Reznikova et al. 2012 and Rakhilina & Reznikova to appear). According to this approach, the lexical item's semantics can be explored via its collocability. Comparison of a lexeme's contexts with contexts of its quasi-synonyms and translational equivalents allows to discover homogeneous semantic zones which can never be “split” by a lexeme: if a word covers one part of such zone, it necessarily covers all the rest. These zones are called “frames”<sup>3</sup> and argued to be organizational elements of any semantic field. Revealing such zones and relationships between them is the main goal of the Frame approach.

Such a method of studying lexicon provides an exhaustive analysis of different semantic fields, describing their direct and metaphorical meanings. However, the method is laborious, which typically entails smaller samples than is customary, say, in grammatical typology. This fact can cast doubts on the study results validity.

In such circumstances the non-SAE languages' material could be useful: demonstrating that African, Austronesian or Caucasian languages have the same lexicon structure as more habitual Roman, German or Slavic ones would serve as a weighty argument pro lexical typology. Sign languages in that case are of even greater value: they don't have genetic links with spoken languages and, thus, similar structure of lexical fields would be a more serious proof of this approach's adequacy. At the same time, we can expect that fundamental differences between spoken and sign languages would lead to some new not-yet-attested lexicalisation strategies.

In this talk the contribution of the Russian Sign Language material to the lexical typology of adjectives will be discussed in detail. The samples in the lexical typological studies (Frame approach) so far have never included a sign language.

In my research I conducted an analysis of the qualitative concepts 'sharp', 'blunt', 'heavy', 'light' and of the 'size'-qualities ('long' vs. 'short', 'deep' vs. 'shallow', 'thin' vs. 'thick' etc.) in RSL, thus providing an exhaustive lexicographic description of the correspondent lexemes, which has never been done before. All of these fields have previously been analysed in spoken languages (e.g., Privezentseva&Kozlov 2014, Kyuseva&Parina 2014). Comparison of my data with that work shows that, on the one hand, the picture from RSL converges with the current typological generalizations. On the other hand, sometimes RSL shows novel strategies of lexicalisation. The peculiarity of RSL reveals itself in the lexical fields with a dominant visual component. While the structures of its experiential ('heavy', 'light') and functional ('sharp', 'blunt') fields are as expected, its visual fields ('size'-qualities) show a complex lexicalisation strategy with a huge number of lexemes, which are sometimes treated as classifiers (Zwitserlood 2012). Such a detalisation of these fields is probably due to the usage of the visual communication channel that leads to the higher linguistic sign iconicity (Taub 2012).

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<sup>3</sup> The term “frame” here used not in the sense of Fillmore (1982, 1985)

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## **Noun phrase structure in Australian languages: A typological study**

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This paper uses a sample of 100 Australian languages (covering most subgroups of Pama-Nyungan as well as most non-Pama-Nyungan families) to examine the structure of nominal expressions. It has often been argued that Australian languages tend to lack 'classic' NP structures, typically in relation to debates about non-configurationality (e.g. Hale 1983). In this paper, we investigate NP structure in its own right, independently from the theoretical issue of non-configurationality (see also Nordlinger 1998, 2014). On the basis of our sample, which represents about one third of all Australian languages, we show that there are few Australian languages that show strong evidence against NP constituency. We use two types of argument to make this case, one relating to classic constituency criteria, and the other relating to the category of determiners.

In the first line of evidence, we break down the general concept of constituency into five specific parameters that are checked for the whole sample. These are: (i) the order of the nominal head and its modifiers, (ii) the location of case markers, (iii) the availability and functions of 'discontinuous' patterns, and, if relevant information is available, (iv) the prosody of nominal patterns, and (v) their behaviour with respect to 'diagnostic slots', e.g. second-position clitics. On the basis of these criteria, especially (i), (ii) and (v), two thirds of the languages in the sample show clear evidence for basic NP constituency, either as the only construal available for nominal expressions (one third of languages) or as the default construal (one third of languages). In other words, when a nominal and its modifiers co-occur in these languages, there is little reason not to assume that they form an NP with the nominal as its head. The existence of discontinuous patterns in the second set of languages is not regarded as evidence against NP constituency, but is analysed either as splitting of nominal material over several coreferential NPs (see McGregor 1997, Schultze-Berndt & Simard 2012), or as an entirely separate construction, with the distinct form reflecting a distinct function (see Schultze-Berndt & Simard 2012).

Our second line of evidence focuses on the category of determiners, specifically the existence of grammaticized types of determiners in the languages of the sample. This is relevant to the question of NP constituency for two reasons. One obvious reason is that determiners often function as boundary markers, not unlike phrasal case markers (see criterion (ii) above), since they tend to occur at the edges of nominal expressions (reflecting their wide scope, compare Rijkhoff 2002). The other, more fundamental, reason is that, following Himmelmann (1997), the presence of grammaticized determiners in a language can be regarded as a 'Gestalt-like' feature that predicts further phrasal characteristics for nominal expressions. This is confirmed in our sample, where the presence of a grammaticized determiner category is only attested in those languages where NP construal is the only or the default option available for nominal expressions.

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## Phonological systems as adaptive responses to multiple factors

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Greenberg's (1978) thought-provoking paper on "Diachrony, synchrony and language universals" makes it clear that constraints on synchronic typological patterns necessarily arise from constraints on processes of linguistic change. Greenberg's concern was not with identifying the factors that shape these constraints in the first place, but much recent work argues for linguistic patterns as emergent adaptive responses to the environment of language use. This paper will survey some of the work in this area relating to phonological systems and argue that local terrestrial ecology should also be considered as a possible factor.

A persuasive scenario for the origin of a phonologically contrastive component in spoken human languages posits a proto-language repertoire of holistic utterances not unlike the one-word stage observed in contemporary early childhood data. Later, speakers became aware of recurrent sound similarities in these utterances and started consciously or sub-consciously manipulating this awareness to expand the lexicon and grammar in a combinatorial fashion (Oudeyer 2005, Zuidema & de Boer 2009, de Boer & Zuidema 2010). The plausibility of such an emergent model is indirectly supported by evidence from much more recent written and oral records showing implicit analysis of syllables, onsets, rhymes and segments as elements in verbal art forms using rhyming, alliteration, assonance, punning and other forms of 'word-play' (e.g. Maddieson & Smith 2009). It is suggested that each language-learning child may individually discover anew the ability to break utterances into elements and recombine them so that phonological contrast emerges in each individual (e.g. Lindblom 1992); hence human pattern-recognition generalizing over an inherited vocabulary becomes a dominant shaping factor.

But, other than from historical accident, where does the substantial cross-linguistic variation in phonological patterns observed in extant languages originate? In the emergent-contrast scenario described above it could arise given different initial conditions, i.e. if the original 'vocabulary' was different. However, many linguists assume uniformitarian pressures on the development of sound systems due to the (largely) shared structures and functionality of the human vocal tract and its control system and shared perceptual and cognitive abilities under ultimately genetic control (e.g. Ohala 1983, Donald 1991). While these factors must necessarily influence the design of language, they account for convergence rather than differentiation (although see Dediu & Ladd 2007 for a case where genetic and phonological differences may correlate).

One factor potentially contributing to phonological differentiation among languages is environment of usage. Researchers in bioacoustics (e.g. Ey & Fischer 2009) suggest that aspects of the ecological setting in which an acoustically-based communication system is used, such as climate, vegetation and terrain, have some influence in shaping the structure of the system. In human languages, factors tending to impede transmission of higher-frequency components in a signal seem to favor the development of language patterns with fewer consonants (especially obstruents) and simpler syllable structures (Ember & Ember 2007, Maddieson et al 2013).

This paper will review each of these themes suggested to contribute to basic phonological typology and update their application to contemporary spoken languages based on the literature and data in the LAPSyD database.

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**A reanalysis of phonemic contrast in two under-resourced languages  
based on systematic phonetic data**

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Typological studies are likely benefit greatly from extending their range into the domains of phonetics and phonology. For the data they may bring in, this observation is especially true of the systematic documentation of under-studied dialects and languages. Important work has been done on the typology of vowels systems (Cruthers, 1978; Maddieson 1984; Lindblom, 1986; Schwartz et al., 1997; Diehl & Lindblom, 2004; Tan et al, 2005; Becker-Kristal, 2010; Carney & McDonough, 2012) but much less has been done on consonantal inventories. There are several reasons for this, but one primary reason has been an almost exclusive dependence on distinctive feature theory to characterize consonantal contrasts, even in languages where little documentation has been done on the language's phonetic structure, producing phonological analyses based on orthography. The circularity of this strategy results in data proscribed by its analysis, hindering insight.

In this talk I'll present two case studies where systematic phonetic documentation (as opposed to description) of the segmental inventory of under-documented languages has resulted in a revision of the phonemic structure yielding a revised view of the system of contrasts: the Dene (Athabaskan) inventory (McDonough, 2003; McDonough & Wood, 2008) and Bardi (Nyulnyulan, Bower, et al, 2011). These cases are interesting because phonologically they represent typological outliers (Maddieson, 1984; Ladefoged and Maddieson, 1997): sonorant-(Bardi) vs obstruent- (Dene) heavy languages. Both cases are based on field data.

The Dene inventory is an obstruent rich inventory; stops and affricate contrasts are characterized a three-way contrasts, aspirated, voiced and ejective. In Maddieson (1984) this is not an uncommon three way contrast, but several issues arise here. One is that while the orthography represents the voiced contrast as /d/, this sound is voiceless in several Dene languages, including Navajo (McDonough, 2003) and Apache. However all the languages have an aspirated version, that is the cross-Dene variability found in the specification of the /d/ segment does not occur in the aspirated stops. Another issue is that nearly all accounts of the aspirated stop /t/ and /k/ describe them as a stop followed by a spirantized velar off-glide. Young and Morgan's landmark Navajo grammar classify /t/ as an affricate, as do others. A third issue is their duration profile, they do not fit the profile of aspirated stops (Lisker and Abramson, 1964; Cho and Ladefoged, 199). Other issues concern the distribution of this segment and its relationship to other complex sounds. Likewise the Bardi stops. The literature on many Australian languages represent the stops as voiced, though the contrasts are singletons /b, d, g/. An investigation of Bower's field data uncover a different characterization of the stops as voiceless, leniting to sonorants. In both cases the recharacterization of the stop contrasts yield insights into the working phonological system and its relationship to its other grammatical components including morphology.

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## The Linguistic Typology of Amazonia

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This study focuses on the morpho-syntactic marking of Tense, Aspect, Modality and Evidentiality (TAME) in Amazonia. The only mention of TAME features in Amazonia by Dixon & Aikhenvald (1999), with regard to a linguistic area, is “most verbal categories (e.g. tense, aspect, modality, direction) are expressed through optional suffixes” (9). Since then, TAME features have been the focus of attention throughout South America in some language-specific studies (e.g. Drude 2008, Epps 2008, Van der Voort 2013, Müller 2014) and part of regional ones (e.g. Crevels & Van der Voort 2008), though until Müller (2013) never on a continental comparative scale. The latter shows for a sample of 63 languages (of 25 families and 11 isolates) that there is no clear Andean vs. Amazonian distinction of overtly marked morpho-syntactic TAME categories, but rather that the categories PRESENT, FRUSTRATIVE, and VISUAL form a broad east-west distinction.

This talk focuses on TAME in Amazonia with data from the SAILS database (<http://sails.cild.org/>) as well as additional material and will give a comprehensive overview, but also focus on subregions/ linguistic areas and selected families that are dominant in Amazonia (e.g. Tupían, Arawakan, Cariban). Generally, morpho-syntactic TAME markers occur more frequently in Amazonia than in the Andes (246-248). TAME systems in Amazonia range from elaborate (e.g. Tariana) to comparatively poor (e.g. Yanam), whereas languages outside Amazonia do not reach the richness of some Amazonian one (e.g. Mocoví and Pilagá). Languages chosen include those spoken in the geographically defined Amazon basin, i.e. the area of the Amazon river system, and the Orinoco-Guayana area (cf. Dixon & Aikhenvald 1999, 4; Everett 2010, 329), as well as those outside this region for comparison.

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## Semantics in linking of locative arguments

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This paper proposes a typology of linking of locative arguments in natural language. The proposal is crucially based on the semantic hierarchy among four types of locative arguments [Goal > Symmetric-Path > Source > Stative-Location] (cf. Nam 1995, 2004, Fong 1997, Kracht 2002, among others) and the syntactic hierarchy among three locative structures [Verbal affix > Locative-Verb > PP] (cf. Baker 1988, Hale and Keyser 2002). We, illustrating examples from various languages, argue for this correspondence claim by identifying some crucial typological implications holding between the syntactic/semantic hierarchies.

- Goal locatives (PPs with *to, into, onto*): *John ran to the office*.
- Source locatives (with *from*): *John came from the office*.
- Symmetric-Path locatives (with *across, over, through, past, around*): *John ran across the street*.
- Stative-Locatives (with *at, on, in, in front of, above*): *John ran on the street*.

Natural language uses various constructions to express spatial properties and relations. Languages like English and Turkish employ prepositional/postpositional phrases (PPs) to denote locations or trajectory of movement, but some languages like Kinyarwanda and Swahili use an applicative prefix or a separate locative verb. This paper, based on Nam's (1995) semantic typology of locatives, aims to characterize the formal structures of locative expressions, and identifies typological implications among the different types of locatives. For example, we show that locative PPs are relatively free to scramble/extrapose, but locative VPs are not; and that if Goal arguments can be expressed in a PP in a language L, then Sources can, too.

The paper further claims that the semantic hierarchy is closely linked to the syntactic hierarchy of the locatives. That is, the closer semantically is a locative to an event of a motion verb, the closer syntactically is the locative to the motion verb. For example, a goal locative is essential to the semantic content of a VP whereas a source locative is not, so the goal locative is syntactically more united to the head verb than the source locative is.

We finally get the following linking patterns, which support the parallelism between the proposed semantic and syntactic hierarchies. Thus, the paper will show in detail that the mapping lines between the two hierarchies do not cross each other.

- (Linking pattern 1) All of the four semantic types are linked to PPs: English, Nepali, Spanish, Russian, etc.
- (Linking pattern 2) All of the four semantic types are linked to PPs, but Goal and Symmetric-Path types may realize as verbal affixes (via applicative or promotional ones): Chichewa, Kinyarwanda, German, Dutch, etc.
- (Linking pattern 3) Goal, Source, and Stative Locative are linked to PPs, and Symmetric-Paths to locative VPs: Japanese, Korean, Malay, Turkish, Kazakh, etc.

- (Linking pattern 4) Source/Stative-Locatives are linked to PPs, and Goal/Symm-Path to locative VPs: Chinese, Thai, and Swahili, etc.
- (Linking pattern 5) Goal/Source/Stative-Locatives are linked to applicative affixes, and Symmetric-Paths to locative VP: Chicasaw and Choctaw, etc.

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## **Is there a correlation between polysynthesis and syllable structure?**

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This paper examines the possibility of a relationship between morphology and syllable shape frequency. More specifically, it investigates whether languages with highly complex morphology such as polysynthetic languages show a larger proportion of CVC syllables. It is hypothesized that as numerous morphemes are attached to a root, vowels in the affixes may have deleted over time, thus yielding a higher proportion of CVC syllables and consequently greater fusion between morphemes in the present languages.

Previous findings suggest that there is a significant relationship between the number of cases a language has and its syllable complexity, in that the higher the number of cases, the greater the likelihood of languages showing complex syllable patterns (Maddieson 2013, Fenk-Oczlon & Fenk 2005). Interestingly, in the WALS database chapter on syllable structure (Maddieson 2013), only one of the 25 languages classified as polysynthetic in Mattissen (2006) possesses maximal syllable structure of the type CV, namely Pirahã.

In order to investigate the correlation between morphological complexity and syllable type frequency, seven unrelated polysynthetic languages were investigated. The choice to include a language in the study was based on two criteria: the occurrence of CVC syllables and the availability of large texts in the language. Geographical distance between languages was also considered, so as to minimize the effects of a bias due to areal features.

The proportion of the different syllable types in words from large text samples of the polysynthetic languages Inuktitun (Eskaleut), Modern Nahuatl (Uto-Aztecan), Gwich'in (Na-Dené), Wapishana (Arawak), Ojibwe (Algic), Ainu (isolate) and Tiwi (isolate) was calculated. For the present purposes, the sole criterion for considering a language polysynthetic was the reference grammar author's postulation. Mithun (1999) was used as a guideline whenever no direct mention of polysynthesis was available. As a comparison, the proportion of CVC syllables was calculated from a sample of words from agglutinating languages Turkish (Turkic) and Aymará (Aymaran) using the same method.

The method employed to collect the data followed a general pattern for all the languages in the sample. First, a phonological description of the language was obtained. Secondly, words from a bilingual dictionary or large text were gathered based on a list of randomized page numbers. The number of words extracted per page depended on the language and size of the dictionary or text, varying from 1 (Ojibwe) to 6 words per page (Nahuatl). Words were subsequently divided into syllables according to the phonological criteria in the grammars. Lastly, the syllables were classified according to their syllable type (i.e., CV, CVC, VC, etc.). Each word was only tallied once. The total number of syllables was a figure under 1,100 syllables for each language.

Results show that although the proportion of CVC syllables was relatively high (i.e. around 30%) for some of the polysynthetic languages, the data does not seem to support a clear correspondence between polysynthesis and syllable type frequency. The present findings do not expand the results in Fenk-Oczlon & Fenk (2005) to non-case morphology.

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## ASL Classifier Predicates in Typological Perspective

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This paper develops a nascent typology of classificatory predications with an emphasis on the systems found in American Sign Language (ASL) and other signed languages compared with those in spoken languages. We examine the different constructions that realize classification in spoken and signed languages in light of the process of grammaticalization and lexicalization, and consider the cognitive motivations behind the development of such systems. Previous ASL linguists have distinguished between “core” lexicon and “classifier” lexicon which differ in their phonotactic and syntactic distribution (Padden 1988). Ostensibly this distinction was made to capture differences between fully lexicalized vs. more iconic and highly variable elements in the lexicon.

However, many of the functions of classificatory predication in ASL conspicuously resemble morphological phenomena in spoken languages such as noun incorporation (NI) and “adverbial” derivational affixes. In prototypical NI constructions—of any type in the basic typology of Mithun (1984)—the semantic scope of the predicate is restricted in the referents that can fill one of its argument roles. This semantic restriction is overtly marked in the construction by a morpheme that in other constructions can definitively mark a referent (i.e. as a noun). Details of the other functions and formal properties of NI constructions vary crosslinguistically, but it effectively creates a system of classificatory predicates, e.g. Wichita *tacʔastéʔssaraʔas neʔeʔh* ‘He is bringing corn to the chickens’ (Lit. ‘He-is-corn-bringing-to-them chicken’) (Rood 1996: 599).

Furthermore, comparable functions are also expressed in spoken languages by morphemes such as the derivational prefixes of Athabaskan verbs or the lexical affixes seen in Salishan languages, e.g. Moses-Columbian: *yər ʔxnmis wa ʔací xʔ ʔút*. ‘He pushed that rock aside with his foot’ (Lit. ‘He foot-pushed that rock’) (Kinkade 1998: 269). Many of these affixes do have their source in incorporation-like constructions. Navajo has remnants of nominal incorporation that are lexically specified and non-productive, e.g. *tá ʔadisgis* ‘I’m washing up’ (Lit. ‘I’m water-washing up’) (Young & Morgan 1992). In comparison the ASL constructions for PATH + MANNER could classify for various types of entities using an overt morpheme that is “incorporated” into the predicate. In figure (1) below, the example CAR-DRIVE-BY, the handshape represents VEHICLE and the PATH + MANNER conveys verbal action and aspect type. Similarly, a TRANSFER/PLACEMENT construction would classify the theme that is changing location, e.g. FLAT OBJECT, CUP, etc., a construction which has previously been compared to Athabaskan classificatory verb stems (cf. for a Navajo-ASL comparison, Fernald & Napoli 2000).

Considering processes of grammaticalization and the diversity of structures seen in signed and spoken languages, we suggest a typology of classifier predication that positions ASL classifiers on a continuum of classificatory constructions found in spoken languages, including noun incorporation, derivational affixes, and (pseudo-)suppletive stems. Based on our

comparison with functionally comparable constructions in spoken languages, we propose that the core-periphery distinction made by earlier scholars is unnecessary given the lexico-syntactic gradation between classifiers constructions and so-called core lexical items.



(FIG. 1) CAR-GO-BY (Valli et al. 2005: 80)

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## Canonical and non-canonical switch-reference in Western Amazonia

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Canonical switch-reference (SR) has been defined by Haiman & Munro (1983:iv) as “an inflectional category of the verb, which indicates whether or not its subject is identical with the subject of some other verb”. This paper focuses on non-canonical SR systems that are sensitive to coreference of arguments in non-subject roles. Canonical SR functions on a subject pivot, meaning that canonical ‘same subject’ (SS) markers encode the identity of subject arguments in two linked clauses, while canonical ‘different subject’ (DS) simply requires that the subjects not be coreferent (Table 1).

*Table 1: Canonical SR linkages*

LINKAGE TYPE	ROLE IN MARKED CLAUSE		ROLE IN CONTROLLING CLAUSE
SS	subject	=	subject
DS	subject	≠	subject

Aguaruna (Jivaroan, Peru) has a set of canonical SR markers, but also a pair of non-canonical markers. The non-canonical SR markers are like canonical SS in requiring a common argument in the marked and controlling clause, but do not function on a subject pivot; the coreference requirements are shown in Table 2 (Overall 2007).

*Table 2: Aguaruna non-canonical SR linkages*

MARKER	ROLE IN MARKED CLAUSE		ROLE IN CONTROLLING CLAUSE
<i>tatamana</i>	subject	=	object
<i>ma</i>	non-subject	=	subject

Similar but more elaborate systems have been described for Panoan languages (Loos 1999; Valenzuela 2003; Fleck 2003; Zariquiey 2011), and for the Takanan language Ese Ejja (Vuillermet 2014). This type of non-canonical SR is typologically very rare, and apparently unattested elsewhere. All of the languages involved are spoken at the western edge of the Amazon basin, and there is a well established link between Takanan and Panoan languages, although whether due to contact or genetic relatedness is not yet clear (see Fleck 2013:22ff. for discussion). Valenzuela (2003) has reconstructed the Panoan markers to case markers for the protolanguage. Overall (forthcoming) shows that the Aguaruna SR system appears relatively recent, with the canonical DS marker coming from a locative case marker and the non-canonical markers coming from case-marked nominalizations. The idea that the non-canonical SR system could have spread through contact is attractive, and SR is known to be a readily diffusible grammatical category (Jacobsen 1983, van Gijn 2012). This paper describes the non-canonical SR systems of the western Amazon and poses some questions regarding typological and areal factors in their development.

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- (4) *Manualai ga i-fa-por=i.*  
 fish.hawk *ga* 3SG.SBJ-CAUS-be.born=3SG.OBJ  
 It was a fishhawk she gave birth to.
- (5) [*Sa-mia famata*] [*ga emi*].  
 GENPOSS-2PL.PSSR village *ga* this  
 ‘This is your village.’

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## Typologizing linguistic expressions of spatial Frame of Reference

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The literature on spatial language contains extensive discussion of spatial Frames of Reference (FoR) (Pederson et al. 1998; Levinson 2003; Danziger 2010 etc). However, previous typologies classify languages by preferred FoR (e.g. Majid et al. 2004). Cross-linguistic comparison of the grammatical constructions that express FoR has been neglected. Further, a clear distinction between conceptual representations and expressions invoking them is typically lacking. A thorough investigation of spatial language requires consistent characterization of spatial expressions and functions across languages. Accordingly, we have developed an explicit approach to typologizing linguistic expressions of FoR.

We distinguish between conceptual and linguistic representations, then typologize spatial expressions on two dimensions: whether or not they employ a) specialized constructions, and/or b) specialized terms. ‘Specialized’ constructions have distinctive syntactic and/or morphological characteristics, are open to a restricted set of terms, and have a specific function or narrow set of functions. ‘Specialized’ terms are members of a lexical (sub)category defined by morphological and/or syntactic behaviour, with a specific (narrow set of) function(s).

We exemplify the typology with English locative obliques. The ‘adnominal locative construction’ *John is **on the north side of** the tree* is not specialized: it is a standard PP and *north* may be substituted by other nouns (*John is **on the left/beach/house side of** the tree*). The ‘nominal locative construction’ *John is **to the north of** the tree*, however, is specialized as it is confined to a restricted set of nouns (*John is **to the left/\*beach/\*house of** the tree*), justifying a lexical subcategory ‘local noun’ for English including *north* and *left* but excluding *beach* and *house*. Likewise, the ‘oblique locative construction’ *John is **north of** the tree* is specialized: it lacks a preposition and is also confined to local nouns (*John is **left/\*beach/\*house of** the tree*).

We then apply the typology to Marshallese (Oceanic) (Palmer 2007; Schlossberg n.d.); Kuuk Thaayorre (Australian) (Gaby forthcoming); and Dhivehi (Indo-Aryan) (Lum n.d.). In Marshallese the ‘general oblique construction’ is non-specialized involving non-specialized terms: a standard PP occurs with any noun. However, two further expressions involve specialized terms in specialized constructions: a ‘local construction’ (Ross 2004), restricted to local nouns and involving an oblique lacking a preposition; and a directional construction confined to local nouns and cardinal enclitics. In contrast, Kuuk Thaayorre employs specialized terms, but in a non-specialized construction: directional adverbs that occur freely in any clause-level position but are comprised of highly restricted morphology. A non-specialized oblique with non-specialized terms also occurs. Dhivehi has three non-specialized constructions, also involving non-specialized terms. However, a ‘locative dative construction’ is restricted to a dedicated subcategory of nouns, qualifying the construction as specialized and justifying a specialized subcategory ‘local noun’.

Our typology is a significant advance as it allows the explicit, comparable characterization of linguistic expressions and expressions of individual concepts across languages, and permits

principled identification of concepts treated as special by individual languages (see Talmy 1983). As such, it has the potential for application to other semantic domains.

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**Experiencer arguments in European languages:  
construction patterns and case frames of physiological predicates**

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This presentation will focus on the case frames and construction patterns of physiological sensation predicates in three European language groups: Germanic, Romance and Slavic. These predicates are cross-linguistically the most likely to give rise to non-canonical subjects and are therefore used as test predicates by Bossong (1998) and Haspelmath (2001) to distinguish agent-experiencer languages (Germanic, Romance) from dative-experiencer languages (several Slavic languages).

However, in languages such as Romanian and Russian, the experiencer of physiological predicates can also bear other cases than dative and can be accusative-marked (cf. Rom. *Mă doare capul* me.ACC aches head-the) or encoded as a locative PP (cf. Rus. *U menja bolit golova* at me.GEN aches head.NOM). Therefore, we will argue that the distinction between agent- vs. dative-experiencer languages should be replaced by a distinction between nominative vs. oblique experiencer languages.

Furthermore, we will show that the different encodings of the experiencer depend primarily on the category of the predicate (verb, adjective or noun), which gives rise to different construction frames. Thus, several subtypes of physiological predicates should be distinguished. For instance, nominal predicates tend to occur in possessive constructions, which can be either of the *mihi est*-type with a dative-experiencer (cf. Rom. *mi-e foame* me is hunger) or of the *habeo*-type with a nominative-experiencer (cf. Dutch *Ik heb honger* I have hunger), whereas verbs can assign the accusative to the experiencer (cf. the Romanian example above). Moreover, when a construction contains a noun denoting a body part, the experiencer can be encoded as an external possessor (cf. Sp. *Me duele la cabeza* me hurts the head).

The aim of our presentation is twofold. Firstly, we will account for the propensity of a language to use oblique cases to encode experiencers. We will link this propensity to various other typological properties, such as word order and its relationship with grammatical relations, the existence of preverbal clitics, the pro-drop parameter and the existence of expletive pronouns, and finally the presence of morphological cases. Due to all these properties French is closer to Germanic languages such as English and Dutch than to Romance languages such as Spanish or Romanian in that it is less prone to oblique experiencers than other Romance languages. Secondly, we will account for the different construction patterns and case frames used with physiological sensation predicates, linking them to the encoding of possessive predicates (*habeo*-languages vs. *mihi est*-languages) and the syntax of inalienable possession (external vs. internal possessor). We will thus argue that the tendency to oblique encoding varies not only from one language group to another, but also inside one and the same group, and even inside one and the same language, depending on the construction used. Therefore, the interaction between the above-mentioned typological factors overrides the genetically based classification of languages.

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## Nonverbal Locative, Existential and Possessive Predication in Pilagá and Nivaçle

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In many languages, nonverbal clauses (lacking lexical verbs) express locational, existential, possessive, permanent vs. transitory attributive and equational/identificational predications. Often, a single construction is used for several of these functions (Clark 1978, Dryer 2007, Roy 2013). Pilagá (Guaykuruan) and Nivaçle (Mataguayan) are apparently genetically unrelated endangered languages. However, they are geographically contiguous, spoken in the Argentine Chaco. Based on original data, this paper concentrates on Locational, Existential and Possessive clauses. First, Existential structures are not metaphorically or diachronically based on Locative predication structures in either Pilagá or Nivaçle, contra supposed cross-linguistic tendencies (cf. Dryer 2007: 240, Clark 1978: 87-89, Heine 1997: 41). Second, there is formal convergence of Existential and Possessive predication structures in both languages (cf. Clark 1978: 118).

The Locational predicate structures in Pilagá (1) and Nivaçle (2) both use ‘be’ verbs with locative suffixes. The Existential and Possession predicates in (3) and (5) for Pilagá and (4) and (6) for Nivaçle use noninflecting existential forms. Possession is differentiated from Existential predication by the requirement of a possessive prefix on the noun in Pilagá (5), versus a dative clitic in Nivaçle (6). The Pilagá Possession predication involves what Heine (1997) terms a “Genitive schema” with a possessed NP, while the Nivaçle Possession predication involves a “Goal schema” with the Dative pronominal clitic on the existential form. Furthermore, suppletive existential forms are used in Negative Existential and Possession predications, in both Pilagá (7) and Nivaçle (8).

	<b>Pilagá</b>	<b>Nivaçle</b>
Location	(1) na' nkiya <sup>ʕ</sup> aki neta-d(a)-ñ'a kal'i di' alewa CL plates be-PL-LOC.on ADV CL floor ‘The plates were on the floor.’	(2) Lh-ja=yi-chacfa y-i-‘ei ja=ôvôc FEM-DEM=POSS.1-spouse 3-be-LOC DEM= river ‘My wife is at the river.’
Existential	(3) w'o so' siya <sup>ʕ</sup> awa EXIST CL.invisible person ‘There was a person.’	(4) na=vatatashi ca'aj na=t'asja'an DEM=pot EXIST DEM=meat ‘There's meat in the pot.’
Possession	(5) w'o da' l-wa EXIST CL.vertical.extended POSS.3-spouse ‘She has a husband (I see him standing).’	(6) Yi-va'atsha ca'aj=yam I-PRO EXIST =I.DATIVE ‘I have it (the knife).’
Neg Existence	(7) qaya' no <sup>ʕ</sup> op NEG.EXIST water ‘There's no water.’	(8) na=vatatashi am=pa ca=t'asja'n-a' DEM=pot NEG.EXIST=DEM DEM=meat ‘There's no meat in the pot.’

Though simple Existential predications are not built from a Locative schema, speakers sometimes do combine Existential and Locational predicates into a single complex structure, to express existence in a particular locale, as shown in (9) from Nivaçle. This dual-predicate strategy is shared across Pilagá and Nivaçle, and is perhaps motivated by the lack of adpositions in both languages.

- (9) y-i-ei        na=yita'    ca'aj    ja-va=josinôjô  
      3-be-LOC    DEM =bush    EXIST    DEM-PL=turkeys  
      'There are small (species of) turkeys in the field.'

Structures like (9) are common, which may support claims about a cognitive propensity to link existence with location. Nevertheless, the Existential structure itself has not developed from the Locative structure in either language.

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## External morphosyntax of proper names in North East Africa

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Phrases headed by proper names have been reported to differ from other types of phrases, notably NPs, with respect to their syntactic behaviour and morphological marking in a range of languages (Helmbrecht, submitted). Data from a wide range of languages are providing a growing body of evidence for proper name phrases as a distinct morphosyntactic category.

In this paper, I aim to explore the external morphosyntax of proper name phrases in a group of genetically and/or areally related languages, spoken in North East Africa. Special attention will be given to Cushitic, Ethiosemitic and Nilotic languages. Typically endowed with rich morphological systems and often sharing a history of extended contact and/or inheritance, these languages offer an ideal laboratory for a close-up comparison of individual phenomena, with the added dimension of a historical perspective.

In WOLANE (Semitic, Afroasiatic), for instance, proper names pattern with personal pronouns and the interrogative pronoun ‘who’ as opposed to all other nominals by virtue of a special accusative marker *-ne*. The same marker occurs on all other types of nominals to signal specificity and/or definiteness, in nouns ending in *i*, *ē* or *j* regardless of their syntactic function (Meyer 2006:137, 212-214).

A similar pattering of proper nouns with other types of nominals is found in two closely related languages, but with fine-grained differences in form and member types of the relevant groups: In ZAY the closed class comprising proper names, personal pronouns and the interrogative pronoun ‘who’ further includes some kinship terms, demonstratives and the question word ‘which’ (Meyer 2005:217, 220-221), the class being defined by the selection of accusative and focus allomorphs. In SILT’E, on the other hand, which is even more closely related to Wolane, the class comprising proper names is more restricted, comprising proper names, personal pronouns, some kinship terms and nouns with 1SG, 2SG and 2PL possessive markers. This class is constituted by the fact that all members take the accusative marker *-na*, while all other nominals select one of four other allomorphs (Gutt 1997:907).

In KONSΟ (Cushitic, Afroasiatic), nominals subdivide into two inflection classes according to case, whereby proper names pattern with days of the week, personal pronouns, demonstratives and definite markers as opposed to all other nominals (Ongaye 2013).

These are just a few examples of phenomena that will be discussed and compared to relevant typological hierarchies, notably the ones conflated in the so-called animacy (a.k.a. referential) hierarchy.

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**Optional Ergatives are Topics**  
**– Evidence from Yali –**

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Optional ergative marking (OEM) is a cross-linguistically wide spread phenomenon, especially common in the languages of Australia, in Tibeto-Burman languages, and in many non-Austronesian languages of New Guinea. These genealogically different languages have also quite often in common that the same formative that (optionally) marks the ergative is used as a clausal linking element (cf. Aikhenvald for an overview).

This paper will first illustrate the interrelation of the functions of ergative marking and clause linking in Yali, a Trans New-Guinea language spoken in the highland area of Indonesian Papua. Second, it will show that the discourse function of the ergative is to mark topicality.

As example (1) illustrates the marking of A with the ergative clitic =*en* in a transitive clause is optional in Yali; the semantics of the clause does not change. Optional ergative marking is thus not strictly syntactic but rather displays a discourse function.

- (1) *huluon itno(en) sohowon filig isehekma laha*  
 hulu-on itno(=**en**) soho-on filig i-su-ehek=**ma** laha  
 red-NLZ DET(=**ERG**) blue-NLZ arrange 3s.OBJ-do-3s.IM.PST=**DS.PRIOR** go:3s.IM.PST  
 ‘the red one pushed the blue one, and it (the blue one) moved’

This paper claims that in Yali, optional ergative marking coincides with topicality as a discourse phenomenon on the one hand and with the semantic status of causality on the other hand. It thus argues along the lines with McGregor’s *usage-semiotic* account (2006, 2010) that OEM is best to be accounted for by distinguishing between the meaning coded by the ergative marker on the one hand, and the meaning of the use vs. the non-use of the marker on the other hand. Yali seems to be a particularly nice case to illustrate this, because the clitic’s causal semantics is the relevant factor for its use with unaccusative intransitives as shown in (2), where the use of the ergative marker signals volitionality. It is also reflected in its use as a relator between clauses, which marks a causal relation, as illustrated in (3):

- (2) *Malik tohon ari(en) elokan turuk*  
 malik tot-on ari(=**en**) elokan tu-ruk  
 child small-NLZ DEM(=**ERG**) yawn do-PROG  
 ‘the little child is yawning (on purpose).’

- (3) *sani esebulen ingkila waruk lahe*  
 sani eset-bul=**en** inggila wa-tuk la-ehe  
 stone.oven cook-1p.IM.FUT=**CAUS** leaf bring-PROG go-1p.IM.PST  
 ‘because we want to cook, we were getting leaves’

In transitive clauses like (1), as well as in the thematization construction (cf. de Vries 2008) in (4), the primary function of the ergative clitic is to mark topicality.

- (4) *wat sehekon itnoen iyuk uken suruk*  
wat su-ehék-on itno=**en** iyuk uken su-tuk  
fall do-3s.IM.PST-NLZ DET=**ERG** foot hurt do-PROG  
'as for the one who fell over, his foot is hurting'

The paper thus presents further evidence for the strong connection between ergative marking and topicality that has been observed in genealogically different languages such as for examples Belhare (Bickel 1999), and Kuuk Thaayorre (Gaby 2008), to mention just two.

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## An areal typology of nasal vowels in West Africa

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In this paper, I argue that the distribution of nasal vowels in West Africa is the result of large-scale areal convergence through sustained language contact, with roots in phonetically natural sound change (phonetic bias, Garrett & Johnson 2013). In West Africa, contrastive nasal vowels are a canonical property compared to worldwide averages (Hyman 1972, Williamson 1973, Maddieson 1984, 2007, Clements & Rialland 2006, Hajek 2011a,b), and have been identified as a core feature defining the linguistic area called “the Macro-Sudan Belt” (Güldemann 2008, 2010) stretching from Senegal to the Central African Republic. This paper addresses (1) what are the typologically common and rare nasal vowel systems and inventory “gaps”, (2) how are these patterns geographically demarcated, and (3) how can such patterns be situated within the larger typological and phonetic literature.

To this end, I have created a typological database of nasal vowel systems and patterns in nearly 400 languages/language clusters, plotting this Nasal Vowel Macro-Zone using Google Maps and ArcGIS. This survey shows that within/abutting this macro-zone, there are five areas which largely lack nasal vowels, which I term West African Oral Vowel Zones 1-5: [1] Atlantic (Senegal/Guinea Bissau), [2] Ivoirian (Southern Ivory Coast), [3] Ghanaian (Northern Ghana), [4] Upper Nigerian (Northern Nigeria, Niger), and [5] Lower Nigerian (South-Eastern Nigeria, Cameroon).

This survey shows two main types of nasal vowel inventories: (1) those with a full set of nasal vowel counterparts, and (2) those with a “mid-close” height gap restricting the occurrence of \* $\tilde{e}$   $\tilde{o}$  (previously noted, e.g. Hyman 1972). Systems with other types of gaps are infrequent (cf. “topless” nasal vowel inventories like European French). This survey is unique in showing that the majority of languages with \* $\tilde{e}$   $\tilde{o}$  gap in this macro-zone form a continuum stretching from Western Nigeria along the coast into Ghana, and up into the Ivory Coast, and appear in the “core” of the Nasal Vowel Macro-Zone. This survey further shows that the languages which show a distinct presence of contrastive / $\tilde{e}$   $\tilde{o}$ / are disproportionately present in the “periphery” of the Nasal Vowel Macro-Zone, where it meets the five Oral Vowel Zones. These patterns show a striking disregard for genetic boundaries, suggesting large-scale areal convergence through language contact.

I attribute these patterns as partially the result of phonetic factors, in which changes in nasal vowel systems emerge from inherent phonetic pressures in their perception (Ohala 1975, Wright 1986, Beddor 1993, much contemporary work showing consensus). However, I also argue that despite these phonetic underpinnings, there is reason to not merely interpret these patterns as “phonetically determined”. I note in particular (1) languages can sustainably handle complex nasal vowel systems of many heights, and (2) phonetic determinism would also predict other widespread gaps, e.g. against high \* $\tilde{i}$   $\tilde{u}$ , not supported by this survey. This adds up to a nuanced picture requiring both phonetic and areal-social forces to explain these typological patterns.

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## Pseudocoordination as a cross-linguistic strategy for verb serialization

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Pseudocoordination refers to the use of a lexical coordinator ‘and’ connecting two elements in a relationship beyond just semantic additivity, often resulting in what appears to be some type of subordination. Pseudocoordination is diachronically between coordination and subordination and has been considered a mismatch between (coordinative) syntax and (subordinative) semantics (Culicover & Jackendoff 1997). I discuss one type of verbal pseudocoordination, a complex predicate construction with two verbs describing a single event, found cross-linguistically with consistent properties:

- (1) I will go and buy a pizza. *(English)*
- (2) Han sitter og skriver dikt. *(Norwegian: Lødrup 2002:121)*  
He sits and writes poems  
‘He is writing poetry.’
- (3) fāda wa-sʿarraha *(Arabic: Badawi, Carter & Gully 2004:422)*  
returned and-declared  
‘He declared again.’
- (4) k=oyra wa okere *(Ainu: Bugaeva & Nakagawa 2013)*  
1SG.A=forget and FINISH  
‘I forgot (it).’ [completive]

The three properties of pseudocoordination that tend to draw the attention of researchers are: (1) that a lexical coordinator ‘and’ is being used for purposes other than coordination (or some say instead of the more correct subordinator like the English infinitival marker *to*); (2) that two verbs are used in the construction describe a complex event possibly in a single clause; and (3) that the two verbs necessarily share morphological forms (Wiklund 2007). The last two properties can be explained with comparison to Serial Verb Constructions (SVCs); that leaves the first which is clearly determined by the definition of pseudocoordination. Thus, pseudocoordination can be seen as essentially a type of SVC, except that it happens to have grammaticalized from syndetic rather than asyndetic coordination, while SVCs by arbitrary definition have no such linker.

The lack of a linking element and the apparent integration of two verbs in a single clause have also attracted attention for SVCs (Aikhenvald 2006), but SVCs have two morphological types: either shared overt inflection on all verbs or inflection realized only on the first, but shared interpretation of Tense-Aspect-Modality. And examples of this type also exist for pseudocoordination:

- (5) *Frisian* (de Haan & Weerman 1986:93)  
de polysje soe by him komme en **nim** syn papieren mei  
the police should to him come.INF and take.[“IMPERATIVE”] his documents with  
‘The police should come [to him] and take his documents.’

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**Overt verb classification in an African noun class system -  
Gújjolaay Eegimaa (Atlantic, NigerCongo)**

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Systems of nominal classification are well known and well researched crosslinguistically. Examples of general works in this area include Aikhenvald (2000), Corbett (1991), Craig (1986), Dixon (1982) and Senft (2000). By contrast, systems of verb classification in which verbs and actions, events and states they refer to are overtly classified using the same markers as nouns or other dedicated elements are typologically unusual. These systems have been reported in language families including Australian languages (McGregor 2002; Schultze-Berndt 2000) and Sinitic languages like Kam (Gerner 2007), but never in NigerCongo noun class systems.

The goal of this paper is to investigate a typologically and conceptually unusual phenomenon of overt verb classification (OVC) in an African noun class/gender system, Gújjolaay Eegimaa (Eegimaa hereafter). The type of OVC found in Eegimaa is characterised by the use of several different noun class prefixes to form nonfinite verbs, thereby assigning them into different morphological classes. Thus the same noun class markers are used with both nouns and verbs to overtly categorise entities denoted by nouns, as well as actions, events and states that verbs refer to. The use of several different prefixes on nonfinite verbs is illustrated in (1) to (4) below with the prefixes *e*, *ma* and *ba*.

- |     |  |                                 |  |                           |
|-----|--|---------------------------------|--|---------------------------|
| (1) | Nestor<br>Nestor(I.SG)                   | na-maŋ-e<br>REAL.I.3SG-want-CPL | <b>e-rem</b><br><b>CL3-drink(VI.PL)</b>    | ga-jjo<br>CL9-mead(V.SG)  |
|     | <b>gagu</b><br><b>V.SG.DEF</b>           |                                 |  |                           |
|     | ‘Nestor wants to drink <b>the</b> mead.’ |                                 |  |                           |
| (2) | Nestor<br>Nestor(I.SG)                   | na-maŋ-e<br>REAL.I.3SG-want-CPL | <b>ma-rem</b><br><b>CL10b-drink(VI.PL)</b> | ga-jjo<br>CL9-mead(V.SG)  |
|     | ‘Nestor wants to drink mead.’            |                                 |  |                           |
| (3) | Aida<br>Aida(I.SG)                       | umu    ni<br>PROG    PREP       | <b>e-pos</b><br><b>CL3-wash(III.SG)</b>    | gá-juo<br>CL9-shirt(V.SG) |
|     | <b>gagu</b><br><b>V.SG.DEF</b>           |                                 |  |                           |
|     | ‘Aida is washing <b>the</b> shirt.’      |                                 |  |                           |
| (4) | Aida<br>Aida(I.SG)                       | umu    ni<br>PROG    PREP       | <b>ba-pos</b><br><b>CL5b-wash(III.SG)</b>  |                           |
|     | ‘Aida is doing the washing.’             |                                 |  |                           |

A second feature of the Eegimaa verb classification system is that different noun class markers can alternate on the same verb stem, and whenever this occurs, one of the prefixes is always the prefix *e* as exemplified in (1) and (3).

This paper begins with a brief demonstration of the crosscategorical use of noun class prefixes to classify both nouns and verbs in Eegimaa and other related languages, followed by an examination of the motivations behind noun class prefix alternations with the same verbal stems. I argue that distinctions made by the alternations between *e* and other prefixes such as *ba* and *ma* can be captured based on Hopper and Thompson's (1980) distinctions between 'High' transitivity (including telicity, punctuality, high individuation (cf. (1) and (3) above) and 'Low' transitivity (including atelic, nonpunctual, nonaffectedness and nonindividuation (see (3) and (4)). I will show that the choice of prefixes such as *ba* and *ma* is motivated by semantic criteria. For example the prefix *ba* which in the nominal domain is used as the diminutive collective marker, is also used with verbs describing events which are composed of multiple individual actions, thus showing correlations in categorisation between the nominal and verbal domains. However, such correlations have not been found between the use of the plural nominal prefix *ma* in its occurrence with bodily function verbs. This paper ends with a discussion on possible links between the Eegimaa verb classification and the other known OVC systems.

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## Beads Off the String: Non-Canonical Clause Chains in Papuan Languages

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Papuan clause chains (McCarthy 1965, Longacre 1985, Foley 1986, Foley 2000) have been described in visual terms as ‘necklaces’ of clauses (Foley 1986:177). Canonically, a Papuan clause chain comprises one or more medial clauses, followed by a single final clause. Medial clauses are not marked for tense, but are usually marked for switch-reference (Roberts 1997). Papuan clause chains are characterized by tenseiconic ordering (Farr 1999). Thus, medial clauses are inherently relational in terms of argument reference (because of switchreference marking) and in terms of time (because of tenseiconic ordering within chains).

Although Foley (1986:198) claims that medial verbs (hence, medial clauses) cannot function independently, this is decidedly not the reality. In Nungon (FinisterreHuon) and other Papuan languages, canonical clause chains coexist with noncanonical clause chains, which either feature medial clauses postposed after the final clause, or lack a final clause altogether. Although some Papuanists do note the existence of noncanonical clause chains (Aikhenvald 2008, Berghäll 2010, Franklin 1983, Linnasalo 1993, Reesink 1987, Spaulding and Spaulding 1994, Wade 1997, Whitehead 1991), full descriptions of the distribution of noncanonical clause chains in a Papuan language are rare. Some instances of noncanonical clause chains are best analyzed as ellipsis, but examination of non-canonical clause chains in Nungon and other Papuan languages reveals four common discourse functions: a) commanding, b) hedging, c) elaborating or summarizing without breaking narrative flow, d) indicating perfect or completive aspect. This last function is illustrated in (1), from Mauwake (Berghäll 2010:141, (502)):

- 1)     Rubaruba     nain=ke         ona     emeria         nain     aaw-ep  
       Rubaruba     that=FOC         3S.GEN woman     that     take-SS.SEQ
- p-ikiw-o-k,             iw-iwkin.  
       bring-go-PAST-3S     give.him-2/3P.DS

‘Rubaruba took his wife and took her (away), they having given (her) to him.’

Here, the medial clause *iw-iwkin* is postposed after the final clause ending in *p-ikiw-ok*, with resulting completive or perfect aspect understood. Such aspect is not encoded in Mauwake final clauses, and can only be conveyed through the inherent time-relationality of medial clauses. This function and the other three are argued here to represent canny manipulation of the relationality of medial clauses to convey meaning efficiently. Non-canonical Papuan clause chains add to the typological inventory of independent uses of dependent forms (Evans 2007, Mithun 2008). The exposition also solves an outstanding puzzle of the Amele switch-reference system (Roberts 1988, Stirling 1993).

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## Causatives in clause-combining: a typological sketch

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Passives and antipassives are often found to have “structural” uses, which are triggered by co-reference constraints in clause-combining. By contrast, causative constructions were claimed to be “seldom... used to satisfy the demands of discourse organization” [Dixon 2012: 239–240]. Although language-specific patterns of this kind have been reported, their typological study is largely lacking (but see [Nichols 1985]). I am going to present evidence showing that in fact causatives are used for purposes of clause-combining in languages from many genetically unrelated families (Nakh-Daghestanian, Altaic, Tai-Kadai, Austro-Asiatic, Austronesian, Eskimo-Aleut, Uto-Aztecan, Panoan). Drawing on these data, I claim that “syntactic” uses of causatives emerge as a grammatical pattern in contexts where same-subjectness is especially likely. The degree of syntactization of the causative reflects the degree of clause integration.

A relevant example is shown in (1) from Kalmyk (< Mongolic, own data):

- (1) *bi [tedn-igə unt-ul-xar] xärül-čk-ü-v*  
I [they-ACC sleep-CAUS-CV.PURP] send-COMPL-PST-1SG  
'I sent them off to sleep' (lit. '...in order to make them sleep').

The causative in (1) can be regarded as at least partially syntax-driven (desemanticized) for the following reasons: i) its use helps to fulfill the same-subject requirement of the purpose converb (CV.PURP); ii) in main clauses *unt-ul* [sleep-CAUS] denotes direct causation (≈‘to lull’); iii) normally, the event described in the purpose clause temporally follows the event described in the main clause, in (1) it is only true for the caused subevent (sleeping).

Cross-linguistically, there are two main semantic domains where such syntactic patterns are frequently attested: the **desiderative** domain (including purpose clauses and complements of desiderative verbs) and the **manipulative** domain, where the causativized dependent verb describes the object’s resultant change-of-state triggered by the action described by the main verb (e.g. ‘to shoot a dog so that it dies’).

Co-reference constraints in clause-combining configurations are syntactic manifestations of a larger discourse preference for the unification of perspective (in Fillmore’s terms). In looser discourse contexts the speaker is relatively free to choose whether or not to construe the subject participant from the previous clause as the causer. Causativization warrants same-subjectness in these uses, but typically they are not considered syntactic. However, same-subjectness can be grammaticalized in the form of a rule in e.g. desiderative or purpose clause-combinations, which are in general especially likely to share a subject. In these contexts causatives can undergo semantic bleaching and become “syntactic”.

Both in the desiderative and especially in the manipulative domain causativization results in that the two clauses share not only subjects, but also direct objects. This opens the way for tighter integration of the two clauses (clause union, serialization). Thus, causativization can develop into a means to achieve transitivity harmony in some tightly-knit contexts, cf. [Zariquiey Biondi 2014], and eventually degrade into a purely morphological device in verb complexes.

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## Emai Aspect Expressing Serial Verbs

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Complex predicates include West Africa's serial verb constructions, Australia/Oceania's coverb frames and South Asia's light verb clauses. Common to their structure is a complex predicate with multiple heads. The verbal properties of each head, however, are not necessarily equivalent, i.e. head elements may or may not exhibit equal status as verb forms. This syntactic fact notwithstanding, it is the semantic nature of these predications that requires attention.

For some time, complex predicates of a serial verb type have been recognized as a clause feature in West Benue Congo's Edoid group (Elugbe 1989). However, the syntactically diverse character of Edoid complex predicates, encompassing verb series as well as verb particle relations, has attracted minimal investigation. Still less attention has been directed at identifying verbs in series that express event aspectual character rather than event participant profile.

For this paper we provide an initial characterization of aspect expressing serial verb types within the Edoid language Emai. Its verbs in series articulate complex predicates that profile or bring into perspective some facet of an assumed or asserted change of state, possession or state change. Most often, though not always, the profiled element becomes evident via comparison to a semantically related simple predicate. Emai's aspect expressing serial verb types bear on event temporal contour, manner, intentional end state as cancelled or confirmed, contact end state, telicity of a quantitative, positional or existential change of state, forcible dispossession and resistance to possession change.

Verb elements in Emai's aspect expressing complex predicates exhibit a strong precedence relation. They reveal a manner verb preceding a result verb, thus exhibiting consistency with the manner/result complementarity hypothesis of Levin (2012) and Levin and Rappaport Hovav (2013). Confirmation of an implied intentional state, for example, is illustrated by manner verb *hoo* 'wash' and result verb *fuán* 'clean' in the complex predication *òjè hóó ólí úkpùn fúán* [Oje PRP.wash the cloth clean] 'Oje washed the cloth clean.' Temporal contour shows up as manner *delo* 'turn over' and result *ma* 'create' conveying sense 'recreate' (*òisèlèbùá déló' àgbòn má* [God PAP.turn world create] 'God recreated the world'). Cancelling an implication of event fulfillment, e.g. 'wash without getting clean,' appears as *hoo* 'wash' followed by predicate *ba kun* 'pursue in vain' (*òjè hóó ólí úkpùn bá kùn* [Oje PRP.wash the cloth pursue.in.vain] 'Oje washed the cloth without success'). Change of quantitative state and existential state are illustrated, respectively, by *òjè dá ényò sé* [Oje PRP.drink wine be.sufficient] 'Oje drank enough wine,' where manner *da* 'drink' precedes result *se* 'be sufficient; and *óli ókà zé ré* [the maize PRP.grow rise] 'The maize has sprouted / grew out,' in which manner *ze* 'grow' precedes result *re* 'rise.' Resistance to possession change, too, reflects complementarity, with manner *lie* 'gather' and result *yaa* 'keep' (*òjè líé ítùú yàá* [Oje PRP.gather mushrooms keep] 'Oje kept the mushrooms'). We conclude by considering the implications of our findings for complex predicate types in other geographic regions.

## OVS word order in Kotiria and other Tukanoan languages

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Word, or ‘constituent’ order, has long been a focus of typological study (Greenberg 1963; Lehmann 1978; Comrie 1989; Primus 2001; Dryer 2007, and others), and data from Amazonian languages has contributed in significant ways to broadening our understanding of word order possibilities and order-related phenomena. Indeed, all basic word orders are attested in Amazonian languages, including object-initial order, thought by Greenberg to be ‘non-occurring’ in natural languages. Object-initial order, originally recognized in the Carib language Hixkaryana (Derbyshire 1985) actually occurs in a number of other Amazonian languages as well, from the Arawak, Carib, Tupi-Guaraní, Maxacali (Jê) and Tukano families. There are additional cases of languages with rare phrase-level configurations that have further challenged some of Greenberg’s proposed universals (Campbell 2012).

This paper investigates patterns of systematic word order variation in Kotiria (Wanano) and other East Tukano (ET) languages of northwestern Amazonia. East Tukano languages have been characterized as generally preferring SOV/SV orders (Barnes 1999), and indeed, they display ordering correlates identified for OV languages, including phrase level modifier-head order, use of postpositions, and overall right-edge (suffixing) morphology. However, a closer look at the literature on ET languages shows that OVS order is considered basic for Barasana, Tatuyo and Karapana, languages spoken in the Piraparaná region, as well as for Kubeo and Yuruti, located slightly to the north (Gomez-Imbert 1997; Gomez-Imbert and Hugh-Jones 2000; Ferguson, et al. 2000). In several others, the position of the Subject constituent varies, resulting in both SOV and OVS orders (Stenzel 2008; Gomez-Imbert 2011). These patterns lead us to consider two hypotheses: a) that we are looking at a word order change in progress, or b) that variation represents a stable, though perhaps complex, system of interacting grammatical and pragmatic word order functions.

The second of these hypotheses is the primary focus of this paper, drawing on investigation of the Subject constituents occurring in both pre- and post-verbal positions in a large corpus of natural language data (composed of narratives, conversations and spontaneous written material). It shows that systematic variation between SOV and OVS orders in Kotiria—as well as the not-infrequent occurrence of both Subject and Object null arguments—can be understood as reflecting discourse-level considerations related to information structure and reference tracking. The final section returns to discussion of the available information on word order phenomena in other Tukanoan languages, expanding the scope of investigation to include languages from the Western branch. It looks to identify broader patterns, assess whether conclusions drawn for Kotiria may be applicable on a family-wide scale, and highlight insights and questions that can contribute to our overall understanding of OVS languages and their place within word order typology.

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## Typology Enriching NLP: A Universal Feature Schema for Inflectional Morphology

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Morphological analysis is an important component of most natural language processing (NLP) tasks, including machine translation, speech recognition, and information extraction. However, because most morphological analysis software is designed for (and only exists for) a small number of languages, the features that are identified vary significantly across languages and are typically defined only with respect to the languages being analyzed. To increase the interoperability and availability of morphological analysis software, we propose a typologically-informed feature schema for capturing the meaning of inflectional morphology across all languages. We present the methodology used to construct the feature schema and a preliminary task that demonstrates its effectiveness.

The results of research in linguistic typology were used to determine which dimensions of meaning (e.g. number, case) and categories (e.g. singular, paucal, genitive, comitative) would be defined as features. After finding the set of parts of speech, we determined which dimensions of meaning were uniquely marked on each (e.g. comparison for adjectives) or which occurred on multiple parts of speech in agreement (e.g. number). For each dimension of meaning, we consulted recent typological studies (such as Corbett 2000) to determine which distinctions were possible and the maximum number of distinctions that were made within a single language (e.g. 6 in Sursurunga; *ibid.*). By consulting typologically-oriented theoretical work for each dimension, we determined which distinctions were irreducible (i.e. axiomatic) and defined each of these in terms of the language-independent semantic foundation that united the dimension. For example, Sursurunga distinguishes singular, dual, trial, paucal, greater paucal, and plural on nouns. These distinctions are irreducible, but must be augmented by the greater plural (attested in Arabic, Kaytetye, etc.), which signals ‘various, many,’ or ‘all possible.’ Finally, languages such as Kiowa and Dagaare use an inverse marker to indicate a number contrary to expectation, e.g. singular for ‘pole’ in Kiowa, which is by default interpreted as plural ‘poles’ (*ibid.*:159). These categories are the irreducible set of number categories, and each can be uniquely defined in relation to a quantificational scale from ‘1’ to ‘all possible.’

For the first large-scale test of this feature schema, we extracted all the inflected word forms along with any given descriptors for each form from all 179 languages represented in the English edition of Wiktionary. For example, from the conjugation table of Spanish *tomar*, we extracted the inflected form *tomo* with the table-heading descriptors “singular, 1st person, yo, indicative, present.” After filtering out descriptors that occurred in only one language or resulted from extraction errors (e.g. footnote markers, etc.), the feature schema was able to provide definitions for all ~500 remaining descriptors.

By incorporating the results of linguistic typology and description (in the spirit of Bender 2009), we have developed a universal feature schema that can be used to define inflectional morphemes in any language and faithfully translate any existing morphological markup schema.

This universal schema is designed to be useful to both linguists and natural language processing researchers.

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## Indirect Evidentials – A Cross-Linguistic Tool for Managing Competition

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Across languages, there are different ways of characterizing the source of information speakers provide (e.g., Chafe&Nichols 1986, Willett 1988, Aikhenvald 2004). Some languages have grammaticalized evidentials, some of which are obligatory and others optional. Other languages have evidential strategies. A long-standing question is whether grammaticalized evidentials and evidential strategy have the same status. Nuckolls and Michael (2014) suggest that examining the functional equivalence of different expressions of evidentiality is important to answer this question.

In the present study, we use experimental methods to explore the hypothesis that indirect evidentials function as a device for managing competitive situations. In competitive social situations it may be disadvantageous to reveal yourself as the source of valuable information. If you have firsthand knowledge of a scarce resource that you want to exploit (e.g. an excellent daycare center) and you are asked to share the knowledge with a competitor (another parent asking your advice about the quality of daycare centers around), you have two conflicting goals: first, to maintain your reputation as a reliable, cooperative informant and, second, to keep the scarce resource for yourself.

Our hypothesis was that indirect evidentials may enable us to hide ourselves as the source of valuable knowledge by introducing an unknown source such as gossip ('someone said that *p*'), thereby decreasing the credibility of the information for the competitor. At the same time by not falsifying the information (*p*), we can maintain an honest face. The question is if languages with evidentials and evidential strategies use their grammatical means differently in hiding the source of information compared to languages that use lexical means to hide information source.

We conducted an online cross-linguistic experiment with 1) English, Italian, and Hungarian (no evidentials involved) and 2) Estonian (an optional indirect evidential/epistemic modal an evidential strategy), Turkish (obligatory indirect evidential), Northern Khanty and Udmurt (evidential strategies). The subjects were presented with descriptions of social situations and a forced choice task: a combination of true vs. false answers and hidden vs. overt source. The source was hidden by means of a phrase (*I heard it somewhere that ...*) in languages without evidentials. Evidentials took the place of the paraphrases in languages with evidentials.

In all groups we found that respondents overwhelmingly chose to answer truthfully. However, they were much more likely to choose to introduce the information with an indirect evidential when resources were scarce than when there was no competition.

In conclusion, from a functional perspective, it appears that grammaticalization status does not influence speakers' reliance on indirect evidentials in managing social situations. Indirect evidentials and evidential strategies, regardless of their grammaticalization status, whether they are optional or obligatory, conveying epistemic modality or pure evidentiality in their semantics are uniformly used to hide the source, potentially decreasing the reliability of information and thus competition for scarce resources. In all of the languages studied indirect evidentials were used to manage access to resources and to balance the need to answer truthfully while retaining the advantage that withholding information in a competitive situation would give.

**A Functional Account of the Development of Nominalized Verbal Forms to Finite Forms:  
A Special Focus on the Similarity Observed between Eskimo Languages and Japanese**

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While Eskimo languages and Japanese are classified into genetically different language families, the two languages share an interesting history of grammaticalization: in both cases the current finite verbal form originated from the nominalized or participial verbal form (e.g. Bergsland 1997 for Eskimo, and Shibatani 1990 for Japanese). Furthermore, this structural similarity accompanies that of meaning in that the dependent verbal form on the way to the finite form is utilized to signal vividness or exclamatory force (e.g. Jacobson 1994; Woodbury 1985 for Eskimo, and Aoki (2011) for Japanese). While these characteristics are known in Eskimo and Japanese linguistics respectively, one fundamental question still remains in both of the literatures: What semantic factors motivate that path of grammaticalization? In other words, why is the implied sense of vividness, wonder or surprise attended in the process of the grammaticalization? This presentation makes a proposal, examining the independent-clause use of Central Alaskan Yup'ik's (an Eskimo, CAY hereafter) participial mood and its old Japanese counterpart, that the epistemic distinction between perceptual and experiential judgment proposed by Akatsuka (1985) and Shibatani (1991) should be introduced as a crucial factor to characterize the grammaticalization chain of the development of nominalized verbal forms to finite forms.

In CAY, the old participial forms are now established as indicative mood markers as exemplified in (1a), and the new participial makers have developed as in (2), in which the participial verbal form, *ikingqa-lria*, serves as forming a relative clause construction.

- (1) Arnaq Qavar-tu-q.  
woman sleep-INDICATIVE.INTRA-3s  
'The woman is sleeping.'
- (2) Arna-m [amiik ikingqa-lria-ø] paq'uussaagg-a-a.  
woman-ERG door.ABS open-INTRAN.NMLZ-3s.ABS peep.in-IND.TRAN-3s.3s  
lit. 'the woman, the door, the one that is opening, peeked in it.'

Interestingly enough, the new participial mood markers, which are classified as non-finite in the literature, can be utilized without the main clause working as a host, as shown in (3a) below, and in such a case, the indicative, finite forms are difficult to be employed as in (3b).

- (3) a. Tang, qava-lria-ø! b. ??Tang, qavar-tu-q.  
look! sleep-PARTICIPIAL.INTRAN-3s look! sleep-INDICATIVE.INTRA-3s  
'Look, she's sleeping!' (Caan Toopeltook, a speaker of CAY)

With this insubordinated use of the participial mood construction (Evans 2007), the new participial forms are supposed to be in the process of developing to the finite forms as the old participial forms did. And essentially the same path of grammaticalization is also observed in the development of the Japanese finite forms.

In order to properly capture the essence of this pattern of grammaticalization, we suggest that the discussion on the epistemic attitude of the speaker is indispensable, and we propose that,

following Akatsuka (1985) and Shibatani (1991), that the difference between two cognitive styles of apprehension of a state of affairs should be taken into account: experiential judgment and perceptual judgment. Shibatani (1991) applies the semantic distinction to the fundamental explanation for how topicalized constructions differ from non-topicalized ones. Beyond the sphere of topicalization, we show that this conceptual distinction also plays a crucial role in the development of nominalized verbal forms to finite forms in grammaticalization. (497 words)

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## Degrees of Temporal Remoteness in Panoan: Contributions to the Typology of Tense

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The Panoan family comprises ca. 30 languages from Peru, Brazil, and Bolivia. Panoan languages grammatically distinguish various degrees of temporal distance from the deictic center; i.e., they possess metrical tense (Chung & Timberlake 1985) or degrees of remoteness distinctions (Comrie 1985, Dahl 1985). This presentation analyzes the complex tense systems found in Panoan, concentrating on morphologically expressed categories. In so doing, it seeks to expand our knowledge of languages with metrical tense and test hypotheses (in Comrie 1985, Dahl 1985, Bybee et alia 1994, Botne 2012) regarding the internal organization of the systems, the ways tense interacts with other grammatical categories, and the possible sources of markers. Although metrical tense systems are attested in approximately 25% of the world's languages (Dahl 2008, Botne 2012:536), those with four or more degrees of remoteness are unusual (Comrie 1985:87; Frawley 1992:363). For example, of 222 languages examined in Dahl & Velupillai's (2011) study on past tense, only 2 have such prolific systems: Chakobo and Yagua; the former belongs to the Panoan family. Discussing the Panoan tense systems is particularly relevant, considering this family is one of the larger clusters of elaborated systems of remoteness distinctions in the world, outside Niger-Congo languages (Dahl, p. c., March 2013). Despite this, Panoan languages are largely absent from older and recent treatments of metrical tense.

(Most) Panoan tense systems are asymmetrical, with more distinctions in the past than the future. The further an interval lies from the present, the less precise its cut-off point, and the more extensive the temporal space it covers (Frawley 1992). As expected, tense interacts with **aspect-modality** (in Shipibo-Konibo, *-rabɨ* marks distant past and imperfective aspect whereas *ɟantan* marks distant past and perfective (Valenzuela 2003)) and **evidentiality** (in Matsigenka, all past tense markers simultaneously code evidentiality (Fleck 2007)). However, tense also interacts with **number** (in Kashinawa, plural marking is achieved through suffixation of *kan* in the immediate past, but *-bu* in other past tenses), **person** (in Amawaka, the immediate past marker is *-xo* when the subject is 3rd person, but *-ki* with 1st/2nd person subjects), and **negation** (in Matis, a negated verb cannot take past tense marking directly, but requires an auxiliary to which the past suffix attaches. Also, different negation markers are used with past vs. non-past tenses (Ferreira 2005:147-148)). We adopt a diachronic approach in accounting for some of these interactions.

Comparative analysis indicates that Proto-Panoan might have exhibited degrees of temporal remoteness. However, even closely related languages may differ significantly in the categories they encode and/or their formal expression. On the other hand, there is evidence suggesting the borrowing of markers. While some tense morphemes clearly originate from temporal adverbs and adverb-like verbal suffixes, others may have arisen through the grammaticalization of motion verbs and associated-motion verbal suffixes (cf. Bybee et alia 1994). In some instances, the marking of tense diachronically involves nominalized constructions. Finally, markers denoting temporally non-adjacent regions may share the same gram (cf. Botne 2012).

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**‘Not-yet’-expressions in the languages of the world:  
special negative adverbs or a separate gram type?**

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In many languages there is a special negation strategy to indicate that an action has not been accomplished or that a state has not been attained. For instance, in Indonesian, verbal predications are negated by the particle *tiada* (or *tidak*), cf. (1a). Nominal predications, are negated by the particle *bukan*, cf. (1c). When the speaker intends to communicate that an action has not been carried out yet, cf. (1b), or a particular state has not been reached yet, cf. (1d), the word *belum* ‘not yet’ is used in verbal and in nominal predications. The perfect marker *sudah* cannot be combined with *belum* or *tidak*, cf. Sneddon (1996: 202).

Expressions like *belum* are typically dubbed in grammars as special negators that differ from the standard negator (SN). They are sporadically mentioned in the comparative literature on negation cf. (Payne 1985, Miestamo 2005). Van der Auwera (1998) analyzes ‘not yet’ expressions in the languages of Europe as continuative negatives and suggests the label *nondum* for them; it is adopted here too. However, a systematic cross-linguistic study of their distribution does not yet exist. My goals with this work are to obtain a better understanding about their cross-linguistic frequency as well as about their functions and status in the grammar and lexicon of their respective languages.

In my sample of 100 unrelated languages, *nondum* expressions occur in most areas of the world, but are notably absent in Europe in the form of single, bound or semi-bound, grammaticalized negative temporal markers. My sources are grammars and parallel texts. The available data allow for the following generalizations: (i) *Nondum* expressions can be encoded as affixes cf. (2) and (3) or as particles, cf (1b, 1d); (ii) they can be either univerbations between SN and another word or completely unsegmentable morphemes. (iii) They typically indicate the non-occurrence of an expected action or state but also an anticipation about its imminent realization. Thus they appear to belong to both the temporal and the negative domain; however, as Contini-Morava (1989: 138), notes the negation they indicate is of limited duration. Their cross-linguistic frequency together with their functional similarities in a number of unrelated languages are evidence that *nondum* expressions should be considered a separate gram. Furthermore, gaining a better knowledge about them also contributes to a deeper understanding of the semantic-pragmatic asymmetry between the tense-aspect systems of the affirmative and the negative domain.

**EXAMPLES**

- (1) Indonesian [Glottocode indo1316] (Sneddon 1996: 196, 202)
- |    |                      |              |                |               |    |                         |              |                  |
|----|----------------------|--------------|----------------|---------------|----|-------------------------|--------------|------------------|
| a. | <i>aku</i>           | <i>tiada</i> | <i>berkata</i> | <i>begitu</i> | b. | <i>mereka</i>           | <i>belum</i> | <i>berangkat</i> |
|    | I                    | NEG          | say            | like that     |    | they                    | not.yet      | leave            |
|    | ‘I did not say that’ |              |                |               |    | ‘They haven’t left yet’ |              |                  |

- c. *dia bukan guru*  
 3SG NEG teacher  
 ‘she isn’t a teacher’
- d. *dia belum professor*  
 3SG not.yet professor  
 ‘He isn’t a professor yet’
- (2) Swahili [Glottocode swah1253] (Miestamo 2005: 126)  
*ha-wa-ja-som-a*  
 NEG-they-NEG.PERF-read-FINAL.VOWEL  
 ‘They have not (yet) read.’
- (3) Shor [Glottocode shor1247] (Nasilov 2005: 229)  
*Aŋčī kel-gelek*  
 Hunter come-not.yet  
 ‘The hunter has not come yet’

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## Neutralization of Tense-Aspect Distinction in Q'eqchi'

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The tense-aspect-modal (TAM) system of Q'eqchi' is a paradigm of six grams, which express different aspectual, temporal and modal meanings: present/incompletive (*nak-*), recent past/completive (*x-*), remote past (*ki-*), future/potential (*ta-*), optative/imperative (*chi-*), and prohibitive (*mi-*). All these grams are expressed prefixally, and the prefixes are mutually exclusive. There are two morphological types of tense-aspect neutralization in Q'eqchi': The first omits the TAM-prefix completely; the second chooses the "default" TAM-gram, which is the present/incompletive. Two questions, then, arise: 1) Under what circumstances does the obligatory grammatical distinction become irrelevant? 2) What conditions the distribution of the two possible means of neutralization?

There are at least three types of context where the tense-aspect distinction is neutralized.

First, when temporal reference has already been mentioned by an adverb (1). This is the case of "contextual replaceability" of grammatical marker (Daniel & Plungian 1996). The default TAM-marker is usually used in this case.

- (1) **junxil**      chi    r-ix            kawaay      **nak-oo-xik**      sa'    k'ayil  
**formerly**    PREP   3POSS-back   horse      **PRES-1PL.ABS-go**    PREP   market  
'Formerly we went to the market on a horse.'

The second context of neutralization is immediate-future temporal reference, when an action begins in the moment of speech or immediately after it (2). In this case the TAM-prefix is completely omitted, as is the personal inflexion; the person is expressed by a special "dative" postpositive particle. Such constructions are apparently possible only with motion verbs.

- (2) **xi**    we            chi    wa'ak  
**go**    1SG.DAT      PREP   eat  
'I am just about to go to eat.'

The third case is when the verb is accompanied by the particle *ak* 'already' (3). Here, both means of neutralization are interchangeable. The tense-aspect neutralization seems to be a specific device to express the perfect meaning.

- (3) **ak**            in-numxik            jun    sut    aran  
**already**      1SG.ABS-swim      one    time    there  
'Once I have already swum there.'

Some imperative forms and specific uses of the present/incompletive gram in narratives can also sometimes be considered as tense-aspect neutralization. These neutralizing contexts differ in the degree of obligatoriness. For instance, constructions in (2) are impossible when prefixed by the tense-aspect. On the contrary, neutralized and non-neutralized verb forms are both acceptable in (3).

The Q'eqchi' data show that the neutralization of a grammatical category can be conditioned not only by grammatical features due to morphological category-based defectivity—

see Bickel & Nichols (2007: 208)—but by a wide range of lexical, syntactic, and semantic features of a context, as well.

The study is based on fieldwork data (elicited sentences and narrative texts) obtained in December 2014 in the area of Coban, Alta Verapaz, Guatemala.

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## Locally bound possessives beyond the apparent differences

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What factors govern the cross-linguistic distribution of locally bound possessives? In the languages of the world this structural position can be encoded by a pronominal (English *Mary<sub>i</sub> saw her<sub>i</sub> cat*); a dedicated reflexive possessive (Russian); a genitive form of an argument reflexive (Avar, Daghestanian); or a head marking (Mari, Uralic). Reuland (2011) and Despic (2011, forthcoming) propose the following correlation: Languages without pronominal definite articles employ dedicated reflexive possessives while languages with pronominal definite articles employ simple pronominals. The question is, then, why this correlation would hold, and whether more basic properties of the computational system underlie it.

The present paper contrasts data on the use of locally bound possessives in two Mordvin languages: Shoksha Erzya and Moksha. Neither language has pronominal definite articles, hence in both one would expect to find a dedicated reflexive possessive. In Moksha, indeed, a dedicated reflexive possessive *es'* is employed (1), while in Erzya a genitive pronominal *sons'inde* is used instead (2).

- |     |                              |                             |                        |                     |
|-----|------------------------------|-----------------------------|------------------------|---------------------|
| (1) | Son <sub>i</sub>             | kel'k-si                    | es' <sub>i</sub>       | c'ora-nc.           |
|     | S/he                         | love-NPST-3SG.S.3SG.S       | self                   | son-3SG.POSS.SG.GEN |
|     | She loves her son. (Moksha)  |                             |                        |                     |
| (2) | Son <sub>i</sub>             | aj-n'ij <sup>h</sup> -sa-za | sons'inde <sub>i</sub> | brat-t.             |
|     | S/he                         | IPF-see-PRS-3SG.O.3SG.S     | s/he.INTF.GEN          | brother-DEF.GEN     |
|     | He sees his brother. (Erzya) |                             |                        |                     |

Moksha *es'* is feature deficient in number and person, unlike the pronominal in Erzya.

What could explain the difference, and what it entails for the Despic-Reuland conjecture? In order to answer this question we will have to consider the precise way in which the dependency is encoded.

We assume that the basic mechanism to syntactically encode local binding of dedicated reflexive possessives is Agree (see, e.g. Reuland 2011 for an implementation), which results in chain formation between anaphor and its antecedent. Crucial for syntactic encoding to obtain is that the goal (the bindee) is phi-feature deficient (an anaphor), and no intervening factor on the path between binder and bindee blocks chain formation. If chain formation is blocked (for instance by an intervening phase boundary, i.e. the dependency is not sufficiently local), a phi-feature deficient potential bindee cannot be valued and interpreted, hence a pronominal must be used instead. Conversely, if no factor intervenes, the dependency is too local for a bound pronominal to be licit (see Reuland 2011 for an explicit derivation).

In case of reflexive possessive *es'*, Agree results in chain formation between the subject of the clause and *es'*, which occupies a Poss position in the nominal complex. The structure of the clause in Erzya is parallel to that of Moksha, therefore using locally bound pronominal, which is fully valued for phi-features, is expected to be illicit, contrary to fact. However, at

closer inspection it turns out that the form used in Erzya is the genitive form of an *emphatic* pronominal (glossed INTF). We argue that the use of the emphatic form creates an additional layer of embedding. It introduces the necessary intervening factor and makes the dependency sufficiently non-local.

This indicates that the relevant factor is not the presence of a DP shell on the object NP per se, but that a broader range of intervening factors enters into an explanation.

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## Morphological effects of agent-oriented components of verbal semantics

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In this paper we will discuss morphological effects of agent-oriented components of verbal semantics with relation to passive lability.

The notion of agent-oriented components of verbal meaning was introduced by M. Haspelmath (1993). Verbs having these meaning components are unlikely to denote a spontaneous occurrence of an event, wherein the agent is not present in the situation described by the verb or moved off to the periphery. This factor explains, at least partially, the distribution of labile verbs in lexicon: verbs with these meaning components tend not to be labile and do not appear in an anticausative/causative labile alternation.

Passive lability, or unmarked passive, wherein the agent is present in the situation and can even be expressed in the clause, is typologically very rare but common for Mande languages (Cresseils 2009; Cobbinah & Lüpke 2012). In these languages, there is often no semantic parameter that predicts the distribution of labile verbs in the lexicon, so verbs with strong agent-oriented components can appear in active/passive labile alternation. See example from Bambara (Vydrine 1994):

*syéma` yé sòlimadén-w sègin só.*  
responsible PRFV initiated-PL come\_back home  
'A responsible (of initiated) brought initiated home';

*sòlimadén-w sègin-na só syéma` fê.*  
initiated-PL come\_back-PRFV home responsible PP  
'Initiated were brought home by a responsible'.

We will analyze the data of two Mande languages, Kakabe (<Mokole group, Guinea) and Mano (<South Mande, Guinea and Liberia), and will show that agent-oriented components are relevant for the morphology of verb alternations.

In the Kakabe language two dialects behave differently with respect to passive lability. In the Central dialect of Kakabe (CK) all transitive verbs can be used intransitively. The meaning of the intransitive construction can be anticausative or passive (some constructions are ambiguous).

However, in the Northern Kakabe dialect (NK), there is a morphological passive, marked by the suffix *-ma*, instead of passive lability (on the contrary, anticausative lability is widespread). As contrasted to passive lability, the morphological passive is common cross-linguistically but there is no other Mande language with a passive marker apart from CK.

*nìngèè bítí kànka-ma.*  
Cow PRF steal-PASS  
'The cow has been stolen'.

In Mano, both anticausative and passive lability are common. Mano also attests two reflexive constructions with simple (bare pronoun) and complex reflexive markers (pronouns with intensifier *dìè*) correspondingly. Apart from expressing reflexive meaning, they can also express anticausative meaning combining with practically all verbs. In case verb meaning contains agent-oriented components which make anticausative reading unlikely, the interpretation is that the action took place "by magic force". Crucially, such verbs can only be used with the complex marker, while verbs without strong agent-oriented meaning components can be used with both.

*yíí lē ē (dìè) lìlìē-pèlè.*

Water EXI REFL EMPH cool\_down-INF

‘The water is cooling down (by itself, put away from fire)’.

*wēī ē ē \*(dìè) bèlè.*

m oney 3SG.PRET 3SG.REFL EMPH Eat

‘The money was wasted by itself (as if by magic force)’.

Passive lability, which is a typological rara, is widely spread in Mande languages. In some languages, practically all verbs are labile and participate in morphologically unmarked anticausative/causative or active/passive transformation. Verbal systems in these languages may seem not to be sensitive to agent-oriented components of verbal meaning which is considered to be an important factor of distribution of labile verbs in lexicon. However, in at least two Mande languages, Kakabe and Mano, this factor is important for the morphology of verb alternations, but in a quite unusual way.

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## An Empirical Study of Multiple Class Membership in Modern English Based on OALD-8

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The multiple class membership or multifunctionality of lexemes in many languages has remained a contentious issue ever since linguistics emerged as an independent discipline in the 19th century.

With regard to English, there are different terms for and controversial opinions on multifunctionality among linguists, and as a result different conclusions are drawn about the existence and quantity of multiple class membership in Modern English. To avoid multiple class membership of lexemes, some scholars like Hockett (1958: 221) advocate addition of mixed word classes like N-V, while others would prefer to treat such phenomenon as homonymy (Halliday, 1966: 157) or category underspecification (Halle & Marantz, 1993; Marantz, 1997; Farrel, 2001). But more scholars would choose multiple class membership (Bloomfield 1933: 206-208; Quirk et al 1985: 720; Biber et al 1999: 60; Herbst 2010: 164). Moreover, many scholars think that multiple class membership is very common in Modern English (Jespersen, 1924: 62; Biber et al, 1999: 60; Chung, 2012: 30; Croft, 2000: 72). Nevertheless, by a comparison of *publish/publication* in English and 出版 in Chinese, Shen (2009) argues that Chinese is utterly different from Indo-European languages like English in terms of word class systems: Indo-European languages have rich inflections which indicate word class differentiation (i.e. a splitting word class system) while Chinese words lack inflections (i.e. an inclusive word class system). In other words, multiple class membership does not exist in Indo-European languages like Modern English.

However, Wang (2014) argue that for analytic languages like Modern English and Modern Chinese, word class categorization must be carefully differentiated between the two levels of syntax at *parole* and lexicon at *langue*, and that multiple class membership exists only in lexicon at *langue*, as represented in dictionaries. Thus, we argue that the existence and quantity of multiple class membership in Modern English is an empirical issue, but the few previous surveys like Coughlin (1996) and Lu (2006) either lack details or have deficiencies in methodology, with no accurate details of the types or numbers of multi-category words in Modern English.

Based on our Word Class Labeling Database of *Oxford Advanced Learner's English Dictionary (8<sup>th</sup> ed.)*, this study is intended to investigate the current status of multiple class membership in Modern English from the perspectives of lexicography, language typology and cognitive linguistics. It is found that Modern English has a large number and variety of multi-category words, and that multiple class membership of frequently used lexemes (i.e. motivated by economy and iconicity) is characteristic of analytic languages. Finally, the underlying motivations for the views of homonymy, category underspecification or precategoriality in analytic languages are also explained.

**Key words:** Modern English; multiple class membership; survey; *Oxford Advanced Learner's English Dictionary (8<sup>th</sup> ed.)*

## **Differential A Marking in diachronic typological perspective: emerging complexity as a by-product**

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The present paper aims to investigate the diachrony of Differential A Marking (DAM), which here refers to a variation in the case-marking of the more agent-like argument of bivalent and trivalent constructions. (I follow Bickel's 2010 approach to grammatical relations.) DAM can be conditioned by the following factors:

- Referential properties of the A argument, e.g. person, number, animacy, focality
- Valency classes (defined by shared case frames)
- Clause properties: TAM values, polarity, clause type (main vs. different types of subordinate clauses), scenario (properties of co-arguments)

DAM is often restricted to specific environments; at the same time, however, many languages have more than one factor conditioning DAM and exhibit complex interaction patterns of these factors. For instance, in languages with different valency classes, further splits are often restricted to only one valency class (usually the one involving prototypical transitive constructions). Moreover, splits conditioned by information structure often only occur in a subset of A arguments (i.e. A arguments with specific referential properties) and/or only within certain TAM categories.

However, DAM cannot be accounted for in terms of universal tendencies (cf. Bickel & Witzlack-Makarevich 2008, Bickel et al. 2014), and it is often difficult to find direct synchronic functional explanations for individual instances of DAM. On the other hand, a diachronic investigation of DAM can account for the individual patterns, including rare idiosyncratic cases.

Moreover, the emergence of language-internal diversity and complexity of A argument markers is often merely a by-product of changes occurring in other parts of the grammar (and the lexicon). The diachronic development of DAM involves, among others, the following contexts and mechanisms:

- Reanalysis of nominalized clauses as full (main) clauses
- Emergence or extension of valency classes or voice types
- Reanalysis and extension of other clausal dependents (arguments or adjuncts)
- Reanalysis of focus markers as A markers
- Morphological properties of a subset of A arguments (e.g. suppletive pronoun forms)

The present study investigates the mechanisms and contexts that give rise to A argument marking complexity from a typological perspective and thereby seeks to account for language-specific patterns of DAM and their restrictions.

Examples are drawn from a worldwide sample of languages. However, languages of Australia, New Guinea, the Himalayas and the Caucasus feature more prominently, since DAM patterns are found more frequently in the languages of these areas.

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## Towards a typology for the grammar of discourse - A case-study of confirmationalals

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In this talk, we establish the need to study the grammar of *confirmationalals* from a typological perspective.

**What are confirmationalals?** Speakers rarely communicate propositions in isolation. A proposition (*p*) encodes speaker (*S*) commitment; in addition, *S* can optionally communicate his/her belief about the addressee's (*A*) commitment to *p*. Particularly in the latter case, we often find a specific type of discourse particle that asks for confirmation about (*S*' perception of) *A*'s beliefs. Such particles, which we refer to as *confirmationalals*, are notoriously present in Canadian English, as in (1a). We argue that *eh* encodes all of the extra-propositional interpretation indicated in (1b).

- (1) a. I have a new dog, **eh**?  
b. [Please confirm that [you believe [the proposition that I have a new dog]]]

**Why a typology for confirmationalals?** Not surprisingly, discourse functions similar to those of *eh* exist in other languages as well. However, these functions are not expressed by particles alone. Evidence from cross-linguistic comparison shows that confirmational meaning can be expressed by a variety of forms, including particles, phrases, a combination of particles and intonation, or intonation only. For instance, what is achieved by the rising intonation in Canadian English (1), i.e. a “call on addressee” (Beyssade & Marandin 2006), is achieved by the question particle *á* in Medumba (2), a tonal Grassfields Bamileke Bantu language:

- (2) kàlá    ú        ɣùú    bú    swó    á?  
PART 2SG.S have dog new Q  
'You have a new dog, eh?'

**A protocol for the cross-linguistic study of confirmationalals.** Following Wiltschko's (2014) formal typology, which takes core abstract functions and hierarchical positioning to be the main identifiers of syntactic categories, we expect this variation. Via a sample of unrelated languages, we establish the relevance of the following factors in the construction of confirmationalals across languages:

(3) Parameters of variation in the form and function of confirmational:

i)	<b>Distribution:</b>	sentence-initial, sentence-final, stand alone, word-like, phrasal
ii)	<b>Sensitivity to clause type:</b>	across all clause-types, or restricted to certain clause-types
iii)	<b>Role of intonation:</b>	relevance or irrelevant
iv)	<b>Complement of confirmation:</b>	truth value of $p$ , $S$ 's belief, or $S$ 's assumption about $A$ 's belief
v)	<b>Presence of any reason to believe <math>p</math>:</b>	is there a reason to believe $p$ prior to the utterance or is that reason only introduced at the time of utterance
vi)	<b>Expertise regarding the content of <math>p</math>:</b>	$S$ , $A$ , or neutral

**The syntax of confirmational.** To formally model these factors, we adopt a syntactic approach which distinguishes an  $S$ -dedicated layer, an  $A$ -dedicated layer, and a layer dedicated to the call on addressee. These layers are hierarchically organized and conform to the characterization of categories of Wiltschko (2014). They correspond to the bracketed paraphrases in (1b). Syntax, we argue, serves to mediate between form (e.g. particle, intonation) and function (confirmation). Our typological research protocol will allow us to compare different forms of confirmation across languages. In particular, we suggest that there is a universal ‘grounding’ function which can be constructed in language-specific ways.

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## On the Syntactic Nature of the Consecutive Construction in ‘Alle

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‘Alle (Cushitic, Ethiopia) has a non-main verb-form, called the consecutive. The consecutive is a finite verb-form fully inflecting for the person, number and gender, but neutral and dependent on the preceding verb for the tense, aspect and mood. From the comparison of expressions of the event integration patterns (Talmy 2000) with Sidaama (Cushitic, Ethiopia), this verb-form corresponds to the Sidaama converbs (cf. Kawachi 2012).

koʔase	gangalat-ti =pa	manne	gala	xull-i.
ball	roll-PF.3FS=LNK	house	under	go_in-CNS.3FS

‘A ball rolled into a house.’ (Lit. ‘A ball rolled and went into a house’)

These Cushitic languages are the verb-final languages, and unsurprisingly the Sidaama converbs always precede the main verb, whereas the ‘Alle consecutive verb-form basically follows the main verb. Since both of the ‘Alle consecutive and the Sidaama converbs function similarly, the clause linkage type would be likewise (e.g. coordination, subordination).

Given that the converbial construction is a typical example of co-subordination, a question arises here: Would the ‘Alle consecutive construction be another case of co-subordination? The consecutive construction is unlikely to be a pattern of coordination because the consecutive verb-form cannot appear alone as a predicate of a simple sentence and that of subordination because it is not embedded morphologically and semantically and the different subject configuration is reported by Tosco (2010: 321).

A problem is that the consecutive construction seems to require that the linkage clitic =*pa* be attached to the preceding finite verb (except for imperatives). When this clitic =*pa* connects main verbs, it would be a coordination and these verbs may have different subjects and markings of tense-aspect-mood. However, the consecutive verb-form basically shares these properties with the main verb. Furthermore, the =*pa* is found immediately before a subordinating conjunction. The present author considers the clitic =*pa* as an indicator of the continuation of speech.

In addition, the consecutive construction expresses the sequence of correlating events. As Banti (2010: 71) points out, the consecutive construction is what one finds in verb-initial/medial languages. For example, it is also very analogous to Japanese *te*-converbs which should be safe to count as a case of co-subordination.

Coordination	[main verb] <sub>1</sub> = <i>pa</i> [main verb] <sub>2</sub>	V1 and V2
Subordination	Simultaneous: [main verb] <sub>1</sub> = <i>na</i> [main verb] <sub>2</sub>	While V1, V2
	Anterior: [main verb] <sub>1</sub> <i>xáni</i> [main verb] <sub>2</sub>	V1, after V2
Co-subordination	[main verb] <sub>1</sub> = <i>pa</i> [consecutive] <sub>2</sub>	(Firstly) V1, (then) V2

The present author therefore concludes that the consecutive construction in ‘Alle is the case of co-subordination.

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