Introduction

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Not surprisingly, the diversity of argument alignments found in Amazonian languages has drawn the attention of many researchers. Ergativity and split intransitivity are particularly frequent in the region. Notwithstanding their diversity, Amazonian alignment systems may contribute to the emergence of unifying hypotheses, provided that in-depth accounts of the observed data become available. The contributions to this volume that bear on morphosyntactic topics are good instances of what we are in need of. Authors are as much concerned with theoretical-typological issues as they are with high fidelity reports on empirical reality, illustrating the importance of fine-grained analyses informed by assumptions on general principles of natural language.

Two topics seem to have especially captured the authors' concerns within the embracing syntactic topic initially proposed for the meeting, i.e. alignment systems. First, the structural affinities between verb phrases and noun phrases, which have two sources in the sample of languages explored in this volume: either (1) lexical, when verb and noun, despite possible diverging morphological characteristics or semantic prototypicity, are equally apt to head a predicate phrase in independent clauses (what Launey (1994) labels "omnipredicativity"); or (2) derivational, when a formally

nominal constituent of the clause, whether a predicate or an argument, is built upon a nominalized verb.

Movima, as reported by Haude, seems to be a good representative of the first type of noun/verb syntactic convergence – along with Tagalog, Nootka, Nahuatl and other languages. In this language, the structure of the verbal predicate is strictly parallel to that of the noun phrase, including two kinds of typically verbal alternations, direct/inverse and a valence decreasing device. A plausible analytic consequence of this is that what seem to be two-place verbal predicates can be viewed as one-place predicates, the seemingly internal argument then being a mere modifier of the head. The interesting fact about Movima is that the clues for a syntactic difference between nominal and verbal predicates are really tiny, since they only involve the syntagmatic position of the external argument.

Several Jê languages of central Brazil illustrate the second option, along with Trumai, an isolate from the same area. The contributions by Alves, Gildea, and Salanova all converge on showing how intertwined diachronic and synchronic hypotheses on dependent clauses headed by nominalized predicates nicely account for several properties of independent clauses. Among these are tense-aspect-modality encoding in finite verbs, and ergative alignments. An interesting side-effect of these claims is that they contribute to narrowing down the alleged cross-linguistic heterogeneity of ergative patterns: a fairly common diachronic source is one of the most frequently observed instances of ubiquitous ergativity – non-basic ergative alignments pervading all types of languages –, namely, the argument structure of either lexical or deverbal action nominals.

Kuikuro allows Franchetto to draw the picture of a language that combines these two issues concerning omnipredicativity: on one hand, the language has strong lexical indeterminacy between nouns and verbs in terms of formal correlates, such as morphology and phrase architecture, and on the other hand it has nominalizations as the source of the contemporary independent clause (ergative alignment in the main clause as the offspring of a nominalized subordinate clause having been reanalyzed).

Less centrally, but yet clearly influential with respect to the general conclusions, are these topics in the contributions on Karititana by Storto – ergative alignments in extracted arguments, the nominal nature of main intransitive copula predicates, and non-finite subordinate clauses –, on Kamayura by Seki – five different argument alignments independently resulting from split intransitivity and the distinction main *vs.* subordinate –, and, finally, in the one on Kulina by Dienst – a language which displays a kind of split transitivity midway between the Movima direct/inverse distinction and the Hungarian subjective/objective conjugations.

Splits, precisely, are the main focus of the three remaining grammatical papers. Typical Arawak split intransitivity is present in Kurripako, analysed by Granadillo, who sorts out the bases for a distinction between the core argument zone and the adjunct zone. Split transitivity appears in Kotiria, analysed by Stenzel, and Shiwilu analysed by Valenzuela, the former having differential object marking where semantic and pragmatic factors are tightly entangled, the latter presenting a classical co-presence of accusative pronominal verb morphology and ergative noun phrase case marking, but where the ergative case mark might have a pragmatic origin. Incidentally, Valenzuela also adds, with her contribution, one new language (Shiwilu) and language family (Kawapana) to the currently growing list of Amazonian ergative grammatical systems (Gildea & Queixalós, to appear).

The term "nasal harmony" is generally used either to designate long distance nasal spreading (i.e. spreading of the nasal feature beyond the immediately contiguous segment), or to refer to a type of contrastive nasality in languages where the nasal feature characterizes a prosodic constituent or a morpheme, rather than a segment. On the South American continent, N(asal) H(armony) occurs in languages in different linguistic families, as witnessed by the different contributions to the phonology section of this book. Among the papers dealing with the question of nasality, the contribution by Rob Goedemans and Leo Wetzels does not address the phenomenon of NH from the perspective of a specific language, but tries to establish the properties of nasal harmony in general, as part of an attempt to develop an electronic database for the storage of nasal harmony systems, called NASDAT. NASDAT represents an effort to identify the parameters involved in NH

systems, as well as the conditions that could explain or favour its existence in a given language. In view of this aim, and bearing in mind the way in which harmony systems have been described in the modern phonological literature, a number of phonetic, phonological, and other grammatical categories are listed that are known, expected, or just speculated to be involved in the operation of NH systems. Other entries in the database provide information about the phonological systems in which NH functions, in an attempt to discover possible relations between NH and other properties of the phonological grammar in which it operates. Here we will use some of the parameters distinguished in NASDAT as the background for a typological sketch of the harmony systems that are described in the other contributions to these proceedings.

In her paper "Nasal Spreading in Paraguayan Guaraní, Introducing Long-Distance Continuous Spreading", Eden Kaiser distinguishes between various nasalization patterns in Guaraní, which she refers to as "local", "discontinuous" and "long-distance continuous" nasal spreading. In Guaraní, nasal consonants spread their nasal feature locally to a directly preceding vowel, as in **kangue** [**kãŋ.'we**] 'bone', by a process of regressive nasal assimilation. Discontinuous nasal spreading is triggered by a nasal consonant and only affects nasal consonants to its left. The phenomenon under primary investigation is leftward long-distance continuous spreading, which can be summarized by the parameters listed in the table below:

Paraguayan Guaraní	long-distance continuous spreading
triggers	all phonemically nasal vowels
domain	word (in careful speech)
direction of spreading	right-to-left
targets	sonorant segments and /**h**/
spreading mode	iterative
transparent segments	non-sonorant consonants
opaque segments	1. word-initial vowels in words longer than 2 syllables 2. stressed oral vowels

In "Nasal harmony in Awetí and the Mawetí-Guaraní family (Tupi)", Sebastian Drude addresses the question of NH in the three branches of the Mawetí-Guaraní linguistic family, itself representing one of the eight subgroups of the Tupí stock of languages. Special attention is given to NH in Awetí. According to Drude, Awetí vowels can be oral, nasal, or neutral. Phonologically neutral vowels surface as oral or nasal depending on the orality/nasality of the trigger. After a nasal vowel, (voiceless) stops show prenasalized allophones. The prenasalization of voiceless consonants, which crucially depends on the presence of an immediately preceding nasal(ized) vowel, is the reason why these consonants are included in the set of target segments: /**a-powã**/ > [**ã^mpɔw̃ã**] 'I spun'. Another instance of nasal assimilation targets morpheme-final consonants, which agree in orality/nasality with the preceding vowel. The main properties of nasal assimilation in Awetí are summarized below.

Awetí	type I (long distance)	type II (local)
triggers	phonemically nasal vowels (which are not part of suffixes) and nasal consonants	phonemically nasal vowels
domain	word	morpheme
direction of spreading	right-to-left	left-to-right
targets	neutral vowels, glides, liquids, the reflexive fricative /**z̡**/, plosives and the affricate /**ts**/	(morpheme-final) consonants
spreading mode	iterative	(non-iterative)
transparent segments	glottals	

Drude also discusses NH in the other two languages of the *Mawetí-Guaraní family,* Mawé and Proto-Tupí-Guaraní. The main difference between NH in Awetí and Mawé concerns the class of plosive consonants (or possibly the larger class of non-sonorant consonants), which behaves as opaque in Mawé. In Proto-Tupí-Guaraní, these consonants act as transparent, since they allow nasality to pass through them without becoming prenasalized themselves. Moreover, nasal consonants are postoralized before oral vowels in Proto-Tupí-Guaraní.

Juruna is one of the many languages spoken in the Parque Indígena Xingú, located in the state of Mato Grosso, Brazil. Together with Xipajá and the extinct Manitsaná, this language forms another subgroup of the Tupí stock of languages. According to Cristina Fargetti, Juruna is a CV language with two contrastive tones and a length opposition on vowels. In her paper "Nasalidade na língua Juruna", the author discusses the properties of leftward long-distance NH. There are a number of uncertainties regarding its domain of application and the definition of the class of opaque segments. As for the domain question, the author observes that a number of intrinsically nasal suffixes do not spread nasality onto the base, a property that this language seems to share with the languages of the *Mawetí-Guaraní* group. It remains unclear whether nasality in Juruna may spread from a base to a prefix, or whether nasal consonants are transparent to nasal harmony or are themselves triggers. As for the class of opaque/transparent segments, some words show optional spreading across non-sonorant consonants, whereas in other words containing these consonants all sonorant segments are nasal. Given the fact that a number of uncertainties remain, a typological classification of Juruna NH is necessarily incomplete at this point. The following table contains the parameters that seem uncontroversial.

Juruna	
triggers	phonemically nasal vowels (at least)
domain	morpheme (at least)
direction of spreading	right-to-left
targets	approximants, including the voiced lateral fricative /ɭ�/
spreading mode	iterative
opaque segments	non-sonorant consonants (optionally?)

In their paper "Nasalidade in Tapirapé: Interpretação para um caso clássico mal interpretado", Wilmar da Rocha D'Angelis and Consuela de Paiva G. Costa present a new analysis of the low nasal vowel /ã/ in Tapirapé, a language of the Tupí-Guaraní family, i.e. another subgroup of the Tupí linguistic stock. Unlike most members of this family, Tapirapé has no nasal harmony or prenasalized consonants, a property which it shares with two other languages of the group, Asurini and Guajajara.

However, different from the latter two languages, Tapirapé has maintained contrastive nasality in the system of vowel phonemes. Moreover, Tapirapé possesses a phoneme /ã/, derived from Proto-Tupí-Guaraní oral /a/, whose behaviour is surprising for several reasons. In Tapirapé, the oral/nasal contrast is usually restricted to the accented syllable. According to the traditional analysis, the only exception to this generalization is /ã/, which also occurs in unstressed syllables. Another mismatch between /ã/ and the other nasal vowels of Tapirapé concerns the distribution of the **ta/na** variants of the gerund suffix. The -**ta** variant is used after roots ending in an oral diphthong of the type /V**j**/ and also after /**ãj**/. The -**na** variant is used after roots ending in a nasal diphthong of the type /Ṽ**j**/, except /**ãj**/. Furthermore, the "recent past" suffix /-**pãp**/ surfaces as -**pãm** after a root-final /**ã**/, but as -**mãm** after any other root-final nasal vowel. (The surfacing of the suffix-final /**p**/ as [**m**] is the effect of a general constraint of Tapirapé, which requires that (light or heavy) syllable rhymes are either entirely nasal or entirely oral.) According to D'Angelis and Costa, nasality in Tapirapé is an exclusive property of the *accented* syllable *rhyme*. Furthermore, the vowel [**ã**] is the sixth vowel of the oral vowel phoneme system of Tapirapé, which is neutralized in stressed syllables and whose nasality is phonetic rather than phonological.

Wilson Silva's paper "Acoustic analysis of voiceless obstruents and nasal harmony in Desano" reports on an acoustic study of intervocalic voiceless stops in oral vs. nasal contexts in the Eastern Tukanoan language Desana, spoken in Brazil and Colombia. Similar to earlier descriptions of this language, the [nasal] feature is analyzed as a suprasegmental feature of morphemes, which are inherently marked as [-nasal], [+nasal], or are unmarked for nasality [ønasal]. Morphemes unmarked for nasality are progressively or regressively nasalized in the context of a [+nasal] morpheme. In Desano, voiceless stops and fricatives occur freely inside nasal spans. The question that is explicitly addressed by Silva is whether or not voiceless stops are affected by nasality and, if yes, to what extent. Following Walker's (1998) acoustic study of voiceless stops in Guaraní, Silva observes both similarities and differences between the characteristics of voiceless stops in Guaraní and Desano. The differences concern the total length of voicelessness realized by /**p t k**/, which differs significantly in

oral versus nasal words in Desano, especially for /**t**/ and /**k**/, but which was found to be approximately equal in Guaraní. Moreover, in Desano, closure voicing is greater in oral contexts than in nasal contexts for /**t**/ and /**k**/; for /**p**/, closure voicing is more or less equal in oral and nasal contexts. Guaraní, on the other hand, shows a longer period of closure voicing in nasal contexts for /**t**/. As for the similarities between Guaraní and Desano, it was found that, in nasal contexts, the segments /**p**/ and /**t**/ show clear differences in both their waveforms and spectrograms as compared to their occurrences in oral contexts. For these segments, a weak energy characteristic of nasal flow is visible in their closure period in nasal environments, showing that they are to some degree affected by nasal harmony.

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