Manifestations of ergativity in Amazonia

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http://celia.cnrs.fr/FichExt/Documents de travail/Ergativite/Introductions_ergativite.htm

In this introduction, we first briefly define ergativity within the framework of alignment typology, which allows us to characterize the geographical and genetic distribution of main clause ergativity in Amazonia (§1). Next, we provide a brief overview of what we see as the major theoretical issues raised by the phenomenon of

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1 Particularly recommended are the synthesis of published material on ergativity throughout the continent by Eva Monró (2004).

2 This introduction has benefited from a substantial amount of cordial disagreement (only occasionally punctuated by epithets), as well as from comments by Katharina Haude, Pilar Valenzuela, Antoine Gillaume, and from some particularly stimulating observations by an anonymous reviewer. We thank them all for their contributions, and absolve them of all responsibility for mistakes in the final result.
ergativity, especially as treated in this volume (§2), followed by a brief introduction to the papers in this volume (§3).

1 Distribution of ergative patterns in Amazonia

Ergativity is widely attested in the world, not just in Amazonia, but also in the far north and the center of North America, the Caucasus region of Europe, center and southeast Asia, north-east Siberia, Australia and the Pacific, not to mention the Atlantic end of the Pyrenees (Nichols 1992; Dixon 1994; Haspelmath et al eds 2008). However, a quick look at the areas of the world where ergativity is well attested shows that, in terms of published descriptions, Amazonia remains the least documented (Derbyshire and Pullum 1998, Moore 2007).

The definition of ergativity itself is not uncontroversial, especially when considered as an alignment type (cf. DeLancey 2004); in fact, more than one contribution to this volume discusses concerns with the definition. For the purposes of exposition, we adopt the simplest definition used by the authors in the World Atlas of Language Structures (WALS; Haspelmath et al, eds, 2008): The term alignment may be intuitively understood as reflecting how the two arguments of the transitive verb, the agentive argument (A) and the more patient-like argument (P), align with the sole argument of the intransitive verb (S). Patterns that distinguish alignment include nominal case-marking, verbal person-marking, and order vis-à-vis the verb. Syntactic criteria commonly used include constituency of the VP, control of coreference with reflexive morphology, control of coreference with core arguments of a conjoined or subordinate clause, and derivational

3 We discuss problems with these notational devices in §2. Much of the next two paragraphs is shared with Gildea and Castro Alves' contribution this volume.
relationships between main clauses and passive, relative clauses, topicalization, etc. Once these grammatical properties are clear for S, A, and P we can ask how (or if) the properties of S align with those of either A or P.

The accusative type describes the situation where S and A pattern together (the nominative) in opposition to the P alone (the accusative). In contrast, the ergative type describes the situation where S and P pattern together (the absolutive) in opposition to the A alone (the ergative). When all three are treated distinctly, the resulting lack of alignment is called tripartite.\(^4\) The label noncanonical marking (Aikhenvald, Dixon, and Onishi 2001) describes the situation in which either A or P (or both) present more than one grammatical pattern (e.g., dative-subject, locative-object, differential object marking, etc.—more on this in section 2). Multiple labels have been proposed for the type in which some S are marked like A and other S like P: Active-Stative, Active-Inactive, Agent-Patient, Split S, Semantic Alignment, or our preferred label, split intransitive. These types are almost universally recognized in typological surveys and textbooks, e.g. Dixon (1979, 1994); Comrie (1989); Payne (1997); Givón (2001); Croft (2003); Creissels (2006); Dryer (2007); Bickel (to appear), etc.\(^5\)

Despite the relative lack of documentation, it is clear that ergative patterns seem to pervade the grammars of an unusually high number of languages in lowland South America. Monros (2004) surveys a range of ergative patterns in 25 South American langages, including 19 from four major families: Cariban [7], Panoan [6], Macro-Jê [4],

\(^4\) Some descriptions have used the term ergative whenever the A takes a unique case-marker, regardless of alignment between P and S, and similarly, the term accusative has sometimes been used to label a unique marker on P, regardless of alignment between S and A. When A or P bears a unique marker without a concomitant alignment of the other two, we use the term tripartite, reserving the terms ergative and accusative for the patterns with two arguments aligned against one.

\(^5\) Our definition of ergativity specifically excludes split intransitive/semantic alignment and hierarchical alignment (in which alignment patterns are, at least in part, conditioned by the relative positions of core arguments on a deictic/animacy/definiteness/topicality hierarchy). cf. §2 for further discussion.
and Tupian [2]. Each of these families contains additional languages with ergative patterns. She also surveys five languages from four small families (Tacanan [2], Arawán, Katukinan, and Yanomam), all of which might once have had many more members, and one isolate (Trumai). Moore (2007) estimates that as of 2000, less than 60% of the languages of Brazilian Amazonia had received even minimal descriptive attention; we confidently assert that the percentage is even lower in the Amazonian regions of neighboring countries. Given what we already know about these families, we conservatively estimate that we could double the number of languages in Monros’ survey, and as more languages are described, it is safe to assume that the number of clearly attested cases of ergativity will continue to increase.6 Several excellent grammars have come out in just the last 10 years documenting ergative patterns in Brazilian and Peruvian Amazonian languages, including Guirardello 1999 (Trumai), Meira 1999 (Tiriyó), Fleck 2003 (Matses), Gabas 1999 (Karo), Galucio 2001 (Mekens), Valenzuela 2003 (Shipibo-Konibo), Castro Alves 2004 (Apânierá Timbira), Oliveira 2005 (Apinajé), and Tavares 2005 (Wayana), three of these written by authors of chapters in the present volume.

Turning to more recent worldwide surveys, WALS Online (HASPelmath et al eds, 2008) provides four different maps that identify ergative patterns, including in South America. Since WALS represents a survey, rather than an exhaustive inventory, it naturally under-reports the number of South American languages presenting ergative patterns; from our own knowledge of the literature of the region (including especially the

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6 And as pointed out by Pilar Valenzuela in personal communication, given the number of isolates and small language families that still lack an adequate first description, it is likely that additional new and surprising patterns will be attested as descriptive work expands to include them. For example, in recent work with Kawpanan language Shiwilu (Jebero), Valenzuela (2008) identifies a pragmatic ergative clitic =ler, which is occurs on the A argument, leaving both S and P unmarked, but is also unusual (at least for South America) because it is not obligatory in any clause type, but is rather utilized only in certain pragmatic situations.
summary in Monros 2004), we can easily multiply the numbers for each map. Map 62, *Action Nominals*, shows 21 ergative patterns in 168 languages sampled worldwide; of these, six are in South America, all from the Cariban family. Such patterns are characteristic of 19 modern Cariban languages (Gildea 1998), over 20 Tupí-Guaranian languages (Jensen 1998) as well as all five Northern Jê languages (Castro Alves in press), so this number is at 44 without even counting languages from the other nine families of the Tupían Stock, nor any of the smaller families or isolates that share this pattern. Map 98, *Alignment of Case Marking of Full Noun Phrases*, shows 32 ergative patterns in 190 languages sampled; of these, seven are in South America, six representing language families with one or more additional examples (The number in these six families would add up to at least 20). Beyond the families mentioned in this WALS map, the Cariban family offers another five (Gildea 1998), Northern Jê another three (Castro Alves in press) and Tupían at least another two (Karo and Maken, cf. Gabas 1999 and Galucio 2001, respectively). Thus, the number of documented cases increases to 30 without even counting languages from small families and isolates. Map 99, *Alignment of Case Marking of Pronouns*, shows 20 ergative patterns in 172 languages sampled; of these, 5 are in South America (removing 2 from the list for ergative case-marking of full NPs). Most ergative splits in South America do not involve the NP hierarchy (exceptions include several Panoan languages), so the number of systems with ergative case-marked pronouns will be at least 20 before counting small families. Finally, Map 100, *Alignment of Verbal Person Marking*, identifies only 19 ergative patterns out of 380 languages surveyed; of these, more than one third (7) are in South America. Again, these languages represent six families, each of which contains other languages with ergative (or more
precisely, absolutive) verbal person-marking. The two Cariban languages could be expanded to seven, the one northern Jê language to five, the one Tacanan language to five, and the one Tupían language to four, raising the number to 21 in just these four families, again not counting smaller and less-described families.

WALS does not provide maps for ergative syntactic properties, such as word order (e.g. the Abs V Erg order attested in Trumai and several Cariban languages), constituency (e.g. the [Abs V] verb phrase attested in Trumai, Cariban, and Jê languages, or the [Erg V] verb phrase attested in Katukina-Kanamari), or syntactic properties associated with “deep” ergative languages, such as absolutive coreference pivots (Katukina-Kanamari, Yanomami), absolutive-to-absolutive raising (Trumai, Katukina-Kanamari), and others.

As might be expected, given the ubiquity of ergative patterns, the topic of ergativity has attracted the attention of scholars in the region for a number of years. Urban (1985.187) famously predicted that languages of the region could serve as a “laboratory for the study of ergativity”, a theme echoed in Dixon (1994) and Dixon and Aikhenvald (1999). It is not easy to find typological information in the descriptive literature from Amazonia: it is somewhat chaotic and is coined in a variety of theoretical and terminological formats, some of which elaborate formal paraphernalia while sacrificing clarity in exposition of data. Ergativity is sometimes not noticed, and when it is, the focus of attention is its more visible facet, morphology. As the community of

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Note that we are not evoking here the notion of “Ubiquitous Ergativity”, which is named in Bruno et al. (2009), Queixalós (to appear). Ubiquitous Ergativity refers to a number of phenomena, originally noted by Keenan 1984, that create patterns of alignment (not at the core of simple basic clause structure) between P and S. Two examples would be that generally only S and P can be incorporated into the verb, and that frequently number of S/P is indicated by suppletive or reduplicated verb forms. Such patterns are not of interest here precisely because they are widespread in languages of the world regardless of basic alignment patterns.
Amazonian descriptive linguists continues to grow, both in numbers and in linguistic sophistication, it has become clear that the clause structures attested in Amazonia may make a significant contribution to typology. As scholars interested in identifying how the languages spoken in Amazonia could contribute to the general typology of clause structure, for us, the topic of ergativity was a natural selection. Given the limited resources available to us in comparison to the large number of languages presenting ergative patterns, we originally selected colleagues who we knew had been involved in extensive fieldwork on their respective languages (and/or languages families) and who have taken their descriptive work beyond the common (at least in South America) reliance on elicitation of translated sentences by working with recorded discourse data.

Before discussing the typological relevance of the contributions to this volume, we turn to the problem of defining ergativity as a theoretical concept, and the related problem of identifying an ergative pattern in any given language.

2. Theoretical issues of ergativity

2.1 Definition of ergativity

Over the years, the standard definition of ergativity has depended on labels for the two arguments of the transitive verb that can then be aligned with the single argument of the intransitive verb. Initial definitions considered ergativity to be any pattern that treats the object of a transitive verb in the same manner as the subject of an intransitive verb, reserving a unique grammatical treatment for the subject of the transitive verb (Anderson 1976, 1977; Comrie 1978; Planck ed. 1979 *inter alia*; Givón 1984, 2001; Bickel in press, etc). It has not escaped the attention of theoreticians that this definition carries within it
certain problematic assumptions (Mel'cuk 1988, Manning 1996, Guirardello this volume, Queixalós this volume), especially that the grammatical relation of subject is (by definition) a theoretical universal, which entails that it must also be universally identifiable in the grammar of any language via more or less robust morphosyntactic patterns. In order to leave the putative universality of subject as an empirically testable hypothesis, we must find some other definition by which to characterize ergativity in theory, and thus to identify ergative patterns in natural languages.

Various typologists have attempted to get around these presuppositions by adducing an intermediate level of structure. Thus, Dixon (1972, 1979, 1994) proposes the “semantico-syntactic primitives” S, A and O, and Comrie (1978) proposes S, A, and P. As an expository tool, this intermediate level of structure allows for a simple (even elegant) way to represent most attested non-accusative alignment types. Due to their expository usefulness, S, A and P/O have become quite widely used in both typology and description, including in many of the contributions to this volume. However Dixon’s 1979/1994 arguments for the theoretical importance of such an intermediate level of structure have been less than convincing (cf. DuBois 1985, Mithun and Chafe 1999, Queixalós 2004, DeLancey 2004, Donohue and Wichmann (eds) 2008 *inter alia*, Haig 2009). The single most compelling argument against this position is that fact that all three categories can receive “split” grammatical treatment: the opposition of active/agentive S and inactive/patientive S is widely attested in split intransitivity, contrasts between nominative and dative A are also widespread and locative/contact objects frequently

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8 Excepting only inverse alignment (cf. Gildea 1994, Zúñiga 2006), also closely associated with hierarchical alignment (Nicholls 1996).
receive grammatical treatment distinct from patient objects. Obviously, it is problematic for such “primes” to be so readily divisible in the very sorts of data they purport to model and/or explain.

The problem of such splits in A and P have led some (e.g. Andrews 2007) to adopt what Haig (2009) calls a “restrictive view” of transitivity, which then leads to a more restrictive definition of A and P/O. For example, in order to provide formal structure with a more coherent role in defining this intermediate level of structure, Gildea (1998.32) defines A and O in a language-specific way, as the two core arguments found with prototypical transitive verbs (e.g. ‘break, kill’). Then to the extent that other two-participant verbs in the same language—regardless of semantics—present the same argument structure as core transitives, the arguments of such verbs are considered to be A and O also. Such a definition rescues the operational coherence of A and O/P, but at the cost of excluding all noncanonical arguments from consideration, which, as pointed out by Haig 2009, reduces “the domain of alignment generalizations within any given language. In doing so, we abandon conventional alignment typology as a global typology characterizing an entire language.” Haig goes on to argue that, in particular, clauses in which one argument is an experiencer NP in an affective construction are better characterized as “extra-transitive”, distinct from prototypical agent-patient transitive clauses. He concludes, “Extending conventional alignment typology and the categories of S, A and P to the extra-transitive domain is questionable.” While this more restrictive definition of A and P might allow us to avoid splitting them, and thereby potentially rescue their coherence as primes, it is beyond the scope of this work to further explore the

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9 Thanks to Geoffrey Haig (pc) for pointing out that Differential Object Marking does not actually “split” P, but rather makes P heterogeneous for all verbs.
10 Something not at issue in the data treated by Gildea 1998
theoretical implication of A, S and P — for now, we merely welcome their expository convenience while joining the skeptics in doubting the theoretical validity (or cognitive reality) of this level of structure.\footnote{An anonymous reviewer suggests that critiques of the theoretical standing of these notions seems almost superfluous, given that in the work of most typologists, S, A, and O/P serve merely as an abstract starting point for the discussion of non-nominative grammatical patterns. While we hope that this is true for most typologists, we do not see a similar sophistication in their use in descriptive work, where they often are introduced with a simple citation to Dixon, then used without question to stand in for semantic roles, grammatical relations, or whatever is most convenient at the moment of exposition. \textit{This is especially problematic for non-canonical argument structures.}}

A different approach to identifying ergative patterns has been to start with semantic roles. This is problematic first because clear definitions of semantic roles are not universally agreed-upon (cf. DeLancey 2003 for a review). It is problematic second because even if everyone were to agree on a single set of semantic roles and their definitions, case-marking patterns do not correspond neatly to semantic roles in either the nominative-accusative or the ergative-absolutive types. For example, the single core argument of an intransitive verb might be an agent, a patient/theme, or a dative/experiencer, and the two core arguments of a transitive verb might be the ubiquitous agent and patient, but they might also be an agent and a location (cf. Fillmore 1970) or an experiencer and a stimulus (cf. DeLancey 2003).

In an attempt to semantically unify these heterogeneous roles, some theoreticians and typologists have proposed superordinate, or “macro-roles”, like the aspectually defined Actor and Undergoer of RRG (van Valin and LaPolla 1997), the semantically-defined S, A and P of Radical Construction Grammar (Croft 2001) or the schematically defined Agent, Theme and Loc of DeLancey’s (2003) localist theory of case. Under these models, ergativity would be defined as a pattern that provides a unified treatment to the S/single argument of an intransitive verb and the P/Undergoer/Theme of a transitive
verb, in contrast to the treatment of the A/Actor/Agent of a transitive verb. In the end, this definition of ergativity is also unsatisfactory, in that we are forced to adopt a specific theoretical model before we can identify the phenomenon in individual languages; we presume that these theoretical models will be superseded in time by newer models that may make different assumptions about the nature of meaning and the relationship between meaning and morphosyntax.

In our view, both the morphosyntactic definition and the semantic definition of ergativity are problematic due to their reliance, whether implicit or explicit, on the grammatical and semantic categories of European languages like English. In the absence of clear morphosyntactic criteria to identify them in individual languages, in practice A and P/O are identifiable as whatever would translate as the transitive subject and object in English. Similarly, semantic definitions are forced to assume translational equivalence into the language of exposition, which then implicitly imports the semantic roles of the translational equivalents into the practical identification of an ergative pattern. In sum, it is not possible even to define the object of study in this volume without either adopting a problematic definition from the literature or proposing a new theory of grammatical relations and alignment typology. We are not prepared to do the latter here (but see Queixalós’ contribution to this volume for further discussion). So for now we adopt the theoretically problematic but heuristically useful practice of relying on intuitive-impressionistic identifications of A and P.

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12 Non-canonically-marked arguments of two-place verbs would then presumably follow from semantic properties of those arguments (whether because of their semantic role in the predicate, as in the case of dative subjects and locative objects, or because of their inherent semantic or pragmatic properties, as in the case of DOM).
This brings us to the question of whether to include split intransitive systems or hierarchical systems in the domain of ergativity. Because a subset of intransitive verbs take a single argument that patterns with the P/O/patient of transitive clauses, Dixon (1979/1994) explicitly calls split intransitive systems “verb-based split ergativity”. Similarly, Dixon (1994.88) approvingly quotes Derbyshire’s (1987) characterization of hierarchical agreement as “split ergative”. In a hierarchical agreement system, the transitive verb cross references (whether as agreement or pronominal affixes) whichever of the two arguments is higher on a personal hierarchy—when the higher argument is the agent, this cross-referencing aligns with cross-referencing to the unique argument of the intransitive verb to form a nominative pattern; when the higher argument is the patient, the result is an absolutive cross-referencing pattern. In both cases, we are dealing with clause types that trivially contain an absolutive pattern, but in both cases we agree with typologists who see these patterns not as subtypes of ergativity, but as subtypes of distinct phenomena (semantically-based case-marking in the case of split intransitivity and inverse systems in the case of hierarchical alignment). Note that were we to treat these patterns as subtypes of ergativity, we would add to our earlier lists of ergative agreement languages most of the Arawakan family (Split-intransitive word order and verbal clitics), most of the Cariban family (hierarchical verb agreement) and all of the Tupi-Guaranian family (hierarchical verb agreement).

Having attempted to explain what we refer to as Ergativity in this volume, we now turn to contemporary theoretical concerns regarding grammatical systems, one grounded in synchronic structural analysis, the other in the diachronic dimension.

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13 Since we could call either a subtype of accusativity as well, to call either a subtype of ergativity means that we implicitly choose ergativity as the marked (naming) category, which is a strong claim about grammar that some make explicit.
2.2 Ergativity and grammatical relations

The core of clause structure is the relation between the predicate and its arguments; the history of our understanding of grammatical relations largely equates subject with nominative \((S = A)\) and object with accusative \((P \text{ different})\). As a result, when we encounter an ergative construction, our theories (and to a lesser extent, our typologies) seem to consider the relational structure to be in some way a distorted surface realization of an underlying, or “deep” nominative-accusative system. This distortion is seen in the disjunct terminology often used to define an ergative pattern: the subject of intransitive has the same properties as the object of transitive, whereas the subject of transitive has different properties. An earlier generation of linguists (among them Pott, Schuchardt, and Uhlenbeck) addressed this asymmetry by assuming that the ergative was merely an obligatory passive; even much later, and more abstract, analyses (e.g. Hale 1983) proposed an obligatory passive transformation. By such analyses, apparently transitive clauses actually contain a derived intransitive predicate whose sole core argument, the subject, is the patient of the transitive verb (cf. Anderson 1976 for discussion).\(^{14}\) Modern typology has largely set aside such analyses but nonetheless a critical examination of the asymmetry between ergative patterns and (inherently nominative-accusative) grammatical relations raises the whole issue of how we define grammatical relations. This is particularly true in how we identify the different layers where argument structure settles into patterns (formal behavior, coreference control, constituency, semantic roles,

\(^{14}\) Quite different, but still passive-centric, are claims about the passive as a universal diachronic source of ergative (Estival & Myhill 1988, convincingly refuted in Dixon 1994, Gildea 1998).
pragmatic hierarchy of referents, semantic hierarchy of referents), and what theoretical importance we assign to each different layer of patterns.

The asymmetry embodied in this definition of ergativity pushes us towards one of two opposed positions in the relativist/universalist dichotomy. The relativist position holds that grammatical relations are not universal notions, and therefore may be different in different alignment systems. In this case, universalist notions like "subject" and "object" are not appropriately used to describe the ergative pattern. From this more relativistic perspective, the terms "absolutive" and "ergative" may have as their scope not only determination of formal coding properties (e.g. case, agreement, and word order), but potentially also the level of grammatical relations (cf. one of Guirardello’s analyses of GRs in Trumai in this volume; Dryer 1997 also proffers a strong argument for this position). The other position holds that grammatical relations remain the same cross-linguistically, embodying a higher (or deeper) level of formal coding. Here, as well, a dichotomy exists: for most, the subject is universally the agent/topic, and as such the ergative pattern is an odd quirk of surface coding—a quirk that of course ultimately requires an explanation, but one that does not have deeper significance for our understanding of grammatical relations (e.g., from very different perspectives, Anderson 1976, 1977, Dixon 1979, 1994, Givón 1997, 2001, and Guirardello’s second analysis for Trumai GRs).

But a few admit the possibility of variation in the mapping of semantic roles onto the formal manifestation of arguments. From this perspective, one first defines the arguments by basic coding properties like case-marking, agreement and word order, and ideally also by behavior and control properties. From this perspective, the notions of

15 Nor the split intransitive or inverse/hierarchical alignment patterns.
"subject" and "object" apply accurately wherever a syntactic asymmetry obtains between the two co-arguments of a transitive clause, regardless of the semantic roles that map to each formal argument, and it thus becomes possible to imagine constructions in which the patient of a transitive clause systematically maps to the subject relation and the agent to the object relation (cf. Queixalós’ analysis of Katukina in this volume; antecedents of this view include Marantz 1984, Mel'cuk 1988, and Manning 1996).

Until this point, we have been discussing alignment patterns as they pertain to constructions; it is a separate question whether such patterns can be taken as characterizing entire languages. Certainly many have postulated that grammatical relations are consistent throughout a given language, but obviously, alignment splits exist at the level of construction, or clause type. Another significant asymmetry between accusative and ergative alignment is that consistent accusative languages (“ubiquitous ergativity” aside) are not only possible, but they are relatively common. In contrast, most languages that contain ergative patterns present them in only a subset of constructions, alongside other constructions that present other (primarily accusative) patterns. Further, even in constructions that present an ergative coding pattern (typically case-marking), it is not uncommon for another alignment coding pattern to co-occur in the same construction (typically nominative-accusative word order and/or nominative-accusative or hierarchical agreement).

In addition, ergative patterns may also become an issue at the interface between grammar and cognition. There appears to be a real asymmetry in the human mind such that, when other aspects of information structure are held constant, in processing a scene where one participant causes a change in the conditions of existence of another
participant, the mind is automatically drawn to privilege the agent. We briefly summarize three steps in understanding this phenomenon: first, an elaboration of the internal structure of the attention system in human cognition; second, both theoretical arguments for and empirical experimental tests of the role of attention in grammar; third, studies of endogenous factors that orient attention in human cognition.

Over the last 30 years, the discipline of cognitive psychology has made dramatic advances in the study of the attentional system, first independently of language (e.g. Posner and Snyder 1975; Posner 1980, 1988; Posner and Peterson 1990, Posner and Rothbart 2007). As described in Tomlin and Villa (1994), the system consists of general alertness (readiness to deal with incoming data), orientation of attention (a bias towards detecting a particular kinds of stimuli), and attentional detection\textsuperscript{16} (the process that selects or registers a particular stimulus). All three of these components of the attention system may be conscious or subconscious (that is, may or may not be processed via the mechanism of executive attention).

From this more sophisticated understanding of attention came a series of studies that demonstrated how attentional detection could be an independent variable that conditions the dependent variable of selection of grammatical subject in English and a range of other languages (Tomlin 1995, 1997; Rasolofo 2006; Myachykov and Tomlin 2008; for replication of experimental finding accompanied by a critical review of the theoretical interpretation of these findings, cf. Diderichsen 2001; for a positive review of this experimental paradigm, cf. DeLancey 2003, lecture 9). These studies showed that by

\textsuperscript{16} Also called also called focus of attention, e.g. in Tomlin 1995; we prefer to avoid this term due to potential ambiguity with the independent (and probably unrelated) notion of focus as developed in the long-standing linguistics literature on, e.g., topic-focus information structure, contrastive focus, focal intonation, etc.
exogenously manipulating the attention of speakers (that is, by introducing a visual arrow to cue speaker attention) towards either agent or patient of an event, an experimenter could essentially force speakers to produce either active clauses (cued agent > subject) or passive clauses (cued patient > subject) in accusative languages (English, Japanese, Malagassy, and another 15). Alongside this experimental paradigm, additional studies have expanded on the role of attention in grammar (Henderson and Ferreira 2004; Myachykov and Posner 2005; Myachykov, Posner and Tomlin 2005; Myachykov, Tomlin and Posner 2007).

Turning now to the third step of our explanation for cognitive bias towards agent, consider the role in the attention system of orientation of attention. Of course, it is possible to condition an exogenous bias towards certain categories of stimuli, e.g., in many children’s games, people are taught to seek a particular shape of stimulus, such as a Volkswagon Beetle in the game “slugbug”, or a particular character in any number of picture books that ask the reader to find that particular character in the midst of many distractor shapes. Once the attention orientation is trained, these stimuli will be more easily detected, increasing the statistical frequency with which they will be detected in preference to counterpart stimuli that have not received comparable exogenous orientation of attention.

But there is also a set of endogenous biases that orient attention, for example, our nervous systems are predisposed to attend to stimuli that move in preference to stationary stimuli, to flashing or brightly-colored stimuli in preference to stimuli of either drab or unchanging color, etc. (Posner 1980, Posner and Peterson 1990). We could imagine many

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17 Unfortunately, none of the languages listed in Tomlin 1997 contains a main clause ergative pattern, and no results were obtained in two attempts to use the experiment by authors of this volume (Gildea with Akawaio and Valenzuela with Shipibo-Konibo).
variables that distinguish between the prototypical agent and the prototypical patient such that they might bias the orientation of attention towards the agent, but it is perhaps already sufficient to note that with a high statistical frequency, the agent of any event will show more independent motion than the patient, and will therefore receive the cognitive benefit of endogenous orientation of attention. That orientation will increase the statistical likelihood that the agent will be attentionally detected, thereby creating an accusative bias in cognition that helps to motivate the robust accusative bias that we observe in linguistic structure.\(^{18}\)

One possible explanation for the statistical prevalence of accusative grammatical patterns is that the grammar of languages somehow directly reflects this asymmetry by predisposing the brains of children to privilege argument alignments on an accusative or semantic basis.\(^{19}\) If this hypothesis were to be sustained, then ergative patterns should be seen as highly marked (cf. Pye 1990), and additionally, they should be (at least statistically) more unstable diachronically. This diachronic instability would then lead to the relative scarcity of such morphosyntactic patterning, as languages gradually make their way to other types of argument alignments, mainly accusative. This would explain why ergative alignment patterns are a statistical minority (e.g. in the WALS databases), and also why homogenously ergative languages (that is, languages with ergative patterns in both morphology and syntax) are a tiny minority within this minority.

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\(^{18}\) We do not discuss the semantic role of the single argument of intransitive verbs because the selection of an intransitive verb logically follows from the selection of the attentionally detected participant (cf. DeLancey’s 2003 *Starting Point*). As such, the S is already assured of the grammatical treatment associated with attentional detection, leaving agentivity to be relevant only in determining which participant of bi- and trivalent verbs will receive the grammatical treatment associated with attentional detection.

\(^{19}\) Although note that Goldin-Meadow’s (2003) experiments appear to show the opposite bias, which demonstrates that our understanding of cognition and of its effects on language are both far from complete.
2.3 Ergativity and Diachrony

If it is true that the human mind is cognitively biased towards privileging the agent of transitive clauses, and that this is reflected in both the creation and diachronic stability of alignment patterns, then we should expect to see some asymmetry in the creation of ergative patterns as opposed to other alignment patterns that code the agent of transitive the same as the sole argument of intransitive. This is a complicated question, involving both diachronic pathways and diachronic mechanisms of change; for this brief introduction, we limit ourselves to the re-accusativization pathway. We posit that languages gain main clause ergative patterns through reanalysis of biclausal constructions (especially nominalizations) and marked voice constructions (especially passives); the earliest stages after reanalysis are those most likely to present ergative syntactic patterns, especially absolutive pivots and control of coreference morphology (like reflexive possessive morphemes). These constructions then drift towards accusativity, losing ergative patterns and establishing accusative patterns one by one, beginning with syntax and later arriving at morphology, until the construction no longer contains any ergative pattern at all (an idea inspired by work like Givón 1980, Estival and Myhill 1988, Gildea 1997).\(^{20}\)

There are three methods by which we might identify such an accusativization path, one based on examination of historical records, the others comparing patterns observed in synchronic languages. Of course, when a written form of language is

\(^{20}\) An anonymous reviewer asks why we do not join Dixon (1994) and Traugott and Hopper (2003) in endorsing DuBois’ (1987) claim that Preferred Argument Structure provides a discourse motivation for the diachronic evolution of ergative grammatical patterns. While this is a logical possibility, it lacks a mechanism by which to create the grammar that it motivates and we consider it speculative in the absence of either an attested case or a plausible reconstruction in which PAS creates a main clause ergative alignment system.
available across a large span of time, as is the case for the Indo-Iranian group of
languages, we have a direct view on both the directionality and pathways of change (cf. Haig 2008). For languages without a record of attested change, we must reconstruct. Comparative reconstruction can depart from the synchronic grammars of genetically related languages or dialects, comparing cognate constructions in which we might observe subtle differences in alignment patterns; these differences would then be evidence for changes. The directionality of changes must ultimately be determined by (a) extrapolation from attested directions of change and (b) an understanding of the mechanisms of change (cf. Gildea 1998, ch. 3). While it is substantially more speculative, the typological method is also a possible tool for proposing pathways of change: we might put the different splits encountered cross-linguistically into an implicational perspective (*a la* Greenberg): given a language, if feature X (e.g. nominal case-marking) aligns accusatively then feature Y (e.g. coreference pivots) also aligns accusatively. (Or conversely, if feature Y aligns ergatively, then feature X aligns ergatively). To the extent that such hierarchies are statistically reliable, they must be taken to reflect the outcomes of statistically more frequent historical changes: feature Y must more frequently lose its ergative pattern before feature X. This diachronic hypothesis would then provide an evolutionary explanation for the synchronic inconsistency of ergative patterns.

In several South American families and isolates, there is growing evidence for the creation of “deep” ergative main clause constructions via the reanalysis of nominalizations. As mentioned in §1, many South American languages show an ergative organization to action nominalizations. In the Cariban (Gildea 1994, 1998; Derbyshire
1994, 1999), Tupian (Derbyshire 1994; Jensen 1998; Rodrigues & Cabral 2004), and Jê (Castro Alves in press, Salanova 2008) families, plus the isolate Trumai (Guirardello 1998), there is solid evidence for reconstructing action nominalizations with the following structure: the verb bears nominalizing morphology (Cariban, Tupian, Jê) or is identified simply by the absence of finite inflectional morphology (Cariban, Trumai); the verb is inalienably possessed by the notional absolutive; the notional ergative is an (optional) adjunct in a postpositional phrase. In Katukina (Queixalós this volume), the nominalization is only possessed if it is transitive, and then it is possessed by the ergative. In Movima (Haude this volume), transitive verbs can be considered patient nominalizations possessed by the agent (direct) or agent nominalizations possessed by the patient (inverse), and intransitive as unpossessed nominalizations. Although they are instantiated differently, each of these relational patterns either establishes a clear ergative pattern already, or else sets the stage for the creation of an ergative pattern when embedded in a complex main clause construction (e.g. the creation of an agentive passive from a stative participle in a predicate nominal clause).

The grammaticalization literature is replete with examples of complement-taking matrix verbs that become conventionalized as auxiliaries, leaving a formerly nonfinite verb form to be the new main verb. Often, that matrix verb is the copula (whether locative or equative), whose subject is either a pleonastic (dummy) or is coreferential with one of the core participants of the embedded clause. In most of the cases in South America where ergatively-organized nominalizations become the nucleus of a main clause predicate, this is the structure that is implicated. In languages with no copula for simple present tense predicate nominal and locative clauses, the nominalized verb (and its
arguments) may become the nucleus of a main clause with no need for an auxiliary. Such sentences often translate as pragmatically-marked phrasing for the event described in the nominalized clause, e.g. a passive/resultative (This beer is a made one by her; this beer is a finished one), cleft-like construction (She is the maker of this beer, i.e., the one who made this beer; This beer is her makee, i.e., the one she has made), a hedge (It's like the making of the beer by her; It's like his going), or a factive (That was his going, i.e., so it was that he went; That was the beer’s drinking by him, i.e., so it was that he drank the beer). When these complex clauses are over-used, become pragmatically unmarked, and eventually are reanalyzed as straightforward monoclausal constructions, the result is the introduction of the nominalization patterns of ergativity into main clauses.

In terms of argument structure, the biclausal construction may simply make no changes to the ergative patterns in the action nominalization, in which case a pre-existing ergative pattern simply “surfaces” into main clauses. For example, in the hedge and factive illustrations just given, the absolutive possessor of the action nominal becomes an absolutive dependent argument internal to the VP and the agent adjunct phrase becomes the case-marked ergative, both without reference to the pleonastic subject of the matrix clause. In terms of control and behavior properties, they would be expected to hold for the matrix clause subject, but as this is merely a pleonastic reference to the event, it will have no functional need to control coreference with arguments in conjoined clauses, or relative clauses, or possessive morphology. As such, upon reanalysis, syntactic properties such as control of coreference should quickly shift to the primary topic (or attentionally detected participant) of the reanalyzed clause. Even in the absence of any morphological nominative pattern, this shift appears to always single out the nominative argument (cf.
DuBois 1987, Estival and Myhill 1988, Givón 1994, 1997). This appears to be the source of main clause ergative patterns in the Cariban and Jê families, as well as in Trumai (Gildea 2008); in these constructions, main clause ergative morphology and phrase structure did not entail other ergative syntax, such as coreference pivots, and therefore the step to nominative pivots did not entail first losing an ergative pivot.

Another possibility is that the biclausal source construction contains an absolutive pivot, that is, the subject of the copula is coreferential with the absolutive argument inside the nominalization. For example, in the passive/resultative and a subset of the cleft constructions, the external subject is a grammatical instantiation of the absolutive of the nominalized clause. In this case, after reanalysis, all the properties of subject will belong to the absolutive, meaning the shift to nominative control of coreference entails that the agent must wrest that control from the patient. Two interesting empirical questions about these shifts present themselves. First, is there a consistent sequence in which such properties shift from the patient to the agent? For example, does the interclausal coreference pivot consistently switch before or after, say, control of coreference with reflexive possession morphology? Second, what steps might such a shift go through? For example, do examples of agent control simply begin to appear alongside patient control, then become more frequent until patient control disappears, or is there a transitional stage during which interclausal coreference is pragmatically determined, not limited to agent and patient.\(^\text{21}\)

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\(^{21}\) Thanks to Denny Moore (pc) for proposing the former scenario in a specific case where Gildea was arguing for the latter. Note also that, as Haig argues (2008, 2009), it is possible that the oblique agent phrase already had more subject properties than expected in the “passive” constructions that served as sources for main clause ergative constructions in the Indic and Iranian families.
Interestingly, in this scenario, the reanalysis and subsequent adjustments of control would not be expected to have any effect on other derived constructions that affect argument structure, such as incorporation, applicatives and causation—these derived forms would presumably appear in the innovative constructions exactly as they formerly appeared in the source construction. These are often listed as behavior properties in arguing for the status of grammatical relations, alongside extraction constructions like relative clauses, information questions, and focus/topicalization constructions. Since extraction constructions are often already biclausal, it is not clear to what extent the reanalysis of nominalizations has any repercussions on their structures, and thus whether they would undergo any comparable shift from ergative to accusative patterning.

Thus, we can see a range of interesting empirical questions about the nature of alignment change as it relates to ergative patterns, and given the density and diversity of ergative patterns in South America, we submit that data from South American languages should play a central role in answering these questions. Given the paucity of grammatical descriptions from preceding centuries, there is no immediate prospect of observing attested change in these ergative constructions in South American languages. Thus, what is needed are more—and more detailed—descriptions of ergative patterns in synchronic languages. This would then allow both the comparative reconstruction of ergative patterns within individual families, as well as further expanding the typological database in search of consistent hierarchies of such patterns.

This volume is a first answer to that need: a series of detailed studies of ergative patterns in a series of languages from the least documented area of South America, some
with explicit discussion of theoretical implications, others with explicit discussion of diachronic implications, a few with both. In §3, we provide a brief overview of these contributions.

3. Overview of this volume

This volume presents 9 papers, based on primary data from 17 languages of lowland South America, two of which are isolates, with the remainder belonging to the Panoan (6), Jê (4), Cariban (3), Tacanan (1), and Katukinan (1) language families. The papers all provide description of details of the synchronic systems, and several also provide diachronic insight into the evolution of these systems. The first six papers comprise Part I, which focuses on languages that limit their ergative patterns primarily to morphology; the remaining three papers consider languages that present ergative patterns in the syntax as well.


The Panoan and Tacanan families are spoken in lowland Peru and Bolivia, and in western Brazil; these two language families, which are possibly genetically related, are known for ergative case-marking on nouns and (in some cases) pronouns, but almost no syntactically ergative patterns.

David Fleck: Ergativity in the Mayoruna Branch of the Panoan Family.

Languages of the Mayoruna branch are spoken in (north)eastern Peru and adjoining areas.
of Brazil; prior comparative treatments of the Panoan family have had little access to data from the Mayoruna Branch of the family. Fleck’s contribution is based on a combination of original fieldwork with all the surviving languages of the branch, plus archival research on earlier descriptions of apparently extinct Mayoruna languages. Fleck describes the ergative alignment patterns in the extant languages of the Mayoruna branch: Matses, Matis, Kulina, Dëmushbo, and Chankuëshbo/Korubo. The patterns that emerge from this comparative study suggest that the Mayoruna languages, particularly Matses, are in the process of developing more uniform ergatively-aligned morphology. The alignment patterns in these languages vary in several details, but overall were found to be much more similar to each other than they are to other Panoan languages, thereby supporting the hypothesis that the languages in the Mayoruna branch compose a linguistic subfamily.

**Pilar Valenzuela: Ergativity in Shipibo-Konibo.** Shipibo-Konibo is spoken in eastern Peru, especially on the banks of the Ucayali River; it is the language spoken by the most populous group in the Panoan language family. Valenzuela describes the consistent morphological ergative pattern found in nominal case-marking and the syntactic ergativity found in internally headed relative clauses. She also describes numerous non-ergative patterns found in morphology and syntax: case-marking on emphatic pronouns, progressive clauses, doubled pronouns, plural marking on the verb, tripartite participant agreement on adjuncts, and same-subject/different-subject constructions.

**Antoine Guillaume: How ergative is Cavineña?** Cavineña belongs to the Tacanan family, about which little typological information is known; it is probably most
closely related to the Panoan language family, and so it is not surprising to find pervasive morphological ergativity in Cavineña. Guillaume offers a clear description of morphological ergativity, including case-marking and a system of pronominal enclitics in second position in the clause. Prior analyses of Cavineña argument structure have mistakenly described it as having a complex split system with multiple factors needed in order to predict the form of a particular pronoun (difference between main and subordinate clause, mood/polarity of the clause, constituent order and person hierarchy). Here Guillaume shows that the so-called split is restricted to the pronominal clitics and that it has a morpho-phonological basis rather than a morpho-syntactic one. In contrast to the consistent morphological ergativity, syntactic patterns are either neutral with respect to pivot or operate on a nominative-accusative basis.

The Cariban family is spoken in northern South America, throughout Venezuela and the three Guianas, across northern Brazil, with eastern outliers in Colombia and southern outliers in central Brazil. The family is known for morphological ergativity in a range of constructions, including some unusual ergative splits.

**Bruna Franchetto: The Ergativity Effect in Kuikuro (Southern Carib, Brazil).** Kuikuro is among the southernmost of the languages in the family, and one of two that presents almost exclusively ergative morphological patterns. In this paper, Franchetto presents a clear description, based on both elicitation and extensive text data, of the morphosyntactic dimensions of ergativity. She shows that case-marking, verbal cross-referencing and VP constituency follow an absolutive pattern, but that the only syntactic subject property in Kuikuro, control of coreference with the third person reflexive possessive prefix, identifies S and A as the subject. She shows that the
morphosyntax of verbal clauses is virtually identical to the morphosyntax of possessed nouns (including cognate morphology). She also identifies a second-position element found primarily in texts that (minimally) contains a demonstrative pronoun and the copula, which certainly played an important role in allowing etymological nominalizations to appear as main clause verbs. She additionally explores the range of uses of the ergative suffix/postposition, concluding that a range of oblique uses can be clearly distinguished from its use to mark the agentive core argument of a transitive verb. Finally, she explores some proposals within the generative literature for modeling the parallels between main clauses and nominalizations.

The entire Jê family is spoken in central Brazil, and presents split intransitivity and multiple ergative splits, as well as multiple classes of non-canonically marked core arguments for semantic subsets of verbs. We have one paper that combines Jê and Cariban.

**Spike Gildea and Flávia Castro Alves: Nominative-Absolutive: Counter-Universal Split Ergativity in Jê and Cariban.** This paper is a combination of original description from some languages and a reanalysis of previously published descriptions in a comparative and typological framework. Nominative-absolutive alignment is a form of split-ergativity in two ways. The first split is internal to the clause type, which presents both nominative and absolutive morphological patterns with no corresponding accusative or ergative patterns: most present no nominal case-marking (although in two, free pronouns can be used only for nominative arguments); where there is auxiliary agreement, it is always with the nominative; absolutive pronominal enclitics mark the main verb. The label nominative-absolutive follows from the fact that the nominative and
absolutive are the marked categories, with no marked accusative or ergative pattern. The second split is based on tense-aspect-mood-polarity, with the nominative-absolutive clause type coding future, imperfective (although also completive in at least one language), irrealis, and negative. These patterns are both counter to the expected universal patterns identified in the typological literature: no other cases have been identified in which (even pronominal) case-marking is nominative while verbal cross-referencing is absolutive, and the universally expected semantic values of the ergative clause type in such a split are, respectively, past, perfective, realis and positive. The authors conclude by asking if the number of counter-examples to putative universals of split ergativity should lead us to question the validity of the definition for the typological category “ergative construction”.

**Part II. Recent Diachronic Innovations: Syntactic Ergativity**

All three of the languages discussed in this section share three properties: (i) they are all genetic isolates (or belong to a very small family that has not been firmly linked to any other genetic unit), (ii) ergative patterns—both morphological and syntactic—prevail, and (iii) in all, main clause grammar is isomorphic to possessed nouns in predicate nominal clauses, suggesting that main clauses were recently reanalyzed from nominalizations.

**Raquel Guirardello: Ergativity in Trumai.** Trumai is an isolate spoken in the Xingu park in central Brazil. It is one of the most consistently ergative languages ever described, with ergative case-marking, absolutive verbal cross-referencing, absolutive VP constituency, and absolutive to absolutive raising from complement clauses. The only
grammatical property that presents a nominative alignment is the use of positional auxiliary verbs. This creates a typological dilemma, in which almost no grammatical properties distinguish the traditional notions of subject and object. Guirardello resolves this problem by appealing to a Givónian notion of subject as (weakly) grammaticalized topic.

**Francesc Queixalós: Grammatical Relations in Katukina-Kanamari.**

Katukina-Kanamari belongs to a very small language family, which has yet to be related to any other languages. KK is another strongly ergative language, with ergative case-marking, ergative verbal cross-referencing and ergative VP constituency, plus an absolutive pivot for focalization, WH questions, and relative clauses. An antipassive is available (and must be utilized) in order to make topicalization, WH questions and RCs available to the agent. A little-used nominative-accusative transitive clause type exists alongside the ergative clause type. The reflexive, applicative, and noun incorporation all uniquely target the P, providing limited domains for the expression of a nominative-accusative pattern. This creates real problems for the traditional grammatical notion of subject, which Queixalós resolves differently from Guirardello, arguing that the absolutive is best analyzed as the synchronic subject in KK, leaving the ergative to be the DO.

**Katharina Haude: The Intransitive Basis of Movima Clause Structure.**

Movima is an isolate spoken in lowland Bolivia. Movima presents a strong inverse system in transitive clauses, with participants assigned to Proximal or Obviative argument status based on relative location on an ontological salience hierarchy: 1 > 2 > 3human > 3animate > 3 inanimate. When participants are equal on the hierarchy, the
primary topic becomes proximate. Grammatically, the proximate argument is internal to the VP, with special cliticization patterns for pronouns and articles and rigid postverbal order; the obviative argument is external to the VP, has distinct cliticization patterns, and order flexibility. The single argument of intransitive clauses is always obviative, reinforcing the conclusion that obviative is the privileged syntactic argument, a typologically uncommon phenomenon. When the agent is Proximate (roughly 80% of clauses in natural texts), the verb bears the Direct suffix and when the agent is Obviative (20%), the verb bears the Inverse suffix; so 80% of the time, P and S pattern together (as Obviative), the rest of the time A and S pattern together. Of particular relevance for this volume, Haude shows that in discourse, there are numerous violations of the saliency hierarchy, all in a single direction: sometimes a definite lower-ranking agent is not assigned to obviative, which would have entailed an inverse clause; in these cases, instead of following the hierarchy, the lower-ranking agent is assigned to the Proximate grammatical role, making the clause Direct and resulting in a more consistent ergative-absolutive pattern. Haude also shows that transitive main clauses are precisely parallel to predicate nominal constructions with a possessed predicate noun—this provides a ready internal reconstruction of the grammatical properties of proximate (possessor of the predicate noun) and obviative (subject of the predicate nominal clause), leading Haude to explore a synchronic analysis of all verbal clauses as predicate nominals, which would mean that all clauses in Movima are intransitive.

As seen in §1, there are many more languages in Amazonia and other parts of lowland South America that present ergative patterns. Most have not been described to the level of detail seen in the studies in this volume. We hope that the increasing
academic concern with description will lead to the necessary descriptions that will allow
the next steps in theoretical and diachronic studies, and that volumes like this one can
help to inform the kinds of questions that are addressed in those descriptions.

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