Table of Contents and Introduction for

The Oxford Handbook of Ergativity

Eds. Jessica Coon, Diane Massam, Lisa Travis
To appear, Oxford University Press

PART 3: APPROACHES TO ERGATIVITY

Diachronic

19. William McGregor – *Grammaticalization of ergative case marking*
20. Geoffrey Haig – *Deconstructing Iranian ergativity*
21. Edith Aldridge – *Intransitivity and the development of ergative alignment*
22. Miriam Butt & Ashwini Deo – *Developments into and out of ergativity: Indo-Aryan diachrony*
23. Ritsuko Kikusawa – *Ergativity and language change in Austronesian languages*
24. Daniel Kaufman – *Lexical category and alignment in Austronesian*

Acquisition

25. Edith Bavin – *The acquisition of ergativity: An overview*
26. Jennifer Austin – *The role of defaults in the acquisition of Basque ergative and dative morphology*
27. Clifton Pye & Barbara Pfeiler – *A comparative study of the acquisition of nominative and ergative agreement in European and Mayan lWhaanguages*

Experimental

28. Adam Zawiszewski – *Processing ergativity: behavioral and electrophysiological evidence*
29. Nicholas Longenbaugh & Maria Polinsky – *Experimental approaches to ergative languages*

PART 4: CASE STUDIES

30. Judith Aissen – *Correlates of ergativity in Mayan*
31. Mark Baker – *Ergative case in Burushaski: A dependent case analysis*
32. Ane Berro & Ricardo Etxepare – *Ergativity in Basque*
33. Miriam Butt – *Hindi/Urdu and related languages*
34. Richard Compton – *Ergativity in Inuktitut*
35. Diana Forker – *Ergativity in Nakh-Daghestanian*
36. Geoffrey Khan – *Ergativity in Neo-Aramaic*
37. Christa König – *Ergativity in Africa*
38. Shobhana Chelliah – *Ergativity in Tibeto-Burman*
39. Mary Laughren – *The ergative in Walpiri: A case study*
40. Yuko Otsuka – *Ergative-absolutive patterns in Tongan: An overview*
41. Tyler Peterson – *Ergativity across Tsimshianic*
42. Francesc Queixalós – *What being a syntactically ergative language means for Katukina-Kanamari*
43. Andrés Salanova – *Ergativity in Jê languages*
44. Eva Schultze-Berndt – *Interaction of ergativity and information structure in Jaminjung (Australia)*
45. Kevin Tuite – *Alignment and orientation in Kartvelian (South Caucasian)*

Introduction

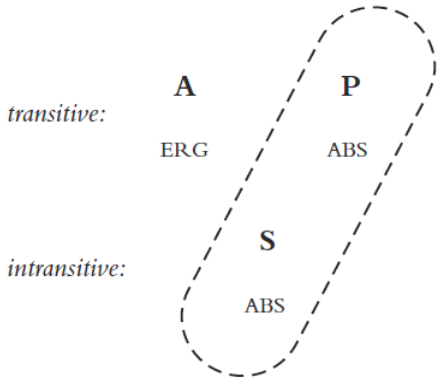
Jessica Coon[1], Diane Massam[2], Lisa Travis[1]
[1]McGill University, [2]University of Toronto

X.1 Introduction

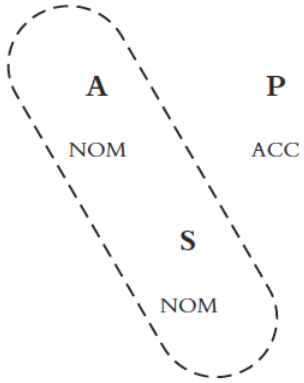
X.1.1 Introducing ergativity

This volume tackles the phenomenon known as *ergativity*. The term "ergativity" has been most commonly used to refer to systems with one or both of the following properties: (i) transitive subject (A arguments in (1)) pattern differently from intransitive subjects (S arguments) and from transitive objects (P arguments); and (ii) transitive objects and intransitive subjects pattern alike. In such a system, schematized in (1a), the A argument is referred to as the "ergative" argument, and the S and P arguments are the "absolutive" arguments. This type of system contrasts with a "nominative–accusative" systems, shown in (1b).

(1) a. ERGATIVE–ABSOLUTIVE



b. NOMINATIVE–ACCUSATIVE



Just as there is more than one way to be "ergative", it is important to point out that "ergativity" may refer to any characteristic which aligns arguments as in (1a)—this includes not only the more common morphological case marking and agreement, but also word order, discourse and information structure, or the extractability of arguments. A wide range of work across different traditions converges on the idea that "ergativity" is not a single unitary phenomenon, and is not realized in the same way across different languages. Dixon (1994, 219), for example suggests that "there is no necessary connection between ergative characteristics and any other linguistic feature", and Johns (2000, 67) writes in a similar vein that there may be "little value in studying ergativity as a thing in itself." In her recent survey of ergativity, Deal (2015b) suggests that "ergativity is not one but many phenomena." Nonetheless, certain patterns and correlations

emerge, suggesting that while there is certainly diversity, there is also some unity—perhaps motivating the existence of this additional volume on the topic. The general themes of unity and diversity in and among ergative systems are touched on in the chapters that follow.

Before discussing the organization and content of the volume, a few disclaimers are in order. First, in this introduction, we do not attempt to provide a comprehensive survey of the wide range of existing work on ergativity. We refer readers to works such as Johns 2000, Aldridge 2008a, and Deal 2015b for overviews in the generative tradition; Dixon 1979, 1994, McGregor 2009, and Comrie 2013a,b for more typologically-oriented overviews; and Coon & Adar 2013 for an annotated bibliography of work on this topic. Rather, we aim to highlight some of the topics that have emerged over the years, which we feel reappear throughout this volume, and point to some common themes. Second, due to the broad reach of the term "ergative", ergativity may be viewed from a number of different perspectives. We have done our best to include works representing a range of different theoretical and methodological traditions, though as with any volume, imbalances reflecting the orientations of the editors nonetheless exist. Finally, many of the papers contained here would fit naturally in more than one of the sections below, and the reader should interpret these divisions as loose guidelines rather than a strict packaging.

X.1.2 Themes and organization

The volume is organized into 4 main parts. Part 1, *Accounting for ergativity*, focuses on factors which distinguish ergative from non-ergative systems and how these may be parameterized and formalized in the grammar. In Part 2, common as well as less-common characteristics and manifestations of ergative systems are discussed. Topics here include alignment splits, antipassive constructions, and word order correlations, as well as nominalization, voice systems, and connections to speech acts and information structure. Part 3 focuses on approaches which draw on data from a diverse range of methodologies; these papers focus on ergativity through the lens of diachronic, experimental, and acquisition research. Finally, Part 4 turns to "case studies"—in depth looks at ergativity and ergative phenomena in particular languages or language families.

Throughout the four parts of this volume, several themes emerge. One such theme is the impressive diversity of languages which exhibit ergativity—languages from every continent and an impressive number of language families are represented—as well as the wide range of phenomena that have been associated with the label "ergative". In addition to diversity in the geographic and empirical landscape, the contributions to this volume also reflect the range of different analyses, views, and theoretical approaches of how to interpret these facts. Relatedly, it becomes clear that ergativity is not as fully isolated a phenomenon as it is sometimes made out to be. Some

characteristics that have been argued to hold of ergativity do not hold in a uniform way, such as the existence of split systems, antipassives, or extraction restrictions, or continue to resist full explanation, such as correlations between word order and ergativity. As has been frequently noted, not only do we find non-ergative patterns throughout languages traditionally labelled "ergative", we also find ergative patterns in a number of language and domains normally considered "nominative-accusative."

To pick just a couple of illustrative examples, this volume includes a number of papers on split ergativity (see especially §X.2.2 and §X.3.1) that demonstrate not only the complexity of defining ergative splits and differentiating them from other types of differential argument marking systems, but also disagreement about how they should be formally represented: as simply morpho-phonological rather than syntactic; connected to something specific to the syntax of ergative languages; driven by competing functional discourse pressures; or even that they might just be the natural fall-out of other structural properties, and hence not be a hallmark of ergative languages at all. In addition, the antipassive, once commonly thought to be exclusive to ergative languages, is argued to be found across other types of languages as well (see §X.3.1 and §X.5). The derivational origins and limits of ergativity are similarly unclear, being possibly based on information structure, or perhaps related to voice systems and nominalizations, and with a possible reach to other domains such as speech act structure (§X.2.1, §X.4).

Despite the diversity reflected here, a number of points of commonality or areas of agreement emerge. A look at the contributions in Part 4 drives home the point that simply labeling a language as "ergative" or "accusative" is not enough. Many contributions here highlight the importance of careful, holistic investigations into individual languages. Just as a given language must be examined carefully, it may be examined from more than one angle. In this volume we see the benefits of increasing the diversity of approaches to the study of ergativity (see §X.4), as well as an increase in cross-collaboration in various disciplines—through studies of acquisition (Bavin, Austin, Pye & Pfeiler), experimental work (Longenbaugh & Polinsky, Zawiszewski), diachronic analyses (McGregor, Haig, Aldridge, Butt & Deo, Kikusawa, Kaufman), or through discourse and speech-act structure (Wiltschko, DuBois). The implications discussed in the other works that follow are similarly far-reaching, with consequences for the representation of case and agreement systems more generally, for argument structure, and the role of constraints in the grammar, to name just a few.

Another striking point of commonality across many of the formal accounts of ergativity presented here is that ergativity or ergative assignment occurs *low* in the structure. Whether this is formalized as a low, in situ licensing of ergative subjects (see Legate, Sheehan, Laka, Müller &

Thomas, Woolford, Aldridge), or as the result of ergative being assigned configurationally to the higher of two nominals in some domain, perhaps by virtue of the ergative argument remaining *low* (Baker & Bobaljik, Baker, Nash, Coon & Preminger), the relevance of the structural *height* of subjects is discussed throughout many of the works here. However it is formalized, the proposed "lowness" of ergative subjects may in turn have consequences elsewhere in the grammar, for example in word order (Taraldsen), or for connections between nominalization and ergativity (Alexiadou, Kaufman).

We do not explore further the many threads of research in this volume, but will let the contributions—which we introduce briefly in turn below—speak for themselves. Far from being the last word on ergativity, we anticipate that this volume will serve to spark further interest and study of this topic, which we hope to have demonstrated has implications for linguists working in any disclipine or subfield of linguistics.

X.2 PART 1: Accounting for ergativity

The papers in Part 1 share a common goal: to understand and model how ergativity arises either in a specific language, or cross-linguistically. In section X.2.1 DuBois, Sheehan, and Mahajan each discuss the "parameterization" of ergativity. DuBois' paper focuses on functional motivations for ergativity, and the competing pressures which might result in ergative or accusative grammatical systems. Sheehan seeks to capture not only differences between ergative and non-ergative languages, but also differences among what she identifies as sub-types of ergative languages, with a parameter hierarchy. Mahajan narrows in to discuss differences in how "absolutive" arguments are represented, with a focus on Hindi. Though they have different scopes and approaches, the articles share a theme found throughout the volume and in other work, namely that languages may manifest ergativity in different ways and perhaps to different degrees.

The chapters in section X.2.2 tackle a specific question in the formal representation of ergativity: what is special about *ergative* arguments? Two main approaches are presented, labelled in Baker & Bobaljik's contribution as the "Inherent Case Theory" (ICT) and the "Dependent Case Theory" (DCT). In the former, ergative case is assigned to an external argument in its base position (e.g. specifier of *v*P). In the DCT approach, ergative case is assigned *configurationally*; it is not tied to a specific functional head, but rather is assigned to the higher of two nominals in some specified domain. Baker & Bobaljik introduce both options, presenting evidence in favor of DCT. In her contribution, Legate presents an overview of the behavior of ergative marking in a wide range of different languages. Despite the range of variation she argues that what they share in common is a *low* source or ergative case, registering concerns for a DCT approach. Both Laka and

Nash tackle the question of ergative case assignment and splits in specific languages—Basque and Georgian, respectively—coming down on different sides of the debate. Laka argues in favor of a consistently *low* locus of ergative case in Basque, providing a detailed analysis of the verb *behar* 'need'. Nash, on the other hand, argues that the non-ergative alignment in Georgian arises when the subject is outside of the *v*P domain, which she formalizes in terms of Dependent Case. Each article is summarized in more detail below.

X.2.1 Representing ergativity

In *Ergativity in discourse and grammar,* **Dubois** discusses the relationship between ergativity and an "ergative discourse profile". Dubois argues that the presence of ergative alignment in discourse—specifically, an ergative alignment in terms of which roles arguments play when they are introduced and tracked throughout utterances—reveals motivations for grammaticized patterns of ergativity cross-linguistically. A conflicting universal discourse-pragmatic pressure, namely for "topicality", gives rise to accusativity. In this chapter, the ergative discourse profile is examined through the lens of typology, language acquisition, and language change. Additional functional factors which contribute to the grammaticization of ergativity including verb semantics, aspects, and inherited morphosyntax, are also discussed here.

Sheehan's paper, *Parameterizing ergativity: An inherent case approach*, outlines a parameter hierarchy to capture variation in alignment systems. The first parameter determines the presence of ergative vs. non-ergative alignment based on whether or not v^0 is able to assign inherent ergative case. Further micro-parameters within the ergative setting determine (i) the full distribution of ergative case (i.e. whether there are splits or active alignment); (ii) the presence or absence of extraction restrictions on ergative subjects; and (iii) the source of absolutive case in transitive contexts. Sheehan's contribution allows for variation within ergative systems, while still restricting the range of possible alignment systems. She discusses how the rankings between parameters connect to the need to create convergent derivations.

In *Accusative and ergative in Hindi*, **Mahajan** tackles the mechanism by which direct objects are licensed in Hindi. Through the examination of the syntax of perfective and imperfective prenominal relative clauses, Mahajan argues that morphologically bare ("absolutive") direct objects in Hindi are licensed by T. Specifically, Mahajan proposes that the restrictions on which arguments can be relativized in prenominal relatives provide evidence for how case licensing works in participial clauses; this in turn offers a window into licensing mechanisms in ergative constructions. These results contrast with recent work (e.g. Legate 2008 and others) which has

argued that transitive objects in Hindi are licensed low by v^0. Differential Object Marking is also discussed, and argued to not be a substitute for structural case licensing.

X.2.2 The nature of ergative case

In their chapter, *On inherent and dependent theories of ergative case*, **Baker and Bobaljik** discuss two approaches to how ergative case is assigned in the grammar, labelled Inherent Case Theory (ICT) and Dependent Case Theory (DCT). In the former, ergative case is an inherent case assigned to the subject by v^0, while in the latter ergative is a dependent case assigned configurationally to the higher of two arguments in some local domain. Baker and Bobaljik discuss the predictions of the two accounts and argue in favor of DCT through an examination of languages such as Shipibo, Kalaallisut, and Chukchi. As evidence against the ICT, they present constructions in which non-agents bear ergative case, and in which agents fail to receive ergative case. They also discuss the absence of active patterns of morphological case marking, argued to be predicted on the ICT.

In *The locus of ergative case*, **Legate** argues that while ergative case is not determined by a single factor cross-linguistically, ergative-assignment is governed by a consistent constellation of factors which share the property of occurring *low* in the clause, centered around *v*P. The factors Legate identifies include: theta-position and theta-role of the subject, the presence of a complement, the presence of a DP object, the theta-role of the object, the case of the object, the presence of object agreement, the lexical predicate, the light verb, and the aspectual head which selects vP. A wide range of languages are discussed, including two for which ergative initially seems to have a higher locus (TP or CP): Kurmanji Kurdish and Yukulta. Legate concludes that even here, ergative is assigned low and that high ergative languages may not exist.

Laka examines ergativity in Basque in her chapter, *Ergative need not split: An exploration into the* TotalErg *hypothesis*. In particular, she discusses what she calls the "TotalErg" hypothesis: the hypothesis that ergative is an inherent case, and that ergativity does not actually split. Apparent splits, under this account, are epiphenomenal, resulting from different structures rather than from different case-assignment properties of functional heads. She examines the Basque predicate *behar* 'need', which shows a split in the assignment of case to subjects and has been recently argued to provide evidence in favor of structural assignment of ergative by T (Rezac, Albizu, & Etxepare 2014). Laka argues instead that predicates like *behar* are nominals, and not raising modals. She concludes that there is no raising-to-ergative in Basque, and that ergative case is uniformly assigned by transitive v^0.

Nash's contribution, *The structural source of split ergativity and ergative case in Georgian*, examines split ergativity in Georgian in order to understand the difference between

ergative and nominative behavior within a single language, with cross-linguistic implications. Specifically, Nash argues that nominative alignment arises when the transitive subject is case-licensed in a position outside of *v*P. In an ergative system, on the other hand, the transitive subject is licensed inside of *v*P. Nash formalizes this variation in terms of a configurational approach to case assignment, in which the low subject is local enough to the object to receive dependent ergative case. Nash attributes the differences in licensing patterns to the presence or absence of an aspectual category, "Event", which has both semantic and syntactic consequences.

X.3 PART 2: Characteristics and extensions

Part 2 has two sections. The first section includes papers that examine some of the key grammatical characteristics that are commonly considered to be correlated with ergativity, and the second includes papers that extend our notion of ergativity in one of two ways. Some papers extend our view of ergativity empirically, by looking at phenomena that are usually considered to lie outside ergativity but which have been argued to be related to it, while other papers extend the usual discussion of ergativity theoretically, by tying ergativity to theories of speech acts and information structure.

X.3.1 Characteristics

Languages with ergative systems are said to exhibit properties and constructions that are characteristic of ergativity, and in this sub-section, some of these characteristics are explored. One common claim about languages with ergative case systems is that they are never uniformly ergative, rather they always exhibit other case patterns as well. This property is referred to as split ergativity, in which the ergative pattern is lost in certain contexts, often in non-perfective aspects or in contexts with "highly ranked" (e.g. 1st and 2nd person) subjects. Several papers in this section explore split ergativity, as outlined below.

Woolford's chapter, *Split ergativity in syntax and at morphological spellout*, focuses on types of split ergative languages, providing an overview of conflicting definitions in the literature. She argues that a consistent definition is important in evaluating claims about whether all ergative languages exhibit splits. She discusses familiar triggering factors such as person and aspect (e.g. Marathi, Chol) and lesser-known triggers such as stage or individual aspect (Nepali) and social conventions (Folopa, Mongsen Ao). She includes languages where ergativity depends on object properties (e.g. Niuean), and she also examines languages with "active" alignments, arguing that while some are split (Choctaw), others are fully ergative (Laz), since all verbs that can license ergative case do so in all contexts.

In their contribution *Split ergativity is not about ergativity*, **Coon and Preminger** examine both aspect-based splits, as in Basque and Samoan and person-based splits as in Sakha and Dyirbal, arguing that split ergativity is epiphenomenal, and that it is not in fact limited to ergative languages. They consider that case splits are due to structural factors, with the non-ergative pattern arising as the result of a bifurcation of the clause, so that the clause becomes intransitive, hence quite straightforwardly not ergative. They argue that bifurcation can be the result of non-perfective (i.e. locative) syntax, or of 1st and 2nd person licensing requirements, thus accounting for the universal directionality of the splits. They conjecture that because all subjects pattern similarly in nominative languages, such splits are not as apparent as they are in ergative languages.

Malchukov takes a functional-typological approach to splits in *Ergativity and differential case marking*, examining differential object marking (DOM), which is widely attested, and differential subject marking (DSM), which is less discussed, and is found mainly in ergative languages. He shows that while DOM can be uniformly explained via markedness, DSM cannot be so explained as many patterns mark subjects that are higher on the hierarchy (e.g. Hindi). He explores two views about case, indexing and distinguishability. Though these are sometimes taken to be in conflict, he argues that both are needed as together they can account for the varying patterns of DSM and other case patterns. He presents an OT analysis, showing that two unranked constraints, DIFF and INDEX, can converge or not, allowing for the existence of different patterns.

Müller and Thomas, in their chapter *Three-way systems do not exist*, discuss three-way systems, arguing that such systems do not exist syntactically, but diverge from two-way systems through scale-driven optimization operations at the syntax-morphology interface. They argue that such languages are actually either ergative or accusative, with case markers that disappear in certain contexts because of morphological processes. Through examination of a range of languages such as Kham, Djapu, Nez Perce, Upriver Halkomelem, and Dyribal, they propose adding a transitive scale to the standard definiteness, animacy, and person scales, which are also usually active in these systems. This allows the successful Principles and Parameters approach to syntactic case assignment to remain just as it is for nominative, ergative, and for three-way systems.

Ergative languages are often said to exhibit a particular construction, sometimes considered to be the ergative version of the passive construction, known as the antipassive. **Polinsky**, in her contribution *Antipassive*, examines this construction across languages (e.g. Chukchi, Diyari, Labrador Inuit, Warlpiri), summarizing its properties and key approaches. She defines it as a construction where the logical object of a predicate is not realized as a direct object but as a non-core argument or is left unexpressed. She demonstrates various realizations including some less

typical, such as (pseudo) noun incorporation and bi-absolutive constructions. She argues that there are interpretive effects, but that none is a defining factor across all antipassives cross-linguistically. She shows that antipassive and passive constructions are not mutually exclusive, and that antipassive is not limited to ergative languages though it is more noticeable in such languages.

Another proposed characteristic property of ergativity is word order, in particular it has been claimed that SVO order and ergativity do not coincide. **Taraldsen** examines this generalization in *Remarks on the relation between case alignment and constituent order,* demonstrating that SVO can be derived in a multitude of ways, as can ergative case marking. He questions whether the generalization holds of all these possible derivations, and argues that we would expect counterexamples, hopefully within certain types of well-defined languages. He examines tripartite and neutral languages with ergative agreement patterns but he finds that no conclusion can be drawn, due to lack of data. The paper also examines key proposals about ergativity, pointing out necessary modifications in order to account for the word order restriction. The paper richly illustrates the complexity involved in developing detailed analyses of broad generalizations.

X.3.2 Extensions

In this section, our familiar view of ergativity as a sentential argument indexing system is extended to allow for consideration of the role of ergativity in other domains such as nominalizations, voice systems, information structure, and speech act theory. The authors of the four papers in this section take different positions on how and whether these extensions can be posited. Alexiadou argues that ergativity is linked to nominalization, and Erlewine, Levin and van Urk argue against a currently widespread view that Austronesian style voice systems are an expression of ergativity. Johns and Kučerová argue that ergative patterns stem from structural properties of information structure, while Wiltschko argues that at the thematic level, ergative patterns are basic, and that they can be extended into speech act theory. In the following paragraphs, we outline each of these papers.

It has been noted that ergativity is related to nominality, both because nominalizations often exhibit ergative case, and because verbs in ergative languages seem to exhibit fewer verbal properties than verbs in nominative systems. **Alexiadou** explores these issues in *Ergativity in nominalization*, noting that many authors have attributed ergativity to the presence of a defective *v* or Voice head, which yields a more nominal clause. She observes that ergativity only arises in a subset of nominalizations in languages that have more than one nominalization pattern, and that these are cases that contain an n head. She argues that *n*-based nominalizations allow only one structural case and do not contain an external argument. She also includes a discussion on the

nature of unergative subjects. In her paper, ergativity is related to characteristics that enable it to extend to other construction types.

In *Ergativity and Austronesian-type voice systems*, **Erlewine, Levin, and van Urk** examine recent extensions of ergativity to Austronesian voice system languages. They begin by reviewing and critiquing ergative analyses of voice systems as in Tagalog, Malagasy, and Atayalic languages, and they bring in new data from Balinese and (non-Austronesian) Dinka. These languages have similar voice systems to the other languages, but they do not exhibit ergativity, thus they demonstrate the necessary dissociation of these two phenomena. They argue that there must be mechanisms other than ergativity that yield the behavior of Austronesian-style voice systems. Their paper thus suggests that there are limits on extensions of ergativity to explain other grammatical phenomena.

Johns and Kučerová's chapter, *On the morphosyntactic reflexes of information structure in the ergative patterning of the Inuit language* shows that there is variability in the presence of object agreement in the ergative-antipassive alternation in the Inuit language. They argue that this is related to information structure and given this, the case and agreement patterns fall out from familiar principles. They argue that absolutive object "agreement" is in fact cliticization, and that such cliticization is tied to the fact that absolutive objects are always "aboutness" topics. Such topics must be at the edge of a phase in order to be assigned a referential address, and this affects the locality relations of the arguments, yielding an ergative pattern. The also touch on dialect variation across the Inuit languages. Their paper thus raises a new perspective on the nature of case splits.

Wiltschko argues in her programmatic contribution, *Ergative constellations in the structure of speech acts*, that ergativity extends beyond the familiar argument structure domain into the domain of speech act structure. She argues for the existence of this domain and shows that, as with argument structure and case structure, ergativity is a possible and indeed, expected pattern at this level. She overviews proposals about speech act structure, touching on assertions, imperatives, and presentatives, and on particles such as *eh*, and German *jo*. She argues that speech act structure consists of a grounding layer and a response system layer, and that ergative constellations can be detected in each of these.

X.4 PART 3: Approaches to ergativity

The papers in Part 3 show how diachronic, acquisition, and experimental work can probe data points and theoretical questions in ways that can both complement and support the work reported on in other parts of this volume. Recurring themes in these papers involve issues such as the

amount of variation that is found in the instantiation of ergativity and the possibility of reanalysis and/or grammaticalization of structure. There is the basic question of how closely related languages can come to have very different grammatical systems, thereby raising further questions concerning how languages change, what the influence of language contact is, and what parts of language are susceptible to reanalysis. Diachronic work takes these puzzles as the starting point. But questions of language change and reanalysis lead to questions about acquisition. Acquisitionists explore what might be subject to reanalysis, what might be a default setting for a parameter, what triggers are salient, and what structures are learnable. Experimental work outside the domain of acquisition looks at related areas where similar questions are investigated, such as what systems are more easily processed, and what elements in the linguistic string aid intelligibility. Specifically in the context of ergativity, we can ask whether ergative systems are stable or are prone to reanalysis, how one arrives at an ergative system, what the paths out of such a system are, and whether there is any evidence that an ergative system is either more or less complex than a nominative system.

X.4.1 Diachronic

A striking characteristic of ergativity is how differently it may present itself from language to language. This is particularly noticeable where microvariation appears within language families. In this section, six chapters tackle the problem of variation by investigating paths of change. Several different types of focus are evident in these chapters—variation vs. commonality and description vs. theoretical account. As more and more details about variation are uncovered (see also the papers in Case Studies below), the puzzle of what we mean by ergativity and what a theoretical account for ergativity might be becomes more complex. Some of these chapters stress the fact that the paths to ergativity are more varied than previously thought (Macgregor, Haig), others try to reduce the number of possible paths (e.g. Aldridge). Without getting down to the details of specific mechanisms, a larger question can be raised as to whether change to an ergative system can be tied to a shift of one language-particular characteristic, or whether a general flavor of ergativity is constructed by coinciding but logically independent changes. It is no surprise that these issues appeared in the first two parts of this volume as well when discussing what the parameters of ergativity are and how the particular characteristics of ergativity are accounted for.

McGregor traces the creation and loss of ergative case morphemes cross-linguistically in his chapter*, Grammaticalization of ergative case marking*, arguing that the range of sources for this case-marker is wider than what is often assumed. He outlines and evaluates various proposals in the literature, critiquing the viability of lexical sources, but giving multiple examples where

markers of other cases, indexical items, and directional elements have been reanalyzed to produce ergative case morphemes. He also discusses instances where ergative case markers themselves are reanalyzed as other case markers or grammatical categories. In the final section of the chapter he discusses the role of language contact in the development of ergative case markers and ergative systems.

Haig focuses on ergativity in Iranian languages in his chapter, *Deconstructing Iranian ergativity*. He introduces three case studies, Kurdish, Balochi, and Taleshi, to illustrate the extent of the micro-variation of ergativity within Iranian languages. He focuses on the path of the emergence of these systems, supporting the claim that this micro-variation stems from independent changes in interrelated subsystems such as case, agreement, and pronominal clitic systems. These findings result in raising doubts for any proposal that ergativity is best represented by a monolithic alignment parameter.

Aldridge in her chapter, *Intransitivity and the development of ergative alignment*, takes a different tack from the previous two chapters, emphasizing what characteristics paths to ergativity might share. Couched in a generative syntax framework, she explores data from several languages and language families, e.g. Indo-Aryan, Iranian, Inuit, and Austronesian, arguing that ergativity is derived from nominal structures. She examines two cases (Indo-Aryan and Inuit) where it has been claimed that the ergative structures came from earlier passives but advances an argument that even in these cases, the ergative was originally a possessive, supporting the hypothesis of a nominal base.

The next three chapters focus on two languages families that have been introduced in Aldridge's chapter, but offer different viewpoints. **Butt and Deo** in their chapter*, Developments into and out of ergativity: Indo-Aryan diachrony*, give a close look at four stages in the rise and fall of ergativity from Early Old Indo-Aryan to New Indo-Aryan, starting with the development of ergativity from participial constructions. Within New Indo-Aryan, they describe three major innovative patterns. In Hindi and Nepali, ergative case marking is strengthened with new morphology, in Bengali and Oriya, both ergative case and ergative pattern agreement is lost, and in Marathi and Gujarati, ergative agreement remains in spite of complications such as surface syncretism of morphology and differential subject case marking.

Kikusawa in her chapter, *Ergativity and Language Change in Austronesian Languages***,** uses the Comparative Method to reconstruct the direction of change in various Austronesian languages and to explain the typological diversity found within this language family. More specifically, she outlines three paths of change: (i) the shift from a morphologically marked ergative system to a fixed word order voice system (Ibaloy, Pendau), (ii) the development of an

accusative clitic system (Tongan, Samoan), and (iii) the development of a system of lexically marked NPs that can be analyzed as ergative (Tongan) or accusative (Maori).

In the final chapter of this section, *Lexical category and alignment in Austronesian,* **Kaufman** focuses on Western Malayo-Polynesian languages. He starts by comparing three theoretical accounts of Tagalog, posing problems for two of them – an ergative analysis and a case agreement analysis. He argues rather that Tagalog is a symmetric language where predicates are nominal rather than verbal. In order to support this account, he compares the structure of Tagalog to that of another Western Malayo-Polynesian language, Mamuju, a canonically ergative language. Kaufman shows how ergative structures found in Mamuju, as distinct from the structures of Tagalog, are developed through the reappearance of verbal predicates.

X.4.2 Acquisition

It is difficult to talk about language change without invoking questions about language acquisition. The next three chapters raise many of the relevant questions for the acquisition of an ergative language, the answers for which would have an impact on how language change should be viewed. As is pointed out, ergative languages are often split systems creating complex input for the language learners, which makes this a particularly interesting and informative field of study. The problems addressed include issues of methodology, the status default cases, and the use of acquisition data to support theoretical claims.

Bavin's chapter, *The acquisition of ergativity: An overview*, outlines various issues that arise in the study of the development of an ergative system in child language. By summarizing studies from the literature representing a range of languages and language families, she highlights several possible confounds in the input data that could create problems for acquisition. These include split systems, multiple uses for the same case marker, and the contribution of pragmatic function to the choice of construction. She also discusses potential hurdles such studies face, such as drawbacks in using naturalistic data and potential ambiguities in the acquisition data. In spite of this, the cross-linguistic data show similar results of timely successful acquisition with very little overgeneralization of ergative case-marking.

In the chapter, *The role of defaults in the acquisition of Basque ergative and dative morphology*, **Austin** presents data from previous studies on the acquisition of the verbal morphology and case in Basque. She shows that children resort to a default morphological system where forms that encode fewer features substitute for more complex forms, for example absolutive case is produced rather than ergative or dative. Austin argues that this repair strategy is not surprising given a Distributive Morphology analysis of Basque morphology. In a morphological

system where morphemes compete to realize a set of features, the notion of "best fit" will ensure that a less marked morpheme will appear in instances where the more complex form has not yet been acquired.

Pye and Pfeiler, in their chapter, *A Comparative Study of the Acquisition of Nominative and Ergative Agreement in European and Mayan Languages*, use acquisition data to probe the status of person marking in Mayan languages by comparing the acquisition of nominative person markers in French (clitics) and Spanish (agreement) with the acquisition of both absolutive and ergative person marking in four Mayan languages: Wastek, Yukatek, Ch'ol and K'iche'. The acquisition of the ergative person marking in all four Mayan languages followed neither the French nor the Spanish pattern, while the acquisition of the absolutive person marking produced mixed results. There were insufficient Chol data, but the acquisition patterns of Yukatek absolutive personal marking were similar to those of Spanish agreement. Those of Wastek and K'iche', however, differed from both those of French clitics and Spanish agreement markers. They argue that the grammaticalization of person markers as determined by their specific combination of clitic and affix properties predicts children's production of the person markers more accurately than their categorical status as absolutive or ergative.

X.4.3 Experimental

Experimental work on ergative languages is relatively new but clearly very important to our understanding of ergativity as a typological language category and as a theoretical construct. The existence of ergative languages raises questions concerning markedness, ease of acquisition, and ease of processing. Whatever the answers to these questions may be, it is clear that no universal pronouncements about language can be made without including data from ergative languages. Both papers in this section give overviews of experimental research on ergative languages. They discuss the methodologies used, the importance of the work, and some ideas for future research.

In his chapter, *Processing ergativity: behavioral and electrophysiological evidence*, **Zawiszewski** presents an overview of current experimental studies on ergativity using a variety of methodologies (self-paced reading, ERP, fMRI, grammaticality judgments) on a variety of languages (Basque, Hindi, Avar). After an introduction of the different experimental methods, he summarizes the studies and shows how they can be used to further probe the results from earlier experiments on nominative-accusative languages investigating issues such as the distinction of syntactic vs. semantic processing, subject/object asymmetries, and the effect of the L1 and L2 acquisition. He concludes with a discussion of the overall results and directions to be explored further.

Longenbaugh and Polinsky, in their chapter*, Experimental approaches to ergative languages*, review recent experimental work testing ergative specific questions involving alignment, long distance relations, and agreement in a range of languages including Hindi, Basque, Niuean, and Avar. They stress the importance of doing experimental work on ergative languages to resolve some confounds that are found in the existing literature on accusative languages. More specifically, the alignment of grammatical case with grammatical function can be teased apart in ergative languages. Their chapter ends with a suggestion that further experimentation can probe the heterogeneous nature of ergative languages.

X.5 PART 4: Case studies

This section of the book contains sixteen case studies of a range of languages from a range of language families. While the approaches of the authors and the scope of the studies vary considerably, the common threads that have appeared throughout the book reappear here. On one hand, ergative languages vary from one another to such an extent that one might suspect that they have no unifying feature, yet they also evidence enough recurring features to confirm their membership in the class. There are SOV, VOS, VSO, and SVO exemplars. Both morphological and syntactic ergativity are explored, and a variety of types of ergative systems are outlined in families such as Nakh-Daghestanian, Tibeto-Burman, and Kartvelian, as well as some apparently emergent systems in African languages. Several languages that are discussed exhibit both ergative case and ergative agreement systems, leading to insights about the relation between case and agreement, and to the relation between ergativity and features such as animacy, gender, number, and person, as well as tense and aspect. Most of the languages explored have split systems—some sensitive to aspect, some to number, while some are Split-S systems, in which different types of intransitive verbs are marked differently for case. The relation between ergativity and other constructions is also explored, focussing on constructions such as the antipassive and control structures, relative clauses, coordination, and non-finite sentences and nominalizations.

In *Correlates of ergativity in Mayan*, **Aissen** examines ergative characteristics of Mayan languages, with a focus on constraints on extraction. Like some of the other languages discussed in this volume, some (but not all) Mayan languages restrict the extraction of ergative subjects, which Aissen calls the ERGATIVE EXTRACTION CONSTRAINT (EEC). In this contribution, Aissen reviews the empirical facts and discusses two main approaches to the EEC in the recent literature on Mayan languages: (i) a Case-based approach, in which restrictions are attributed to abstract Case assignment configurations, and (ii) a morphosyntactic approach which attributes extraction

asymmetries to special morphology, in particular the "Agent Focus" morphology used when transitive subjects are extracted.

Through a detailed look at a range of constructions in *Ergative case in Burushaski: A dependent case analysis*, **Baker** provides a Dependent Case analysis of ergative case in Burushaski, a language of Northern Pakistan. To understand the distribution of ergative marking, Baker investigates three environments in which the canonical ergative pattern of the language disappears: (i) verbs with two absolutive arguments; (ii) verbs with an ergative argument and a dative argument; and (iii) future-tense clauses which permit absolutive transitive subjects. Baker argues that the syntax of each of these constructions is more complex than surface appearances show, lending support to the proposal that ergative case is assigned only when one NP (the ergative) c-commands another NP in the same local domain.

Berro and Etxepare's paper *Ergativity in Basque*, explores an ergative system that is manifested by both case and agreement morphology. They provide a thorough and detailed overview of both the case and agreement systems in Basque and of their interaction across both the nominal and verbal inflectional systems. They also demonstrate how ergative marking interacts with other systems such as number, person, and tense. They present a cross-dialectal study of the marking of ergative case on subjects of unergative predicates, which has been referred to as Split S system, while critiquing some of the claims that have been made about this system, such as the positing of implicit objects and light verb structures. They discuss claims that have been made that ergative is an inherent case linked to causation, by considering a range of construction types, including nominal and adjectival predicates, perception verb complements and raising verbs. In their closing section they discuss the notion of "marked case" in relation to case marking in Basque.

Butt in *Hindi/Urdu and related languages* gives an overview of ergativity in Hindi/Urdu but crucially sets the Hindi/Urdu facts against a background of other South Asian languages such as Nepali, Gujarati, Marathi, and Bengali. She highlights the range of variation and also details the different roles that differential case marking plays in each of the languages. Butt argues that the variation in the behavior of case and agreement in these languages, and the variation that role of differential case marking in agreement patterns, makes a tight link between case and agreement difficult to maintain.

In *Ergativity in Inuktitut*, **Compton** focuses on how ergativity is realized both in morphological case marking as well as in the rich agreement system of the language. After reviewing basic characteristics of Inuktitut, Compton discusses the various approaches to ergative

and absolutive case assignment in the literature. Finally, he turns to antipassive constructions and their relationship to Differential Object Marking and aspect.

In her chapter, *Ergativity in Nakh-Daghestanian*, **Forker** surveys the range of ergative alignment patterns found in the Nakh-Daghestanian (or East Caucasian) language family, concluding that the main correlates of ergativity in these languages are morphological. In particular, Forker discusses the system of gender and person agreement on verbs and the morphological case marking found on nominals. Biabsolutive constructions—in which both A and P arguments are marked absolutive—are reviewed, as well as valence-changing operations (causative, antipassive). Forker also provides an in depth discussion of control constructions, noting that there is a general tendency for syntactic accusativity in this domain.

Kahn's chapter, *Ergativity in Neo-Aramaic*, organizes and presents a complex set of patterns of ergativity in modern spoken form of Aramaic (Neo-Aramaic) split into four sub-groups: Western, Turoyo, Northeastern, and Mandaic. Khan discusses the nature of split ergativity evidenced in the patterns of verbal suffixes across a number of dialects, which are described in detail. He argues that the influence of Iranian languages on Eastern Aramaic explains both why Neo-Aramaic differs from other Semitic languages in its expression of ergativity and the non-canonical type of ergativity that it displays.

While African languages are generally left out of any discussion of ergativity, **König**, in her chapter, *Ergativity in Africa*, describes ergative patterns that appear in the West Nilotic family of Nilo-Saharan, in particular Shilluk. She points out four features particular to ergativity in African languages – marked nominative, no-case before the verb, OVA word order, and its relationship to pragmatically marked word order. She argues that ergative case developed in these languages through reanalysis of either determiners, genitive markers, or prepositions.

In *Ergativity in Tibeto-Burman*, **Chelliah** surveys morphological case marking in several representative languages of the Tibeto-Burman family: Dolakha Newar, Chintang, Tibetan, Meitei, and Burmese, using these to demonstrate four possible alignment patterns for core arguments. The first two languages exemplify a typical ergative alignment pattern. In Tibetan, there is a general pattern of ergativity but one in which transitivity factors influence whether the transitive subject receives ergative marking. Burmese shows an accusative alignment in which information structure (topicality, contrastiveness, and theticity) influences when "subject marking" occurs. Finally, Chelliah discusses Meitei, demonstrating that it falls somewhere between Tibetan and Burmese insofar as both transitivity and information structure considerations affect the marking of core arguments.

Laughren's chapter *The ergative in Warlpiri: A case study*, examines what has been claimed to be a morphologically ergative case system in a syntactically nominative-accusative language. Laughren begins with an overview of ergativity in Australian languages, then focuses on Warlpiri, which has certain verbs which take ergative subjects in finite clauses and other verbs which take unmarked or absolutive subjects. This chapter examines the distribution of the the ergative morpheme, including on body parts and circumstantial adjuncts, and the functions of the ergative DPs in both finite and non-finite clauses, with a focus on the relation between subject marking and instrument marking.

In her paper *Ergative-absolutive patterns in Tongan: An overview*, **Otsuka** demonstrates that Tongan has an ergative pattern in both morphology and syntax, but that this pattern is not consistent throughout the language, as nominal morphology is split between clitic pronouns and other nominals. There are three syntactic manifestations of ergativity in the language: relativization strategies, coordinate reduction strategies, and anaphoric antecedence patterns. Interestingly, these cannot be accounted for in a unified manner, and Otsuka argues that the first two are in fact PF phenomena. She claims that this necessitates a view of ergativity as a construction-specific rather than a language-specific phenomenon.

In his paper *Ergativity across Tsimshianic*, **Peterson** demonstrates that these languages have fully ergative agreement systems. Although there are splits, conditioned by clause type and person hierarchy, all sides of the splits exhibit ergativity. He describes the agreement patterns across the family, including a discussion of connectives, which are determiner-like particles that appear to contribute a further split. The more conservative languages are purely ergative, while other branches also exhibit transitive, contrastive and neutral alignments. He considers all to be expansions of ergativity, since A and S are never grouped together.

Queixalós' chapter, *What being a syntactically ergative language means for Katukina-Kanamari*, presents a detailed examination of alignment, and grammatical relations more generally, in the Amazonian language Katukina-Kanamari (KatKan)—a language which Queixalós describes as "remarkably suited for raising pivotal issues on grammatical relations". KatKan is shown to have two patterns of bivalent clauses: ergative and accusative. The latter, Queixalós shows, is more highly restricted in its distribution, and is found with unindividuated patient arguments. Queixalós' contribution includes a thorough survey of the empirical facts surrounding the two types of construction, as well as more general discussion of the interactions among grammatical roles, argument structure, and alignment.

Salanova, in his chapter, *Ergativity in Jê languages*, describes the distribution of ergative case marking in Jê languages in general, and Mẽbengokre more specifically. In these languages, the link between the ergative constructions and nominalization is clear, where the subject DP is marked with postposition when it occurs with the nominal/adjectival form of the verb. Further, he shows that the use of the nominalized structure is pervasive, appearing not only in embedded contexts, but in independent clauses as well depending on other considerations including aspect and the presence of post-verbal modifiers.

Schultze-Berndt's chapter, *Interaction of ergativity and information structure in Jaminjung (Australia)*, tackles the problem of a system where ergative case-marking appears to be optional, alternating with zero-marking, and, less frequently, ablative case. She describes several factors that influence the choice, factors which include animacy, verb class, tense/aspect, and information structure. Schultze-Berndt shows that factors that categorically determine morphological marking in other languages show up only as tendencies in Jaminjung, connecting it to differential case-marking of subjects.

Tuite's chapter, *Alignment and orientation in Kartvelian (South Caucasian),* starts by tracing the history of linguistic accounts of Georgian ergativity starting in the 17th century. This history is followed by a detailed description of the different case and agreement patterns found in Georgian, as well as in Laz, Mingrelian, two members of the Zan branch of the family, and in Svan, an outlier. Tuite further outlines the role of verb classes in determining these patterns. Once the present variation has been established, an overview is given of case, agreement, verb classes, and morphosyntax of Proto-Kartvelian.

X.6 Acknowledgments

In concluding this introduction, the editors would like to acknowledge the valuable help of several people. We would like to thank Crystal Chen, Patrick Murphy, and Rebecca Tollan for editorial assistance, and we would like to thank the editorial team at Oxford University Press, in particular Vicki Sunter, and Julia Steer, who has provided invaluable help and advice throughout the process of producing this volume. Finally we would like to thank all the authors for their work not only on their own contributions, but also in the reviewing process.