

EDITED BY

JESSICA
COON

DIANE
MASSAM

LISA DEMENA
TRAVIS

≡ The Oxford Handbook of
ERGATIVITY

THE OXFORD HANDBOOK OF

ERGATIVITY

OXFORD HANDBOOKS IN LINGUISTICS

Recently Published

THE OXFORD HANDBOOK OF CORPUS PHONOLOGY

Edited by Jacques Durand, Ulrike Gut, and Gjert Kristoffersen

THE OXFORD HANDBOOK OF LINGUISTIC FIELDWORK

Edited by Nicholas Thieberger

THE OXFORD HANDBOOK OF DERIVATIONAL MORPHOLOGY

Edited by Rochelle Lieber and Pavol Štekauer

THE OXFORD HANDBOOK OF HISTORICAL PHONOLOGY

Edited by Patrick Honeybone and Joseph Salmons

THE OXFORD HANDBOOK OF LINGUISTIC ANALYSIS

Second Edition

Edited by Bernd Heine and Heiko Narrog

THE OXFORD HANDBOOK OF THE WORD

Edited by John R. Taylor

THE OXFORD HANDBOOK OF INFLECTION

Edited by Matthew Baerman

THE OXFORD HANDBOOK OF DEVELOPMENTAL LINGUISTICS

Edited by Jeffrey Lidz, William Snyder, and Joe Pater

THE OXFORD HANDBOOK OF LEXICOGRAPHY

Edited by Philip Durkin

THE OXFORD HANDBOOK OF NAMES AND NAMING

Edited by Carole Hough

THE OXFORD HANDBOOK OF INFORMATION STRUCTURE

Edited by Caroline Féry and Shinichiro Ishihara

THE OXFORD HANDBOOK OF MODALITY AND MOOD

Edited by Jan Nuyts and Johan van der Auwera

THE OXFORD HANDBOOK OF LANGUAGE AND LAW

Edited by Peter M. Tiersma and Lawrence M. Solan

THE OXFORD HANDBOOK OF PRAGMATICS

Edited by Yan Huang

For a complete list of Oxford Handbooks in Linguistics, please see pp 1263–1264

THE OXFORD HANDBOOK OF

ERGATIVITY

Edited by

JESSICA COON, DIANE MASSAM,

and

LISA DEMENA TRAVIS

OXFORD
UNIVERSITY PRESS

OXFORD
UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide. Oxford is a registered trade mark of
Oxford University Press in the UK and in certain other countries

© editorial matter and organization Jessica Coon, Diane Massam, and Lisa deMena Travis 2017
© the chapters their several authors 2017

The moral rights of the authors have been asserted

First Edition published in 2017

Impression: 1

All rights reserved. No part of this publication may be reproduced, stored in
a retrieval system, or transmitted, in any form or by any means, without the
prior permission in writing of Oxford University Press, or as expressly permitted
by law, by licence or under terms agreed with the appropriate reprographics
rights organization. Enquiries concerning reproduction outside the scope of the
above should be sent to the Rights Department, Oxford University Press, at the
address above

You must not circulate this work in any other form
and you must impose this same condition on any acquirer

Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data
Data available

Library of Congress Control Number: 2016944782

ISBN 978-0-19-873937-1

Printed and bound by
CPI Group (UK) Ltd, Croydon, CR0 4YY

Links to third party websites are provided by Oxford in good faith and
for information only. Oxford disclaims any responsibility for the materials
contained in any third party website referenced in this work.

CONTENTS

Notes on Contributors xi

1. Introduction 1
JESSICA COON, DIANE MASSAM, AND LISA DEMENA TRAVIS

PART I ACCOUNTING FOR ERGATIVITY

Representing Ergativity

2. Ergativity in Discourse and Grammar 23
JOHN W. DU BOIS
3. Parameterizing Ergativity: An Inherent Case Approach 59
MICHELLE SHEEHAN
4. Accusative and Ergative in Hindi 86
ANOOP MAHAJAN

The Nature of Ergative Case

5. On Inherent and Dependent Theories of Ergative Case 111
MARK C. BAKER AND JONATHAN DAVID BOBALJIK
6. The Locus of Ergative Case 135
JULIE ANNE LEGATE
7. Ergative *need* not Split: An Exploration into
the *TotalErg* Hypothesis 159
ITZIAR LAKA
8. The Structural Source of Split Ergativity and Ergative Case
in Georgian 175
LÉA NASH

PART II CHARACTERISTICS AND EXTENSIONS*Characteristics*

9. Split Ergativity in Syntax and at Morphological Spellout 205
ELLEN WOOLFORD
10. Split Ergativity is not about Ergativity 226
JESSICA COON AND OMER PREMINGER
11. Ergativity and Differential Case Marking 253
ANDREJ MALCHUKOV
12. Three-Way Systems do not Exist 279
GEREON MÜLLER AND DANIELA THOMAS
13. Antipassive 308
MARIA POLINSKY
14. Remarks on the Relation between Case-Alignment
and Constituent Order 332
TARALD TARALDSEN

Extensions

15. Ergativity in Nominalization 355
ARTEMIS ALEXIADOU
16. Ergativity and Austronesian-Type Voice Systems 373
MICHAEL YOSHITAKA ERLEWINE, THEODORE LEVIN,
AND COPPE VAN URK
17. On the Morphosyntactic Reflexes of Information
Structure in the Ergative Patterning of Inuit Language 397
ALANA JOHNS AND IVONA KUČEROVÁ
18. Ergative Constellations in the Structure of Speech Acts 419
MARTINA WILTSCHKO

PART III APPROACHES TO ERGATIVITY
Diachronic

19. Grammaticalization of Ergative Case Marking 447
WILLIAM B. MCGREGOR
20. Deconstructing Iranian Ergativity 465
GEOFFREY HAIG
21. Intransitivity and the Development of Ergative Alignment 501
EDITH ALDRIDGE
22. Developments into and Out of Ergativity: Indo-Aryan diachrony 530
MIRIAM BUTT AND ASHWINI DEO
23. Ergativity and Language Change in Austronesian Languages 553
RITSUKO KIKUSAWA
24. Lexical Category and Alignment in Austronesian 589
DANIEL KAUFMAN

Acquisition

25. The Acquisition of Ergativity: An Overview 631
EDITH L. BAVIN
26. The Role of Defaults in the Acquisition of Basque Ergative
and Dative Morphology 646
JENNIFER AUSTIN
27. A Comparative Study of the Acquisition of Nominative
and Ergative Alignment in European and Mayan Languages 665
CLIFTON PYE AND BARBARA PFEILER

Experimental

28. Processing Ergativity: Behavioral and Electrophysiological Evidence 693
ADAM ZAWISZEWSKI

29. Experimental Approaches to Ergative Languages 709
NICHOLAS LONGENBAUGH AND MARIA POLINSKY

PART IV CASE STUDIES

30. Correlates of Ergativity in Mayan 737
JUDITH AISSÉN
31. Ergative Case in Burushaski: A Dependent Case Analysis 759
MARK C. BAKER
32. Ergativity in Basque 782
ANE BERRO AND RICARDO ETXEPARE
33. Hindi/Urdu and Related Languages 807
MIRIAM BUTT
34. Ergativity in Inuktitut 832
RICHARD COMPTON
35. Ergativity in Nakh–Daghestanian 851
DIANA FORKER
36. Ergativity in Neo-Aramaic 873
GEOFFREY KHAN
37. Ergativity in Africa 900
CHRISTA KÖNIG
38. Ergativity in Tibeto-Burman 924
SHOBHANA CHELLIAH
39. The Ergative in Warlpiri: A Case Study 948
MARY LAUGHREN
40. Ergative–Absolutive Patterns in Tongan: An Overview 989
YUKO OTSUKA
41. Alignment across Tsimshianic 1007
TYLER PETERSON

42. What being a Syntactically Ergative Language means for Katukina-Kanamari FRANCESC QUEIXALÓS	1035
43. Ergativity in Jê Languages ANDRÉS PABLO SALANOVA	1065
44. Interaction of Ergativity and Information Structure in Jaminjung (Australia) EVA SCHULTZE-BERNDT	1089
45. Alignment and Orientation in Kartvelian (South Caucasian) KEVIN TUIITE	1114
<i>References</i>	1139
<i>Author Index</i>	1241
<i>Language Index</i>	1245
<i>Subject Index</i>	1251

NOTES ON CONTRIBUTORS

Judith Aissen is Research Professor of Linguistics at UC Santa Cruz. The primary focus of her work since the 1970s has been on the morphology, syntax, and information structure of the Mayan languages, especially Tsotsil, Tz'utujil, and K'ichee'. She has always been particularly interested in the properties and analysis of Agent Focus constructions, and their position at the interface of these three modules.

Edith Aldridge is Associate Professor in the Department of Linguistics at the University of Washington. Her work focuses on syntax, particularly diachronic change, of Austronesian languages, Chinese, and Japanese. Her work on ergativity has appeared in the journals *Language and Linguistics*, *Compass*, *Lingua*, *Linguistics Vanguard*, *Sophia Linguistica*, as well as the collected volumes *Grammatical Change: Origins, Nature, Outcomes* and *Encyclopedia of Chinese Language and Linguistics*.

Artemis Alexiadou is Professor of English Linguistics at the Humboldt University of Berlin. She received her PhD in linguistics in 1994 from the University of Potsdam. Her research interests lie in theoretical and comparative syntax, morphology, and most importantly in the interface between syntax, morphology, the lexicon, and interpretation.

Jennifer Austin is Associate Professor in the Department of Spanish and Portuguese Studies at Rutgers University, Newark. She received her PhD in linguistics from Cornell University with a minor in cognitive science. Her research interests include language acquisition, bilingualism, and the effects of language contact. She is a co-author of the book *Bilingualism in the Spanish-speaking World* (2015) and has published articles on the acquisition of Basque, English, and Spanish.

Mark C. Baker is Distinguished Professor of Linguistics and Cognitive Science at Rutgers University. He received his PhD in linguistics in 1985 from MIT, and previously taught at McGill University. He specializes in the syntax and morphology of less-studied languages, seeking to bring together generative-style theories and data from fieldwork and typological comparison. He has written five research monographs, including *Case: Its Principles and Its Parameters* (2015).

Edith L. Bavin received her PhD from the University of Buffalo and taught at the University of Oregon before moving to Australia, where she conducted fieldwork on Nilotic languages and on the acquisition of Warlpiri. She switched to experimental work focusing on both typical and atypical language development. She was editor

of the *Journal of Child Language* (2006–12), edited the *Cambridge Handbook of Child Language* (2009) and a second expanded edition (2015) together with Letitia Naigles, and co-edited with Sabine Stolle *The Acquisition of Ergative Languages* (2013). Now an honorary professor at La Trobe University, she is still conducting acquisition research.

Ane Berro is a post-doc researcher at the University of the Basque Country (UPV/EHU) and the laboratory Structures Formelles du Langage (UMR 7023, CNRS/Paris 8). She did her doctoral dissertation ‘Breaking Verbs: From Event Structure to Syntactic Categories in Basque’ under the supervision of Beatriz Fernández (UPV/EHU) and Ricardo Etxepare (CNRS IKER UMR 5478), and, currently, she is working on aspect, categorization, and the relation between syntax and morphology.

Jonathan David Bobaljik has held appointments at Harvard and McGill, and is currently Professor of Linguistics at the University of Connecticut. His theoretical research has focused primarily on morphology and syntax, and he has conducted descriptive fieldwork on the Itelmen language, Kamchatka, Russia. Publications include *Universals in Comparative Morphology* (2012).

Miriam Butt is Professor for Theoretical and Computational Linguistics at the University of Konstanz. Her research interests include morphosyntax, historical linguistics, and computational linguistics. The bulk of her research is on South Asian languages, with a special emphasis on Urdu, though she has also worked on English and German. She has written and edited several books on syntax, semantics, and computational linguistics, including a textbook on theories of case.

Shobhana Chelliah is a documentary linguist working primarily on the Tibeto-Burman languages of Manipur state in northeast India. Her interests lie in morpho-syntactic issues such as case morphology, referent tracking, and affix ordering. Her publications include *A Grammar of Meithei* (1997) and the *Handbook of Descriptive Linguistic Fieldwork* (co-authored with Willem de Reuse (2011)). With funding from the National Science Foundation, she is currently working with members of the Lamkang community (Tibeto-Burman) to develop a practical orthography and create an online dictionary for their language. She is also working towards the creation of a language archive for Tibeto-Burman languages. Chelliah served as the Program Director for the Documenting Endangered Languages program at the National Science Foundation (2012–15), and is currently a professor of linguistics at the University of North Texas.

Richard Compton is Assistant Professor in the Department of Linguistics at the Université du Québec à Montréal in Canada. His work examines polysynthetic word-formation, nominal and verbal incorporation, lexical categories, modification, and agreement in Eastern Canadian Inuktitut. He has conducted fieldwork in the communities of Iqaluit and Baker Lake in Nunavut and is currently co-editing a new edition of a dictionary of the Kangiryuarmiut dialect of Western Canadian Inuit.

Jessica Coon is Associate Professor of Linguistics at McGill University. She finished her PhD at MIT in 2010 and then spent one year as a postdoctoral fellow at Harvard University. Jessica has worked on topics including ergativity, split ergativity, verb-initial word order, and agreement, with a special focus on Mayan languages. Her book *Aspects of Split Ergativity* was published by Oxford University Press in 2013.

Ashwini Deo received a Master's in Sanskrit grammar and linguistics from Pune, India, followed by a PhD in linguistics from Stanford University (2006). She is an associate professor at Yale University. Her main research interest is in systematic semantic change phenomena—particularly in the ways in which functional morphemes like tense–aspect, negation, possession markers change over time in the ways that they do. Within semantics–pragmatics she also works on phenomena in the domains of aspect, temporal reference, lexical semantics of verbs, and genericity. Her empirical focus is on the Indo-Aryan languages.

John W. Du Bois is Professor of Linguistics at the University of California, Santa Barbara. A specialist in functional linguistics, discourse, Mayan languages, and socio-cultural linguistics, his work centers on the interaction between discourse and grammar. He has long been interested in the complex functional competitions that drive the emergence of grammar as a complex adaptive system, yielding the extraordinary typological diversity of argument structure constructions and syntactic alignments in the world's languages. His publications include *Competing Motivations* (1985), *The Discourse Basis of Ergativity* (1987), *Preferred Argument Structure* (2003), *Discourse and Grammar* (2003), *Motivating Competitions* (2014), and *Towards a Dialogic Syntax* (2014).

Michael Yoshitaka Erlewine is Assistant Professor at the National University of Singapore. He received his PhD in linguistics from MIT in 2014. His research interests are syntactic theory and the syntax–semantics interface.

Ricardo Etxepare is a permanent researcher at the Centre National de la Recherche Scientifique, and director of the lab IKER (UMR5478), a research center devoted to the study of the Basque language and Basque texts in Bayonne, France.

Diana Forker teaches general linguistics at the University of Bamberg. She completed her PhD at the Max Planck Institute for Evolutionary Anthropology. Her main interests are languages of the Caucasus, typology, and morphosyntax. She currently works on the documentation of the Nakh-Daghestanian language Sanzhi Dargwa and on a typological investigation of gender agreement. Among her publications are *A Grammar of Hinuq* (2013) and several articles on different aspects of Nakh-Daghestanian languages.

Geoffrey Haig received his PhD in general linguistics from the University of Kiel in 1997. He is currently professor of linguistics in the Institute of Oriental Studies at the University of Bamberg. His research interests focus on the languages of the Middle East, in particular the syntactic features they have inherited, and those they have shared with their neighbors. He is also active in language documentation, and in corpus-based approaches to language typology and areal linguistics.

Alana Johns is Professor of Linguistics at the University of Toronto. Her research concerns the morphosyntax of complex words, especially in the Inuit language. She has published on ergativity, noun incorporation, and verbal inflection. One of her main research interests are syntactic differences between closely related dialects, where small distinctions can lead to a wide range of effects. Another area of involvement is language maintenance, where linguistics can help in capacity development within communities who are engaged with these issues. She has worked with the Inuit of Nunatsiavut for many years.

Daniel Kaufman specializes in historical, descriptive, and theoretical issues in Austronesian languages with a focus on the languages of the Philippines and Indonesia. He is co-founder and executive director of the Endangered Language Alliance, a non-profit organization dedicated to documenting and conserving the endangered languages of New York City's immigrant communities and is also Assistant Professor at the Department of Linguistics and Communication Disorders at Queens College, CUNY.

Geoffrey Khan is currently Regius Professor of Hebrew at the University of Cambridge. He was awarded his PhD by the University of London in 1984 for a thesis on extraposition in the Semitic languages. His published books include a series of grammars of Neo-Aramaic dialects, editions of medieval Judaeo-Arabic grammatical texts and medieval Arabic documents and an introduction to the Hebrew Bible. He is general editor of the *Encyclopedia of Hebrew Language and Linguistics*.

Ritsuko Kikusawa is Associate Professor of the National Museum of Ethnology and the Graduate University for Advanced Studies in Japan. Her research interests include description of Fijian dialects and Betsimisaraka Malagasy, methodology of morphosyntactic comparison and reconstruction, and the linguistic prehistory of Oceania. Her recent publications include "The Austronesian language family" (*The Routledge Handbook of Historical Linguistics*, ed. Claire Bowern & Bethwyn Evans, 2015).

Christa König is Apl. Professor at the Institute of African Linguistics, University of Frankfurt. Her research interests include verbal aspect and case systems. She has carried out extensive field research on the following languages: Maa (Kenya, Tanzania), Ik (Northeastern Uganda), !Xun (Namibia), and Akie (Tanzania). Her publications include 'Marked nominative in Africa' (*Studies in Language* 30(4): 705–782, 2006) and *Case in Africa* (Oxford University Press, 2008).

Ivona Kučerová is Assistant Professor of Linguistics at McMaster University. She specializes in theoretical syntax and semantics, and their interface. Her works explore information structure and its morphosyntactic correlates, definiteness systems and their relation to aspect, the morphosyntax and morpho-semantics of case, agreement, and case splits, the syntax of null languages, and the syntax of copular clauses. She works mainly on Slavic, Germanic, and Romance languages.

Itziar Laka is Full Professor at the Department of Linguistics and Basque Studies and Director of The Bilingual Mind research group at the University of the Basque Country. Her research combines theoretical linguistics and experimental methods to inquire into the representation and processing of language, with a strong focus on syntax and bilingualism.

Mary Laughren is an honorary senior research fellow in the School of Languages and Cultures at the University of Queensland, where she taught linguistics (1993–2009). Since 1975 she has studied the Warlpiri language and has been involved in the implementation of bilingual education programs in Warlpiri-speaking communities. One focus of her research is the interplay between lexical and syntactic organization. She is currently collaborating in the documentation of traditional Warlpiri songs, and since 2000 of another Australian language, Waanyi.

Julie Anne Legate is Professor of Linguistics and the Chair of Undergraduate Studies in the Department of Linguistics at the University of Pennsylvania. She received her PhD from MIT in 2002. She is the author of *Voice and v: Lessons from Acehnese*, and is editor-in-chief of *Natural Language & Linguistic Theory*.

Theodore Levin received his PhD in linguistics from MIT in 2015 and is a postdoctoral research associate in the Department of Linguistics at the University of Maryland. His primary research interests are in syntactic theory with specific interest in the interaction of case, agreement, and word order.

Nicholas Longenbaugh is a PhD student in linguistics at MIT, with a BA in computer science and linguistics from Harvard University (2014). His work focuses on issues in syntax, with an emphasis on cross-linguistic variation and universal principles. He has done original research and fieldwork on Austronesian and Romance languages. Nicholas has also worked within the Tree-Adjoining Grammar framework, and has explored topics concerning formal complexity in language.

Anoop Mahajan is Professor in the Department of Linguistics at UCLA. He received his PhD in linguistics from MIT in 1990 and has taught at UCLA since 1992. His research includes work in formal generative syntax with a special emphasis on how to account for typological variation across languages. He has published research on various topics in syntax that include word order and scrambling, agreement and case, ergativity, partial wh-movement, and relative clauses.

Andrej Malchukov is a senior researcher at the St.-Petersburg Institute for Linguistic Research (Russian Academy of Sciences), currently affiliated as Visiting Professor to the University of Mainz. Apart from descriptive work on Siberian (in particular, Tungusic) languages, his main research interests lie in the domain of language typology. He published extensively on the issues of morphosyntactic typology; in particular, he edited *The Oxford Handbook of Case* (together with Andrew Spencer; 2009), *Studies in Ditransitive Constructions: A Comparative Handbook* (together with Bernard Comrie and Martin

Haspelmath; 2010); *Competing Motivations in Grammar and Cognition* (together with Brian MacWhinney and Edith Moravcsik; OUP, 2014), and *Valency Classes in the World's Languages* (together with Bernard Comrie; 2015).

Diane Massam (PhD MIT 1985) is Professor in the Department of Linguistics at the University of Toronto. Her research areas are argument structure, case, predication, and word order, with a focus on the Niue language (Polynesian), and an interest in register variation in English. She has edited volumes on Austronesian syntax, ergativity, and the count–mass distinction, and was co-editor of *Squibs for Linguistic Inquiry*.

William B. McGregor is Professor of Linguistics in the Department of Aesthetics and Communication, Aarhus University, Denmark. His primary research interest is in the languages of the Kimberley region of Western Australia; more recently he has begun work on a Khoisan language of Botswana. He has published widely on these languages, including descriptive grammars, and has a long-term interest in ergativity.

Gereon Müller is Professor of general linguistics at Leipzig University, and head of the graduate program “Interaction of Grammatical Building Blocks” (IGRA). He got his Dr. phil. from Tübingen University in 1993, and his Dr. habil. from the same university in 1996, both with works on theoretical syntax. His main research interest is grammatical theory, with a special focus on syntax and morphology.

Léa Nash PhD (1995), Paris 8 University, is Professor of Linguistics at that university. She has published many articles in theoretical syntax, especially on argument structure, case theory, and ergativity.

Yuko Otsuka is Associate Professor in Linguistics at the University of Hawai‘i at Mānoa. Her research interests are theoretical syntax and Austronesian languages. She has worked extensively on Tongan (Polynesian) with special focus on case and ergativity.

Tyler Peterson received his PhD from the University of British Columbia in 2010 and joined the University of Auckland in 2016. He has undertaken extensive fieldwork on the endangered indigenous language Gitksan (Tsimshianic, British Columbia), and has also worked with indigenous languages in the southwestern United States, the South Pacific, and the Brazilian Amazon.

Barbara Pfeiler is Professor of Linguistics at the National Autonomous University of Mexico in Mérida, Yucatán. She has conducted fieldwork on the acquisition of Yukatek and Teenek since 1997. She has published articles on the acquisition of these languages as well as on the sociolinguistics and dialectology of Yukatek. She edited the volume *Learning Indigenous Languages: Child Language Acquisition in Mesoamerica* (2007).

Maria Polinsky (PhD 1986) is Professor of Linguistics and Associate Director of the Language Science Center at the University of Maryland. Her main interests are in theoretical syntax, with an emphasis on cross-linguistic variation. She is also interested in the

integration of experimental methodologies in linguistic research. She has done extensive work on ergative languages across several language families, namely, Austronesian, Kartvelian, Nakh-Dagestanian, and Paleo-Siberian.

Omer Preminger is Assistant Professor of Linguistics at the University of Maryland (College Park). He graduated from MIT in 2011, and was a postdoctoral associate at MIT and at Harvard. Before joining UMD, he was a faculty member at Syracuse University. Omer has worked on issues of agreement and case in a variety of languages, including Basque, Hebrew, Kaqchikel, and Sakha. His publications include *Agreement and Its Failures* (2014).

Clifton Pye is Associate Professor of Linguistics at the University of Kansas. His specialty is the documentation of the acquisition of Mayan languages with a special focus on the acquisition of K'iche', Mam, Q'anjob'al, and Ch'ol. He has published numerous articles on the acquisition of phonology, morphology, syntax, and semantics in these languages.

Francesc Queixalós as a member of the Centre National de la Recherche Scientifique and, periodically, of the Institut de Recherche pour le Développement (France), Francesc Queixalós has conducted in-depth research on two languages of lowland South America, Sikuni (Guahiban) spoken in the savanna area of the middle Orinoco, and Katukina-Kanamari (Katukinan), spoken in the rain forest south of the middle Amazon, while addressing several issues in the morphosyntax of Tupi-Guarani languages. He has taught linguistics in several Universities in France and South America.

Andrés Pablo Salanova is Associate Professor of Linguistics at the University of Ottawa. He has worked with the Mëbengokre since 1996, totaling over one year in the field and writing on several different aspects of their language. Salanova holds a BA in mathematics from Brown University, an MA in linguistics from Campinas (Brazil), and a PhD in linguistics from MIT.

Eva Schultze-Berndt is Professor of Linguistics at the University of Manchester, UK. She received an MA from the University of Cologne, and a PhD from the University of Nijmegen. Her research interests include complex predication, overt classification of verbs/events, secondary predication, spatial language, parts of speech, information structure, language contact, and documentary linguistics.

Michelle Sheehan is a senior lecturer at Anglia Ruskin University, specializing in comparative syntax. She has worked on null arguments, Control, word order variation, clausal–nominal parallels, and case/alignment. She is co-author of *Parametric Variation: Null Subjects in Minimalist Theory* (2010); *The Philosophy of Universal Grammar* (OUP, 2013); *The Final-over-Final Constraint* (forthcoming). Michelle is co-editor of *Theoretical Approaches to Disharmonic Word Order* (OUP, 2013) and of the journal *IBERIA*.

Tarald Taraldsen (PhD University of Tromsø, 1983) has worked as Professor of Linguistics at the University of Tromsø since 1984. He was a senior researcher at the Center for Advanced Study in Theoretical Linguistics (2002–12). He has worked on the syntax of Scandinavian and Romance languages and, since 2008, also on the syntax and morphology of Bantu languages.

Daniela Thomas gained her MA from Leipzig University in 2015, with a thesis on a harmonic grammar approach to scale effects in argument encoding that combines minimalist syntax with weighted constraints in post-syntactic morphology. Her bachelor thesis from 2013 tackles split ergativity in subordinate contexts from a minimalist perspective.

Lisa deMena Travis completed her PhD in Linguistics at MIT in 1984, writing on parameters of word order variation. She is currently Professor in the Department of Linguistics at McGill University where she has been teaching since 1984. Her research focuses mainly on phrase structure, head movement, language typology, Austronesian languages (in particular, Malagasy and Tagalog), and the interface between syntax and phonology. Recent publications include *Inner Aspect: The Articulation of VP* (Springer, 2010).

Kevin Tuite is Professor of Anthropology at the Université de Montréal. He directed the Caucasus Studies program at the Friedrich-Schiller-Universität Jena (2010–14). Since 1985, he has been researching the languages and cultures of the Caucasus, with a focus on Georgia. He is presently working on a grammar of the Svan language, and a study of the cult of St George in the Caucasus.

Coppe van Urk received his PhD in linguistics from MIT in 2015 and is a lecturer at Queen Mary University of London. His research focuses on syntax, with specific interests in movement, case, agreement, and the structure of Dinka.

Martina Wiltschko is Professor of Linguistics at the University of British Columbia (Vancouver). She is interested in the range and limits of variation in the domain of syntax and its interfaces (syntax–morphology; syntax–semantics; syntax–pragmatics). She has extensively published on several empirical domains pertaining to this question including her recent monograph *The Structure of Universal Categories: Towards a Formal Typology*.

Ellen Woolford received a BA from Rice University and a PhD from Duke University, with a dissertation on Tok Pisin based on fieldwork in Papua New Guinea. She is currently a professor of linguistics at the University of Massachusetts. She has published on a range of topics in syntax, including locality constraints on wh movement and the behavior of passives in double-object constructions. Her recent work focuses on the theory and typology of case and agreement.

Adam Zawiszewski graduated in Romance philology (Adam Mickiewicz University), obtained a Master's in Linguistics from the University of the Basque Country (UPV/EHU) where he also defended his PhD. He completed a postdoctoral training at the Max-Planck Institute for Human Sciences and Cognition (Leipzig). In 2011 he was awarded a Juan de la Cierva Fellowship by the Spanish Ministry of Science and Innovation. Currently he is working as Assistant Professor at the University of the Basque Country (UPV/EHU).

CHAPTER 1

INTRODUCTION

JESSICA COON, DIANE MASSAM,
AND LISA DEMENA TRAVIS

1.1 INTRODUCTION

1.1.1 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 (see Figure 1.1). In such a system, schematized in Figure 1.1(a), 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 Figure 1.1(b).

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 Figure 1.1(a)—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.

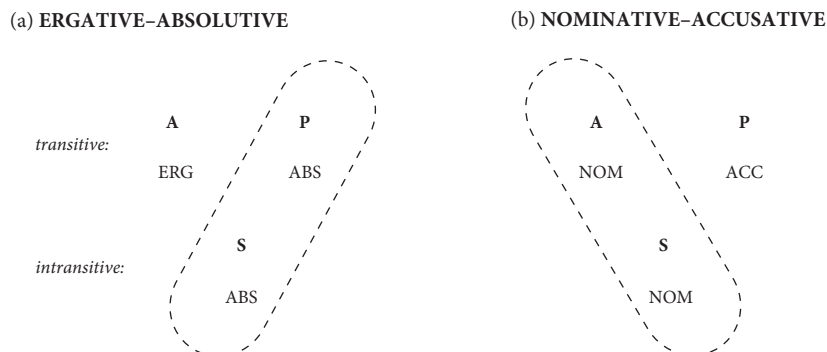


FIGURE 1.1 Alignment patterns

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 (2015) for overviews in the generative tradition; Dixon (1979, 1994), McGregor (2009), and Comrie (2013a, 2013b) for more typologically oriented overviews; and Coon and 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 chapters 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 chapters contained here would fit naturally into more than one of the book’s four parts, and the reader should interpret these divisions as loose guidelines rather than a strict packaging.

1.1.2 Themes and Organization

The volume is organized into four main parts. Part I, on 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 II, 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 III focuses on approaches which draw on data from a diverse range of methodologies; these chapters focus on ergativity through the lens of diachronic, experimental, and acquisition research. Finally, Part IV 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 nearly 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 labeled “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 chapters on split ergativity (see especially sections 1.2.2 and 1.3.1) 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 morphophonological 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 fallout 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 sections 1.3.1 and 1.5). 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 (sections 1.2.1 and 1.4).

Despite the diversity reflected here, a number of points of commonality or areas of agreement emerge. A look at the contributions in Part IV 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 section 1.4), as well as an increase in cross-collaboration in various disciplines—through studies of acquisition (Bavin; Austin; Pye and Pfeiler), experimental work (Longenbaugh and Polinsky; Zawiszewski), diachronic analyses (McGregor; Haig; Aldridge; Butt and Deo; Kikusawa; Kaufman), or through discourse and speech act structure (Wiltschko; Du Bois). The implications discussed in the chapters in this volume 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 and 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 and Bobaljik; Baker; Nash; Coon and Preminger), the relevance of the structural *height* of subjects is discussed throughout many of the chapters in this volume. 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 go on to introduce briefly in turn—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 discipline or subfield of linguistics.

1.2 PART I: ACCOUNTING FOR ERGATIVITY

The chapters in Part I share a common goal: to understand and model how ergativity arises either in a specific language, or cross-linguistically. Part I has two sections: in the first of these, on representing ergativity, Du Bois, Sheehan, and Mahajan each discuss the “parameterization” of ergativity. Du Bois’ chapter 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 subtypes 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 chapters 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 the second section, on the nature of the ergative case, tackle a specific question in the formal representation of ergativity: What is special about *ergative* arguments? Two main approaches are presented, labeled in Baker and 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 and 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 vP domain, which she formalizes in terms of dependent case. We summarize each of the volume's chapters in more detail in the following sections.

1.2.1 Representing Ergativity

In Chapter 2, Du Bois discusses the relationship between ergativity and an “ergative discourse profile.” Du Bois 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 grammaticalized 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 grammaticalization of ergativity including verb semantics, aspects, and inherited morphosyntax, are also discussed.

Chapter 3 by Sheehan 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.

Mahajan (Chapter 4) 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.

1.2.2 The Nature of the Ergative Case

Baker and Bobaljik (Chapter 5) discuss two approaches to how the ergative case is assigned in the grammar, labeled 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.

Legate argues in Chapter 6 that while the 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 vP . 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 Chapter 7. 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, and 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 (Chapter 8), on 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 vP . In an ergative system, on the other hand, the transitive subject is licensed inside of vP . 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.

1.3 PART II: CHARACTERISTICS AND EXTENSIONS

Part II has two sections. The first section includes chapters that examine some of the key grammatical characteristics that are commonly considered to be correlated with ergativity, and the second includes chapters that extend our notion of ergativity in one of two ways. Some chapters 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 chapters extend the usual discussion of ergativity theoretically, by tying ergativity to theories of speech acts and information structure.

1.3.1 Characteristics

Languages with ergative systems are said to exhibit properties and constructions that are characteristic of ergativity. In this first section of Part II, 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. first- and second-person) subjects. Several chapters in this section explore split ergativity, as we now outline.

In Chapter 9, Woolford 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 predicates (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, Coon and Preminger (Chapter 10) 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 straightforwardly not ergative. They argue that bifurcation can be the result of non-perfective (i.e. locative) syntax, or of first- and second-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 (Chapter 11) takes a functional–typological approach to splits, 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 (Optimality Theory) analysis, showing that two unranked constraints, DIFF and INDEX, can converge or not, allowing for the existence of different patterns.

Müller and Thomas (Chapter 12) 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 (Chapter 13), 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 interpretative 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 (Chapter 14) examines this generalization, 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 chapter also examines key proposals about ergativity, pointing out necessary modifications in order to account for the word order restriction. The chapter richly illustrates the complexity involved in developing detailed analyses of broad generalizations.

1.3.2 Extensions

In the second section of Part II, 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 chapters 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 chapters.

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 Chapter 15, 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 chapter, ergativity is related to characteristics that enable it to extend to other construction types.

In Chapter 16, 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 chapter thus suggests that there are limits on extensions of ergativity to explain other grammatical phenomena.

Johns and Kučerová show in Chapter 17 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 propose 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. They also touch on dialect variation across the Inuit languages. Their chapter thus raises a new perspective on the nature of case splits.

Wiltschko argues in her programmatic contribution (Chapter 18) 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.

1.4 PART III: APPROACHES TO ERGATIVITY

The chapters in Part III 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—and is divided into three sections, accordingly. Recurring themes in these chapters 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.

1.4.1 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. theory. As more and more details about variation are uncovered (see also Part IV, the case studies, which we discuss shortly), 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 (McGregor, 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 appear in Parts I and II of this volume as well when discussing what the parameters of ergativity are and how the particular characteristics of ergativity are accounted for.

McGregor (Chapter 19) traces the creation and loss of ergative case morphemes cross-linguistically, 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 Chapter 20. 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 (Chapter 21) 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 language families that have been introduced in Aldridge's chapter, but offer different viewpoints. Butt and Deo (Chapter 22) take 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 (Chapter 23) 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 Chapter 24, 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.

1.4.2 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 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 learner, 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 (Chapter 25) 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.

Austin (Chapter 26) 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 (Chapter 27) 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 Ch'ol 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.

1.4.3 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 chapters 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. Zawiszewski (Chapter 28) 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 L1 and L2 acquisition. He concludes with a discussion of the overall results and directions to be explored further.

Chapter 29 is a review by Longenbaugh and Polinsky of 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.

1.5 PART IV: 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 person, 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, focusing on constructions such as the antipassive and control structures, relative clauses, coordination, and non-finite sentences and nominalizations.

Aissen (Chapter 30) 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, Baker (Chapter 31) 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 (Chapter 32) on ergativity in Basque, explore an ergative system that is manifested by both case and agreement morphology. They provide a thorough and detailed overview of 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 (Chapter 33) 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.

Compton (Chapter 34) 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.

Forker (Chapter 35) 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 (Chapter 36) focuses on ergativity in Neo-Aramaic. He organizes and presents a complex set of patterns of ergativity in modern spoken form of Aramaic (Neo-Aramaic) split into four subgroups: 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 (Chapter 37), 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.

Chelliah (Chapter 38) 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 (Chapter 39) focuses on the ergative in Warlpiri, and 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 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.

Otsuka (Chapter 40) 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.

Peterson (Chapter 41) demonstrates that the Tsimshianic 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 42) 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 (Chapter 43) describes the distribution of ergative case marking in Jê languages in general, and Mëbengokre more specifically. In these languages, the link between the ergative constructions and nominalization is clear, where the subject DP is marked with a 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 (Chapter 44) 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.

Finally, Tuite (Chapter 45) traces the history of linguistic accounts of Georgian ergativity from the seventeenth 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.

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, Justin Royer for help with proofing, and Hisako Noguchi for work on the index. We would also 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.

PART I

ACCOUNTING
FOR ERGATIVITY

Representing Ergativity

CHAPTER 2

ERGATIVITY IN DISCOURSE AND GRAMMAR

JOHN W. DU BOIS

EVERY language provides its users with systematic ways of organizing the core arguments of the clause, establishing a more or less stable and consistent framework for the foundations of its grammar. Remarkably, languages differ even in this most basic level of structural organization. Yet certain configurations of arguments tend to recur, emerging again and again in the grammars of the world's languages. For syntactic alignment what proves pivotal is how the grammar treats the sole argument of a one-place predicate (S), aligning it with one or the other argument of a two-place predicate, with respect to case-marking, agreement, word order, extraction, and so on. Some languages treat the S like the object of a two-place predicate (O), yielding ergative alignment (S=O vs. A), while others treat S like the subject of a two-place predicate (A), yielding accusative alignment (S=A vs. O). Still other languages are sensitive to the semantic variability inherent in the population of one-place predications, aligning the more agent-like subset of S (S_a) with A, and the more patient-like subset of S (S_o) with O, giving active alignment ($S_a=A$ vs. $S_o=O$).

Yet languages are not simply ergative, accusative, or active. There is great diversity, as well as convergence, across the world's languages with respect to the various systematizations of basic grammatical relations (Silverstein 1976; Comrie 1978, 2013a, 2013b, 2013c; Dixon 1979, 1994; Mithun 1991; Malchukov 2005; Bickel & Nichols 2009; Bickel 2010; Siewierska 2013). This diversity can penetrate into the grammar of a single language, where a mix of distinct alignments is often found in different parts of the same grammar (Silverstein 1976; Comrie 1978; Mithun 1991; Coon 2010a, 2013a; Malchukov 2014; see also Coon and Preminger, Chapter 10 in this volume). Accounting for diversity and convergence within and across languages remains a compelling yet elusive task for linguistics (Evans & Levinson 2009). Argument structure configurations (Goldberg 1995) represent the very foundations of the clause—what may be considered the “basic body plan” (Mayr 2001) of the utterance. No theory of grammar can be considered explanatory without contributing to an understanding of how such a diversity of basic

plans could have emerged in the world's languages. Yet the challenge of accounting for structural variability at a foundational level has proved baffling, such that many leading linguists have postponed the day of reckoning with ergativity. Fillmore considered his principles of subject selection universal, "given certain qualifications for the interpretation of ergative systems" (1977: 61). Dowty acknowledged that "argument selection in ergative languages" (1991: 581) was relevant to his proto-role model, but invoked an "inverse" model of ergativity which "means in effect treating the transitive 'Patient' as a grammatical subject and the transitive 'Agent' as analogous to an object" (1991: 582). Ergative languages are said to employ the same proto-agent and proto-patient roles as in accusative languages, but "merely REVERSE the syntactic association" with subject and object (1991: 582). Often it seems that ergativity is taken up only after commitments to basic theoretical assumptions are set (Ackerman & Moore 2001: 1, fn. 1). But ergativity is unlikely to reveal its secrets to those who approach it superficially or too late, whether with afterthoughts or mere mirror-image models.

This chapter explores the connection between the well-known ergative pattern in grammar and a pattern in discourse that is isomorphic to it, with the goal of providing a functional explanation for ergativity. The ergative discourse pattern holds the key to the grammaticization of ergativity, perhaps—or is just a piece of the larger puzzle. The specific approach presented here is known informally as discourse and grammar (Givón 1979; Hopper & Thompson 1980; Thompson & Mulac 1991; Du Bois 2003b, 2014), which seeks to understand grammar in light of discourse, and discourse in light of grammar. Patterns of grammatical form are linked to communicative functions on the evidence of naturally occurring language use, in order to shed light on why grammars are the way they are. Crucially, "grammars" is plural, inviting attention to typological diversity. Not only must the broad alignment types of ergative, active, and accusative be distinguished, but also such cross-cutting typological features as head-marking vs. dependent-marking, optional vs. consistent, aspect-based vs. person-based splits, and so on (DeLancey 1981; Nichols 1986; Garrett 1990; Bickel & Nichols 2009; Malchukov 2014; Nichols & Bickel 2013a; van de Velde 2014).

The discourse-and-grammar approach accords equal importance to discourse and to grammar. In this chapter, however, I will devote more space to the discourse side of the equation. This is feasible because ergative grammar is well documented in the literature (including this volume); it is necessary because ergative discourse is not. That said, a key task will be to bring together the facts of ergative grammar and ergative discourse, and to clarify the connection between them.

If ergativity is seen as a problem, it's one that is not going away any time soon. That may be a good thing for linguists, who have a lot to gain by taking up the challenge of explaining ergativity. But one group for whom ergativity has never been a problem is the speakers of ergative languages. Ergative speakers do just fine, learning their language with equal ease (Ochs 1982; Narasimhan, Budwig, & Murty 2005; Bavin & Stoll 2013; Brown et al. 2013; Pye et al. 2013), and using it to perform the full range of functions that every language serves (de León 1999, 2000). Linguists seeking explanations might take a cue from the language users, and treat ergative

grammar as a system that works. The idea is to see ergativity as the solution, and ask what the problem is. This is not to suggest that there will be easy answers, nor that every aspect of ergative grammar will be transparently motivated or directly functional. Nonetheless, how a grammar works for its users is one of the most productive questions a linguist can ask.

The view that grammars solve problems in new and creative ways accords well with the approach advocated by Evans and Levinson (2009), who, while arguing for massive cross-linguistic diversity, also maintain that languages tend toward “evolutionarily stable strategies,” representing “recurrent solutions across time and space.” These strategies

result from myriad interactions between communicative, cognitive, and processing constraints which reshape existing structures through use. A major achievement of functionalist linguistics has been to map out, under the rubric of grammaticalization, the complex temporal sub-processes by which grammar emerges as frequently used patterns sediment into conventionalized patterns (Bybee 2000; Givón 2009).

(Evans & Levinson 2009: 444–445)

From the discourse-and-grammar perspective, the enterprise begins in discourse with the search for “frequently used patterns”; it continues by showing how the “recurrent solutions” resolve universal functional needs; and it ends, if successful, by elucidating the emergence of the “conventionalized patterns” known as grammar—including the grammar of ergativity and its competitors. One seeming paradox is that grammar is already present in discourse from the start. Discourse is never found without its grammatical clothing; but by the same token, grammar is never realized except in discourse. A basic task for discourse-and-grammar research, then, is to tease discourse and grammar apart. With ingenuity and a little typology, the problem is solvable, as will become clear. This then sets the stage for investigating the connection between the respective ergative patterns in discourse and in grammar.

I begin (2.1) with a look at a stretch of discourse in an ergative language, identifying a recurrent pattern which is isomorphic with the ergative–absolute pattern of grammar. The next section (2.2) documents this pattern quantitatively as the ergative discourse profile, based on evidence from a typologically diverse array of ergative, active, and accusative languages. I propose that the ergative discourse profile is shaped by a set of soft constraints known as Preferred Argument Structure (Du Bois 1987b, 2006; Du Bois, Kumpf, & Ashby 2003). The next section (2.3) explores whether the ergative discourse profile represents a discourse universal, examining evidence from child language, typology, genre, and diachrony. In the following section (2.4) I take up the functional explanation for ergativity, having introduced the analysis of competing motivations (Du Bois 1985, 2014; MacWhinney, Malchukov, & Moravcsik 2014; Malchukov 2014) that favor either ergative or accusative alignment. Next (2.5) I respond to some common objections to the discourse explanation for ergativity. Finally, I present some directions for future research (2.6) and conclusions (2.7).

2.1 ERGATIVITY IN DISCOURSE

To understand ergativity, it is important to look at how discourse connects to grammar and to meaning. As Dixon says

The most important task for future work on ‘why some languages are ergative in a certain way and others are not’ is to investigate the semantic and discourse-pragmatic makeup of each of a sample of languages, and study the way in which this determines (or partly determines) its grammatical profile.

(1994: 219–220)

If discourse has the power to affect grammar, it is because “discourse, clause structure, and verb semantics are all intimately interwoven” (Foley & Van Valin 1984: 373). But to move beyond broad generalities about the interdependence of form and function, it is necessary to tease apart these three forces, if only to show how they come together again to shape the fundamental grammar of the clause.

To make good on the promise that “recurrent patterns” shape grammar (Evans & Levinson 2009), it is necessary to do the empirical work to document the specific “discourse profiles” (Du Bois 2003a: 40–44) that are linked to the grammatical constructions of interest, and their functional niches. The relevant work on discourse profiles focuses on “discourse inside the clause” (Du Bois 2003a: 13; 2003b: 83), seeking to identify the distinctive discourse correlates of the clause, its arguments, and other aspects of structure. While researchers sometimes speak broadly of the discourse profile of a language, akin to whole-language typology (Nichols & Bickel 2013b), it is often more useful to target the discourse profile at a more specific level—on a par with a specific argument structure construction, for example. Thus one can ask about the discourse profile of the intransitive, transitive, or ditransitive clause; or the agentless vs. agentive passive, and so on.

One challenge in working with discourse is its evident variability, born of freedom. Seemingly, speakers exercise the absolute liberty to construct their utterances as they wish, within the broad limits circumscribed by the rules of grammar. The result appears, to some, as unpredictable variability. Yet a closer look reveals recurrent regularities in discourse, including some which are not strictly required by any grammatical rule. Understanding ergativity depends on sorting out how argument structure constructions balance the multiple demands of information processing, anaphoric reference, topic continuity, event semantics, and other factors, including the inherited morpho-syntax of the language at hand.

To make these matters more concrete, it will be useful to examine a sample of discourse from an ergative language. The following narrative is in Sakapultek, an ergative, head-marking, verb-initial language of the Mayan family, spoken in highland Guatemala (Du Bois 1981). The narrative was produced as a telling of a short film, the Pear Film (Chafe 1980; Du Bois 1980). To highlight the grammatical elements that matter for the discourse profile, the following conventions are used: underscore represents a

referent mention marked by a reduced referential form (pronoun, agreement, or zero);¹ **boldface** indicates a lexical noun phrase; *italics* in the free translation indicates a verb or preposition (head of its phrase). The distribution of lexical vs. reduced forms is also indicated schematically, with capital letters (A S O) indicating a lexical noun in the designated grammatical role, while small letters represent a reduced form (a s o). A clause-by-clause analysis of this narrative's ergative discourse profile is published elsewhere (Du Bois 2006); here I present just the first 13 lines.

(1) Pear Story (Sakapultek)

1	... (H) Ee x-Ø- <u>inw</u> -il-anh, FOC CP-3.ABS-1.ERG-see-TV	oaV
	... (H) <u>What I saw</u> was,	
2	.. x-Ø-aq'an jun achenh , CP-3.ABS-ascend one man	VS
	.. a man <i>climbed up</i> ,	
3	.. ch-u' chee' , at-top tree	PX
	.. <i>in a tree</i> ,	
4	... (H) x-Ø-a-r: ... ch'up-o' niky'aj péera-s . CP-3.ABS-LAT-3.ERG pick-DEP some pear-PL	aVO
	... (H) <u>he</u> went and ... <i>picked some pears</i> .	
5	... Tik'ara' Ø-Ø-qaaj-uu:l, then CP-3.ABS-descend-hither	sV
	... Then <u>he</u> <i>came</i> dow: n,	
6	... Ø-Ø-r-su' r-ijj juu: n , CP-3.ABS-3.ERG-wipe 3.ERG-back one	aVO
	... <u>he</u> <i>wiped the surface of one</i> ,	
7	... (H) ii despwee: s, and then	
	... (H) and the: n,	
8	... (H) x-Ø-r-ya ² qaj p l chikech , CP-3.ABS-3.ERG-put down at the basket	oaV PX
	... (H) <u>he</u> <i>put it in the basket</i> ,	

¹ Note that this annotation focuses on referent mentions and how they are expressed. Thus a referent expressed with a lexical noun phrase plus a cross-referencing affix in the same clause is treated as one mention, not two (Du Bois 1987b: 813). Here it always the heavier form (noun phrase) that is marked (with boldface).

² The underlying *r*- is devoiced in this phonological environment, coalescing with preceding voiceless fricative *x*- and effectively disappearing in the surface form, yielding *xya* 'he gives it'.

lexical noun.³ The attentive reader will have noticed that the discourse distribution of lexical arguments (and of new information) corresponds to the absolutive category in the grammar of ergative languages, while topically continuous elements are found in what would be the subject in accusative languages. The latter reflects, perhaps, the common wisdom that subject is a grammaticization of agent and topic (Givón 1983a; Comrie 1988).

The ergative and accusative discourse patterns coexist in one and the same stretch of narrative, in a language whose grammar is basically ergative. The tension between these two discourse patterns will prove fruitful for understanding the role of competing motivations (Du Bois 1985, 2014) in the discourse motivation of ergativity (1987a; Du Bois 1987b, 2006); see section 2.4. But we are getting ahead of ourselves. First we must ask: Do these observations characterize the discourse of one speaker, or do they represent something broader? This calls for a quantitative perspective, which is addressed in terms of discourse profiles.

2.2 THE ERGATIVE DISCOURSE PROFILE

The first systematic study of information structure to distinguish A, S, and O was by Du Bois (Du Bois 1981, 1985, 1987a, 1987b, 2003a, 2003b, 2006; Du Bois, Kumpf, & Ashby 2003). Previous studies had commonly been framed in terms of subjects, documenting contrasts in information structure that naturally seemed to favor accusative languages. But as long as S and A were collapsed within the all-too-familiar subject category, the differences between them remained effectively hidden. Adopting the grammatical terms A, S, O (Dixon 1979) or P (Comrie 1978), originally designed for typologically neutral comparisons encompassing ergative and accusative languages, made it possible to recognize a new kind of pattern in discourse. Early evidence from Sakapultek, illustrated in example (1), revealed a skewed distribution of lexical arguments across A, S, and O. A similar skewing was discovered for New information. Specifically, most lexical mentions occur in absolutive argument positions (S or O), but are avoided in the ergative (A) slot, which is mostly restricted to reduced forms (pronoun, agreement, zero). Correspondingly, most new mentions occur in S or O, with few occurring in A. Many more languages have since been investigated; see Table 2.1 for a selection. In most cases the findings reported tend to fit the generalizations of Preferred Argument Structure. This holds true whether the language is ergative, active, or accusative. Of course, not all scholars agree on the interpretation of the findings; for a discussion of controversial issues, see 2.5.

It is useful to distinguish between discourse profiles, understood as observable patterns of linguistic behavior in discourse, and Preferred Argument Structure, understood as the functional constraints that govern them. The ergative discourse profile

³ The implications of V-Lex as a kind of ergative-absolutive word order (Dryer 2013b) are developed below in “Typology” and “Diachrony” (2.3).

Table 2.1 Selected studies of Preferred Argument Structure

Language	Family	Region	Type	Genre	Studies
Sakapultek	Mayan	Guatemala	ergative	narrative (PF)	(Du Bois 1987b)
Mam	Mayan	Guatemala	ergative	narrative	(England & Martin 2003)
Tektiteko	Mayan	Guatemala	ergative	narrative	(England & Martin 2003)
Mochó	Mayan	Mexico	ergative	narrative	(England & Martin 2003; Martin 2003)
Q'anjob'al	Mayan	Guatemala	ergative	narrative	(England & Martin 2003)
Itzaj	Mayan	Guatemala	ergative	narrative	(Hofling 2003)
Tsotsil	Mayan	Mexico	ergative	narrative	(Martínez Álvarez 2012)
Hieroglyphic Maya	Mayan	Guatemala, Mexico	ergative	dynastic history	(Mora-Marín 2004)
Inuktitut	Eskimo-Aleut	Canada	ergative	child	(Allen & Schröder 2003)
Hindi	Indo-Iranian	India	ergative	child	(Narasimhan et al. 2005)
Nepali	Indo-Iranian	Nepal	ergative	narrative	(Genetti & Crain 2003)
Hawrami	Indo-Iranian	Iran	ergative	narrative (PF)	(Mahand & Naghshbandi 2014)
Gooniyandi	Australian	Australia	ergative	narrative	(McGregor 1998)
Roviana	Austronesian	Solomon Is.	ergative	monologue	(Corston-Oliver 2003)
Chamorro	Austronesian	Guam	ergative?	narrative	(Scancarrelli 1985)
Acehnese	Austronesian	Indonesia	active	narrative	(Durie 1988, 1994, 2003)
Chol	Mayan	Guatemala	active	narrative	(Vázquez Álvarez & Zavala Maldonado 2013)
Yagua	Yaguan	Peru	active	narrative	(Thomas Payne 1993)
Mapudungun	Araucanian	Chile	hierarchical	narrative	(Arnold 2003)
Tohono O'odham	Uto-Aztecan	Arizona		narrative	(Doris L. Payne 1987)

Language	Family	Region	Type	Genre	Studies
Jarawara	Arauan	Amazon	accusative	narrative	(Dixon 1994: 209)
Japanese	Japonic	Japan	accusative	conversation	(Matsumoto 1997, 2000)
Korean	Koreanic	Korea	accusative	child	(Clancy 2003)
To'aba'ita	Austronesian	Solomon Is.	accusative	narrative	(Lichtenberk 1996)
Finnish	Uralic	Finland	accusative	conversation	(Helasvuo 2003)
Hebrew	Semitic	Israel	accusative	narrative	(Sutherland-Smith 1996)
English	Indo-European	United States	accusative	narrative (PF)	(Kumagai 2001, 2006)
English, diachronic	Indo-European	England	accusative	drama	(Shibasaki 2006)
French	Indo-European	France	accusative	conversation	(Ashby & Bentivoglio 1993)
French, diachronic	Indo-European	France	accusative	epic poetry	(Ashby & Bentivoglio 2003)
Spanish	Indo-European	Venezuela	accusative	conversation	(Ashby & Bentivoglio 1993)
Spanish, diachronic	Indo-European	Spain	accusative	epic poetry	(Ashby & Bentivoglio 2003)
Portuguese	Indo-European	Brazil	accusative	narrative	(Dutra 1987)
Portuguese	Indo-European	Brazil	accusative	various	(Brito 1996, 1998; Everett 2009)
multiple	various	various	various	various	(Haig & Schnell 2016)

Notes

The languages are arranged by alignment type, then by family. The designation as ergative or accusative is not meant to dichotomize, as it necessarily glosses over details of split ergativity, etc. "PF" indicates Pear Film narratives (Chafe 1980).

can be observed in a corpus as a skewed distribution of new and lexical noun tokens across the argument slots of the clause. Preferred Argument Structure represents the constraints or generalizations which—as a first approximation—appear to govern the skewed distribution of utterance tokens. Whether the four constraints should be considered mere generalizations about linguistic practices, or whether there are deeper cognitive motivations behind them, is a question that remains open to alternative theoretical

interpretations (see section 2.5). Though closely related, the two perspectives are useful to distinguish, at least for the moment.

Specifically, Preferred Argument Structure comprises four soft constraints, which collectively influence the discourse distribution of grammatical expressions and pragmatic statuses. In the grammatical dimension, the Quantity constraint limits the number of lexical arguments in the clause core to a maximum of one. The Role constraint specifies where in the clause the single lexical argument may appear, excluding it from the A role. Paralleling this pair of constraints is a second pair in the pragmatic domain. Here the Quantity constraint limits the number of new information arguments in the clause core to a maximum of one. The Role constraint specifies where in the clause this new argument will appear, again excluding it from the A role.

In contrast to the generalizations of Preferred Argument Structure, the ergative discourse profile represents the empirically observable pattern of recurrent linguistic behavior, characterized by a statistical skewing in the distribution of lexical argument and new information tokens in a population of utterances. Broadly speaking it is the difference between rules and consequences—or generalizations and facts on the ground. Table 2.2 summarizes the relation between the four constraints of Preferred Argument Structure and the corresponding consequences observable in the ergative discourse profile.

To be more precise, the pragmatic constraints should be described as applying, not to new information, but to low accessibility referents (Ariel 1990, 2001), i.e. to referents whose cognitive status motivates a verbalization with a relatively informative (high surprisal) form. For present purposes, the looser formulation in terms of new information is adequate. But the more precise theoretical framing has important implications for research design, including the need for a continuous scale of accessibility/surprisal (Ariel 2001) and, correspondingly, a continuous variable for the size of linguistic forms. For future research, such terms of analysis are to be preferred.

Preferred Argument Structure is neither a syntactic structure nor a discourse structure, but a preference in discourse for the use of certain configurations of grammar. All four constraints are soft constraints (Givón 1979; Bresnan, Dingare, & Manning 2001), which can be violated without producing ungrammaticality. Yet in spontaneous language use, speakers tend to follow them. Together they influence the shape of discourse productions, yielding the distribution of argument structure constructions recognizable as the ergative discourse profile.

Figure 2.1⁴ presents findings from several languages regarding lexical argument quantity, that is, the frequency of clauses with zero, one, or two lexical arguments. (For Figures 2.1–2.4, the languages are sorted in the same sequence as Table 2.1, with ergative languages presented to the left, and accusative languages to the right.) While there is considerable variability, the key finding here is that clauses with two lexical arguments are consistently rare across languages of different typologies, regions, and genealogies.

⁴ Figures 2.1–2.4 are based on selected studies in Table 2.1 (see also tables 2.1–2.4 of Du Bois 2003b: 62–69).

Table 2.2 Preferred Argument Structure and the ergative discourse profile

Constraint	Domain	Preferred Argument Structure	Ergative discourse profile
QUANTITY	GRAMMAR	Avoid more than 1 lexical core argument	lexical arguments ≤ 1
	PRAGMATICS	Avoid more than 1 New core argument	New arguments ≤ 1
ROLE	GRAMMAR	Avoid lexical A	free use of lexical S & O
	PRAGMATICS	Avoid new A	free use of New S & O

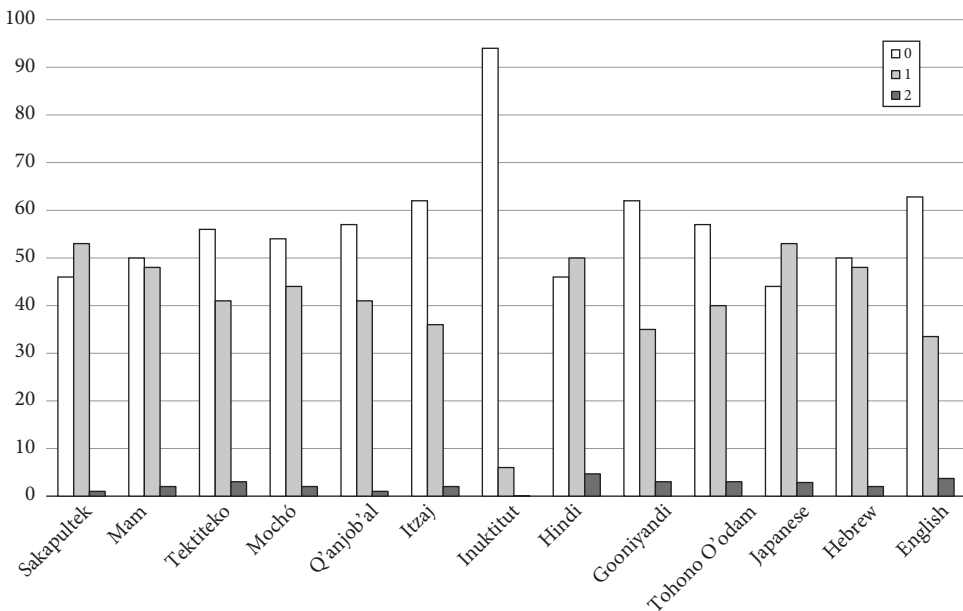


FIGURE 2.1 Lexical argument quantity: frequency of clauses with 0, 1, or 2 lexical core arguments

Noun phrases are not produced in a functional vacuum, of course, but are tied to cognitive-pragmatic processes of information management. The use of a lexical noun is linked to, but far from equivalent to, the presenting of new information. Thus the Quantity constraint on lexical core arguments is paralleled by a similar constraint on new core arguments. Figure 2.2 presents findings across several languages regarding New argument quantity, that is, the frequency of clauses containing zero, one, or two new arguments. Some language samples show no instances at all of clauses containing two new core arguments (Sakapultek, Roviana), while others show very few (Inuktitut, English).

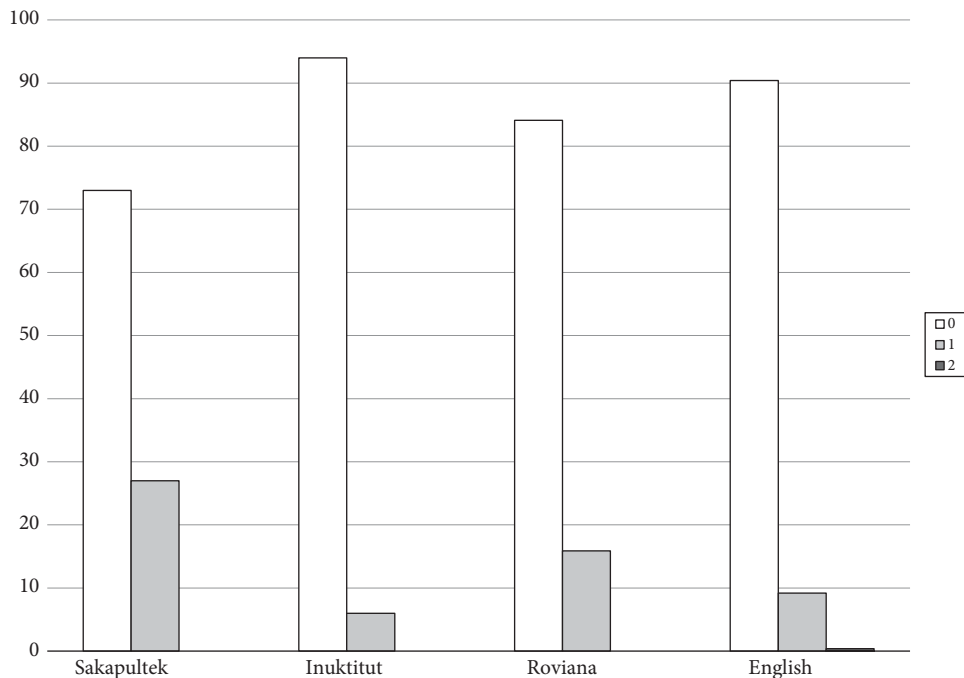


FIGURE 2.2 New argument quantity: Frequency of clauses with 0, 1, or 2 new core arguments

While the Quantity constraint allows speakers to freely deploy One Lexical Argument per clause core, not all syntactic positions in the clause are equally good candidates for realizing this mention. This is where the Role constraint comes in, constraining the use of lexical arguments in A role, while freely allowing their use in S or O roles. Figure 2.3 summarizes findings from a number of languages regarding where lexical arguments are realized within the clause, showing how lexical core arguments are distributed across A, S, and O. While there is considerable variation in some dimensions (e.g. the relative preference for S or O), again what matters most is what is specifically constrained: the A role, which shows relatively low frequencies of lexical mentions as a recurrent pattern across many of a typologically diverse array of languages. Nonetheless, variation here is substantial, raising interesting typological questions (see below).

For one-place predicates, it is easy to satisfy the Quantity constraint, since the S role is unconstrained, freely allowing the introduction of a new referent. Indeed, this may be one reason language users select a one-place predicate over a transitive alternative—for its pragmatic, rather than semantic, affordances. But for two-place predicates, the Quantity constraint on new information is more directly consequential. Thus the Role constraint establishes an opposition within the transitive clause between A and O, constraining new arguments in A, while freely allowing them in O. Figure 2.4 presents the distribution of new core argument realizations across A, S, and O.

A close examination of the frequencies in Figures 2.1–2.4 shows considerable cross-linguistic similarities in some dimensions, along with substantial variability in others.

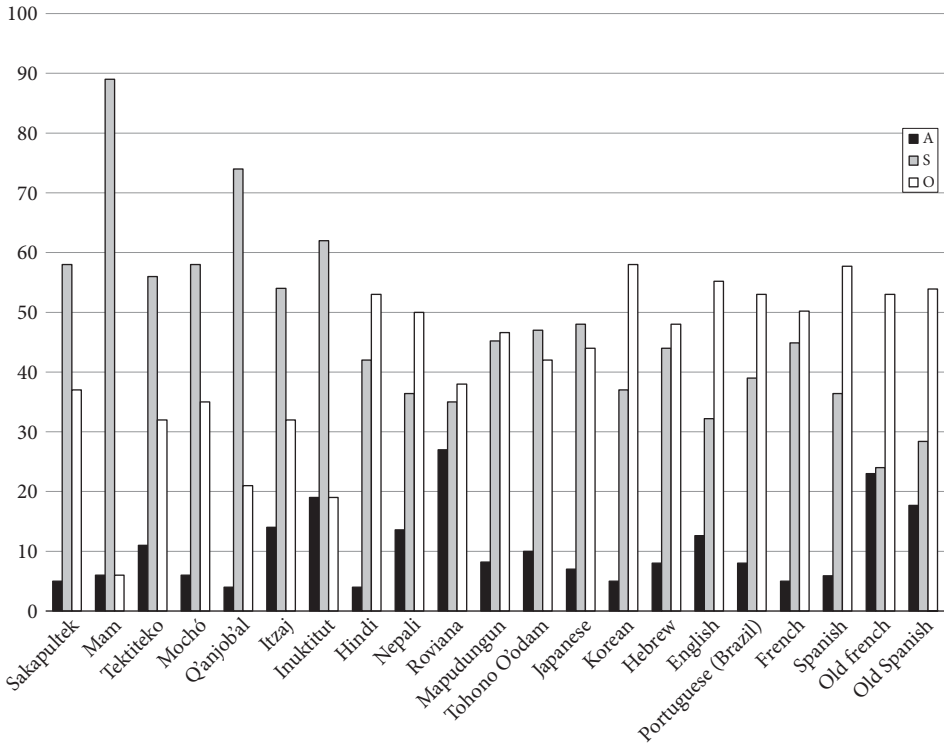


FIGURE 2.3 Lexical argument role: Distribution of lexical arguments across A, S, and O

This is why it is important to evaluate the discourse evidence in light of a theoretical framework, such as Preferred Argument Structure, which offers specific hypotheses about which aspects of argument realization are constrained, and which are not. One misunderstanding that often arises in the literature involves an attempt to compare raw frequencies between two languages (one of which is usually Sakapultek). But whether frequencies match or not is beside the point (and no one language of the many surveyed has a privileged position). What matters instead is the testing of specific, theoretically motivated hypotheses about constraints on syntactic positions in argument structure constructions, e.g. with respect to information structure. Another common temptation is to attribute the difference in frequencies found in two studies to the structural attributes of the languages in question. This may prove to be correct in some cases, and is certainly a question worth asking. But there are other candidates that should be considered as well in accounting for variance, especially genre differences. As the field of Preferred Argument Structure studies develops further, these issues are likely to become more visible, and we can anticipate new findings that tease apart the subtle variables involved. Now that so many typologically diverse languages have been studied, new questions arise about universality and variability of Preferred Argument Structure. Especially interesting is the potential for two-way interactions between the grammar of a language and its discourse profiles, occasioned by the never-ending cycle of grammaticization and language use. Are there different Preferred Argument Structures for

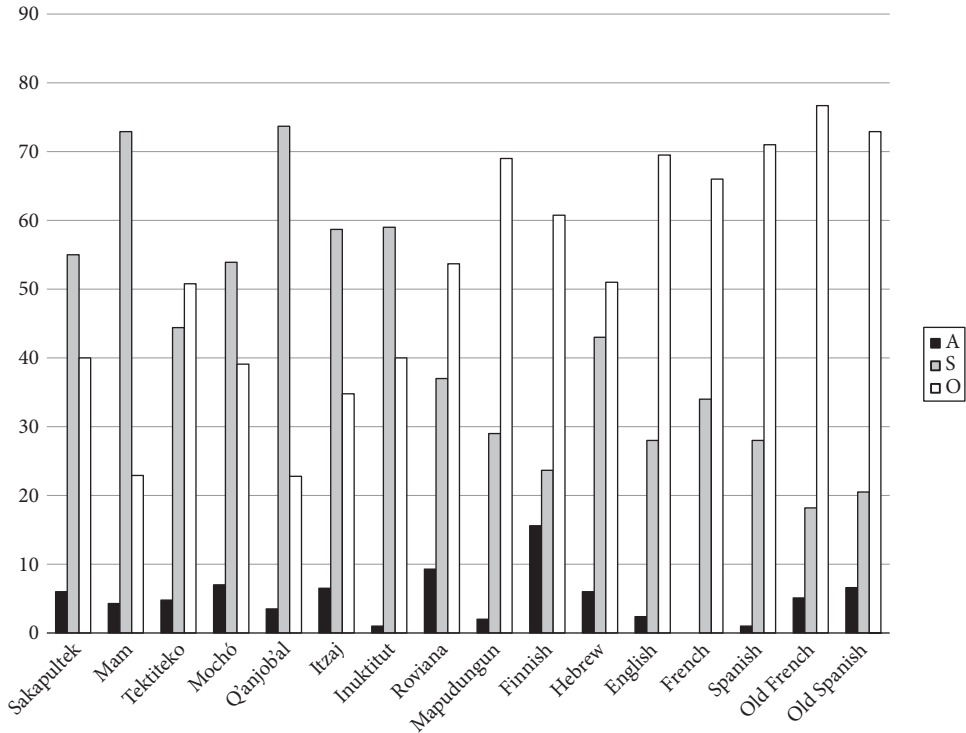


FIGURE 2.4 New argument role: Distribution of new arguments across A, S, and O

different languages, and does this correlate with the ergative–active–absolutive typological contrast (Durie 1988, 2003)? The way is open for a broader theoretical framing of questions about why these recurrent patterns arise across such a broad typological array of languages, yet vary within seemingly well-defined limits. There is much that remains to be discovered.

2.3 A DISCOURSE UNIVERSAL?

Is the ergative discourse profile universal? To answer this question, I begin with the child, and go on to examine the evidence from typology and diachrony.

2.3.1 Child Language

As might be expected, children who are exposed to ergative languages exhibit the ergative discourse profile. This has been shown for Tzeltal (Mayan, Brown 1998, 2008; de León 1999), Inuktitut (Eskimo-Aleut, Allen 2000; Allen & Schröder 2003), and Hindi

(Indo-Iranian, Narasimhan 2013; Narasimhan et al. 2005), and similar observations have been made for Samoan child language (Austronesian, Duranti, & Ochs 1989; Ochs 1982).

But if the question is about universals, what is more telling is what happens in the discourse of children learning accusative languages. Clancy's extensive studies of Korean child language show that even when exposed to an accusative grammar, children produce the ergative discourse profile (Clancy 1993, 1995, 1996, 1997, 2003). For Spanish, Bentivoglio argues for late acquisition of the ergative discourse profile (1998), while other studies of Spanish and French show a more complex picture (Khorounjaia & Tolchinsky 2004; Salas 2010). Older English-speaking children with autism show the ergative discourse profile (Weber 2003), as do adults with aphasia (Kohn & Cragolino 2003).

How deep does the ergative discourse profile go? For Goldin-Meadow this leads her to ask what the child's discourse can reveal about the mind, and she goes to great lengths to find out. Seeking out "people who have had no exposure to any conventional language whatsoever" (2003: 493), Goldin-Meadow works with profoundly deaf children who have had no access to either spoken language or sign language. What these children do is invent their own gesture systems, with revealing implications for cognition:

The thoughts of these individuals cannot possibly have been shaped by language. As a result, whatever categories they express reveal thoughts that *do not* depend on language—thought before language.

(Goldin-Meadow 2003: 493)

One of Goldin-Meadow's most compelling discoveries is that in the invented gesture systems, discourse tends to "pattern like ergative languages: intransitive actors and patients are treated alike (produced), whereas transitive actors are treated differently (omitted)" (2003: 502). She observes:

We have found the ergative pattern to be robust in communication situations. Deaf children of hearing parents who are inventing their own gesture systems tend to organize their gesture sentences around an ergative pattern. Equally striking, we found that when asked to describe a series of action vignettes using their hands rather than words, English-speaking adults invented an ergative structure identical to the one developed by the deaf children, rather than the accusative pattern found in their spoken language. These findings suggest that the ergative pattern may reflect a robust solution to the problem of communicating information from one mind to another, be it an adult or a child mind.

(Goldin-Meadow 2003: 516)

While Goldin-Meadow finds evidence to support the absolute distribution of lexical arguments, she does not find evidence for the role of new information (2003: 516; Schulman, Mylander, & Goldin-Meadow 2001). Pointing to eye-tracking research by Griffin and Bock (2000), Goldin-Meadow suggests that "focusing on patients may be a default bias found in both processing and acquisition tasks" (2003: 517). While their proposed "patient focus" motivation must be balanced against other

factors—competing motivations—deriving from pragmatics, semantics, etc., Goldin-Meadow and associates have made a compelling case for the presence of an ergative discourse profile at the earliest stages of communication. This begins even before exposure to language, arguing for a deep-rooted cognitive basis for “thinking ergative” (Goldin-Meadow, Yalabik, & Gershkoff-Stowe 2000; Goldin-Meadow 2003).

2.3.2 Typology

From a typological perspective, the first question is whether the ergative discourse profile is restricted to languages with ergative grammar, or rather represents a property of the discourse of all languages, independent of syntactic alignment. If it is restricted to ergative languages, it could be a consequence of ergative grammar. But if it is a discourse universal, this is no longer a tenable position, and it becomes a potential factor in the functional motivation for ergativity (2.4).

As already noted, studies of Preferred Argument Structure have been carried out for a number of languages (2.2, Table 2.1, and Figures 2.1–2.4). While a truly random typological sample is not possible, the available languages appear to be reasonably diverse in typology, region, and genealogy, covering all major alignment types. Based on these languages, the preponderance of evidence supports the view that most languages, whether ergative, active, or accusative, tend to display an ergative–absolutive patterning in the discourse distribution of lexical (or “heavy”) nouns, and of new (or low-accessible) information, in the core argument positions of the clause. To be sure, the interpretation of the discourse patterns, and even their existence, remains controversial for some scholars; I address these issues in 2.5. I believe that when the evidence from discourse, typology, child language, and diachrony are all taken into account, the picture that emerges is of an ergative discourse profile pervasive across languages, independent of the typology of syntactic alignment.

That said, one of the most interesting questions raised by cross-linguistic evidence like that in Figures 2.1–2.4 is whether ergative, accusative, and other language types may have their own distinctive variants of Preferred Argument Structure, maintaining some universal aspects while also fine-tuning to the grammar at hand, through cyclic interactions between grammar and use.

2.3.3 Diachrony

If the ergative discourse profile represents a universal, found in modern languages regardless of their type, the uniformitarian principle (Hock 1991)⁵ predicts that older

⁵ “The general processes and principles which can be noticed in observable history are applicable in all stages of language history” (Hock 1991: 630).

stages should share this feature as well. While few languages can provide direct textual evidence for older stages, some do. Diachronic studies conducted so far, though few, have consistently found the ergative discourse profile in both earlier and later stages of the same language. Among accusative languages, diachronic studies of Old Spanish, Old French, and their modern descendants show that “despite a gap of seven centuries ... the medieval and modern forms of French and Spanish are remarkably similar in their manifestations of Preferred Argument Structure” (Ashby & Bentivoglio 2003: 73; see also Bentivoglio 1994). In a study of English spanning six periods from Old English to Modern English, Shibasaki concludes that, despite higher lexical densities⁶ in older stages, each period largely conforms to the constraints of Preferred Argument Structure (Shibasaki 2006).

Among ergative languages, the Mayan family offers especially rich historical implications, given the available comparative and philological evidence. With 30 modern descendants, almost all of the languages have remained consistently ergative over four millennia (Norman & Campbell 1978; England 1983, 1991, 1990; Robertson 1983, 1992; Kaufman & Norman 1984; Law 2009, 2014).⁷ In the domain of discourse, the ergative discourse profile has been documented in detailed case studies covering four of the six major branches of Mayan, extending across a wide expanse of the Mayan territory: Mamean (Mam and Tektiteko, England & Martin 2003); Q’anjob’alan (Q’anjob’al and Mochó, England & Martin 2003); K’ichean (Sakapulteko, Du Bois 1987b, 2006); and Yucatecan (Itzaj, Hofling 2003).⁸ While at least one nineteenth century scholar claimed to reconstruct the text of a proto-Indo-European myth, such feats were ultimately deemed beyond the reach of the comparative method. But a discourse profile is not a text. Its wide distribution across the Mayan family makes the ergative discourse profile a plausible candidate for reconstruction to older stages. Support comes from early textual evidence in yet a fifth branch of Mayan (Chólan-Tzeltalan). Mora-Marín shows that Maya hieroglyphic inscriptions, written in an early Chólan language, display the ergative discourse profile (Mora-Marín 2004). While areal diffusion is a theoretical possibility, the family-wide distribution and textual evidence taken together point to a

⁶ It bears noting that in several language families, older texts show higher lexical densities than modern texts (Ashby & Bentivoglio 2003), while still conforming generally to Preferred Argument Structure. This may reflect differences in genre of the older texts (epic poetry for Old French and Old Spanish, dynastic history for hieroglyphic Maya), for which the modern languages lack a common counterpart.

⁷ The main exception is Chol, which has innovated an agentive system (Law, Robertson, & Houston 2006; Coon 2013; Vázquez Álvarez & Zavala Maldonado 2013). A few Mayan languages show some split ergativity, but this is a late and partial development (England 1983; Law 2009, 2014), which coexists with ergative morphosyntactic alignment. Yet one line is never crossed: No Mayan language has ever been accusative, from Proto-Mayan till today.

⁸ Discourse evidence from a fifth branch is provided for Chol (Vázquez Álvarez & Zavala Maldonado 2013), which seems to have a discourse profile similar to that identified by Durie for Acehnese (Durie 1988, 1994, 2003), with $A=S_a$ opposed to $S_o=O$ in both grammar and discourse profile. Whether Durie’s conclusion, that Acehnese is compatible with an (extended) Preferred Argument Structure account, can be applied as well to the Chol data is beyond the scope of this chapter.

more likely conclusion: that the ergative discourse profile was present in early stages of Mayan, even Proto-Mayan. This conclusion is also consistent with the uniformitarian principle, given the typological evidence for universality.

The wealth of evidence for the Mayan family offers unique opportunities for tracing the history of ergativity in grammar and discourse. The implications are worth dwelling on here, as they are relevant not only for discourse-and-grammar reconstruction, but also for tracking the development of ergativity down through the daughter languages. One point of intersection between studies of comparative Mayan and the ergative discourse profile comes in the work of Nora England and Laura Martin (England 1983, 1991; England & Martin 2003). Drawing on their own research on the grammar and discourse of four languages from two branches of Mayan, they find the Given A constraint in both Mamean and K'ichean, and consider how discourse tendencies may become grammatical rules:

It may be the case that, in K'ichean languages in particular, a grammatical restriction against indefinite subject NPs exists or is developing. This would presumably be a grammaticalization of the discourse constraint noted by Du Bois (1987b), that agents (ergators) are typically not used to convey new information. His analysis and analyses on other languages by England and Martin (1989) [= (England & Martin 2003)] show that, in texts from five different Mayan languages, lexical new mentions in agent (transitive subject) role typically occupy about three percent of the total lexical new mentions. Therefore, it is very rare to encounter an indefinite transitive subject noun, for discourse reasons. K'ichean languages appear to be creating a syntactic rule that reflects the same constraint.

(England 1991: 484)

Thus the ergative discourse profile, present in Mamean and K'ichean languages and presumably in their common ancestor, is undergoing incipient grammaticization in K'ichean but not Mamean. This means the K'ichean change cannot be considered deterministic. Nevertheless, in moving from soft constraints to hard constraints, it traverses a path from ergative discourse to ergative grammar.

2.3.4 Interim Conclusions

Is Preferred Argument Structure universal? The evidence so far paints a complex picture (2.5), and a full answer must await further inquiry (2.6). But what seems clear is that something like the ergative discourse profile represents a “recurrent pattern,” appearing again and again in the discourse of children just learning their language—or exposed to no language at all—and remaining constant in languages widely separated by space, time, genealogy, and typology. Whether the complexity and variation evident in the research record can be subsumed under a single set of generalizations remains to be seen. For now, it seems productive to explore the view that the ergative discourse profile,

and the Preferred Argument Structure constraints that motivate it, reflect enduring properties of language in use, with consequences for cognitive processing, acquisition, typology, diachrony, and grammaticization.

Having introduced several parts of the problem, it is time to see how they fit together, and to assess what it would take to provide a functional explanation for ergativity.

2.4 EXPLAINING ERGATIVITY

Preferred Argument Structure is claimed to be universal, and to motivate the grammaticization of ergativity. So far the functional explanation for ergativity seems on track—until we stop to think about accusative languages. If the ergative discourse profile is present as a motivating force in all languages, why aren't all languages ergative? "A system-external functional force, once appealed to, cannot simply be turned off at will" (Du Bois 1985: 353). To explain ergativity, one more piece of the puzzle must be introduced: competing motivations (Du Bois 1985, 2014; MacWhinney et al. 2014; Malchukov 2014). In the arena of discourse, the two top competitors are powerful and pervasive, even universal: topic continuity and new information.

The grammaticizing power of topicality is widely acknowledged. Subject is said to be a grammaticization of topic, or topic-cum-agent (Givón 1983a; Comrie 1988). But what about languages that don't have subjects, or at least don't grammaticize them in the central way that accusative languages do? Speakers of ergative languages have been claimed to differ from speakers of accusative languages in having "different conceptions of prototypical agenthood" and "different basic topicalizations" (Plank 1979: 28). Curiously, these psychological claims were made in the absence of any experimental or corpus evidence. To put such speculations to the test, a corpus-based study of topic continuity was devised (Du Bois 1987b: 842–843), which showed that in the ergative language Sakapultek, topical referents (appearing in two successive clauses) overwhelmingly favor S=A continuity over S=O continuity, 80 percent to 20 percent. The idea that ergative speakers think differently about topicality is debunked. But this leaves us with a quandary. Admitting that ergative speakers track topics just like accusative speakers do, it is still only accusative languages that grammaticize topic in an all-encompassing syntactic and morphological subject. If speakers of all languages track topic continuity in the S=A groove that motivates accusative alignment, why aren't all languages accusative? The typological question comes full circle.

Both questions receive the same answer: competing motivations. Ergativity and accusativity are both motivated, each with its own dedicated motivation operating at all times in all languages. But only one motivation can prevail at a time, in organizing the basic structure of a grammar (or part of a grammar) in a given language. The discourse profiles that drive this eternal competition were hinted at already, in the discussion of the discourse excerpt in (1) (2.1). Within a single short stretch of discourse, two

recurrent patterns are observed to coexist: first, introduction of new referents is managed in O and S (absolute); and second, topic continuity is managed in A and S (subject). Quantitative cross-linguistic evidence shows the two discourse profiles are widely distributed, found together in diverse genres and across languages of all types. As usual, S is Janus-faced: Variable in discourse, it becomes pivotal in grammar.

Having seen some key pieces of the ergative puzzle, while acknowledging the competition from accusativity, we can now ask how it all fits together—to articulate the discourse motivation for ergativity, at least, if not a complete explanation for ergativity. The Quantity and Role constraints of Preferred Argument Structure set broad limits on the information structure of the clause. In effect they define a gross template for any argument structure construction, including intransitive, transitive, and ditransitive clauses. In the arena of discourse, utterance tokens realizing such constructions undergo selection to satisfy the constraints, producing the “facts on the ground” of the distribution of argument structure configurations in the utterance population. The ergative discourse profile represents a generalization of the statistical distribution of recurrent patterns, as candidates for grammaticization in the grammar of a given language. At the same time, the accusative discourse profile, lurking in the very same utterance population, presents its own patterns as alternative attractors for grammaticization. In general, the distribution of New information (reflecting cognitive processing demands) motivates a discourse pattern isomorphic to ergative–absolute grammar. The distribution of topic continuity motivates a discourse pattern isomorphic to nominative–accusative grammar. Both functional pressures are present in the discourse of all languages, but at any given point only one can grammaticize, determining the syntactic alignment of a specific argument structure construction. If just one syntactic alignment is to prevail, the competition must be resolved. And this is just what grammaticization does: It resolves competitions, converting functional motivation into normative motivation (Du Bois 2014: 280). What emerges is a grammar that may seem arbitrary in its specific forms and normative rules, but that works for its users, serving as a unified framework for communicative practice and cognitive affordance.

Consider the Mayan case, which shows what can happen when the ergative discourse profile interacts with word order, setting up the conditions for the emergence of ergativity. First, in line with the ergative discourse profile, the single lexical argument (reflecting the Quantity constraint) typically occurs in either O for transitives, or S for intransitives (reflecting the Role constraint). Second, for Mayan languages going back to Proto-Mayan, the dominant word order (Dryer 2013a) is verb-initial. Taken together, these two factors place both lexical arguments to the right of the verb, producing a structurally consistent V-Lex_{s/o} or V-Absolute word order (an ergative order in the sense of Dryer 2013b). This constitutes the gross structure of verb and noun, maintained consistently in the discourse profiles of most if not all Mayan languages from Proto-Mayan to now. But Mayan languages also have a fine structure of pronominal clitics, implemented in head-marking of both ergative and absolute on the verb. How does the fine structure of agreement morphology interact with the gross structure of word order syntax?

As noted earlier, different parts of the cross-referencing paradigm behave differently. First and second person referents are given information, and thus are regularly marked by overt (non-zero) pronouns/clitics, in both ergative and absolutive. For 3rd person, referents in A are typically given, and thus reduced, and potentially cliticized. But S and O are often new, hence lexical, and so are not likely to be reduced or cliticized. The absolutive mention, being expressed overtly in the clause with a lexical rather than pronominal mention, is not itself cliticizable. The absence of a clitic may then be interpreted as absolutive zero agreement. Once the pronoun-to-agreement shift takes place (presumably in pre-Proto-Mayan), the features that define the Mayan ergative complex (V-Lex word order, head-marking, absolutive zero, and the ergative discourse profile) create a kind of V-Lex lock-in. This proves to be an evolutionary stable strategy, resistant to change over four millennia.

Along with the gross structure of information, there is also the fine structure of inflectional detail, semantic nuance, and the specificity of pragmatic interpretation. The gross structure defined by Preferred Argument Structure sets broad constraints, but leaves speakers and languages plenty of room to maneuver at the level of fine structure. This is where the precise details of morphosyntactic analysis and historical development become critical, as processes of utterance production, interpretation, analogy, reanalysis, and grammaticization deploy and reconfigure the fine points of grammar to serve the exacting needs of language users. The grammarian's, semanticist's, and historical linguist's attention to detail comes into its own here, analyzing the fine structure to elucidate the precise accounting of grammar and meaning, which is indispensable to the functionality of language. But the gross structure matters too. In the end there is no need to choose between them. Gross and fine work together in all of human action, and language is no exception.

Languages often show an apparent harmony between gross structure (e.g. information structure, topicality, word order) and fine structure (e.g. inflection, agreement). But what if a discord or disruption arises between gross structure and fine—how is it to be bridged? Must it be? To locate the critical arena where the crisis comes to a head, look to word order in use. This is where discourse-and-grammar research may contribute to resolving certain mysteries about the grammaticization of syntactic alignment. Preferred Argument Structure motivates the gross configuration of lexical nouns, e.g. the ergative discourse profile. If these nominal elements are arrayed on the same side of the verb as in most Mayan languages, perhaps motivated by a formal and/or functional analogy, the result is a recurrent word order configuration (e.g. V-Lex_{s/o} or Lex_{s/o}-V) that constitutes a potential model for ergativity. If another historical development (say a phonological merger or analogical leveling) collapses key distinctions between elements in the agreement system, this may undermine the fine structure of morphological agreement. Yet what remains is the gross structure. Now the ergative distribution of gross structure becomes a potential model upon which to rebuild a fine structure, this time along new lines, perhaps ergative. Whether such a trajectory can be confirmed or disconfirmed in a language family with a long written history remains an open question. But the only way to find out is to follow the patterning of language in use. This

means documenting the discourse profiles that define the gross structure of the relevant utterances. It may be rare to find suitable conditions for inquiry into both gross and fine structure at the required level of detail, but it is well worth seeking out.

The analysis of the Mayan ergative complex in relation to the ergative discourse profile provides an important case study illustrating certain general principles of functional explanation, insofar as it combines universal generalizations about gross structure of the ergative discourse profile with locally specific generalizations about fine structure of the inherited morphosyntax of a particular language family.

Extending this approach to other language families, each with its own unique history, one should expect three things. First, the layer of gross structure produced by principles like the ergative discourse profile has a discourse-based coherence of its own, and is likely to remain relatively stable; yet word order developments can introduce fundamental changes even here. Second, the layer of fine structure (inflection, agreement, and so on) linked to the language-specific inherited morphosyntax has its own logic of continuity and change, which operates in part independently of that of gross structure. Third, interactions between gross structure and fine structure may trigger a dynamic of change that disrupts the ecology of grammar, setting in motion events that lead to restructuring the system of grammar. The story of the interaction among gross and fine must be discovered anew in the history each new family. Yet even here, analogy, reanalysis, and adaptive selection (based on cognitively motivated information processing constraints, for example) offer general principles for a theory of grammaticization.

The roster of motivations with the power to shape ergative and other syntactic alignments is not exhausted by the two considered here. A more complete account will have to incorporate interactions with competing and converging factors such as event structure, causal chains, verb semantics, tense and aspect, voice, the constructional repertoire, evidentiality, analogy, and more (DeLancey 1990; Croft 1998; see also the chapters in this volume). Many of these involve morphosyntactic, semantic, and pragmatic fine structure, which is essential to complete the functional explanation of ergativity. A critical task for future research is show how multiple layers of fine structure interact with layers of gross structure to shape the grammaticization of ergative and other argument structure configurations.

2.5 OBJECTIONS AND REFUTATIONS

The claim of a discourse basis of ergativity (Du Bois 1987b) has generated a certain amount of controversy, which I address in this section. Some objections question the existence of the ergative discourse profile, or try to explain it away, while others accept it but doubt it supports a functional explanation for ergativity. While some studies raise useful points that warrant attention in future research, others reveal a misunderstanding of the nature of discourse-based explanation. Common conceptual errors are essentialism, reductionism, and epiphenomenalism, all of which involving idealization of the

facts of language use. In the following I will try to distinguish the useful critiques from the dead ends; and, for the latter, suggest an alternative approach. A recurrent theme is that generalizations about language must be grounded in linguistic realism rather than idealization.

2.5.1 Diversity

One of the earliest and most productive critiques was developed in a series of discourse-and-grammar studies by Mark Durie (1988, 1994, 2003). Preferred Argument Structure studies had adopted the A–S–O grammatical categories (Dixon 1979) for their neutrality with respect to typological diversity in syntactic alignment, to avoid imposing alien categories on ergative languages. But Durie argued they were doing just that to active languages. He rejected the view of S as a universal category for linguistic analysis, arguing that it obscured important diversity in both discourse and grammar, in active languages like Acehnese (Austronesian, Indonesia). Here, intransitive subjects are internally differentiated, both in grammar and in discourse profile, between S_a and S_o . A better analysis of Acehnese discourse could be achieved by respecting the alignment typology evident in Acehnese grammar, which distinguishes Actor ($S_a=A$) and Undergoer ($S_o=O$). By investigating categories relevant to the grammar at hand, Durie was able to show that each discourse profile was both internally consistent and distinct from its counterpart. Subsequent studies in ergative, accusative, and especially active languages have confirmed and extended these findings. For example, Chol, a Mayan language once characterized as “split-ergative” but now recognized as active, makes a similar distinction between Actor and Undergoer in both grammar and discourse profiles (Vázquez Álvarez & Zavala Maldonado 2013). These studies challenge the assumption that S is uniform in language use, and provide a useful corrective to the A–S–O schema. More generally, they remind us that the categories of the language being investigated are a potent guide to new discourse profiles waiting to be discovered. This raises the question of whether there are different Preferred Argument Structures for active, ergative, and accusative languages, or even finer-grained distinctions; and, if so, whether they can be interpreted as principled variations on a single unifying theme.

Durie nevertheless saw value in framing his analysis in terms of Preferred Argument Structure, once the necessary adjustments were made to accommodate the diversity of grammar and discourse profiles of the language being analyzed. Durie recognizes a key point that befuddles some critics, regarding the role played in discourse-functional explanation by the discourse profile (Du Bois 2003a: 40–44), what I have previously called “recurrent clusterings in parole” (Du Bois 1985: 357). Discourse profiles are generalizations about recurrent patterns of linguistic behavior, including recurrent co-occurrences of pragmatic, semantic, and grammatical features. As statements about language use, they are not to be confused with the grammatical categories they motivate, which have a normative status in the linguistic system. Durie nicely points up a

common misconception about discourse-functional motivation of grammatical categories in a response to Herring (1989) which remains relevant today:

Herring (1989), misunderstanding the concept of motivation, regards the mismatch in Sakapulteko as a logical flaw in Du Bois's argument. A further distortion in Herring's argument derives from her demand that the grouping of S and [O] should involve functional specialization in terms of cognitive or semantic factors. In Du Bois's account, the cognitive/semantic motivations do not themselves directly impact upon coding choices, but only *proximately*, through the "recurrent clusterings in parole" (Du Bois 1985: 357) which they produce. This is of course a key difference between the Du Bois account of ergativity and more directly cognitively or semantically based approaches.

(Durie 2003: 192, fn. 193)

Discourse profiles are general statements about the "facts on the ground" of language use. They arise as a result of multiple factors, including factors such as cognitive processing, salience, and so on. As system-external motivations they interact with system-internal factors to shape the emergence of grammar. But the process is not deterministic. While discourse profiles influence the grammaticization of linguistic categories, the profile is not the category.

2.5.2 Essentialism

Less productive are critiques which, while bringing no empirical research to bear on the question at hand, translate originally statistical observations into the language of categorical statements, the better to draw logical deductions—or contradictions. Needless to say, the meaning of a discourse profile may be severely compromised if its empirical variability is disregarded. When soft constraints are restated as hard constraints, the result is unlikely to be faithful to the original.

Such a confusion mars the critique of Harris and Campbell (1995), who paint a portrait of the discourse basis of ergativity (Du Bois 1987b) that is almost unrecognizable to someone familiar with the theory. They confidently appeal to the "spirit" of Preferred Argument Structure constraints, which they feel are "blatantly violated" by the passive origin of ergativity (1995: 253). They enthusiastically assert that transitive "A [is] prohibited almost totally from introducing new information" (1995: 253), then quietly delete the "almost" as they substitute a categorical rule for the original soft constraint. They perceive "an unpleasant circularity in Du Bois' picture" (1995: 254), based on their questionable reframing of Nora England's findings of incipient grammaticization of certain Preferred Argument Structure constraints into grammatical constraints on the ergative in K'ichean (England 1991; England & Martin 2003). Their story of the passive origins of ergativity begins with a proto-language agented passive, represented as containing two proper nouns (*Mary was.hit by Jane*) (1995: 252). This contrasts with the attested

examples they themselves cite from Old Persian to illustrate the passive to ergative change, which contain a pronoun rather than a lexical noun in the agentive *by*-phrase (1995: 244, 255). Though somewhat murky, the reasoning behind their argument seems to depend on the following assumptions and inferences:

1. To get from accusative to ergative alignment, a well-known diachronic pathway is via the reanalysis of an intransitive passive construction as a transitive active construction.
2. To express a two-place predication fully explicitly, the passive sentence cannot be agentless, but must include the agent.
3. Thus the agented passive construction is used, with the agent expressed in an oblique role, e.g. a prepositional phrase adjunct (*by*-phrase).
4. Obliques (prepositional phrase adjuncts) often contain new information and lexical nouns (by Preferred Argument Structure).
5. Therefore the oblique agent must have been new and lexical.
6. The two-participant predication, being a passive, is intransitive.
7. Therefore the subject of the two-participant predication (the semantic Patient) must be an S.
8. Intransitive S arguments are often new and lexical (by Preferred Argument Structure).
9. Therefore the S role argument must have been new and lexical.
10. By reanalysis, the *by*-phrase (originally an optional adjunct) is reinterpreted as an obligatory core argument (transitive subject A), and the S becomes O.
11. The formerly rare agented passive intransitive construction undergoes a massive change in frequency to become the new normal for transitive constructions, but speakers make no changes in their use of pronouns vs. nouns, or given vs. new information.
12. Now there are two new and lexical nouns in the core arguments of the clause (violating Preferred Argument Structure).
13. Now there is a new and lexical A (violating Preferred Argument Structure).

The problems with this account are several, arising on multiple levels. First, the logical flaws. The reasoning depends on converting a statistical tendency to a categorical rule. This must be done twice (in deriving 5 from 4, and 9 from 8), in order to generate the desired contradiction. Second, language users are presented as being sufficiently creative to introduce major changes to the structure of their grammar, reanalyzing an optional oblique as an obligatory core argument (step 11), but they were apparently too timid to begin using a pronoun in place of a lexical noun—during the decades or centuries it must have taken for the frequency shift and ergative reanalysis to be completed. Ignored is the fact that there are no constraints against using pronouns or given information: Not only are the Preferred Argument Structure constraints always soft constraints, the limits are always upper limits, not lower (Du Bois 1987b: 834; 2003b: 73).

Thus there has never been any minimum requirement to fill a syntactic slot, whether argument or adjunct, with either new information or a lexical noun.

One begins to understand why it was necessary for Harris and Campbell to appeal to the “spirit” of Preferred Argument Structure in making their argument, instead of employing the actual constraints. The result is unfortunately fairly typical of essentialism, which, faced with statistical evidence of diversity in argument realization, substitutes a categorical stereotype, and then uses the stereotype to work out the logic of its reasoning. But surely this is antithetical to the “spirit” of Preferred Argument Structure, if it must have one.

Is there an alternative? Actually, very little needs to be changed in the above account to make it clear that not only is Preferred Argument Structure compatible with the grammaticization pathway in question, it actually facilitates it. Moreover, the only changes needed involve replacing the rigidly idealized conjectures of Harris and Campbell with common-sense observations on how speakers talk—as confirmed in corpus-based studies of naturally occurring language use. Preferred Argument Structure allows speakers the flexibility to use a pronoun in any slot, whether argument or adjunct, and speakers routinely do just that (Du Bois 1987a, 2003b). Moreover, as Ariel et al. (2015) have shown, speakers use pronouns when innovating a new argument slot, precisely because pronouns fly under the radar of the Quantity constraint. This leaves speakers free, when extending the use of a structure like the passive, to choose a pronoun in the *by*-phrase. In fact this is precisely what the textual evidence from Old Persian shows:

(2) *ima tya manā kartam Parθavaīy*

“This is what was done by me in Parthia”

(Darius the Great) (John R. Payne 1980: 151) (cited in Harris & Campbell 1995: 255)

The genitive pronoun (*manā* ‘me.GEN’) expresses the agent in a *by*-phrase, initially an optional adjunct. But as this structure comes to be routinely used to express two-place predications, it undergoes reanalysis (step 11) as an ergative core argument. The new transitive structure easily satisfies the Quantity and Role constraints of Preferred Argument Structure.

2.5.3 Reductionism

One attraction of essentialism is that it feeds reductionism. By replacing a complex empirical generalization with a handy rule of thumb, a theoretical economy is achieved. If the rule is not only categorical but universal, the conclusion may be drawn that empirical investigation of the language at hand is unnecessary. But when statistical generalizations are replaced with categorical statements, the likely result is a false economy.

Such a chain of essentialist substitutions is found in the reductionist proposal of Haspelmath (2006). Where I had pointed out the functional motivation linking the avoidance of lexical nouns with avoidance of new information (Du Bois 1987b: 829–830), Haspelmath wants to go further, suggesting that “since new information is **mostly** coded

by lexical NPs, ... the [lexical] tendencies ... could be **reducible** to the [new information] tendencies.” Moreover:

[T]he ‘quantity’ tendencies ... [may] **follow straightforwardly** from the ‘role’ tendencies.

(Haspelmath 2006: 910)

[I]t appears that the strong **tendency** to avoid clauses with two new/lexical core arguments can be **reduced** to the strong avoidance of new/lexical As ...

[W]e simply like to talk about human beings and their actions, so animates **tend** to be topical. ... Since the A argument is **almost invariably** animate, it **follows** that it is **typically** topical and **hence** given.

(Haspelmath 2006: 911, emphasis added)

Haspelmath concludes that “the whole notion of preferred argument structure may be **reducible** to other, well-established tendencies and generalizations” (2006: 911, emphasis added); (see also Dahl 2000: 50; Everett 2009; Haig & Schnell 2016).

This style of argument slides easily from most to all, from it tends to it follows, and draws inferences accordingly. While it overlooks the fact that the Quantity constraint probably has a better independent motivation as a cognitive limitation on information processing resources, Haspelmath’s proposal to dispense with the Quantity constraint, and indeed all of Preferred Argument Structure, makes a certain sense—if we accept a series of inferences about language use, each apparently well motivated on its own:

1. Humans are interesting to humans.
2. Therefore, humans are topical.
3. Therefore, humans are given.
4. Therefore, humans are expressed by reduced forms (pronouns or zeroes).

Leaving aside the inferential gaps, this is still not enough to make viable predictions about argument realizations in syntactic argument slots. If you add the further assumption that humans are agents, and that the subject role expresses agent-cum-topic, you can, seemingly, derive the inference that subjects are expressed by pronouns. In contrast, direct objects are said to encode inanimates. Inanimates are less interesting, therefore not topically continuous, therefore not accessible, therefore new, therefore lexical. But do these conclusions actually follow?

Goldberg evaluates a similar reductionist proposal and rejects it: “[T]he Given A constraint does not follow directly from the prevalence of animate topics. ... [T]he Given A constraint is not simply epiphenomenal” (Goldberg 2004: 431). The problem with the essentialist–reductionist line of reasoning is that the conclusions follow only if each of a long chain of assumptions is valid—specifically, only if each generalization is categorical. But none of them are. And because each step in the chain represents at best a statistical tendency, the inferential failure compounds with each step. Flawed logic aside, the most serious problem is empirical: the observable facts of discourse do not confirm the logical deductions about what discourse “should” look like. The fact is, only some

humans are topical, and therefore pronominalizable, and this makes a critical difference for grammaticization pathways, e.g. in the role of pronouns in the emergence of innovative argument structure constructions (Ariel 2000; Ariel et al. 2015).

Is there another way? A recent corpus-based study of Hebrew datives (Ariel et al. 2015) offers a relevant model, even if the construction involved is different. Ariel et al. compare datives (syntactic arguments) with adjuncts headed by the preposition *bishvil* ‘for.’ Both introduce mostly humans, and both express the same thematic role (roughly, benefactive). Yet they part company in their discourse profiles: Only 5 percent of the datives are lexical, but as many as 23 percent of the *bishvil* adjuncts are. The difference cannot be attributed to animacy, but only to the difference in syntactic status: argument vs. adjunct. This accords with the predictions of constructional Preferred Argument Structure (Ariel et al. 2015: 270–272; Du Bois & Lester in progress), which freely allows lexical mentions in adjuncts, but not in core argument slots other than S/O. More generally, pronouns sidestep any problems with the One Lexical Argument constraint, and thus are exploited as pioneers in an incipient grammaticization introducing an additional argument position into the clause, allowing a second human participant (in addition to the agent) to be expressed in a benefactive-like role.

What are the implications for ergativity? While the alignment types and constructions in question differ, interesting parallels can be drawn nonetheless. In both cases, speakers modify an existing argument structure construction, adding a new argument role (ergative or dative). And the strategy they adopt to accomplish it without violating Preferred Argument Structure constraints is essentially the same: cognitive containment (Ariel et al. 2015: 270–272; Du Bois & Lester in progress). The safe strategy is to use a pronoun in the innovative argument slot, to avoid violating the One Lexical Argument constraint—or, to put it in cognitive–functional terms, to avoid overloading limited processing resources.

2.5.4 Historical Accident

Claims of functional motivations have implications for language change, but are sometimes at odds with the findings of historical linguists (Cristofaro 2014). For example, Næss (2015) points to a series of seemingly random historical changes in rejecting, not only the competing motivations analysis of ergativity (citing Du Bois 1985; Du Bois 1987b), but any functional explanation for the ergative structure of Äiwoo (Oceanic, Solomon Islands). After detailing the complicated historical processes that produced the ergative verb phrase, he states:

What the [ergative] VP structure of Äiwoo demonstrates is ... that any linguistic system at any point in time is the outcome of a number of interacting factors which do not add up to either a universal structural template or a set of functionally-based competing motivations.

(Næss 2015: 102)

This statement about grammar as “the outcome of ... interacting factors” is fine up to the conclusion, which does not follow. The assumption that the claimed VP merits its own “set of functionally-based competing motivations” seems premature, in the absence of the relevant discourse profile information. Be that as it may, it is surely unwise to conclude that the randomness of historical changes precludes an adaptive account of the historical evolution of linguistic structure. From the perspective of linguistic as well as biological evolution (Beckner et al. 2009; Lane 2015: 172–204), there is no principled contradiction between the fact that a system is subject to historical processes, which may randomly introduce partial arbitrariness, and the applicability of the evolutionary processes of adaptive selection, which yield partial motivation.

The origin of ergativity seems particularly prone to invite frustration and despair, leading some historical linguists to go so far as to question whether there is any functional motivation for ergativity:

The absence of a clear case of extension creating ergativity argues against a clear functional motivation unique to the ergative pattern. With the exception of the passive > past/perfective ergative, it appears that ergativity is a historical accident that has come up again and again in many parts of the world.

(Gildea 2004)

To conclude that “ergativity is a historical accident,” while acknowledging that it is a recurrent pattern arising independently in languages around the world, seems a contradiction. Anything in language can be made to look like a historical accident—even the grammar of accusative languages. But such a stance appears valid only if one restricts the inquiry to tracing etymological sources and describing the arbitrary signs that result. What looks like a “historical accident” may well turn out to involve adaptive selection, given an evolutionary account.

What is the alternative? The evolutionary development of any aspect of language can be seen as the result of many small, locally motivated actions, taken by speakers who lack an overarching view of the system (Keller 1994). But in this respect linguistic evolution is no different from biological evolution (Dediu et al. 2013; Lane 2015; Mayr 2001). Evolutionists don’t give up on adaptive explanation just because random mutations introduce one accident after another. On the contrary: Such accidents (mutations) provide the necessary variability (Bybee 2007) for selection to act on. On one interpretation, functional constraints play a role in grammaticization by acting as selective processes that winnow the variability of naturally occurring discourse. The forms and constructions that survive and reproduce in the longer term will be those that satisfy cognitively motivated constraints, like Quantity. In general, constraints on the selection of functionally viable linguistic structures can act over time to constrain the possible outcomes of grammaticization processes, leading to functionally motivated structures (Hopper & Traugott 2003; Traugott & Trousdale 2014).

2.5.5 Epiphenomenalism

Epiphenomenalism may seem an arcane philosophy, originating as it does in nineteenth-century mind–body dualism (Walter 2009: 1137). But despite its abandonment in most modern sciences, in linguistics (and in sociobiology, Searle 2013) the epiphenomenon is invoked surprisingly often (Hopper 1987; Jaeger & Snider 2008; Malchukov 2008). This includes in claims about ergativity (Everett 2009; Haig & Schnell 2016). In practice, labeling an empirical observation as epiphenomenal typically prefigures a move to dismiss it as inconsequential. “An epiphenomenon is a *secondary symptom*, a mere “afterglow” of real phenomena” (Walter 2009: 1137). While the supposed epiphenomenon is acknowledged to have a real cause, it is claimed to have no further causal consequences in the world (Walter 2009: 1137). By setting up a disconnect between mind and materiality—or langue and parole—epiphenomenalism inherits the problems of dualism (Searle 2013). Not surprisingly, attempts to partition facts into real phenomena and epiphenomena tend to suffer from a lack of consensus about criteria for deciding which is which: One scholar’s epiphenomenon is another’s phenomenon. But the real problem lies in the idealization that is introduced into otherwise empirical questions: a dualism, not of mind and body, but of grammar and use.

Appeals to epiphenomenality often arise in response to claims about language use as an influence on grammar. An empirically observable pattern in use is said to be epiphenomenal—in effect, not a phenomenon, but only illusory—to the extent that it can be explained away as caused by other factors—in a word, reduced (Haspelmath 2006). But this neglects the first question that should be asked: Does the observable pattern in language use have downstream causal consequences? Specifically, the epiphenomenal charge has been made regarding discourse patterns identified by Du Bois (1987b) as consequential for the grammaticization of ergativity (Everett 2009; Haig & Schnell 2016). In a study otherwise notable for its careful analysis and impressive multilanguage database,⁹ Haig and Schnell, speaking of the Given A Constraint, maintain that:

[T]he apparently marked behavior of the A role, another cornerstone of the ergativity claims, ... is an epiphenomenal by-product of two well-documented and robust tendencies: the pervasive tendency for transitive subjects to be [+hum], and the pervasive tendency for all subjects (S or A) to be topical, hence given information.

(2016: 612)

Their claim to distinguish some patterns as epiphenomenal (while others, presumably, are not) leads them to conclude, somewhat surprisingly, that ergativity itself is epiphenomenal:

⁹ The massive study by Haig and Schnell (2016), encountered online as this chapter was going to press, makes a valiant effort to raise the bar statistically, and merits a more complete assessment than can be given here. Nevertheless, it introduces conceptual problems of its own, touched on here. Note that they cite different numbers of subjects and objects for transitive clauses (e.g. for English they report 1,111 transitive objects but only 422 transitive subjects; see their appendix 2). The gap reflects their omission of 1st and 2nd persons, making it difficult to compare with the findings reported here.

In Iranian for example, a shift from accusative to ergative alignment (restricted to past tenses) ... was a particular, and highly contingent, combination of ... changes that conspired to yield ergative alignment These and similar diachronic developments speak of a more contingent approach to ergativity, according to which ergativity arises as an epiphenomenal and construction-specific constellation, through the combination of essentially independent morphological and phonological processes.

(Haig & Schnell 2016: 614–615)

Here the idea of epiphenomenality begins to collapse on itself. Against claims of functional explanation, the epiphenomenalist proposes an absence of explanation: “ergativity is a historical accident” (Gildea 2004) or “epiphenomenal” (Haig & Schnell 2016: 615). True, a grammatical pattern may seem accidental, when viewed exclusively in terms of its etymological source materials. But some historical accidents are accidents waiting to happen. As a typologically recurrent pattern, ergative syntactic alignment must be recognized as a powerful attractor state, that is, an evolutionary stable strategy. Accusativity too is a potent attractor. But there is no contradiction here. Both recurrent patterns are attested worldwide, and each has its motivations. Indeed, the two motivations coexist within the discourse of every language. The eternal tension between ergative and accusative motivations, evident in split ergativity, is best understood in terms of the theory of competing motivations (Du Bois 1985, 2014; MacWhinney et al. 2014). But to dismiss a linguistic pattern—even ergativity—as epiphenomenal is to cut off inquiry prematurely. It would be better to drop the epiphenomenal stance altogether, and take up the very real challenges of building theory and method capable of accounting for recurrent discourse patterns and their downstream consequences for grammar. In the study of ergativity, the facts on the ground of discourse hold much promise for understanding split ergativity (Silverstein 1976; Comrie 1978; Dixon 1979, 1987; DeLancey 1981; Durie 1988, 2003; Malchukov 2005, 2014; Law et al. 2006; Mahand & Naghshbandi 2014; see also Laka, Nash, Coon & Preminger, and Woolford Chapters 7, 8, 9, and 10, this volume).

2.5.6 Interim Conclusions

I have considered various objections to Preferred Argument Structure and the ergative discourse profile. The most productive tend to come from researchers who combine in-depth first-person research on the grammar in question with detailed and sensitive empirical investigations into the discourse distribution of grammatical elements (Durie 1988, 1994, 2003; Vázquez Álvarez & Zavala Maldonado 2013). Others were found wanting: mired in essentialism, reductionism, and epiphenomenalism.

What is the problem? Not generalization per se, which is indispensable for understanding and explaining grammar. Rather, the problem lies in idealization, cutting the system of language off from the reality of its use. Idealization begins with a misplaced essentialism that reifies categories, obscuring the variability that characterizes

populations of naturally occurring utterances. It continues (sometimes) with a reductionism that creates an illusion of economy, without testing to see if the reduced principles can in fact reconstitute (predict) the facts of the world it claims to have reduced. On the other hand, sometimes scholars dwell on a maze of intricate historical details—no lack of empirical facts here—but when the time comes for an explanation they come up empty, claiming a historical accident. Finally, the apotheosis of idealization is reached in epiphenomenalism, which dismisses certain facts as not phenomena, banishing them to the black hole of epiphenomena—from which no downstream causal consequences can escape.

What is the alternative? First, linguists must commit to linguistic realism. The facts on the ground of discourse are not to be dismissed, lest their consequentiality in the world of language be overlooked. Nor are they to be shunted aside as epiphenomena. Rather, language use is firmly located in the world. Here it coexists and interacts with the practices, norms, and knowledge of language, even if all these have somewhat different ways of being in the world. Linguistic realism urges documenting the empirical generalizations about language use that define its capacity to shape grammar: the discourse profile. Second, it is equally important to follow through on the theoretical end. Discourse profiles have downstream causal consequences. Identifying the consequences serves at the very least to verify that a meaningful discourse profile has been identified. The combination of linguistic realism and theoretical generalization is critical for explaining ergativity, and for all questions of the interinfluence of discourse and grammar.

While some objections have proved lacking, even so they serve to elicit clarification of issues left murky in previous formulations, and point to gaps in our knowledge that call for further research. Important issues have been broached regarding the relation of language use to grammar, and of linguistic realism to functional explanation. Certainly some aspects of the discourse approach to ergativity are likely to remain controversial, until resolved by further research. It remains for new collaborations among researchers, bringing together corpus-based methodologies, multifactorial statistical techniques, grammar, typology, competing motivations, and functional theory, to advance our understanding of the outstanding questions.

2.6 DIRECTIONS FOR FUTURE RESEARCH

What new possibilities does discourse research bring to the study of ergativity? Whether the topic is pragmatics, syntax, semantics, constructions, splits, morphology, prosody, cognition, typology, diachrony, or grammaticization, all can benefit from incorporating a focus on language in use. The study of discourse integrates well with a wide range of research questions, bringing new perspectives on how a targeted set of grammatical resources serves the communicative goals of its users.

For ergativity the biggest payoff is likely to come from “discourse inside the clause” (Du Bois 2003a: 13; 2003b: 83), an approach that seeks to map out the distinctive functional

correlates of the various structural components of the clause. A useful research strategy is to follow the trail of difference, in both discourse and grammar. Differences in linguistic structure are shaped by the multiplicity of functional needs, modulated by complex interactions among competing motivations, and driven by the dynamics of grammaticization. Interesting structural differences arise between contrasting elements in split grammar, variation, typology, child language, diachrony, and grammaticization, all potentially linked to distinctive functions. The world's languages offer a rich set of natural experiments (Evans & Levinson 2009), where each case represents a potentially novel way of linking contrasts in form to contrasts in function. Integrating a discourse methodology into cross-disciplinary research can bring a key piece of the puzzle, helping to trace out the similarities and contrasts that manifest in such fundamental differences as, for example, ergativity vs. accusativity. For discourse to become an integral and valued component of such research, it must identify the specific discourse profiles that are relevant to the problem at hand.

One ongoing challenge is to tease apart grammar and discourse: grammar with its seemingly static structure, and discourse with its free plasticity. The challenge is compounded, yet all the more important, because grammar and discourse are so intimately intertwined. For untangling the multiplicity of factors that impinge on the discourse distribution of referential forms across syntactic roles, a much-needed development is the application of newer multivariate statistical techniques (Du Bois & Lester in progress). The increasing popularity of soft constraints (Bresnan et al. 2001) as a way of describing morphosyntactic and functional variation makes the development of statistical models all the more urgent for corpus-based ergativity research. Such techniques are needed to address questions that have been raised about functional correlates of variation in ergative marking, for example in exploring Duranti's observations about how the so-called "optional ergative" is exploited in discourse to index social power and access to agency (Duranti & Ochs 1990; Duranti 2004). Similarly, Dixon, observing that discourse profiles differ in detail from one ergative language to the next, asks how this may reflect differences in cognitive style between their respective cultures (Dixon 1994: 219–220).

Yet perhaps the most productive questions, offering a combination of the most effective methodological purchase and the greatest theoretical rewards, will be those that explore the diversity of constructions that characterize the grammar of ergative and other languages. The constructional approach is particularly well positioned to shed light on issues of split ergativity, with large theoretical implications. The exploding interest in the grammar of constructions provides a useful framing for new investigations of the discourse profiles of a wide variety of constructions, each potentially revealing some new aspect of the structural and functional diversity of language. Constructions combining aspects of argument structure, valence, reference, person, voice, tense, aspect and so on are promising topics for new research on syntactic alignment that incorporates a discourse-and-grammar dimension. For the targeted argument structure construction, it will be important to map out its information structure, as revealed in its distinctive discourse profile, operating within the relevant functional niche (Du Bois 2014).

A further step is to work out how such construction-level discourse profiles interact with the semantics of the verbal repertoire; inherited morphosyntax; functional strategies for utterance processing; and other factors that combine to motivate the grammaticization of ergative and other alignments. A particularly incisive version of this problem concerns the three-way interaction between split ergativity, split function, and split discourse, where each new language's "natural experiment" differentiates contrasting elements within the scope of a single language. Insights gained from split ergativity can extend even to languages that do not themselves overtly exhibit these splits, insofar as they provide clues to concealed patterns and discourse profiles that reveal the incipient fault lines of potential change.

For linguists who are prepared to use the combined tools of discourse and grammar to investigate the diversity of natural experiments in the world's languages, the potential for discovery is open-ended. A valuable research strategy is to (1) document a construction, or better, a contrasting set of grammatical constructions; (2) identify their respective discourse profiles; (3) clarify the connection of each to its corresponding functional niche; and (4) explore the ramifications for grammaticization. Such a research agenda is well positioned to expand and refine our understanding of the dynamic processes that motivate the grammaticization of the structures of ergative languages in all their diversity, with broad implications for understanding all forms of grammar.

2.7 CONCLUSIONS

Amidst increasing interest in the complexity, diversity, and heterogeneity of grammar in all its forms and functions (Beckner et al. 2009; Page 2010; Evans 2013), the challenge of coming to terms with ergativity takes on special significance. Ergativity has long revealed an uneasy fit with the conventional categories of standard theories of grammar, including the supposedly fundamental categories of subject and object, or even A, S, and O. Ergativity calls into question the universality of such preconceived categories; yet neither can its own indigenous categories of ergative and absolutive be set up as universal structures in their stead. Ergativity and its variations and competitors challenge the linguist's desire for easy answers.

One way to engage with this complexity is by attending to the variability, and the recurrence, of patterns of language use. For example, the ergative discourse profile has been documented in a typologically diverse array of languages around the world: ergative, active, and accusative. To be sure, it does not stand alone: competing discourse forces of topicality strongly motivate ergativity's main competitor, the accusative type. Yet whether expressed in grammar or only in discourse, the robustness of the ergative discourse profile remains, attested in its continuity across grammatical typology, historical change, child language, and genre. Its presence, sometimes variable and often submergded, is nevertheless revealed in small ways, shaping the child's earliest productions and the occasional grammaticized construction even in accusative languages. While it

cannot constitute a complete account of ergativity on its own, neither can any explanatory account of ergativity be complete, realistically, without incorporating the “facts on the ground” of the ergative discourse profile, with all its consequences. As a counter to reductionism, essentialism, and idealization, the empirical trend of modern linguistics invites attention to the explanatory power of corpus-based evidence. Typologically aware research on discourse profiles documents the complexity and diversity of vast populations of utterances—but also the consistency that gives them power to shape the adaptive evolution of grammars.

Surely the functional, structural, and historical basis of ergativity is more complex than is envisioned in any one current analysis. A full explanation of ergativity and its variants and alternatives will require the corpus-based identification of multiple competing and converging motivations, and their integration into a larger explanatory framework. Relevant forces include the distribution of given and new information across clausal arrays of argument slots, the semantics of force dynamics in the clause, the lexicon of verbs and argument structure constructions, the learning and reanalysis of inherited morphosyntax, recurrent pathways of change and grammaticization, and more. All impact the dynamics of the discourse profile, and all come together to shape the emergence of the system of grammar.

Ergativity is too important to be left to the specialists of ergative languages. It is a problem for all linguistics, and a useful one at that. Ergativity invites linguists to investigate the most fundamental structures of grammar, not only in ergative languages but in every language; and to revisit questions of function and structure, of universality and diversity, that were once thought to be settled. As the field of linguistics turns more and more to evidence-based analysis, traditional methods of elicitation are increasingly supplemented by the empirical tools of corpus-based and experimental methods. There is much work to be done to document the discourse profiles that shed light, not only on the syntactic alignments that broadly define ergative, accusative, and active languages, but also on the details of the rich constructional repertoires of more specialized argument structure constructions, such as passives, antipassives, perfectives, and nominalizations, that may serve as bridges for diachronic realignment from one structural type to another. Ergativity has the potential to disrupt conventional thinking and existing explanations for grammar. Let the disruption begin.

ACKNOWLEDGMENTS

I wish to thank Jessica Coon and Shobhana Chelliah for comments on an early draft that have greatly improved this chapter. For helpful input on specific points I thank Matthew Dryer and Danny Law. For conversations that have deepened my thinking on this and other questions of linguistic explanation, I am profoundly indebted to Mira Ariel.

ABBREVIATIONS

The following symbols and abbreviations are used in glosses: CP, completive aspect; DEP, dependent; DIM, diminutive; ICP, incompletive aspect; FOC, focus; LAT, lative; PL, plural; TV, transitive verb; 1.ERG, ergative 1st person singular; 3.ERG, ergative 3rd person singular; 3.ABS, absolutive 3rd person singular. In addition to the standard A–S–O symbols introduced in the first paragraph, the following are used in the syntactic schemas: X, oblique/adjunct NP; V, verb; P, preposition.

Transcription symbols (Du Bois 2014b; Du Bois et al. 1993) include: ; [semi-colon] speaker label; ... pause; .. micro-pause; : [colon] prosodic lengthening; (H) in-breath; , [comma] continuing intonation; . [period] final intonation. Intonation units are indicated by a carriage return (one IU per line).

Sakapultek data are presented in a practical orthography (Du Bois 2006: 198), in accordance with standards of the Academy of Mayan Languages, with the following special values: *x* voiceless laminopalatal fricative; *j* voiceless velar fricative; *q* voiceless uvular stop; *tz* voiceless apicoalveolar affricate; *nh* voiced velar nasal stop (engma). Apostrophe (') following a consonant represents a glottalized consonant; following a vowel it represents a glottal stop. Double vowels represent phonemic length.

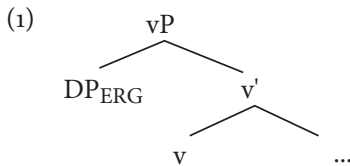
CHAPTER 3

PARAMETERIZING ERGATIVITY: AN INHERENT CASE APPROACH

MICHELLE SHEEHAN

3.1 INTRODUCTION: THETA-ROLES AND INHERENT CASE

MANY recent (and not so recent) approaches argue that ergative is an inherent case associated with the specifier of little *v* (see Levin 1983; Mahajan 1989; Woolford 1997, 2006; Massam 1998, 2006; Aldridge 2004; Anand and Nevins 2006; Legate 2006, 2012a; among others):¹



GB versions of this proposal took inherent case to be assigned at D-structure, as opposed to structural case, which was assigned at S-structure. In Minimalist terms, inherent case can be thought of as a K-projection dominating DP, which is s-selected by a class of thematic heads, or simply as case-valuation coupled to theta-role assignment (Woolford 2006). The inherent-case approach to ergativity is attractive because

¹ In the following discussion, I use the term ‘accusative’ to denote languages which lack anything which could be classified as ergative case and ‘non-accusative’ to denote those languages which use ergative case in some way. This is intended to avoid the problem of referring to a rather heterogeneous class of languages as ‘ergative’ (complete with scare quotes).

(i) inherent (theta-related) cases appear to be independently needed in order to model the case/agreement properties of accusative languages, making ‘ergativity’ (i.e. non-accusativity) less exotic, and (ii) if ergative is an inherent case, this immediately explains Marantz’s (2000 [1991]) much discussed generalization that non-thematic subjects do not bear ergative, as many others have noted (Woolford 2006; Legate 2012a).

Essentially, the inherent approach to ergative case makes four distinct kinds of predictions not made by structural or dependent case approaches:

- A. Ergative will only occur on (a subset of) arguments externally merged in spec vP.
- B. The presence of ergative may be independent of transitivity, so we might find ergative subjects without absolutive objects.
- C. There will be no derived/non-thematic ergative subjects (no ergative expletives, raising to ergative or ergative subjects of passives, ditransitives, or otherwise).
- D. Ergative case will not be lost in contexts where structural case is not available (no change of case under ECM, no loss of ergative under raising).

While C and D can only be evaluated via in-depth language-specific consideration of raising, passives, applicatives, and ECM in non-accusative languages (to the extent that they exist—see Rezac et al. 2014; Berro and Extepare, Chapter 32 and Laka, Chapter 7, this volume, on Basque; Baker and Bobaljik, Chapter 5, this volume on Burushaski), A and B should be much easier to evaluate on a broad cross-linguistic basis as they concern the surface distribution of ergative case.² Nonetheless, to my knowledge, no systematic cross-linguistic survey of the distribution of ergative case has been given in favour of the inherent-case proposal. The main aim of this chapter, then, is to fill this gap, in the context of a broader parametric account of basic alignment.

The obvious challenge in relation to A is that the inherent-case proposal only has predictive power inasmuch as there is an independent theory of theta-roles, distinguishing those arguments introduced by little *v* from those introduced by other (lower) thematic heads such as Appl and V. While there has been rich cross-linguistic research on argument structure, it is still much debated exactly how many thematic distinctions need to be made syntactically and even how best these thematic distinctions should be described: by distinct theta-positions (Baker 1988, 1997) or by the combination of proto-roles/features (Dowty 1990; Reinhart 2003), possibly accumulated via movement (Ramchand 2011). Nonetheless, certain proposals regarding theta-roles have become widely accepted. There is a general (empirically grounded) consensus, for example, that certain (proto) theta-roles are subject-like (agent, causer, initiator) while others are more object-like (theme, patient, undergoer, result), or lie somewhere in between (experiencer, recipient, process) (Baker 1997, 2009; Platzack 2009, 2011; Ramchand 2011;

² Of course, the very real possibility exists that ergative has a different inherent/structural/dependent status in different languages. The null hypothesis, though, should be that it has the same status cross-linguistically.

but see also Bowers 2013).³ Here, I will adopt the conservative position, stemming from Baker (1988), that there are distinct theta-roles, which are configurationally determined.⁴

As Folli & Harley (2007) point out, there is good reason to take agents and (animate/inanimate) causers to be introduced by distinct little *vs*: v_{do} and v_{cause} respectively. The evidence for distinguishing these two theta-roles comes from the fact that some predicates require agent subjects, and cannot take causers (Oehrle 1976; Hale & Keyser 1993; Folli & Harley 2007, among others). For example, as Oehrle (1976) showed, prepositional datives require agent subjects but the double object construction takes a causer subject, at least with verbs of transfer of possession (see also Pesetsky 1995):

- (2) a. My relationship with him gave/brought me a daughter.
b. *My relationship with him gave/brought a daughter to me.

The fact that the same lexical verb occurs in both examples shows, moreover, that this is not a lexical but a syntactic effect. A similar contrast holds of certain transitive verbs in English: those derived from unaccusative change of state verbs allow causer subjects, unlike unergative activity verbs like *read*, which take only agents (Hale & Keyser 1993):

- (3) a. *The homework assignment read several books.
(Intended. caused the reading of several books)
b. The snowfall closed several roads.

It has also been observed that in many languages anticausatives permit causers but not agents to be overtly expressed as PPs (headed by *from* in English) (Alexiadou & Schäfer 2006: 41):

- (4) a. The window broke from the pressure / from the explosion / from Will's banging
b. *The window broke from John

The opposite pattern is observed with the *by*-phrase in passives in some languages, as Alexiadou & Schäfer also note. Finally, certain 'causative' constructions are actually 'agentive', requiring an agent and not a causer subject (see Folli & Harley 2007 on Romance 'causatives'):

- (5) a. The fact that it was hot in the room made/?let/*had Mary take off her jacket.
b. The teacher made/let/had Mary take off her jacket.

³ Assuming that the goal theta-role in prepositional datives is distinct from the recipient theta-role in double object constructions, with recipients being externally merged higher than themes, unlike goals (see Pesetsky 1995; Harley 2002).

⁴ For our purposes here, it is not important whether theta-roles can be acquired only by external merge or by either external or internal merge (Hornstein 1999), but see Sheehan (2014a) for arguments in favour of the second possibility.

The fact that both agents and causers can, nonetheless, be introduced as additional arguments in 'causative' constructions and (to varying degrees in different languages) appear as a by-phrase in the passive, provides strong evidence that they are both 'external arguments' introduced by little *v*. A first prediction of the inherent approach to ergative case is that agents and/or causers can appear as ergatives.

In many accusative languages, there is also evidence that the subjects of some intransitive predicates are introduced by little *v*. As Burzio (1986) showed, intransitive verbs divide into those which have a thematic object or theme, externally merged as the complement of *V* (so-called unaccusatives) and those whose single argument is a thematic agent, now usually taken to be externally merged in spec *vP* (unergatives), following Koopman & Sportiche (1991).⁵ A further prediction of the inherent case approach is therefore that, among intransitive subjects, only the subjects of unergatives should be able to surface with ergative case.⁶

In line with Alexiadou & Schäfer (2006), I take instrument subjects to reduce to either agents or causers. Differences in binding possibilities strongly suggest that subject instruments are externally merged in a higher position than PP instruments:

- (6) a. *Mary hit him_i on the foot with John_i's baseball bat
 b. John_i's baseball bat hit him_i on the foot (when it fell off the shelf).

It does not seem, however, that there is a dedicated theta-position for instruments high in the clause, but rather that subject instruments behave like either agents or causers. The main evidence for this comes from the fact that not all instruments can surface as subjects (examples adapted from Alexiadou & Schäfer 2006):

- (7) a. The doctor cured the patient with a scalpel/chamomile tea.
 b. ??The scalpel cured the patient.
 c. Chamomile tea cured the patient.
- (8) a. The crane picked up the crate.
 b. *The fork picked up the potato.

Alexiadou & Schäfer (2006: 42) claim that instruments make good subjects when they can be conceived of as 'acting on their own without being (permanently) controlled by

⁵ There is some disagreement with respect to the correct label or semantic characterization of the argument of unergative subjects, partly due to the fact that there is non-trivial cross-linguistic (lexical) variation regarding the unaccusative/unergative divide (see Rosen 1984; Sorace 2000). While these issues are of course interesting and relevant, we abstract away from them here for reasons of space (see Pesetsky 1995 for relevant discussion).

⁶ It has sometimes been claimed, in fact, that the inherent-case approach predicts that transitive and intransitive little *v* should pattern alike in this respect. As we shall see, though, this does not necessarily follow if the distribution of inherent ergative is subject to more intricate parameterization (see also Legate 2012a).

a human agent, as is the case with chamomile tea and cranes (in German, Greek, and Dutch as well as English). This means that there is no independent theta-role ‘instrument’ introduced by little *v*, subject instruments are either agents or causers, depending on their semantics. In non-accusative languages, then, we expect to find ergative instruments to the extent that they are semantically permitted, but there might be quite subtle restrictions on their use.

Deciding which other kinds of arguments are introduced by little *v* is more difficult. The subjects of verbs of perception, though often labelled experiencers, actually pattern with agents/causers and unlike other experiencers in certain respects: they can form so-called agentive nominalizations (*hearer, feeler, sooth-seer*) for example, and can appear in by-phrases in the passive. Note also that verbs of perception also give rise to causative-like constructions in English and other languages (see Guasti 1993), again making them syntactically similar to causers/agents as ‘external arguments.’ There are other experiencers too, which pattern like this (*lover, cheese-hater, ghost-fearer*). Broadly speaking, these are the subjects of stative psych-predicates, which, in many accusative languages, surface as subject-experiencer predicates, taking a nominative subject (Grimshaw 1990). Eventive psych-predicates, on the other hand, often surface as object-experiencer predicates, taking a dative or accusative experiencer (Belletti & Rizzi 1988; Pesetsky 1995; Landau 2009). The fear/frighten contrast illustrates this difference in English:

- (9) a. I fear ghosts.
 b. *I am fearing (some) ghosts (right now).
- (10) a. Ghosts frighten me.
 b. Some ghosts are frightening me (right now).

Building on Platzack (2011) and Ramchand (2011), I take the subjects of (stative) psych-predicates/verbs of perception to be holders rather than experiencers, introduced as external arguments by v_{hold} . The experiencers in eventive object-experiencer constructions, I take to bear the true experiencer theta-role, introduced by a lower thematic head (Appl) (in the spirit of Belletti & Rizzi 1988; Pesetsky 1995; Landau 2010). This means that we might expect to find a split in some non-accusative languages between stative psych-predicates which take an ergative holder and eventive psych-predicates which take a dative or absolute experiencer. As we shall see, this is exactly what we find in many non-accusative systems. Additionally, the second argument in object-experiencer predicates is persuasively argued by Pesetsky (1995) to be either (i) an internal theme/target (with the unaccusative *piacere* class) or (ii) an external causer (with the causative *preoccupare* class). A further prediction, then, is that the non-experiencer argument of an eventive psych-predicate will also be able to surface with ergative case, again something which is born out in many cases.

Following Pylkkänen (2008) among others, I take recipients and benefactives to be introduced by low/high Appl heads respectively. Finally, themes/patients and goals, I assume to be externally merged low down inside VP. This gives the following

range of thematic positions in the clause (not all of which can co-occur—see, again, Pesetsky 1995):

- (11) [_{VP} agent/causer/holder v_{agent/v_{causer}/V_{holder}} [_{AppIP} benefactive Appl_{benefactive}
 [_{VP} V [_{AppIP} recipient Appl_{recipient} theme ([_{PP} P goal])]]]]]]⁷

The prediction for ergative languages is therefore that only holders, agents, and causers (including instruments and the non-experiencer arguments of eventive psych-predicates) should be able to bear ergative case.

In the remainder of this chapter I show that this prediction holds for a range of non-accusative languages, but that languages vary as to exactly which subset of little vs assigns ergative case. In section 3.2 I consider the differing distribution of ergative case in Basque, Hindi, Tsez, Lezgian, Trumai, Cavineña, and Chamorro. I argue that the best way to account for this variation is via a series of parameters arranged in transitive dependencies in the general way proposed by Roberts (2012). The section further considers two additional dependent parameters active only in languages with transitive-sensitive ergative case, determining the presence of syntactic ergativity (understood in the narrow sense) and the source of absolutive case (T or v). Section 3.3 briefly discusses the resultant parameter hierarchy and its theoretical status as well as raising some questions for future research. Finally, section 3.4 concludes.

3.2 THE (PARAMETERIZED) DISTRIBUTION OF ERGATIVE CASE

This section considers variation in the distribution of ergative case across languages. It does not consider, for reasons of space, the kind of split-ergativity that Sheehan (2015) calls ‘variable alignment’, whereby the same predicate in the same language displays different case/agreement properties depending on syntactic context (root/embedded and/or tense/aspect properties of the clause, person/animacy of the subject). This kind of variability, I assume, can be attributed to independent facts about the languages in question which serve to obscure basic alignment in certain contexts, rather than to variable parameter settings (see Laka 2006a, Chapter 7, this volume; Coon 2013a; Coon & Preminger 2012, Chapter 10, this volume; see also Woolford, Chapter 9, this volume). As Hindi, Basque, and Tsez show aspect-sensitive variability, Chamorro mood-based

⁷ Note that the theme appears as the complement of V where no recipient is present. Where a recipient is present, I assume that the theme is the complement of Appl, for the reasons discussed in Pykkänen (2008). Likewise, where a PP goal is present, the theme is the specifier of P. For this reason, theta-roles are configurationally determined in a relative rather than an absolute sense. Thanks to Lisa Travis for asking me to clarify this point.

In fact, closer examination of Basque suggests that all arguments introduced by little *v* in transitive and intransitive contexts seem to bear ergative case. Consider first agents and animate/inanimate causers:¹¹

- (13) Maddi-k sagarr-a jan du. [Basque]
 Maddi-ERG apple-DET eat 3SABS.AUX.3SERG
 ‘Maddi ate the apple.’ (Oyharçabal 1992: 313)
- (14) (Nik) zuri lan egin arazi dizut.
 I.ERG you.DAT work do CAUS AUX.2DAT.1ERG
 ‘I made you work.’ (Oyharçabal 1992: 332 fn.)
- (15) Haize-a-k ate-a ireki du.
 wind-DET-ERG door-DET open 3SABS.AUX.3SERG
 ‘The wind opened the door.’

Even instruments can surface with ergative case in Basque, as noted by Woolford (2006). This follows if, as discussed, subject instruments are actually causers/agents:

- (16) Giltz-a-k ate-a ireki zuen.
 key-DET-ERG door-DET open 3SABS.AUX. PST.3SERG
 ‘The key opened the door.’
 (Woolford 2006: 124, citing unpublished work by Juan Uriagereka)

Turning to experiencers, we find that the latter surface either with dative, absolutive, or ergative case, depending on predicate type (Etxepare 2003). These three options seem to be equivalent to the three kinds of psych-predicates identified by Pesetsky (1995) and Landau (2010), building on Belletti and Rizzi (1988). Thus, unaccusative object experiencer verbs (the *piacere* class) surface with a dative experiencer and an absolutive theme/target (see Etxepare 2003; Rezac 2008):

- (17) Ni-ri zure oinetako-a-k gustatzen zaizkit.
 I-DAT your shoes-DET-PL like 3PLABS.AUX.1SDAT
 ‘I like your shoes.’ (Woolford 2006: 115, citing Austin and Lopez 1995: 12)

Other verbs in this class include *interesatu* ‘to interest’ and *dolutu* ‘to repent’ (Etxepare 2003: 39).

Causative object experiencer psych-predicates follow an ERG–ABS pattern, whether or not the causer is animate (and hence potentially agentive) or inanimate:

¹¹ Thanks to Maia Duguine for help with the Basque data.

- (18) Mikel-ek ni haserretu nau.
 Michael-ERG I.ABS angry-PERF 1SABS.AUX.3SERG
 ‘Michael angered me.’ (Woolford 2006: 124, citing Manandise 1988: 118)
- (19) Berri-ek (ni) haserretu naute.
 new-DET.PL.ERG I anger 1SABS.AUX.3PLERG
 ‘The news angered me.’

Verbs in this class, which often alternate with an intransitive form, include *kezkatu* ‘to worry, to become worried’, *gogoratu* ‘to remember’, *zoratu* ‘to madden’ (Etxepare 2003: 41). The ergative here is as expected if the non-experiencer argument is a causer rather than a theme, as discussed. Moreover, the absolutive case on the experiencer is plausibly equivalent to the accusative case received by experiencers in the equivalent accusative structures (the *preoccupare* class) (but see Landau 2009 for complications).

There is a class of experiencers, though, including the subjects of verbs of perception, which surface with ergative case (including *miretsi* ‘to admire’, *gutxietsi* ‘to despise’, *desiratu* ‘to desire’—Etxepare 2003: 41)

- (20) Ni-k asko ikusi ditut
 I-ERG many.ABS seen 3PLABS.AUX.1SERG
 ‘I saw many.’ (Rezac et al. 2014: 6)
- (21) Jon-ek liburu hauek nahi/ezagutzen ditu.
 Jon-ERG book these want/know 3PLABS.AUX.3SERG
 ‘John wants/knows these books.’

These appear to be equivalent to subject-experiencer (*temere* class) verbs in accusative languages. The case patterns observed in Basque are therefore exactly as expected if all little *vs* assign ERG to their specifiers and thematic structure in Basque follows expected universal patterns.¹²

Hindi shares many of these properties with Basque even to the extent that unergative but not unaccusative predicates can surface with ergative subjects. In Hindi, though, few intransitive verbs actually require ergative subjects, the verb ‘to bathe’ being a rare exception in this respect:

- (22) Raam*(-ne) nahaayaa
 Ram-ERG bathe.PERF
 ‘Ram bathed.’ (Mohanan 1994a: 71)

¹² It may turn out, of course, that the inherent case approach to Basque fails for reasons C–D (as Rezac et al. 2014 argue). If this is the case, the implication is merely that the approach to non-accusative alignment here is incomplete as there are other kinds of ergative languages in which ergative is not an inherent case. I leave this as a matter for ongoing research. See also Laka, Chapter 7, this volume for a defense of the inherent ergative approach to Basque.

The verbs which behave in this way appear to have a reflexive meaning. In most cases, intransitive verbs take ergative subjects only optionally. More precisely, a subset of the class of verbs which satisfy independent diagnostics for unergativity can surface with either an absolutive or ergative subject (Bhatt 2003; Butt, Chapter 33, this volume; Surtani, Jha, & Paul 2011, Surtani & Paul 2012).¹³ This includes *jhool* 'swing', *dauR* 'run', *kood* 'jump' *naac* 'dance', *hans* 'laugh' *tair* 'swim', *gaa* 'sing', *k^hel* 'play' and *chillaa* 'shout/scream' (Mahajan 1990; Mohanan 1994a; Surtani, Jha, & Paul 2011). As Mohanan (1994a) shows, however, the choice between an absolutive and ergative subject with these verbs is not purely optional but correlates with a semantic difference: ergative subjects imply volition in intransitive contexts:

- (23) raam-ko acaanak šer dik^haa. vah/us-ne cillaayaa [Hindi]
 Ram-DAT suddenly lion.ABS appear.PERF he/he.OBL-ERG scream.PERF
 'Ram suddenly saw a lion. He screamed.' (Mohanan 1994a: 71)
- (24) Us-ne/*vah jaan buuj^hkar cillaayaa
 He.OBL-ERG/he.ABS deliberately shout.PERF
 'He shouted deliberately.' (Mohanan 1994a: 72)

Verbs which can be independently diagnosed as unaccusative, however, never take ergative subjects, even where volition is implied (*gir* 'fall' *soo* 'sleep', *jaa* 'go', *phail* 'spread'):

- (25) Raam(*-ne) giraa
 Ram-ERG fall.PERF
 'Raam fell hard.'

The implication seems to be that unergative verbs in Hindi can, but need not, take ergative subjects; where they do, the subject is interpreted as volitional. These facts are consistent with ergative being an inherent case but they are not immediately explained by such an account. What is required is some further parameter differentiating intransitive little *v* in Basque from intransitive little *v* in Hindi.¹⁴

Because of these facts, Mohanan (1994a) proposes to associate ergative case directly with the semantic feature [volition] across the board. The problem with this idea,

¹³ These diagnostics include (i) the possibility of a cognate object, (ii) participation in impersonal passives, (iii) non-participation in participial relatives, (iv) compound verb selection of *le* 'take', *de* 'give', *daal* 'did' and not *jaa* 'go', and (v) inability to appear without genitive marking in non-finite clauses.

¹⁴ Another complication in Hindi is that a small number of transitive verbs (verbs taking absolutive/ko-marked objects) fail to assign ergative case (*bolnaa* 'speak' and *laanaa* 'bring') or do so only optionally (*samaj^hnaa* 'understand' and *janna* 'give birth to') (see Mohanan 1994a). These appear to be idiosyncratic lexical gaps.

though, is that ergative case assignment with transitive predicates is insensitive to [volition]. In fact, the distribution of ergative case across transitive predicates in Hindi follows very closely the Basque distribution. Non-volitional animate and inanimate causers receive ergative just as volitional agents do. This is true of instruments as well as the causers in object-experiencer constructions:¹⁵

- (26) Havaa-ne patte bik^her diye t^he
 Wind-ERG leaves scatter give.PERF be.PST
 ‘The wind scattered the leaves.’ (Mohanan 1994a: 75)
- (27) [Mina-ke cillaa-ne]-ne sab-ko Daraa diyaa
 Mina-GEN scream-INF/GER-ERG all-DOM scare give.PERF
 Mina’s screaming scared everyone.
- (28) nayii khabaroN-ne Sita-ko dukhii kar diyaa
 new news-ERG Sita-DOM sad do give.PERF
 The new news saddened Sita.
- (29) caabhii-ne taalaa khol-aa
 key-ERG lock open.TR-PERF
 The key opened the door.

Finally, holders of states also receive ergative with both verbs of perception and subject-experiencer verbs:

- (30) tuṣaar-ne caand dek^haa
 Tushar-ERG moon see/look.at.PERF
 ‘Tushar saw the moon.’ (Mohanan 1994a: 141)
- (31) tuṣaar-ne vah kahaanii yaad kii
 Tushar-ERG that story memory do.PERF
 ‘Tushar remembered that story.’ (Mohanan 1994a: 141)

Eventive object-experiencers versions of these verbs surface with dative subjects:

- (32) tuṣaar-ko caand dik^haa
 Tushar-DAT moon appear.PERF
 ‘Tushar saw the moon.’ (Mohanan 1994a: 141)
 (lit. The moon appeared to Tushar.)

¹⁵ Thanks to Rajesh Bhatt for help with the Hindi data.

- (35) žek'-ā biš^wa r-ac'-xo [Tsez]
 man-ERG food.ABS.IV IV-eat-PRES
 'The man is eating the food.' (Comrie 2004: 115)
- (36) žek'-ā is b-exu-r-si [Tsez]
 Man-ERG bull.ABS.III III-die-CAUS-PST.WIT
 'The man killed the bull.' (Comrie 2004: 116)
- (37) C'i-d-ä řa^fyur y-iku-r-si.
 fire-ERG mill.ABS.II II-burn.INTR-CAUS-PST.WIT
 'Fire burnt the mill.' (Polinsky 2015: 138)
- (38) Nes-ä ža kařat kid-be-q t'et'r-er-si.
 DEM.I-ERG DEM letter.ABS.II girl-OS-POSS.ESS read-CAUS-PST.WIT
 'He made the girl read that letter.' (Polinsky 2015: 160)

An apparent difference between the languages concerns instruments. In Tsez, instruments can also surface with ergative case, as expected:

- (39) Yıřa rek-ä řiřimuku r-a^fyi-x. [Tsez]
 DEM key-ERG lock.ABS.IV IV-open-PRES
 'This key opens the lock.' (Polinsky 2015: 139)

While this was also previously true of Lezgian instruments, Haspelmath (1993: 84) claims that ergative instruments are 'never used in the modern language', raising some potential issues for the collapsing of instrument subjects with agents/causers.

This is where the similarities with Hindi and Basque end, however. The subjects of intransitive verbs always receive absolutive case in Tsez, regardless of the unaccusative/unergative distinction, which is independently diagnosable in the language (Polinsky 2015: 121–123):

- (40) is b-exu-s [Tsez]
 bull.ABS.III III-die-PST.WIT
 'The bull died.'
- (41) Ecu žek'u qoqoři-s
 old man.ABS laugh-PST.WIT
 'The old man laughed.' (Comrie 2004: 115)

While this is also generally the case in Lezgian, there is a class of verbs derived from N-do compounds which take ergative subjects despite appearing intransitive:

- (45) Elu-r mašina c'aq' b-et-äsi yoł. [Tsez]
 1PL-LAT car.ABS.III very III-want-RES.PTCP AUX.PRES
 'We badly need a car.' (lit.: car is wanted to us) (Polinsky 2015: 156)

- (46) [Yedu kid] [meži-z yw^hay-q] y-uł'-xo.
 DEM girl.ABS.II 2PL-GEN2 dog-OS-POSS.ESS II-fear-PRES
 'This girl is afraid of your dog.' (lit.: fears on your dog)
 (Polinsky 2015: 157)

Polinsky (2015) further shows that these verbs can be causativized in Tsez, giving rise to two different patterns. The first pattern is as expected: an external causer is added:

- (47) Eni-y-ä debe-q yedu čorpa b-et-ir-xo.
 mother-OS-ERG 2SG-POSS.ESS DEM.NI soup.ABS.IV IV-like-CAUS-PRS
 'The mother is making/will make you like this soup.'
 (Polinsky 2015: 165)

In the second pattern, however, causativization serves merely to alter the case and theta-role of the subject, making it ergative and agentive:

- (48) Madin-ä [gagali-s maḥ] b-iy-r-si.
 Madina-ERG flower-GEN smell.ABS.III III-know-CAUS-PST.WIT
 'Madina smelled flowers.' [ERG-agent, ABS-stimulus]
 (Polinsky 2015: 163)

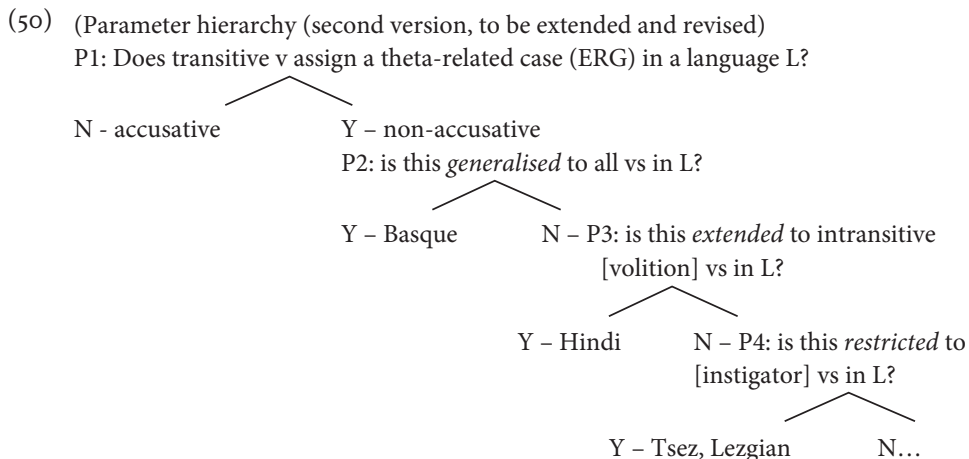
Based on other diagnostics such as binding and Control, it appears that the *like*-type verbs are unaccusative and equivalent to the *piacere* class in Italian (see Polinsky 2015: 163–166), meaning that the *smell*-type verbs are presumably subject-experiencer verbs. If this is the case, then *holders* in these languages are not ergative. Finally, Tsez also has what appear to be object-experiencer verbs of the *preoccupare* class which take an ergative causer (ambiguous between direct and indirect causation) and an absolutive experiencer:

- (49) Meži-z yw^hay-ä kid y-uł'-er-xo. [Tsez]
 2PL-GEN dog-ERG girl.ABS.II II-fear-CAUS-PRES
 'Your dog frightens the girl.'
 (Polinsky 2015: 168)

In this way, both Tsez and Lezgian limit ergative to (animate and inanimate) causers and agents, with dative case surfacing on holders.²⁰ In order to capture the basic

²⁰ A further difference, not encoded in the hierarchy is that Lezgian but not Tsez can have ergative subjects in the absence of absolutive case with a small class of intransitives (derived from *N-do* compounds) and with bivalent verbs taking oblique complements. It seems that this difference is due to an independent parametric difference between the languages regarding what counts for transitivity, a discussion of which would take us too far afield here.

behaviour of these languages a further kind of parameter must be added to the proposed hierarchy:



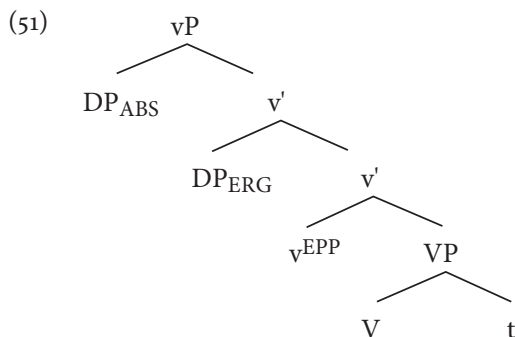
The pattern in Tsez and Lezgian suggests that in addition to generalizing and extending the distribution of ergative case it must also be possible to restrict it to a subset of transitive *vs*. As discussed in section 3.3, the parameters in (50) are not intended to be pre-specified by Universal Grammar, nor is their format intended to be fixed. Rather, the hierarchy, it is proposed, emerges as the result of acquisition based on the acquisition strategies of feature economy, input generalization and analogy (see Roberts 2012).

3.2.3 Default Transitive Ergativity: Trumai and Chamorro

The languages discussed up to now are all morphologically rather than syntactically ergative in that they do not have syntactic operations sensitive to the transitive/intransitive subject distinction. It is well known, however, that many non-accusative languages do display a form of syntactic ergativity in that they prohibit (straightforward) A-bar extraction of ergative DPs.²¹ Following the general approach in Aldridge (2004, 2008a, 2008b) and Coon et al. (2014), I assume that this property results from the presence of a movement-triggering EPP feature on ergative-assigning little *v*.²²

²¹ An anonymous reviewer asks about the other apparent instances of syntactic ergativity such as topic chaining in Dyrbal. These apparent instances of syntactic ergativity remain controversial (see Legate 2012a). The ban on A-bar extraction is a much more robust effect, attested in many unrelated languages, and I therefore limit the discussion to this narrower definition of syntactic ergativity here (see also Aldridge 2008a). The typologically and genetically diverse languages displaying this restriction include some Mayan languages (Assmann et al. 2012; Aissen, Chapter 30, this volume; Campana 1992; Coon et al. 2014;), some Austronesian languages (Tongan, Otsuka 2006; Otsuka, Chapter 40, this volume; Tagalog, Seediq, Aldridge 2004; 2012b; Chamorro, Chung 1982), some Eskimo–Aleut languages (Manning 1996) as well as Australian and Brazilian languages: Dyrbal (Dixon 1979, 1994), Trumai (Guirardello-Damian 2010), Karitiana (L. Storto, p.c.), and Katukina (Queixalós 2012; Queixalós, Chapter 42, this volume).

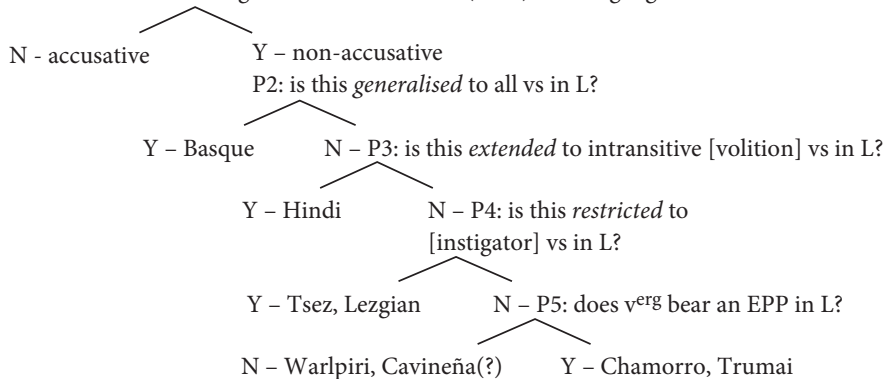
²² As an anonymous reviewer reminds me, the idea that syntactic ergativity can be attributed to movement of the absolutive DP past the ergative DP was first proposed by Bittner and Hale (1996a).



This feature attracts the absolutive argument to the external specifier of *v* and serves to trap the ergative DP inside the *vP* phase.²³ Implementations of this basic idea differ in Aldridge and Coon et al.'s work. I assume that it is an effect of anti-locality (see also Erlewine 2016). This follows if only the outermost specifier of *vP* can avoid the phase impenetrability condition (PIC). In this way the absolutive DP is always available for further extraction and lower adjuncts/locatives can raise to a further external spec *vP*, avoiding the PIC, past both the ergative and absolutive DPs. The ergative DP is, however, doomed to be trapped inside *vP* as it can never raise to the external specifier of *vP*, due to anti-locality (one cannot raise from the internal specifier of a given head to its external specifier).²⁴ In parametric terms then, syntactic ergativity of this kind arises where a dependent parameter associates an EPP feature with the ergative property, in the following way (see also Sheehan 2014b):

(52) Parameter hierarchy (third version, to be extended and revised)

P1: Does transitive *v* assign a theta-related case (ERG) in a language L?



A direct consequence of (52) is that P₅ (the syntactic ergativity parameter) is only active in languages which answer Y to P₁ and N to P₂–P₄. In other words, a prediction is that syntactic ergativity will be possible only in languages which have default (transitive)

²³ Note that this movement must be covert in VSO languages (Aldridge 2004). In many languages, it nonetheless triggers a Diesing-type effect on the absolutive DP. I leave a full exploration of the relationship between syntactic ergativity, object interpretation, and word order to one side here.

²⁴ One assumption that needs to be made is that this movement does not lead to 'tucking in' (Richards 1997).

ergative alignment rather than generalized (Basque), extended (Hindi), or restricted (Tsez, Lezgian) ergative alignment. This is a one-way implication, though, and there can be languages which are only morphologically ergative, such as Warlpiri, but which have default ergative alignment (ergative on transitive causers, agents, and holders—Legate 2012a).²⁵

Chamorro is an example of a syntactically ergative language displaying default non-accusative alignment, whereby ergativity is tied very closely to transitivity. In the realis mood, the verb in Chamorro displays ergative agreement with transitive subjects only, but this agreement is lost where such subjects are A-bar extracted, and the infix *-um-* is added instead (Chung 1982). This kind of morphological compliance strategy is common in syntactically ergative languages (see Dixon 1994 on antipassives; Coon et al. 2014, Erlewine 2016, on Mayan Agent focus):

- (53) a. Ha-fa'gasi si Juan i kareta. [Chamorro]
 ERG.3S-wash UNM Juan the car
 'Juan washed the car.'
- b. Hayi f-um-a'gasi i kareta?
 who UM-wash the car
 'Who washed the car?' (Chung 1982: 49)

Extraction of objects and intransitive subjects, however, can proceed straightforwardly:²⁶

- (54) Hayi na famalao'an man-ma'pus?
 who L women PL-leave
 'Which women left?' (Chung 1982: 46)
- (55) Hafa ha-fahan si Maria gi tenda?
 what ERG.3S-buy UNM Maria LOC store
 'What did Maria buy at the store?' (Chung 1982: 51)

In addition to agents, (animate/inanimate) causers trigger ergative agreement, including the subjects of object experiencer verbs, as do holders (*chat-* 'hate' patterns

²⁵ An anonymous reviewer points out that some Mayan languages (Ixil and Chuj) are syntactically ergative in this sense but require unaccusative subjects to be co-indexed by set A (ergative) marking on the verb in durative/progressive aspect (see Assmann et al. 2015). Crucially, these apparently ergative intransitive subjects can be A-bar extracted unlike their transitive counterparts. While a full discussion of these facts is beyond the scope of the present discussion, Coon (2013a) and Coon and Preminger (Chapter 10, this volume) argue convincingly that aspect-sensitive splits of this kind in Mayan result from embedded nominalizations, so that the set A marking is actually genitive, rather than ergative, case (the two are often homophonous in Mayan). For this reason, these examples are only a superficial counterexample to the prediction.

²⁶ Where obliques are extracted, the clause must be nominalized, however (Chung 1982: 51). It is not clear why this should be the case or to what extent this holds in other syntactically ergative languages.

like *ya-* ‘like’, *ga'o-* ‘prefer’, *gusto-* ‘like’, *ga'ña-* ‘prefer’ in this respect—Chung 1982, 1998, p.c.):

- (56) Hu-punu' i lalu' ni niuis. [Chamorro]
 ERG.1S-kill the fly OBL newspaper
 ‘I killed the fly with the newspaper.’ (Chung 1982: 51)
- (57) a. Ha-istotba ham [na malagu' i lahi-nmami ni kareta].
 ERG.3S-disturb us COMP want the son-our OBL car
 ‘That our son wants the car disturbs us.’
- b. Ha-istototba yu' si Juan.
 ERG.3S-disturb.IMPV me UNM Juan
 ‘Juan is disturbing me.’ (Chung 1982: 54–55)
- (58) Ha-chatli'i' yu' atyu na taotao.
 ERG.3S-hate me that LK man
 ‘That man hates me.’ (S. Chung, p.c.)

In causative object-experiencer constructions, experiencers are absolutive (i.e. they do not trigger agreement as in (57)). Where they take an oblique complement, psych-predicates also take an absolutive subject:

- (59) Ma'aniao yu' ni ga'lagu. [Chamorro]
 fear I OBL dog
 ‘I am afraid of the dog.’ (Chung 1982: 51)

The subjects of intransitive predicates never trigger ergative agreement, regardless of the thematic status of the subject (in realis mood). In all cases, then, it seems that *v* inflects for ergative agreement exactly where it is transitive, due to its positive setting of P1 (and negative setting of P2–P4).²⁷

Trumai is another syntactically ergative language which displays a strong connection between transitivity and ergative case (Guirardello-Damian 2003, 2010). In Trumai where an absolutive argument (subject or object) is relativized, the verb is modified by the relativizer *ke*:

- (60) Ha hu'tsa chi_in [axos-a-tl]_i [Ø_i esa-t' ke] [Trumai]
 I see FOC/TENSE child-EV-DAT dance-NZR.PAST REL
 ‘I saw the boy who danced.’ (Guirardello-Damian 2010: 218)

²⁷ No data is available regarding the behaviour of instrument subjects (S. Chung, p.c.).

Where a (transitive) ergative subject is relativized, however, the verb is modified by *chik*.²⁸

- (61) Ha hu'tsa ka_in [axos-a-tl]_i [ha aton mud husa-t' chī-k Ø_i]
 I see FOC/TENSE child-EV-DAT 1 pet neck tie-NZR.PAST REL
 'I saw the boy who tied my pet.' (Guirardello-Damian 2010: 219)

As in Chamorro, agents and animate/inanimate causers alike take ergative case (Guirardello-Damian 2003), including the subjects of causative object experiencer verbs (Guirardello-Damian 2010: 221):

- (62) [sud yi]-k [pike xop yi] mahan. [Trumai]
 wind YI-ERG house mouth YI close
 'The wind closed the door.' (Guirardello-Damian 2003: 201)

- (63) [martelu yi]-k [atlat] mapa.
 hammer YI-ERG pan break
 'The hammer broke the saucepan (by falling on it).' (Guirardello-Damian 2003: 201)

- (64) hai-ts Yakairu-ø sa ka
 1-ERG Yakairu dance CAUS
 'I made Yakairu dance.' (Guirardello-Damian 2003: 210)

It is even possible to have two ergatives following the causativization of a transitive verb:

- (65) Hai-ts chī_in Atawa-k atlat-ø mapa ka
 1-ERG FOC/TENSE Atawak-ERG pan-ABS break CAUS
 'I made Atawak break the pan.' (Guirardello-Damian 2003: 210)

Somewhat surprisingly, instruments are reported never to be ergative:

- (66) chavi letsi [pike xop yi] mahan. [Trumai]
 key INSTR house mouth YI close
 Lit. 'pro closed the door with a key.' (Guirardello-Damian 2003: 201)

An apparent difference between Chamorro and Trumai is that in the latter, holders are never ergative, but rather surface with absolutive case (with verbs of perception like see, hear, smell, feel as well as subject experiencer verbs: like, think, believe, forget, remember):

²⁸ Note, though, that this is true also where recipients are relativized (Guirardello-Damian 2010: 219).

- (67) axos- \emptyset hu'tsa de kasoro-tl [Trumai]
 child-ABS see already puppy-DAT
 'The child saw the puppy.' (Guirardello-Damian 2003: 204)

A crucial point here, though, is that the theme/target complement in such cases is always dative, meaning that the verbs in question are not formally transitive. Note that this situation is different from that displayed in Tsez/Lezgian where it is the holder which receives dative/lative while the theme/target is absolutive. In Trumai, unlike in Warlpiri and Lezgian oblique arguments can never count for transitivity. This is true even where the subject is an agent: if the complement of V is oblique, then the subject remains absolutive. This is the case with the heterogeneous class of verbs of routine events translating variously eat, drink, cook, roast, kiss, hunt, fish, which take absolutive subjects and dative complements. In fact, as Guirardello-Damian notes, many abs-dat verbs are direct synonyms of ERG-ABS verbs: *kapan/chuda* 'make/produce', *disi/fa* 'kill/beat' *tako/make* 'bite', *tuxa'tsi/dama* 'pull', *padi/fatlod* 'wait'. As long as dative objects never count for transitivity in Trumai, then it shares with Chamorro the default ergative alignment whereby ergative case is simply tied to transitivity. Intransitive verbs, whether unergative or unaccusative always take absolutive subjects (Guirardello-Damian 2003: 196).²⁹

3.2.4 Parameterizing the Source of Absolutive Case

A final point of variation between non-accusative languages concerns the source of absolutive case (Aldridge 2004, 2008a; Legate 2006, 2012a; Coon et al. 2014). Whereas in some languages it appears that absolutive case has a mixed source, coming from *v* in transitive and T/Asp in intransitive contexts (mixed ABS), in other languages it appears to come from T/Asp across the board, leading to what has been called a 'high ABS' system. The evidence for this comes from the distribution of absolutive in non-finite contexts, where T/Asp loses its structural Case-assigning capabilities. It has been observed that at least in some accusative languages, non-finite T/Asp fails to assign nominative case and, for this reason, the only possible subject of such clauses is PRO (possibly derived via movement, at least in some cases—Hornstein 1999; Sheehan 2014a). In some non-accusative languages, we see that the absolutive on transitive objects is retained in non-finite contexts, suggesting it does not come from T/Asp, but from *v*. In other cases, we find that absolutive case is not straightforwardly available in non-finite clauses at all, so that the transitive object must be licensed in some special way, if transitive control is possible. In these high ABS languages, then, it seems that absolutive always comes from T/Asp.

²⁹ As noted, an independent parameter is needed to govern whether obliques count for transitivity.

Chamorro appears to be a high ABS language in these terms. The evidence for this is that the infix *-um-*, which surfaces where ergative subjects are extracted, also surfaces where a transitive predicate appears in a control context (Chung 1982: 49, fn. 5):

- (68) Malagu' gui' b-um-isita si Rita. [Chamorro]
 want he UM-visit UNM Rita
 'He wants to visit Rita.'

Plausibly, *-um-* serves to license the absolutive DP in (68), as is the case with the “crazy antipassive” in high ABS Mayan languages (Coon et al. 2014). In Tagalog, on the other hand, ABS is retained on the transitive object in non-finite contexts because it is a mixed ABS language (see Aldridge 2004, 2013b):

- (69) Nagba-balak ang babae-ng [PRO tulung-an ang lalaki] [Tagalog]
 INTR.PROG-plan ABS woman-LK help-APPL ABS man
 'The woman is planning to help the man.' (Aldridge 2013: 2)

There is some evidence that Trumai is also high ABS in these terms. Verbs like *padi* ‘wait’ can take reduced clausal complements which appear to give rise to ECM, whereby what would be the absolutive argument of the embedded clause surfaces as an enclitic on the matrix verb:

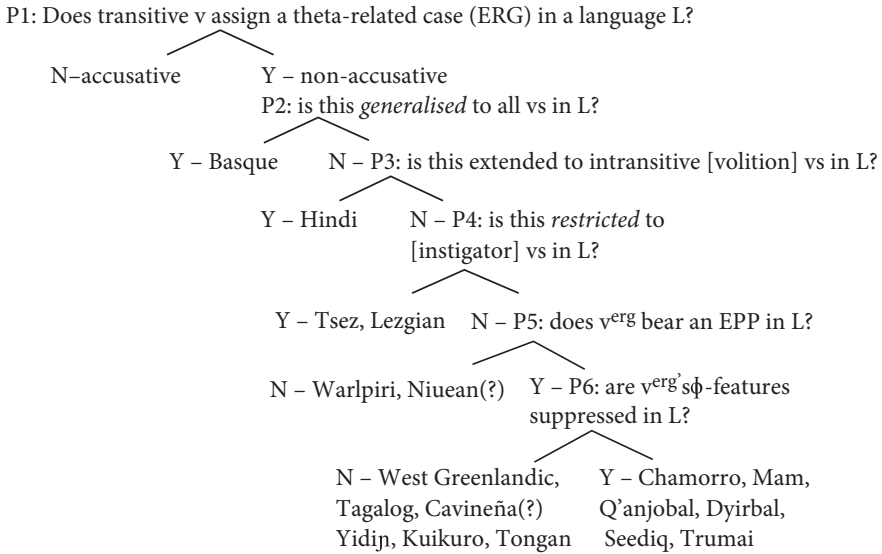
- (70) hai-ts chi_in [Kumaru-k tichi] padi-n [Trumai]
 1-ERG FOC/TENSE Kumaru-ERG scarify wait-3ABS
 'I waited for Kumaru to scarify her.'
- (71) hai-ts [huma] padi-n
 1-ERG take.bath wait-3ABS
 'I waited for her to take a bath.' (Guirardello-Damian 2010: 220–1)

The fact that this process applies uniformly to absolutive subjects and objects in Trumai, whereas ergative case is retained (as in (70)), suggests that both get case from T in finite contexts. In non-finite contexts, T fails to assign absolutive case, but ergative, from *v*, is still available, as expected.

High ABS languages appear to be a proper subset of syntactically ergative languages and given standard assumptions about intervention, there is a principled reason why this should be the case. In order for a lower DP_1 to receive structural Case from a higher head where another DP_2 intervenes, DP_1 must first move past DP_2 . This is essentially the movement proposed to hold in syntactically ergative languages: *v* bears an EPP feature and attracts DP_1 past DP_2 . No intervention obtains for this movement because DP_2 occupies the specifier position of *v*P and so is not *c*-commanded by *v*. To ensure that DP_1 receives Case from this higher head (T), though, it must also be the case that it has not received Case from *v*, prior to movement. In this way, the parameter distinguishing mixed ABS and

high ABS languages is that which determines whether *v* loses its ability to assign a structural Case. In a mixed ABS language, *v* retains this ability (which is the default option for transitive *vs*—Burzio 1986). In a high ABS language, on the other hand, *v* loses the ability to assign a structural case (i.e. it bears no ϕ -features) and so DP_1 receives Case from T, after movement has occurred.³⁰ This final dependent parameter is thus active only in syntactically ergative languages for principled reasons, giving the following parameter hierarchy:

(72) Parameter hierarchy (fourth version)³¹



3.3 THE STATUS OF THE HIERARCHY

The parameter hierarchy in (72) serves to model micro-parametric variation among non-accusative languages. What is given, I assume, are the functional categories themselves, formal features such as EPP and ϕ (leading to structural Case valuation) and a requirement for nominal licensing. The other properties of *v* are open to parameterization: whether *v* is overt/covert; whether it assigns a theta-related Case (always, never,

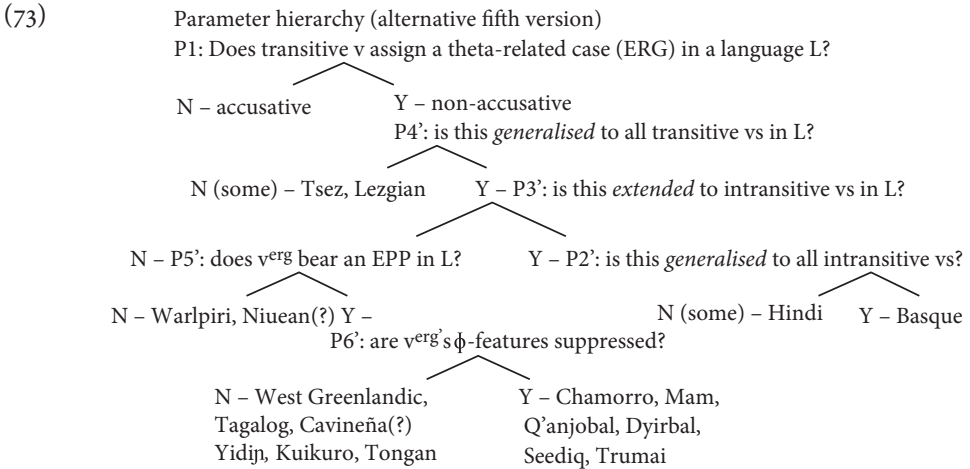
³⁰ This raises the question what happens to T's ϕ -features in mixed ABS languages' transitive clauses, where both arguments get Case from *v*. Either T must simply lack ϕ -features in this context or we must assume, following Preminger (2011a) that unvalued ϕ -features fail to crash the derivation.

³¹ With extra languages tentatively added for purposes of illustration: see Dixon (2010) on Yidij; Massam (1998, 2006) on Niuean; Otsuka (2006) on Tongan; Guillaume (2008) on Cavineña; Aldridge (2004) on Seediq and Tagalog; Franchetto (2010) on Kuikuro; Coon et al. (2014) on Mam and Q'anjobal. It is not actually possible to say, as of yet, whether Cavineña is syntactically ergative or not, though there is suggestive evidence that it is (Guillaume 2008, p.c.). I have not been able to ascertain whether Niuean patterns with Warlpiri or Tsez/Lezgian, but it is reported not to be syntactically ergative (Levin and Massam 1985).

sometimes); whether it assigns a structural Case; and whether it bears an EPP feature. The upper end of the hierarchy remains fairly descriptive, and I have no deep explanation for the fact that P1 refers to transitive rather than intransitive v, though this is clearly empirically justified, given that all non-accusative languages seem to share this property. It is possible that transitive v is the most salient instantiation of the category v and as such has a privileged status for acquisition.

The format of P3–P4 is intended to be open rather than fixed by UG, the idea being that the child acquiring a non-accusative system can extend or restrict ergative case to any coherent class of vs, with Hindi and Tsez/Lezgian being just two possibilities (see Roberts 2012). While this is a fairly powerful model, it appears to be empirically necessary. It is an empirical question, though, to what extent all potential extensions/restrictions of ergative case are attested. I have found no language, for example, in which ergative is limited to agents, to the exclusion of causers, though there is at least one language which may limit ergative to animate DPs (Nepali).³² The model can therefore be seen as a working hypothesis.

P5–P6 are substantively different from P2–P4. First of all, the dependencies between P2–P4 are negative, so that they do not determine cumulative properties of a system but rather mutually exclusive properties. A language either generalizes, extends, or restricts ergative case, but it cannot, by hypothesis, do more than one of these things. P5–P6, however are different. Syntactically ergative high ABS languages are a subset of syntactically ergative languages. It is only positive dependencies of this kind which are truly dependent and hierarchical in this sense. P2–P4 are non-cumulative and so could be reordered without altering potential outputs, but the same is not true of P5–P6. An anonymous reviewer points out that it is possible to rephrase P2–P4 so that they too are cumulative in this sense, giving the following alternative parameter hierarchy:



In (73), there is only one negative dependency: that between extension of ergative to intransitive vs and the association of an EPP feature. Again, there is a principled

³² Thanks to Joe Perry for providing me with and discussing the Nepali data.

reason why these two grammatical properties would be incompatible: a language which extended ERG to intransitive contexts would have no argument to satisfy an EPP feature in such contexts. With this exception, though, the parameters in (73) all involve positive dependencies. This has the advantage that, moving down the hierarchy, the output grammars stand in superset relations. The contexts in which ergative surfaces in Basque are a proper superset of the contexts where ergative surfaces in Hindi, which are a proper superset of the contexts where ergative surfaces in Tsez. Similarly, little *v* in Chamorro has all the properties of little *v* in West Greenlandic plus suppressed ϕ -features (the marked option) and little *v* in West Greenlandic has all the properties of little *v* in Warlpiri plus an additional EPP feature. In this way, assuming that the hierarchy models acquisition, this is a process of selecting grammars of ever increasing complexity and size, providing a potential solution to the subset problem identified by Wexler & Manzini (1987) and Manzini & Wexler (1987). Essentially, as they point out, given the negligible role played by negative evidence in language acquisition, children face a superset trap, whereby if they posit a grammar consistent with the data they observe, but not restrictive enough, they may never be able to posit a grammar which is a subset of that initial hypothesis. The kind of parameter hierarchy in (73) addresses this problem head on by proposing that children start off by positing smaller grammars and only extend them in the face of positive evidence. Reordering the hierarchy in this way thus seems attractive, although it appears to involve some redundancy concerning the actual parameters required.

A remaining question concerns the relative ordering between parameters. Is there any deeper rationale for the positive dependencies between parameters in (73)? The answer appears to be that these dependencies are due to the need for convergence. We have already provided a potential explanation for the fact that syntactic ergativity is compatible only with transitive-sensitive ergative alignment. A similar account emerges for the dependency between $P_1, P_5/P_5'$ and P_6/P_6' . In a language in which *v* fails to assign ergative and/or lacks an EPP feature, there will be no way for both arguments to receive Case if *v* loses its ability to assign a structural Case (i.e. loses its ϕ -features). In order for both DPs to get case in such as context: (i) the higher DP must get a non-structural case; and (ii) the lower DP must scramble past the higher DP so that it is in a position to receive a higher structural case (from T) without defective intervention. It is only in such contexts, then, that Burzio's generalization can be violated. All of this is implicit in the parameter hierarchies in (72)/(73).

3.4 CONCLUSIONS

This chapter has developed a parameter hierarchy for non-accusative alignment based on the hypothesis that ergative is an inherent Case. It has been shown that while there are minimal differences in the distribution of ergative case across languages, there are also many similarities all of which seem to be broadly in line with the predictions of

the inherent case account, based on what is known about theta-roles in accusative languages. Of course, as mentioned in the introduction, the inherent case approach makes four different kinds of predictions and this chapter has focused mainly on the first of these (A):

- A. Ergative will only occur on (a subset of) arguments externally merged in spec vP.
- B. The presence of ergative may be independent of transitivity, so we might find ergative subjects without absolutive objects.
- C. There will be no derived/non-thematic ergative subjects (no ergative expletives, raising to ergative or ergative subjects of passives, ditransitives, or otherwise).
- D. Ergative case will not be lost in contexts where structural case is not available (no change of case under ECM, no loss of ergative under raising).

In relation to B, it has been shown that Western Basque and Hindi both have ergative with unergative intransitives, but the possibility of ergative with oblique objects seems to be rarer (though it is observed in Warlpiri and Lezgian). The discussion of the source of absolutive case in Trumai and Chamorro touched on D, though, there is clearly much more to be said. Finally, C has not been discussed at all. In a sense, then, showing that ergative case occurs only on a (a subset of) arguments externally merged in spec vP is just the first step towards arguing that ergative is an inherent case. While the facts have been shown to be broadly compatible with the inherent case approach, the results are by no means conclusive (see especially Rezac et al. 2014 on Basque). Given the parameter hierarchy approach, though there are added advantages to the inherent case approach, not least because it enables us to conceive of accusative/ergative variation in terms of variation of the properties of a single class of functional heads (little *v*), broadly in line with the Borer–Chomsky conjecture. Parameter hierarchies, in these terms, are the pathways used by the child to acquire the properties of a class of functional heads, aided by the kinds of dependencies and acquisition strategies discussed. The basic case/alignment properties of a language are thus effectively encoded on little *v* in systematically defined ways.

ACKNOWLEDGMENTS

Many thanks to the European Research Council for funding this research under the auspices of the project Rethinking Comparative Syntax (ReCoS). Thanks also to the other members of that project: András Bárány, Tim Bazalgette, Theresa Biberauer, Alison Biggs, Georg Höhn, Anders Holmberg, Ian Roberts, and Jenneke van der Wal for providing critical feedback at various stages. Different parts of this work were presented at West Coast conference on Formal Linguistics (Arizona), the Syntax of the World's Languages (Dubrovnik), GLOW Biolinguistics Workshop (Lund), Formal Ways of Analyzing Variation (Reykjavik), Towards a Theory of Syntactic Variation (Bilbao), International Congress of Linguists (Geneva), Societas Linguistica Europaea (Split), Workshop on Building Blocks (Leipzig), and at What Happened to Principles and Parameters? (Arezzo). Thanks to the audiences at those venues

as well as at the University of Cambridge for providing thought-provoking questions and critiques, especially Joe Perry, Katya Pertsova, Gereon Müller, Edith Aldridge, Amy Rose Deal, Adam Ledgeway, and Bob Freidin. Finally, special thanks to an anonymous reviewer and to Lisa Travis for providing detailed comments on an earlier draft of this chapter which have (I hope) led to a great deal of improvements. As ever, I take full responsibility for the way I have interpreted and used comments and suggestions.

ABBREVIATIONS

ABS, absolutive; AOR, aorist; APPL, applicative; AUX, auxiliary; CAUS, causative; COMP, complementizer; DAT, dative case; DEF, definite; DEM, demonstrative; DET, determiner; DOM, differential object marker; EPP, movement trigger; ERG, ergative; EV, evidential; FOC, focus marker; GEN, genitive; GER, gerund; I noun, class I agreement; II noun, class II agreement; III noun, class III agreement; impf, imperfect; inf, infinitive; INSTR, instrumental; INTR, intransitive; iv noun, class iv agreement; LAT, lative case; LK, linker; LOC, locative; NZR, nominalizer; OBL, oblique case; OS, oblique stem; PERF, perfect; PL, plural; POSS.ESS possessive case; PRES, present; PROG, progressive; PST, past; PTCP, participle; REL, relative marker; RES, resultative; S, singular; TENSE, tense marker; TR, transitive; UM, 'um' morpheme; UNM, unmarked; WIT, witnessed; YI, 'yi' morpheme.

CHAPTER 4

ACCUSATIVE AND ERGATIVE IN HINDI

ANOOP MAHAJAN

4.1 INTRODUCTION

THIS chapter deals with a specific issue of case licensing in ergative languages. The issue concerns the licensing of the case on the direct object (absolutive) argument in ergative constructions. This issue is of importance, since over the last few years the case of the direct object (DO) argument in ergative constructions has been argued to be licensed by a variety of conditions that include: case licensing by T; case licensing by an accusative licensing head, which could be either a little *v* or a lower agreement (AGR) head; or by some mechanism of case competition.¹ The discussion is often complicated by the well-known fact that the overt case realization of absolutive is often morphologically null. Furthermore, in a language like Hindi, the DO can have a differential object marking that is often equated with the overt manifestation of accusative case (as in Mohanan 1994a, for example) in opposition to the null case on a non-differentially case marked object which is then sometimes labeled as nominative (Mohanan 1994a) or as accusative (Legate 2008). My objective in this chapter is to argue, employing data that has not been previously invoked within this domain, that the Hindi DO in ergative constructions does not have accusative case. This casts doubt over the universal validity of absolutive-as-accusative type theories, and also on Hindi specific proposals where it has been argued that the DOs in Hindi ergative constructions bear accusative case. Furthermore, it will once again highlight the question concerning why, at least in certain environments, the absence of accusative assignment is a prerequisite for the licensing of ergative subjects and perhaps other oblique subjects as well. The discussion in this chapter will

¹ I use the terms ‘case’ and ‘inherent case’ in this chapter to distinguish between ‘structural case’ and ‘inherent case.’

also emphasize that focusing on case licensing as structural argument licensing in the original Government and Binding sense is a more fruitful strategy to resolve disputes over what case the arguments in ergative constructions bear, rather than looking at the morphology on the arguments—which that can often be confusing.²

To set the background for this discussion, consider (1) in Hindi:³

- (1) Kabir-ne vah laal gaarīi jaldii-se beč-ii thii
 Kabir(masc)-erg that red car(fem) quick-with sell-perf.fem.sg be.pst.fem.sg
 ‘Kabir had sold that red car quickly.’

The central problem to which we seek an answer concerns the case borne by the DO in (1). The case of the subject in (1) is identifiable as the ergative case by its postpositional case ending *-ne*. However, the DO has no overt morphological case ending, therefore it is not a priori clear whether this DP has a case and if it does, what is the nature of that case. I am not aware of any proposal that asserts that the object DP in (1) does not have a case, and indeed if one assumes the validity of the traditional GB case filter, the DO in (1) must surely have a case in order to be visible.⁴ The usual practice in traditional literature on ergativity (for example in Comrie 1978 and in Dixon 1994) is to label the DO as having an absolutive case. However, the label ‘absolutive’ does not tell us how this absolutive case is assigned or licensed, and therefore the use of this label often obscures the formulation of the structural licensing conditions under which the object nominal is (case) licensed. My aim here is to suggest that the DO in (1) is case licensed by T, and within the GB-minimalist type theories, the case that the DP bears in (1) should be labeled as the nominative case. The alternative that has been proposed (for Hindi) is that the DO in (1) is case licensed by a little *v* and should be labeled as accusative (Bhatt 2005; Legate 2008; also related general proposals in Murasugi 1991, Bobaljik 1993b, and others). I will argue that this alternative view is not correct. It should however be made clear that the case labels themselves are not so important. The GB-minimalist theories are clear on this. The real issue concerns the nature of case licensing of the object, and

² In this respect (realization of the morphological case), I am in general agreement with distributive morphology based approaches such as that of Legate (2008).

³ The glossing I provide for the examples includes the features that are relevant to the discussion as well as for clarity. Not all morphological features are always identified in the glosses. For example, I gloss gender agreement for participle verbs and do not usually gloss the number agreement, even though it can be morphologically realized in many cases.

⁴ However, the possibility that the DO in (1) may be caseless should perhaps be evaluated in view of proposals concerning the case of DOs in antipassive constructions, where it has been suggested by some (including Aldridge 2012b and Mahajan 2012) that DO nominals may be caseless and perhaps be a special case of incorporation (or pseudo-incorporation). I have tried to minimize that possibility in (1) by making the DO non-adjacent to the verb and by including a demonstrative and a modifier. Furthermore, the DO in (1) is clearly referential and it can be shown that its scope properties are different from that of the DOs in antipassive constructions (for an outline of the relevant properties of DOs in antipassives, see Polinsky 2005; for relevant issues concerning Hindi noun incorporation, see Mohanan 1995 and Dayal 2011).

indirectly of the subject, particularly the identification of the relevant case licensing heads and the environments of case licensing.

4.2 A SELECTIVE OVERVIEW OF PROPOSALS ABOUT DO CASE LICENSING IN ERGATIVE CONSTRUCTIONS

4.2.1 DO Has ACC Case in Ergative Constructions

Within the GB tradition, this is perhaps the earliest proposal, represented by Massam (1985) and Levin and Massam (1985), and followed up in Bobaljik (1993b).⁵ Taking Bobaljik (1993b) to be representative of this tradition, the general idea is that the sources of structural case for subjects and objects in ergative-absolutive (ERG-ABS) languages and nominative-accusative (NOM-ACC) languages are parallel. Specifically, ABS=ACC and ERG=NOM (Bobaljik 1993b: 46). Even more specifically, Bobaljik proposes that NOM and ERG are both assigned by a structurally higher head, while ACC and ABS are assigned by a structurally lower head. He labels those heads as AGR₁ (the higher head that takes TP as its complement) and AGR₂ (the lower head that takes VP as its complement). The crucial way in which ERG-ABS languages differ from NOM-ACC languages in his system concerns the case that the sole argument of an intransitive clause is assigned. Bobaljik makes his proposal in the form of a parameter he calls the ‘Obligatory Case Parameter’, which essentially says that in NOM-ACC languages, this sole argument has NOM (=ERG) case, while in ERG-ABS languages, this argument has ACC (=ABS) case. Given the existence of split ergative languages, it is clear that this type of parameter cannot be a parameter distinguishing languages, though one can develop an implementation of this approach to include split ergativity (which I will not attempt here). I should note that I will follow Bobaljik and others in an important way in that I will assume that NOM is the label of the case licensed by a (higher) T head while ACC is the label of the case that is licensed by a (lower) v head under well-defined locality conditions. An implementation of this would be to use the locality involved in the AGREE relation of the minimalist tradition and I will assume that for this chapter. It would perhaps be wise to develop a different terminology and relabel NOM as case₁ and ACC as case₂ or something similar so that we can get away from the confusion caused by the use of the traditional terminology in this domain. However, no one, including me at this point, is making this move, and therefore I want to make sure that we are talking about licensing relations as opposed to morphological forms, which may sometimes yield useful clues, but can also add unnecessary confusion.

⁵ For Hindi, Bhatt (2005: 759–760) also makes the assumption that the absolutive DO has ACC. He also assumes that Hindi differentially case marked objects have ACC.

4.2.2 DO Has Nominative Case in Ergative Constructions

This view is advocated and developed in Bittner (1987), Mahajan (1990), Bok-Bennema (1991), and Murasugi (1992) among others. The general idea in most of these approaches is that ergative licensing is handled by some head other than T (though see Bittner and Hale 1996a for a somewhat different perspective), leaving T to license NOM on the DO in ergative languages. Whether ergative is licensed as an inherent case or a structural case is a separate issue and I will not be directly concerned with that here (see among others, Marantz 1991, Bittner and Hale 1996a, Woolford 1997). My focus in this chapter is more on the nature of DO licensing than that of subject (SUB) licensing.

4.2.3 DO Has Sometimes NOM and Sometimes ACC in Ergative Constructions

This view has been developed in Legate (2008) who argues that there are two typologically distinct groups of languages. In one group, the absolutive argument is NOM, while in the second group, the absolutive argument is ACC. Legate makes a specific proposal about Hindi, arguing that Hindi is a type of language in which absolutive objects have ACC. This approach agrees with the assumption made concerning the case of DO in Hindi ergative constructions in Bhatt (2005: 759–760). I will argue in this chapter that Hindi DOs in ergative constructions do not have ACC. I will use evidence from a variety of prenominal relative clauses that are based on the same verbal form as the Hindi ergative constructions to substantiate my argument. If my argument is on the right track, it will cast doubt over Legate's proposal about Hindi, though I do not evaluate the Hindi external data that Legate provides for her general proposal.⁶

4.2.4 The Source of Ergative Case

Once again, there are differing views on the licensing of the ergative case. Marantz (1991) and Bittner and Hale (1996a) propose in different ways that the ergative case is structural. Bobaljik's (1993b) proposal tying ERG to the higher AGR head also makes the ergative case look like a structural case, though in ways different from Bittner and Hale, and Marantz. However, much of the recent work on ergativity has developed the idea that the ergative case is inherently assigned by little *v*. This view is represented in Mahajan (1990, 2000, 2012), Woolford (1997), Anand and Nevins (2006), and in numerous other recent papers. In this chapter, I will assume that ergative in Hindi is assigned inherently by the little *v* that heads the complement of a perfective Asp head

⁶ Another type of variation is discussed in Massam (1996) who argues that in Niuean the absolutive case patterns unlike both NOM and ACC.

(more details in section 4.3). While this aspect of ergativity is not the focus of this chapter, there appears to be a connection between the unavailability of accusative case and the appearance of ergative case in Hindi. This raises the issue of whether the ergative case is some deviant form of the accusative case (Marantz 1991; Mahajan 2000). The unavailability of ACC in Hindi extends beyond the ergative subject construction to include dative subject constructions and a variety of Hindi passives (see Mahajan 2000 for relevant details). Therefore, the proper correlation in Hindi is between the unavailability of ACC and the appearance of an oblique case on the subject. I do not pursue this matter in this chapter.

4.3 SOME BASIC HINDI ERGATIVITY FACTS AND THE BASIC ISSUES

4.3.1 Null Case Objects in Hindi Ergative Constructions

As is well known, Hindi is a split ergative language. Ergative case appears on the subject of transitive perfective participle verbs as in (2) (on the connection between ergative and perfective in Hindi, see, among others, Porizka 1967, 1968, 1969; Kachru and Pandharipande 1978; Mohanan 1994a; Davison 2004b). The subjects of non-perfective participle transitive clauses must not have an ergative ending; and indeed in (3), a transitive imperfective construction, and in (4), a transitive future construction, the subjects are unmarked and cannot have an ergative ending.⁷

(2) *mē-ne vah akhbaarē jaldii-se beç-ī thī*
 I-erg(masc) those newspapers (fem) quickly sell-perf.fem.pl be.pres.fem.pl
 ‘I sold those newspapers quickly.’

(3) *mē (*-ne) vah akhbaarē jaldii-se paṛh-taa hū*
 I(masc) those newspapers (fem) quickly read-imperf.masc.sg be.pres.IP.sg
 ‘I (habitually) read those newspapers quickly.’

(4) *mē (*-ne) vah akhbaarē jaldii-se paṛhū-gaa*
 I(masc) those newspapers (fem) quickly read.IP-fut.masc.sg
 ‘I will read those newspapers quickly.’

A lot of the later discussion in this chapter will focus on the verb forms in (2) and (3). At this point, what we need to note about (2)–(4) is that: (i) the morphological shape

⁷ Examples (3) and (4) are ungrammatical with a subject *-ne* ending even if the agreement is changed to object agreement.

of the DO in all of these sentences is identical; (ii) the subject in (2) has an ergative case postposition,⁸ while the subjects in (3) and (4) must be unmarked, and are therefore labeled as nominative by most Hindi linguists; and (iii) the perfective participle and the copula in (2) agree with the object, whereas we get subject agreement in (3) and (4).⁹ The Hindi verbal cluster (verb and the copula/auxiliary) always agrees with the same argument, though not exactly in the same features.

Given that the DO in (2)–(4) looks exactly the same, there are various logical possibilities. These include: (i) the DOs in (2)–(4) are all NOM, since they are morphologically bare and are morphologically identical, and share the same bare case form as that of the subject in (3) and (4). The fact that the DO agrees with the verb in (2) but not in (3) and (4) is not relevant. This is the view held by Mohanan (1994a). She treats (3) and (4) as double nominative constructions.¹⁰ (ii) the DOs in (2)–(4) are all ACC, since they are all objects and licensed in the same way, arguably by the same case licensing head. Once again, the fact that the DO agrees with the verb in (2) but not in (3) and (4) is not relevant. This is the view held by Bhatt (2005) and Legate (2008). (iii) the DO in (2) is NOM and is case licensed by T, while the DOs in (3) and (4) are ACC and are case licensed by a distinct head, presumably a little *v*. Agreement relations in (2) vs. (3) and (4) mirror case licensing. This view is proposed by Mahajan (1990) and is consistent with Chomsky's (1993) idea about the relationship between case and agreement feature checking. (iv) the DO in (2) is ACC while it is NOM in (3) and (4). This possibility has not been explicitly suggested by anyone and I will not discuss it further. A variant of this idea is followed by Mohanan (1994a) in the context of differentially case marked (DOM) objects, which I will discuss later.

If the evidence I present and discuss in this chapter is on the right track, the possibilities and proposals in (i) and (ii) are wrong. That is, the proposals that treat all unmarked objects alike, whether as ACC or as NOM, are inadequate in dealing with the data that I will discuss. I argue that the DO in ergative constructions in Hindi, whether unmarked or marked, is never licensed by an ACC licensing head. This essentially leaves us with the proposal in (iii) that the DOs in (2) vs. (3) and (4) are licensed by different heads and should therefore be labeled differently: NOM in (2) vs. ACC in (3) and (4).

A sketch of the proposal concerning case licensing that I defend is outlined in the structural configurations that represent perfective (Figure 4.1, corresponding to

⁸ Hindi case postpositions are clitics (see Mahajan 1990 and Mohanan 1994a for some discussion).

⁹ Object agreement in ergative constructions in Hindi does not include person features. The subject agreement in non-ergative constructions (3) and (4) shows person agreement, though in (3) the person agreement shows up only on the auxiliary. In the present discussion, this fact will not be relevant.

¹⁰ Mohanan's (1994a) discussion is within the LFG framework where the case linking conditions are quite distinct from the case licensing conditions of the GB-minimalist tradition. Therefore, a direct comparison of her proposal and its possible counterpart in the GB-minimalist tradition is difficult. However, Mohanan's work does represent the tradition of taking morphological shape of the case endings (including null endings) seriously for linking/licensing purposes.

sentence (2)) and imperfective (Figure 4.2, corresponding to sentence (3)) transitive clauses with a finite tense. For the sake of clarity, these configurations are depicted with pre-movement structures that only show case relations and not the final word order of Hindi.¹¹

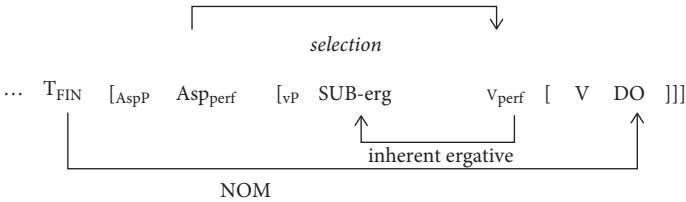


FIGURE 4.1 Case relations in Hindi perfective transitive clauses

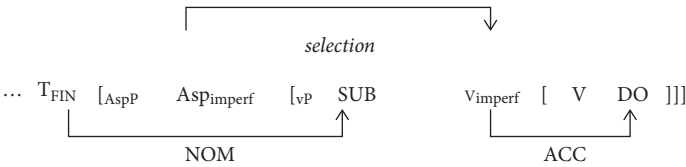


FIGURE 4.2 Case relations in Hindi imperfective transitive clauses

4.3.2 DOM in Hindi

Hindi displays differential object marking (DOM) that interacts with the characterization of object case. Examples (5) and (6) provide examples of DOM objects in Hindi ergative constructions, while (9) and (10) illustrate that DOM objects can be found in non-ergative constructions as well.

- (5) Miiraa-ne lar̥kii-ko kal dekḥ-aa thaa
 Meera-erg(fem) girl(fem)-DOM yesterday see-perf.masc be.pst.masc
 ‘Meera had seen the girl yesterday.’

¹¹ In this chapter, I omit discussion of why the ergative subject does not block case assignment by T to the DO in Figure 4.1. Various ways of handling this ‘non-intervention’ effect have been proposed in the literature. For the purpose of this chapter, I will assume that ergative assignment makes the subject ‘inert’ and not visible to structural case assignment by T. See Mahajan (1990) and Bhatt (2005) for two of the possible analyses.

- (6) Miiraa-ne kitaab-ko kal paṛh-aa thaa
 Meera-erg(fem) book (fem)-DOM yesterday read-perf.masc be.pst.masc
 'Meera read the book yesterday.'
- (7) mē (*-ne) laṛkii-ko har roz bulaa-taa hū
 I(masc) girl-DOM every day call-imperf.masc.sg be.pres.IP.sg
 'I call the girl every day.'
- (8) mē (*-ne) kitaab-ko jaldii-se paṛhū-gaa
 I(masc) book-DOM (fem) quickly read.IP-fut.masc.sg
 'I will read the book quickly.'

Broadly speaking, Hindi proper names and pronouns must always be followed by DOM and specific animate and inanimate objects are also followed by DOM. There is extensive literature on Hindi DOM that deals with various interpretational issues of DOM objects. (For formal proposals see, among others, Mahajan 1990, Butt 1993b, Mohanan 1994a, Bhatt and Anagnostopoulou 1996).¹² The DOM marking in Hindi is the same as the case ending obligatorily carried by indirect objects. With a few exceptions, the Hindi DO *-ko* ending is identified as the accusative ending (as in Mohanan 1994a and Butt 1993b, 1995). Given this common and pervasive view, the *-ko* ending in (5) and (6) is taken to represent ACC. In view of the new data discussed in this chapter, the proposal is that the *-ko* ending in (5) and (6) is not morphological realization of ACC but simply DOM marking. This view was originally put forward for Hindi in Mahajan (1990). The licensing of the DOM morphology is not an issue discussed here, though see Bhatt and Anagnostopoulou (1996), and a more recent idea in Kalin (2014). My contention is that the case licensing of DOs in (5) and (6), and also (7) and (8) is obscured by the surface appearance of the DOM marker. In particular, I will argue, contrary to much work in Hindi linguistics, that the DO in (5) and (6) is case licensed by the T head while the DO in (7), and also in (8) (though I do not directly argue for that), is licensed by a little *v*. I leave open the issue of what governs the appearance of the DOM marking. The point I want to make is that the DOM marking is not a substitute for the structural case licensing requirement. This in turn raises yet another interesting issue of whether non-structural case marking can ever substitute for structural case licensing in terms of a condition of the sort envisaged by Vergnaud's (2008) original proposal concerning case. My tentative answer to this would be that DOM does not substitute for structural case, or more specifically, DOM nominals must be structurally case licensed in the sense of the classical structural case requirement.¹³

¹² Mohanan (1994a) disallows DOM endings on inanimate DOs. Other works such as Mahajan (1990) and Bhatt and Anagnostopoulou (1996) accept DOM inanimates.

¹³ This raises the issue of whether the inherent ergative case (for those who view it as inherent case) is sufficient to fulfill the case theory requirements. I will not discuss this here, though see Legate (2002) who

4.4 A NEW EMPIRICAL DOMAIN IN RESOLVING THE ISSUE OF CASE IN HINDI PERFECTIVE ENVIRONMENTS

Given that Hindi DOs can have null case ending or be DOM marked in various environments, it is hard to find crucial evidence that will help us decide the exact nature of case licensing in normal transitive clauses. My strategy here is to turn to a new empirical clausal domain where both perfective and imperfective verb forms that we see in Hindi ergative and non-ergative constructions are employed and isolate the DO licensing outcomes in those environments. The clausal domains are similar to ergative constructions with respect to the verbal forms (the lower vP clausal domain) but crucially different in that they filter out the possibility of case licensing by T since finite T is systematically unavailable in these environments. This in turn provides us with a useful control in looking at how the DOs may be licensed in structures that contain sub-parts of the ergative construction and provide a new insight into object case licensing. The empirical domain that we now turn to is that of non-finite prenominal relative clauses.

4.5 PERFECTIVE PARTICIPLE PRENOMINAL RELATIVE CLAUSES

4.5.1 The Case of DOs

In this subsection, I will present the core argument of this chapter suggesting that the perfective participles in Hindi are simply incapable of case licensing DOs in Hindi. Since the ergative construction by itself does not provide conclusive evidence, I turn to a somewhat similar construction that helps us resolve the relevant issue.

Hindi prenominal relative clauses come in various varieties—the one we start with here is the form that is of most interest to us—the relative clauses that use a perfect participle form of the verb which is identical to the one found in Hindi ergative constructions. Consider the data below. The brackets indicate the limits of the prenominal relative clause; the head of the relative clause is the NP that appears after the right bracket.

presents some Warlpiri data with ergative subjects in infinitive constructions that may have consequences for this issue. Hindi ergative case is however only found in tensed environments. I discuss in note 18 one environment where the assignment of the ergative case could be attributed to a non-finite context, though the ergative nominal in that case can be argued to have raised to a finite clause.

- (9) [Kabiir-kii likh-ii (huii)] kitaab
Kabir-gen write-perf.fem be.perf.fem book(fem)
'a/the book written by Kabir'
- (10) [bazaar se aa-yii (huii)] taazii sabzii
market-from come-perf.fem (be.perf.fem) fresh vegetable(fem)
'fresh vegetables (which) arrived from the market'
- (11) [mar-ii (huii)] čhipkali
die-perf.fem (be.perf.fem) lizard(fem)
'a/the lizard that is dead'
- (12) [mez-par soy-ii (huii)] billii
table-on sleep-perf.fem (be.perf.fem) cat(fem)
'a/the cat sleeping on the table'

Examples (10)–(12) are cases of subject relativization.¹⁴ Example (9) is an instance of an object relativization. In (9), the subject of the relative clause is followed by the genitive postposition. The perfective participle verb and participial aux *be* (which is optional) agree with the relativized head noun (and the genitive postposition). The subject can also be marked as a *by*-phrase instead of with genitive (but can never be unmarked).

- (13) [Kabiir-dwaara likh-ii (huii)] kitaab
Kabir-by write-perf.fem (be.perf.fem) book(fem)
'a/the book written by Kabir'

Example (9) is parallel to a normal perfective transitive ergative clause (14). Similarly, (10) is parallel to a normal intransitive perfective non-ergative (15).

¹⁴ There are interesting restrictions on intransitive subject relatives. Some unergative subjects that can optionally take ergative subjects cannot be relativized (Mahajan 1990), as in (i)–(iii) below. Though *so-naa* 'to sleep' can optionally take an ergative subject, it can appear in prenominal perfective relatives. This pattern is not fully understood and needs to be investigated.

- (i) *[tez dauṛ-aa (huaa)] laṛkaa
fast run-perf.masc be.perf.masc boy
'a/the boy who ran fast'
- (ii) *[zor-se bhōk-aa (huaa)] kutta
Loudly bark-perf.masc be.perf.masc dog
'a/the dog that barked loudly'
- (iii) [zor-se soy-aa (huaa)] aadmii
soundly sleep-perf.masc be.perf.masc man
'a/the man who is sleeping soundly'

- (14) Kabiir-ne kitaab likh-ii (thii)
Kabir-erg book(fem) write-perf.fem (be.pst.fem)
'Kabir had written the book.'
- (15) bazaar se taazii sabzii aa-yii (thii)
market-from fresh vegetables(fem) come-perf.fem (be.pst.fem)
'The fresh vegetables had arrived from the market.'

The point that I wish to make is that the perfective prenominal relatives in (9)–(12) are structurally parallel to normal non-relative clauses such as (14) and (15) with a crucial difference: they use the same perfective participle verbal forms and have similar agreement patterns; but while (9)–(12) lack a finite T, (14) and (15) have a finite T (though it can be null).

Prenominal relative clauses in Hindi cannot be finite. This is illustrated by the ungrammaticality of (16).

- (16) *[Kabiir-kii likh-ii thii / hē] kitaab
Kabir-gen write-perf.fem be.pst.fem / be.pres book(fem)
'a/the book that was/is written by Kabir'

Also, while a genitive subject is possible in (9), and a *by*-subject is possible in (13),¹⁵ an ergative subject is systematically impossible in prenominal relative clauses.

- (17) *[Kabiir-ne likh-ii (huui)] kitaab
Kabir-erg write-perf.fem be.perf.fem book(fem)
'a/the book written by Kabir'
- (18) *[Miira-ne Kabiir-ko likh-ii (huui)] kitaab
Meera-erg Kabir-dat write-perf.fem be.perf.fem book(fem)
'a/the book written to Kabir by Meera'

The reason for the ungrammaticality of (17) and (18) is very likely due to the non-finiteness of the relative clauses, though the exact nature of the finiteness requirement (for ergative) in Hindi is not clearly understood.¹⁶ One possibility is that Hindi ergative

¹⁵ I leave aside the issue of whether the relative clause in (13) is a passive, since it has a subject form that is also found in passives. It should be noted though that (13) itself does not have the usual passive auxiliary which would be based on the verb form *jaa-* 'go.' However, the *be* auxiliary of the examples like (9) and (13) can be replaced by the *go* auxiliary (though only in transitive prenominal perfective relatives) making them look more like passives even though (9) has a genitive subject, and regular clausal passives in Hindi do not mark the agent with a genitive.

¹⁶ Bhatt (2005: 767) includes finiteness as one of the three requirements for ergative licensing (the other two are perfectivity and transitivity).

subjects are only realized in finite environments and while it can be argued (as I do in Mahajan 2012) that Hindi ergative case is inherently assigned, there is a further connection between the ergative case and the finite T in this language.^{17, 18}

It is also important to note that an unmarked subject is systematically excluded from the prenominal relative clause.

- (19) * [Kabiir paṛh-ii (hui)] kitaab
 Kabir read-perf-.fem be.perf.fem book(fem)
 'a/the book read by Kabir'
- (20) * [Miira Kabiir-ko likhii (hui)] kitaab
 Meera Kabir -dat write-perf.fem be.perf.fem book(fem)
 'a/the book written to Kabir by Meera'

The ungrammaticality of (19) and (20) is perhaps not surprising given the ungrammaticality of (16). Since prenominal relative clauses in Hindi are non-finite, and cannot have a finite auxiliary as shown in (16), the unmarked assumption would be that T case licensing is not available in such clauses, forcing the subjects to be either marked by a genitive postposition or an agentive postposition (or be null).¹⁹

¹⁷ The assignment and realization of the ergative nominal is a somewhat complex matter. So while Hindi infinitives (as well as prenominal relatives) do not allow ergative subjects, perfective participle *if*-conditionals do.

- (i) agar tum-ne vah kitaab paṛh-ii, to ...
 If you-erg that book read-perf.fem then
 'if you read that book, then ...'

If the generalization that finiteness is a requirement for ergative realization is true for Hindi, then one would have to argue that *if*-conditionals have a hidden tense (and they do optionally allow an overt finite tense auxiliary).

¹⁸ The example below (somewhat marginal for some Hindi speakers) supports the idea that ergative licensing is itself not dependent on finite tense (the right bracket is provided to indicate the clausal boundary between the raising verb and its complement; the left bracket is left out on purpose since its placement depends on discussion beyond the scope of this chapter).

- (i) Kabiir-ne bahut baṛii galtii kar d-ii (*thii)]
 Kabir(masc)-erg very big mistake(fem) do give-perf.fem be.pst.fem
 lag-tii thii
 seem-imperf.fem be.pst.fem
 'Kabir seemed to have made a big mistake.'

The ergative is surely assigned in the complement clause since that is a transitive perfective clause, and the matrix clause is not. The complement clause must however be non-finite, as shown by the inability to place a finite auxiliary inside it. This may provide evidence that ergative assignment itself is independent of finiteness. However, it is possible that the ergative phrase in (i) has undergone raising and is in the matrix finite clause thus meeting a possible requirement (in Hindi) that ergative subjects need to be in a finite clause. This type of raising is presumably blocked in (17) and (18) since that would involve raising out of a relative clause.

¹⁹ This does imply that the genitive and agentive subjects are distinct in their case requirements from the ergative subjects in the sense that they are more like real PPs.

The important generalization seems to be that subjects and objects can be relativized in prenominal perfective relatives in Hindi. Furthermore, when an object is relativized, the subject cannot be unmarked—it must either have a genitive case postposition or an agentive postposition.

The crucial observation is that the DO, when present because the verb is transitive, *must* be relativized. It cannot appear inside the perfective prenominal relative clause.²⁰ Examples (21)–(24) involve attempted subject relativization with an overt DO inside the relative clause and they are ungrammatical.

- (21) **[kitaab paṛh-aa (huaa)] laṛkaa*
 book(fem) write-perf.masc (be-part-masc) boy
 ‘a/the boy who has read the book’ (*even if agreement on V and aux is fem)
- (22) **[angrezii akhbaar khariid-aa (huaa)] aadmii*
 English newspaper buy-perf.masc be.perf.masc man
 ‘a/the man who had bought the English newspaper’
- (23) **[Kabiir-ko bahut pēse diy-aa (huaa)] aadmii*
 Kabir-dat lot money give-perf.masc be.perf.masc man
 ‘a/the man who gave a lot of money to Kabir’
- (24) **[Miiraa-se us-kii kitaab maang-aa (huaa)] aadmii*
 Meera-froms/he-gen book ask-perf.masc be.perf.masc man
 ‘a/the man who asked Meera for her book’

²⁰ An exception involving a DO inside the relative clause is given in (i).

- (i) *[šaraab piyaa (huaa)] aadmii*
 Liquor drink-perf.masc be.perf.masc man
 ‘a/the man who drank liquor’ (= a drunk man)

However, (ii) is ungrammatical.

- (ii) **[duudh/paanii/dawaaii pi-yaa (huaa)] aadmii*
 milk/water/medicine drink-perf.masc be.perf.masc man
 ‘a/the man who drank milk/water/medicine’

My hunch is that (i) involves noun incorporation of the DO and (therefore) has an idiomatic meaning. Since one does not usually get drunk drinking milk/water/medicine, (ii) is ungrammatical. Furthermore, attempts to modify the object in (i) yield ungrammaticality.

- (iii) **[desii/videšii šaraab pi-yaa (huaa)] aadmii*
 local/foreign liquor drink-perf.masc be.perf.masc man
 ‘a/the man who drank country/foreign liquor’

Examples (21)–(24) show that in Hindi an unmarked DO cannot be present inside a perfective prenominal relative clause while another nominal is relativized. We have already seen that unmarked subjects are not possible inside prenominal relative clauses in (19) and (20). I had suggested that (19) and (20) are ungrammatical because there is no source of NOM in the non-finite prenominal relative clause. The ungrammaticality of (21)–(24) can now similarly be attributed to the unavailability of any additional structural case inside the prenominal relative clause. In particular, the ungrammaticality of (21)–(24) tells us that perfective prenominal relative clauses are unable to license any non-PP arguments inside them. This can be taken to imply that a structural ACC is not available in these clauses.²¹ I don't know of any other reason for the ungrammaticality of (21)–(24). The fact that a DO, if present within a perfective prenominal relative clause, must be externalized (i.e. must be the head that appears outside the relative clause) indicates that the heads of prenominal relative clauses are externally case marked. Thus, relativized DPs ((21)–(24)) must appear in a structural case position in a clause as in (25) (in a subject position) and in (26) (as an object of a preposition). The oblique ending of the plural head in (26) is due to the postposition *-se*, supporting the idea that these heads are externally case marked.

(25) [Kabiir-kii paṛh-ii (huii)] kitaab kho ga-yii
 Kabir-gen read-perf.fem be.part.fem book(fem) lost go-perf.fem
 'A/the book written by Kabir was lost.'

(26) Mohan-ko [[Kabiir-kii likhii (huii)] kitaabō]-se
 Mohan-dat Kabir-gen write-perf.fem be.part.fem books.obl(fem)-from
 ḍar lagtaa hē
 fear feel-imperf.masc.sg be.pres
 'Mohan is afraid from a/the book written by Kabir.'

Further support for the proposal that the heads of the prenominal relative clauses are externally case marked comes from the relativization possibilities of phrases like locatives, manner phrases and instrumental phrases (and other oblique phrases) which must be case licensed by their own postpositions. The prediction is that such nominals cannot be relativized using the perfective prenominal relative clause construction. This prediction is borne out as illustrated in (27)–(29).

(27) a. Mohan kūē-mē ḍuub ga-yaa
 Mohan well-in drown go-perf.masc
 'Mohan drowned in the well.'

²¹ As pointed out by an anonymous reviewer, English perfective participle relative clauses like in *[[a book [written by John]] is on sale]* display restrictions similar to Hindi. Part of the analysis being developed here for the Hindi facts may have potential consequences for the syntax of reduced participle relatives in English.

- b. *Mohan-kaa ḍuub-aa huaa kũāā/kũē (-mē)
 Mohan-Gen drown-perf.masc be.perf.masc well in
 ‘the well in which Mohan drowned’
- (28) a. vo kaar-se ga-yaa
 he car-with go-perf.masc
 ‘He went with a car.’ (He used a car to go.)
- b. *us-ki ga-yii huui kaar
 he-gen go-perf.fem be.perf.fem car
 ‘the car in which he went’
- (29) a. čor-ne laṛke-ko čaaku-se maar-aa
 thief-erg boy-DOM knife-with kill-perf.masc
 ‘The thief killed the boy with a knife.’
- b. *čor-kaa laṛke-ko maar-aa huaa čaaku
 thief-gen boy-DOM kill-perf.masc be.perf.masc knife
 ‘the knife with which the thief killed the boy’

The proposal that the head in a Hindi prenominal relative clause must be externally case marked now helps us make sense of the restriction that in perfective prenominal relative clauses in Hindi, only subjects and DOs can be relativized, since they are the only type of arguments that can be structurally case licensed by clause internal (spinal) heads like T and v. The inability of a DO to survive inside a perfective prenominal relative clause must therefore follow from the lack of structural case inside the relative clause. Given that a finite T is clearly absent in Hindi prenominal relative clauses, the only other plausible source for the structural case would have been an accusative assigning little v. On the basis of the evidence that we have seen so far, I suggest that the little v present inside these clauses is unable to assign ACC, thus making these clauses very similar in ACC case assigning property as transitive perfective ergative clauses.²²

To complete this line of argumentation, the big difference between a prenominal relative clause in (30) and a normal finite transitive clause like (31) is the absence/presence of finite T. The fact that the object is licensed in (31) and not in (30) must then be due to

²² The issue of why the subject of a transitive perfective relative clause cannot be ergative (and must be genitive, if present) remains unresolved here. If, as suggested by Bhatt (2005), the presence of a finite T is a further requirement for ergative case licensing (as mentioned in n. 17), then the lack of a finite T within prenominal relative clauses may be tied to the lack of ergative case. However, in view of the data in n. 17, it is not clear if this would be a desirable analytical direction. An alternative that I do not develop in this chapter could be that the little v that assigns case is distinct from the little v that introduces the external argument (as in Mahajan 2012). If one follows that analytical option, then one may be able to argue that the perfective prenominal relative clauses simply lack the case assigning little v head.

this finite T. Therefore, if finite T licenses NOM, then the object in (31) must have NOM, since we have already eliminated the possibility of the availability of ACC inside perfective clauses.

- (30) *[kitaab paṛh-aa (huaa)] laṛkaa
 book(fem) read-perf.masc (be.perf.masc) boy
 ‘a/the boy who has read the book’ (*even if agreement on V and aux is fm)
- (31) laṛke-ne kitaab paṛh-ii thii / (*huii)
 boy-erg book(fem) write-perf-masc be.pst.fem / (be.perf.fem)
 ‘The boy had read the book.’

A schematic sketch comparing the analyses of finite perfective transitive clauses and prenominal perfective relative clauses is presented in Figures 4.3 and 4.4 (Figure 4.3 repeated from Figure 4.1 in section 4.3.1):

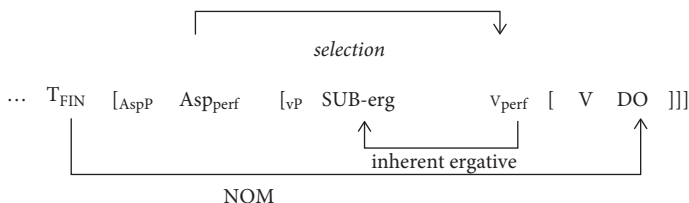


FIGURE 4.3 Case relations in Hindi perfective transitive clauses

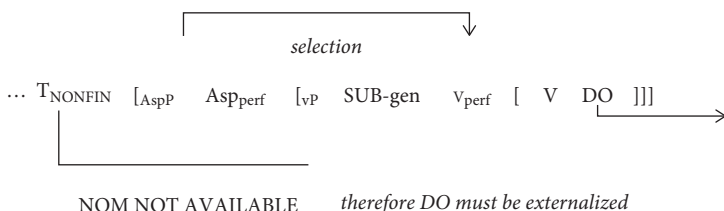


FIGURE 4.4 Case relations in Hindi prenominal perfective relative clauses

A by-product of this discussion is that it helps us make sense of why only certain kinds of grammatical function positions are accessible for relativization in the context of the typology of relativization as discussed in Keenan and Comrie (1977). Only subjects and (non-postpositional) DOs are accessible for relativization in Hindi perfective prenominal relative clauses because: (i) only those two need structural case licensing; (ii) structural case is not available in Hindi perfective prenominal relative clauses; and (iii) the relative clause head in Hindi perfective prenominal relatives is externally case marked. The fact that the indirect object and the obliques (PPs) in Hindi cannot be relativized in perfective prenominal relatives follows since they all receive a case from a postposition inside the relative clause.

4.5.2 PP DOs and DOM Objects

Interestingly, at least some oblique DOs can appear inside the prenominal perfective relatives.

(32) [dušman-se mil-ii (hiii)] laṛkii
 enemy-with join-perf.fem be.perf.fem girl
 ‘a/the girl who has joined (with) the enemy’

(33) [dušman-se ḍar-ii (hiii)] senaa
 enemy-with fear-perf.fem be.perf.fem army
 ‘a/the army that is afraid of the enemy’

However, a differentially case marked object cannot appear within such relative clauses. This has obvious consequences for analyses of DOM.

(34) *[laṛkii-ko dekh-aa (huaa)] aadmii
 girl-DOM see-perf.masc be.perf.masc people
 ‘a/the man who saw the girl’

(35) *[dhyaan-se tasveer-ko dekh-aa (huaa)] aadmii
 care-with picture-DOM see-perf.masc be.perf.masc man
 ‘a/the man who carefully saw/examined the picture’

The contrast between (32)–(33) and (34)–(35) is interesting. Examples (32)–(33) tell us that the constraint on not having a DO inside a perfective prenominal relative clause is not about DOs per se but is about whether that DO is a PP or not. A PP DO does not need PP external case licensing, and we would expect it to survive inside a prenominal relative clause, which it does. The ungrammaticality of (34) and (35) appears to be telling us that the differential object marker *-ko* is treated differently from normal postpositions. In particular, it looks like DOM *-ko* objects require structural case licensing. Given that no structural case is available inside perfective prenominal relative clauses (as we have argued), the ungrammaticality of (34) and (35) can be attributed to the failure of case licensing of DOs in these examples. The consequence of this is that the DO *-ko* marking itself cannot be the morphological realization of structural ACC case (as is often assumed in Hindi linguistics).²³ Furthermore, it also tells us that *-ko* marked objects in Hindi need to be structurally case licensed. Given that we have already argued that there are no structural case licensing heads inside perfective prenominal

²³ See Bhatt and Anagnostopoulou (1996) and Kalin (2014) for some relevant discussion, where it is argued that *-ko* may be assigned, or enters the derivation, higher than the base position of the DOs. Both of these proposals are compatible with the current proposal.

relative clauses in Hindi, it now becomes possible to entertain the possibility that the *-ko* objects in (36) and (37) (finite main clause counterparts of the prenominal relatives in (34) and (35)), are actually case licensed by the finite T, i.e. they have NOM structural case (Mahajan 1990).

- (36) lōgō-ne laṛkii-ko dekh-aa thaa
 people-erg girl-DOM see-perf.masc be.pst.masc
 ‘The people had seen the girl.’
- (37) aadmii-ne dhyaan-se tasveer-ko dekha thaa
 man-erg care-with picture-DOM see-perf.masc be.perf.masc
 ‘The man had seen the picture carefully.’

I am obviously not suggesting that (all) *-ko* marked objects in Hindi always have NOM. In section 4.6, we will see that such objects may have ACC when ACC is available.

4.6 IMPERFECTIVE PARTICIPLE PRENOMINAL RELATIVE CLAUSES

4.6.1 The Case of DOs

Hindi prenominal relatives can also be built on an imperfective participle and the properties of this type of relative clause provides more support for the proposal that I have developed so far. Recall that Hindi ergativity is crucially dependent upon perfectivity and that imperfective transitive constructions cannot have ergative subjects. This was shown in section 4.3.1 by the contrast between examples (2) and (3) (repeated below).

- (2) mē-ne vo akhbaarē jaldii-se beṅ-ī thī
 I-erg(masc) those newspapers(fem) quickly sell-perf.fem be.pres.fem
 ‘I sold those newspapers quickly.’
- (3) mē (*-ne) vo akhbaarē jaldii-se paṛh-taa hū
 I(masc) those newspapers(fem) quickly read-imperf.mas be.pres.IP
 ‘I (habitually) read those newspapers quickly.’

I argued in section 4.5, *contra* Bhatt (2005) and Legate (2008), that the DO in (2) does not have ACC (but has NOM) and that ACC is systematically unavailable in transitive perfective clauses. The issue that I now take up is the case of the identical-looking DO *vo akhbaarē* ‘those newspapers’ in the transitive imperfective clause in (3).

For some relevant evidence, I once again turn to prenominal relative clauses. Examples (38)–(40) are prenominal relative clauses that contain imperfective participle main verbs.²⁴

- (38) [bhuukh-se mar-taa (huaa) / (*hē)] aadmii
 hunger-from die-imperf.masc be.perf.masc / be.pres people
 ‘a/the man (who is) dying of hunger’
- (39) [saṛkō-par so-te (hue) / (*hē)] log
 roads-on sleep-imperf.pl be.perf.pl / be.pres.pl people
 ‘people (who are) sleeping on the roads’
- (40) [tezii-se bhaag-tii (huii) / (*hē)] laṛkii
 quickness-with run-imperf.fem be.perf.fem be.pres.pl girl
 ‘girl (who is) running fast’

Examples (38)–(40) are all cases of subject relativization. Given: (i) that prenominal imperfective relative clauses must be non-finite, as shown by the ungrammaticality of attempts to insert a finite auxiliary inside them (compare with (3) where a finite auxiliary appears in a normal imperfective participle clause); and (ii) our discussion earlier showing that the relative clause head of prenominal clauses is case marked externally, we expect (38)–(40) to be grammatical, since the non-finite relative clause does not have the capability of licensing an argument with a case assigned by a finite T. When the subject is relativized in (38)–(40), under our assumptions, it can be externally case licensed, and therefore the grammaticality of (38)–(40) is in line with our expectations.

The crucial difference between the imperfective prenominal relative clauses and the perfective prenominal relative is that the former allow a lexical DO inside them while the latter do not (as we observed in section 4.5).

- (41) [kitaab paṛh-tii (huii)] laṛkii
 book read-imperf.fem (be.perf.fem) girl
 ‘a/the girl (who is) reading the book’
- (42) [sarkaar-se apne haq maang-te (hue)] log
 government-from self’s rights ask-imperf.pl be.perf.pl people
 ‘people demanding their rights from the government’

²⁴ The morphological shape of the optional auxiliary in (38)–(40) is the same as in prenominal perfective relatives. While I continue to gloss this auxiliary be.perf, the relative clauses in (38)–(40) are not semantically perfective. Interestingly, though, they have a progressive reading and they lack the habitual interpretation that is available with main clause imperfectives in Hindi. The precise nature, function, and representation of the optional auxiliary remains an open question.

- (43) [Mohan-ko lambe lambe patr likh-tii (hui)] paagal laṛkii
 Mohan-dat long long letters write-imperf.fem (be.perf.fem) crazy girl
 ‘the crazy girl writing long letters to Mohan’

Given that a finite T is absent in these clauses, the DO nominal can only be licensed by a different head, and I suggest that this head is the little v of the imperfective vP. This also implies that the case of the DO in main imperfective clauses like (3) is ACC. A sketch of the analyses of finite imperfective transitive clauses and imperfective prenominal relative clauses is provided in Figures 4.5 and 4.6 (Figure 4.5 repeated from Figure 4.2 in section 4.3.1).

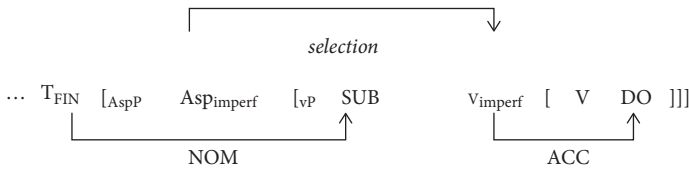


FIGURE 4.5 Case relations in Hindi imperfective transitive clauses

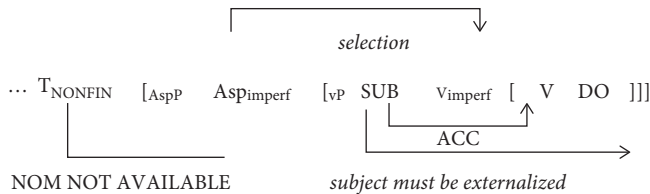


FIGURE 4.6 Case relations in Hindi prenominal imperfective relative clauses

If my suggestion that prenominal relative clauses are externally case marked is correct, then a clear prediction can now be made. The prediction is that unlike in perfective prenominal relative clauses, the imperfective prenominal relative clauses will disallow DO relativization, since that configuration will lead to case marking the head of the relative clause twice (inside the relative clause and also externally). This prediction is fulfilled.

- (44) *[laṛkii-kii paṛh-tii (hui)] kitaab
 girl-gen read-imperf.fem be.perf.fem book
 ‘the book that the girl is reading’
- (45) *[logō-kaa sarkaar-se maang-taa (huaa)] apnaa haq
 people-gen government-from ask-imperf.masc be.perf.masc self’s right
 ‘the right that the people are demanding from the government’

- (46) **[paagal laṛkii-ke Mohan-ko likh-te (hue)] lambe lambe patr*
 crazy girl-gen Mohan-dat write-imperf.pl (be.perf.pl) long long letters
 ‘the long letters that the crazy girl is writing to Mohan’

In fact, the prediction is that only subjects can be relativized in imperfective relatives, given that the imperfectives have a little *v* that licenses DOs and oblique nominals like locatives and instrumentals are internally case marked PPs. These nominals are therefore internally case licensed and cannot move to a clause external case position. As shown below, PPs fail to be relativized using this strategy.

- (47) **[Mohan-kaa ḍuub-taa (huaa)] kūāā / kūē -mē*
 Mohan-gen drown-imperf.masc (be.perf.masc) well well-in
 ‘the well in which Mohan is drowning’
- (48) **[Raam-kaa čuhaa maar-taa huaa] čaaku /čaaku-se*
 Ram-gen rat kill-imperf.masc.sg be.perf.masc.sg knife /knife-with
 ‘a/the knife with which Ram is killing the rat’

If the discussion in this section is on the right track, then we now have an answer to the question posed at the beginning of this subsection where we asked about the case of the DO nominal in (2) and (3) given that there is no morphological case distinction. The answer is that the DO in (3) has ACC, while the DO in (2) does not have ACC, but has NOM as suggested in section 4.5.

4.6.2 DOM Objects

Following up on the parallel discussion on morphologically marked objects, we expect DOM objects to be fully well formed inside the imperfective prenominal clauses, since they will now be able to have ACC. This prediction is fulfilled.

- (49) *[laṛke-ko ghuur-tii (huii)] laṛkii*
 boy-DOM stare-imperf.fem be.perf.fem girl
 ‘a/the girl (who is) staring at the boy’
- (50) *[dhyaan-se tasveer-ko dekh-taa (huaa)] aadmii*
 care-with picture-DOM see-imperf.masc be.perf.masc man
 ‘a/the man who was carefully looking at the picture’

If the DOM objects in (49) and (50) have ACC, a further prediction is that they cannot be relativized in these constructions. This prediction also holds.

- (51) *[lar̥kii-ke ghuur-te (hue)] lar̥ke-ko
 girl-gen stare-imperf.obl be.perf.obl boy-DOM
 ‘the boy whom the girl is staring at’
- (52) *[aadmii-kii dhyaan-se dekh-tii (huu)] tasveer-ko
 man-gen care-with see-imperf.fem be.perf.fem picture-DOM
 ‘the picture that the man is carefully looking at’

To conclude this section, I hope to have shown that imperfective transitive constructions in Hindi always have an ACC available and that this case is assigned to both morphologically unmarked objects as well as to DOM objects. Thus, imperfective vPs in Hindi are crucially distinct from perfective vPs with respect to their case licensing capability.

4.7 GENERAL DISCUSSION AND CONCLUSIONS

The basic question that this chapter addressed concerned the structural case assigned to the DO in Hindi ergative constructions such as (1) repeated below.

- (1) Kabir-ne vah laal gaar̥ii jaldii-se beç-ii thii
 Kabir-erg(masc) that red car(fem) quick-with sell-perf.fem.sg be.pst.fem.sg
 ‘Kabir had sold that red car quickly.’

There is no morphological case on the DO in (1), a common situation in ergative languages where the absolutive case is often null. Legate (2008) suggests that it is possible to identify two types of languages with null absolutives. She distinguishes between ABS=DEF(ault) vs ABS=NOM type languages. She argues that Hindi is an ABS=DEF language. In particular, she proposes that the distinction between the two types of languages is located in the case assignment properties of little *v*. In ABS=DEF, little *v* assigns accusative case, while in ABS=NOM languages, little *v* does not assign accusative case (Legate 2008: 58). She further suggests that in ABS=DEF languages, nominative case is not assigned in transitive clauses and the subject receives an inherent ergative case while the DO receives ACC. Thus, with respect to (1), her specific proposal would be that: (i) the DO has ACC; and (ii) NOM is not assigned in (1). In this chapter, I have argued against both of these proposals by bringing in a new set of data that abstracts away from morphology and focuses on argument licensing in terms of abstract case licensing as originally envisaged within the GB framework (see Chomsky 1981 and Vergnaud 2008). I have argued that the DO in (1) does not have ACC, and that ACC is

not licensed by perfective little *v* in Hindi. I have also argued that the case that the DO in (1) has is NOM.²⁵

In trying to uncover the case licensing condition on DOs, we have observed that DOM objects behave like non-DOM objects in their case licensing in Hindi participle prenominal relative clauses. I have suggested that this implies that DOM objects must be structurally case licensed, that they can have a NOM (in perfectives) or ACC (in imperfectives), and that the presence of DOM *-ko* cannot be taken to reflect the same underlying structural case (usually suggested to be accusative).

I have also argued that despite superficial appearances, the DO in Hindi imperfective constructions bears ACC. That is, the imperfective little *v* is an ACC licenser. Given the pattern of data that we have seen in this chapter, it appears that ERG and ACC in Hindi are in complementary distribution, though a satisfactory theory of this complementarity remains unclear.²⁶

ACKNOWLEDGMENTS

Parts of this chapter were presented in the ‘Case by Case’ Workshop held at École Normale Supérieure, Paris, in October 2011, and at the Third Formal Approaches to South Asian Languages workshop at USC in March, 2013. My thanks to the participants of these workshops, including Adriana Belletti, Rajesh Bhatt, Jessica Coon, Amy Rose Deal, Hilda Koopman, Luigi Rizzi, Dominique Sportiche, and K. V. Subbārāo for their comments. I also thank an anonymous reviewer for helpful comments.

ABBREVIATIONS

Abbreviations used in the glosses in this chapter: 1P, first person; ABS, absolutive; ACC, accusative; AGR, agreement node; AUX, auxiliary verb; DAT, dative; DO, direct object; DOM, differential object case marking; ERG, ergative; FEM, feminine gender; FUT, future tense; GEN, genitive; IMPERF, imperfective aspect; MASC, masculine gender; NOM, nominative; OBL, oblique; PERF, perfective aspect; PL, plural; PRES, present tense; PST, past tense; SG, singular; T, tense node.

²⁵ In this chapter, I have not invoked the argument that the presence of object agreement on T is a reflex of NOM. For more discussion on that topic, see Mahajan (1990) and Bhatt (2005).

²⁶ Marantz’s (1991) dependent case assignment account is a possible contender. Another possibility (a variation on Marantz’s proposal) is that a little *v* can license case once, either an inherent ERG or a structural ACC. It is not obvious how such accounts can be parametrized if ERG–ACC languages do exist.

The Nature of Ergative Case
