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## Polynesian languages and their contributions to theoretical linguistics

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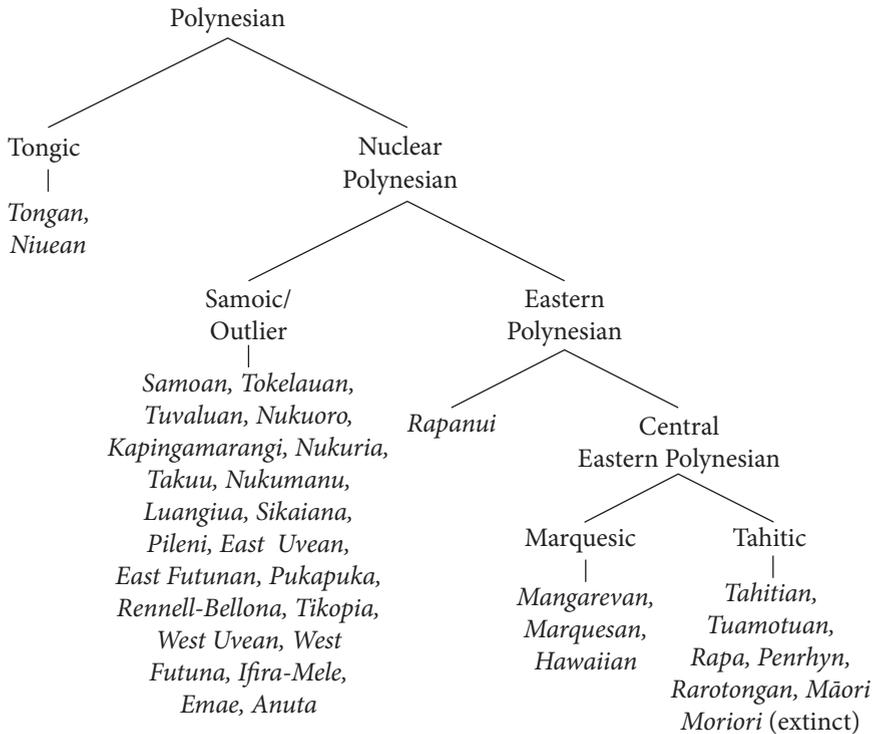
### 1.1 Overview

This volume presents research in theoretical syntax and its interfaces with semantics and prosody based on a range of Polynesian languages. There are few such volumes, as generally Polynesian languages are studied within the larger domain of Austronesian languages (e.g. through conferences such as the International Conference on Austronesian Linguistics, the Austronesian Formal Linguistics Association (AFLA), the International Austronesian and Papuan Languages and Linguistics Conference, and in the journal *Oceanic Linguistics*), or within the domain of Oceanic languages (e.g. through the Conference on Oceanic Languages and in the volume Lynch et al. 2002). In both the Austronesian and the Oceanic families, Polynesian languages form a minority, so the issues they raise are often overshadowed by issues relevant to a larger proportion of Austronesian languages (e.g. historical reconstruction and the pressing need for comprehensive description), or by issues relevant in Austronesian languages with larger populations of speakers (e.g. voice systems and extraction restrictions).

While Polynesian languages share many linguistic properties with the languages in these larger groupings, they also present unique characteristics and theoretical opportunities. For example, with their relatively shallow time depth, low-level position in the language family, and their almost complete geographical isolation from each other, they present an ideal laboratory for the study of parametric micro-variation. Of course, such study rests on solid theoretical analyses of individual languages. This volume focuses on issues that are uniquely Polynesian, and it includes chapters that provide in-depth analyses of these issues within particular languages, as well as chapters that take on comparative challenges within the language family. The volume includes work on theoretical syntax, semantics, morphology, and prosody across the sub-groups of Polynesian, with chapters focusing on Hawaiian, Māori, Niuean, Samoan, and Tongan.

## 1.2 Polynesian languages

For the most part, Polynesian languages are spoken in Polynesia, which is generally defined as a triangle of islands in the Pacific, with Hawai'i, New Zealand (Aotearoa), and Easter Island (Rapa Nui) forming the three most distant points. According to Lynch et al. (2002), Polynesia was settled around 1000 BCE, ultimately resulting in nineteen languages being spoken in the region. In addition, there are fifteen Polynesian Outlier languages spoken in Melanesia and Micronesia, by people who moved away from Polynesia at later dates after originally settling there. The languages cover a large geographic area, but they form a coherent group through their grammatical innovations (Lynch et al. 2002; cf. Pawley 1966, 1967; Biggs 1971; Clark 1979). The Polynesian family lies within the Central/Eastern branch of the Oceanic languages, and it has two main branches, Tongic and Nuclear Polynesian, with the latter being further subdivided, as in Figure 1.1, which provides a standard family tree. The main languages of discussion in this volume, Hawaiian, Māori, Niuean, Samoan, and Tongan, represent each branch of the tree (with the exception of Rapanui).



**Figure 1.1** Polynesian language family

Source: adapted from Lynch (1998).

Each of these languages has a relatively small number of speakers, and most of the languages are considered to be endangered (<http://www.unesco.org/languages-atlas/>).

### 1.3 Early history of Polynesian linguistics

The Western study of Polynesian languages began in essence with Cook's voyages (1768–80) during which Sir Joseph Banks made observations about the commonalities of languages in diverse areas such as New Zealand and Tahiti (Biggs 1974). The 18th and 19th centuries saw the publication of lexicons, grammar sketches, religious works, and bibles, often by missionary-linguists, and many of these remain as key reference works today (e.g. Davies 1851; Andrews 1865; cf. Sebeok 1971). Following on from this were works establishing the historical relations among the languages (Elbert 1953; Capell 1962; Grace 1968), a pursuit which remains robust up to the present day, both for Polynesian and the larger family of Austronesian.<sup>1</sup> A notable accomplishment is POLLEX Online, a large-scale comparative dictionary of Polynesian languages, the production of which is overseen by Bruce Biggs, Andrew Pawley, and Ross Clark (Greenhill & Clark 2011).

Work on Polynesian languages died down in the early part of the 20th century, but modern linguistics turned its attention to Polynesian languages in the 1950s, as noted in Biggs (1971). Much of this work continued to focus on phonology and morphology, with an eye to historical reconstruction, and we will not review this impressive work here (see books and papers by the authors in note 1, and their references). Unusual among the contributions through this time period, in its focus on syntactic reconstruction, is Clark (1976). Clark's main goal is reconstruction of Proto-Polynesian, but along the way he presents a careful study of many of the principal typological characteristics of Polynesian languages, as well as several key constructions which remain of central interest to theoretical linguists today. The most salient typological characteristics of Polynesian languages<sup>2</sup> are their isolating, particle-based morphology, sentence-initial Tense/Aspect/Mood (TAM) marking and negation marking, variation in word orders (mainly VSO/VOS/SVO), varying case systems (accusative and ergative), cleft structures,

<sup>1</sup> Of note is the work of K. Alexander Adelaar, Juliette Blevins, Robert Blust, Ross Clark, Terry Crowley, Otto Dempwolff, Isidore Dyen, Paul Geraghty, George Grace, Roger Green, Ray Harlow, John Lynch, Jeff Marck, G. B. Milner, Andrew Pawley, Malcolm Ross, Mary Walworth, William Wilson, John Wolff, David Zorc, among others. See Otsuka (2005e, 2006a) for a specifically Polynesian discussion of the history of the language family.

<sup>2</sup> We focus on syntax, but recent works within theoretical Polynesian phonology include: Taumoevalu (2002), Anderson & Otsuka (2006), Rolle & Starks (2014), Zuraw (2018), and Zuraw et al. (2014); and on phonology and its interfaces: de Lacy (2004); Calhoun (2015, 2017); and Yu & Stabler (2017).

reduplication, and complex genitive constructions. The study of these properties has led to theoretical insights in topics such as the morphological, syntactic, and prosodic nature of lexical vs functional words, configurationality and movement, the architecture of predicate-argument relations, the structure of the left periphery, the role of case marking, and the syntax of noun phrases. These areas and related topics currently form the major focus of work in Polynesian syntax, as we see reflected in the chapters in this volume, which are discussed in Section 1.5.

Of course, the major contribution to the understanding of Polynesian languages, both historically and in the present day, has been made by speakers of the various Polynesian languages. As consultants and teachers, they have provided invaluable insights both to linguists and to their fellow-speakers; and as linguists, they have contributed substantially to the literature, through dictionaries, grammars, and dissertations (only a few of which are cited here), as well as within the field of theoretical linguistics. Not least, many of these language professionals are also working on the front lines of language maintenance and revitalization.

#### 1.4 Contributions to modern theoretical linguistics

Polynesian languages became important early on within theoretical linguistics, largely due to debates about the nature of case and ergativity, passivization, and subjecthood. These came to the fore through the work of Hale (1968) and Hohepa (1969a), as well as Pawley (1973); Biggs (1974); Chung (1974, 1977, 1978); Sharples (1976); Sinclair (1976); Wilson (1976); Cook (1978); Hawkins (1979); and Reedy (1979). These works, many of which were published in *The Journal of the Polynesian Society*, had the effect of bringing Polynesian grammar into mainstream discussions (and homework assignments) within Government and Binding, Relational Grammar, and Lexical Functional Grammar (as well as into functional and descriptive discussions), at a time when generative linguistics was first expanding to include lesser studied languages (e.g. Chung & Seiter 1980; Cole et al. 1980; Seiter 1980; Hooper 1984; Levin & Massam 1985, 1988; Massam 1985; Waite 1987; Cook 1988, 1991; and Lillo-Martin 1989). Throughout the same time period, Biggs (1974) and Krupa (1982), in their discussion of Polynesian morphology, brought forward questions about the nature of words, prosody, and word classes in Polynesian, also a major topic for current theoreticians, while Ochs (1988) raised questions about language acquisition.

More recently, particularly within Minimalism, Polynesian languages have become important for the study of other theoretical issues, such as pro drop, V-initial and other word orders, complex predicates, inversion, predication, ergativity, noun incorporation, extraction and resumption, reflexives, modality, question formation, and the structure of the left periphery in both nominal and

sentential domains (e.g. Lazard & Peltzer 1991; Dukes 1996; Hawkins 2000; Hooper 2000; Bauer 2004; Custis 2004; Hendrick 2005a; Ball 2008; Koopman 2012; Macdonald 2014; Brown & Koch 2016; Kikusawa 2017; Douglas 2018).<sup>3</sup> This theoretical work has been made possible in part by the important reference grammars that have brought the features of the languages forward, including grammars on Fakaueva or Wallisian (Moyse-Faurie 2016), Hawaiian (Elbert & Pukui 1979), Māori (Ngata 1901 and later editions; Bauer 1993, 1997; Harlow 2007), Pukapukan (Salisbury 2002), Rapanui (du Feu 1996), Samoan (Mosel & Hovhauge 1992), Tongan (Churchward (1953), Tuvaluan (Besnier 2000), Ūa Pou, a Marquesan dialect (Mutu with Teikitutoua 2002), and Vaeakau-Taumako or Pileni (Næss & Hovdhaugen 2011), as well as many others. In addition to these grammars, there is also a wealth of excellent bilingual and unilingual dictionaries, many developed by speakers or teams of speakers of Polynesian languages, which are too numerous to outline here. Polynesian languages have also been important in typological linguistics (e.g. papers in Fischer & Sperlich 1999; Fischer (2000); and Bril & Ozanne-Rivierre 2004).

The blossoming of theoretical work on Polynesian languages was fostered by the foundation in 1994 of AFLA. This conference has continued to provide an annual venue for sharing formal research and for collaboration amongst scholars such as those represented in this volume, creating a rich background for new generations of theoretical Polynesianists. Polynesian linguistics continues to grow and to impact our understanding of phonology and syntax, and, more recently, of prosody and semantics as well. This volume comes at a vibrant time in the field of theoretical Polynesian, and it represents the work of both seasoned and new scholars in the area. In Section 1.5, we overview the chapters included in this volume, and show how each chapter interacts with the issues discussed in Sections 1.3 and 1.4.

## 1.5 Contents of the volume

The chapters in this volume address topics ranging in scope from the clausal architecture of Polynesian languages to fine-grained analyses of single lexical items in individual languages. In all the chapters, authors focus on issues that are distinctive to Polynesian languages and relevant across the entire family; and, in all cases, they connect the themes to broader questions in linguistic theory. Here we present an outline of each chapter, briefly noting its significance within Polynesian and theoretical linguistics.

<sup>3</sup> This list is by no means exhaustive, for example, we do not cite here the foundational and ongoing work by the participants in this volume, as much of it is reviewed or cited in the chapters themselves. See the References section in this volume for a fuller bibliography.

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In Chapter 2, **Hohaus** presents a unified analysis of Samoan *sili*, a predicate used to express both weak necessity and the superlative. In this groundbreaking study of Polynesian modality, she argues for a gradable, degree-based relational lexical entry for *sili* (rather than one based on quantification over possible worlds), which allows for both its modal and non-modal meanings. She shows how the Samoan morpheme can teach us about the relationship between gradability and modality, as well as about the different compositional pathways that languages can take to construct weak necessity, priority modal meanings, as well as superlative meanings, which, in Samoan, build on the meaning of the Positive form. Her study initiates discussion of Polynesian modality, explores context dependency (cf. Hopperditzel, Chapter 6, this volume), and illustrates how cross-linguistic analysis can extend (and test) our understanding of core semantic concepts.

In Chapter 3, **Collins** also examines an issue at the crossroads of syntax and semantics in Samoan, developing a general theory of how morphological case relates to lexical semantics. A tantalizing question in general, this takes on particular salience in the ergative Polynesian languages where there is almost, but not quite, a one-to-one mapping between ergative case and agentivity. Samoan, like many Polynesian languages, exhibits more than one morpho-syntactic encoding for transitive predicates, known as transitive and middle constructions, with the case patterns *ERG-ABS* and *ABS-DAT*,<sup>4</sup> raising questions about how verbal meanings are paired with argument structures. Collins develops an analysis of case that depends on verbal semantics, arguing that to appear in the *ERG-ABS* frame, first, a verb must have a self-directed initiator argument; and, second, the less agentive argument cannot be a goal. His chapter contributes to discussions of case in Polynesian (cf. Clemens & Tollan, Chapter 5, and Otsuka, Chapter 9, both this volume) and he proposes an analysis within Optimality Theory, thus contributing to studies of how OT can apply to syntactic structures.

From the mapping between thematic arguments and cases, we turn to the surface syntactic positions of the arguments themselves. In Chapter 4, **Polinsky & Potsdam** present a novel account of word order variations in Tongan. They adopt Otsuka's (2000) *V*<sup>0</sup>-raising account of Tongan verb-initiality, but argue against the widely accepted A-scrambling treatment of *VOS* (Custis 2004; Otsuka 2005b; see also Clemens & Tollan, Chapter 5, and Otsuka, Chapter 9, both this volume). Instead, Polinsky & Potsdam develop a number of arguments in favor of a rightward subject displacement account of Tongan *VOS*. Their arguments for this proposal are drawn from discourse interpretations as well as from syntactic considerations such as reflexive connectivity and word order. They consider a subject-final base-generated order, but argue in favor of movement. They conclude with general discussion of the role of rightward movement in grammar,

<sup>4</sup> The case Collins calls *DAT* is variously referred to in the literature as middle case (e.g. Chung 1978), as accusative case (e.g. Tollan 2018), or (in Niuean) as locative or goal case (Massam 2020).

noting that while some linguists rule it out altogether, it continues to have an analytic tradition of its own. Their chapter contributes to the ongoing discussion about VSO/VOS word order variations in Polynesian, while also addressing larger issues about movement typology in linguistic theory.

Also contributing to the ongoing discussion about VSO/VOS word order alternations in Tongic languages is Chapter 5 by **Clemens & Tollan**. Building on literature connecting the occurrence of syntactic ergativity to the locus of absolutive case assignment (e.g. Coon et al. 2014), Clemens & Tollan develop an account of the alternating word order in Tongan as compared to the strict VSO order of Niuean. They argue that in Tongan, the absolutive argument must A-move leftwards for absolutive case (which they argue is high, on T in Tongan), and subsequently it can be pronounced in either its base position or its case position, accounting for the word order alternation. Assuming this analysis, the presence of syntactic ergativity (i.e. the restriction of movement to only the absolutive argument) falls out in Tongan, since the ergative argument is ‘trapped’ in the lower position by the fronted absolutive, due to constraints on crossing dependencies. On the other hand, they argue that absolutive case is assigned low, by voice in Niuean, so there is no movement of the absolutive argument, and the ergative argument is thus free to extract, resulting in the lack of syntactic ergativity in Niuean. Their chapter thus unifies several micro-parametric variations between Tongan and Niuean; and, further, it builds bridges with related work on case and syntactic ergativity in these languages as well as others, such as those in the Mayan family.

A number of chapters in this volume address the functional structure of the clausal spine. Within the verbal domain, **Hopperdietzel’s** Chapter 6 illustrates a bundling paradox with the Samoan causative morpheme *fa’a* (a morpheme appearing across Polynesian languages), which shows both voice-bundling and non-bundling properties. He argues that this paradox reveals the locus of causative semantics in the derivation, arguing for a contextual approach (cf. Hohaus, Chapter 2, this volume), rather than the designation of a causative head. He proposes that what might appear to be an instance of morphological bundling in Samoan is instead a case of bi-directional contextual allomorphy, where the eventive *v* head is spelled out as *fa’a* but only in the presence of a higher voice head. He argues that this explains why causatives, but not inchoatives, are morphologically marked. Not only does Hopperdietzel present an in-depth study of *fa’a*, which is one of the key Polynesian prefixes (in contrast to the many post-verbal particles), he also discusses the causative alternation in Samoan in the context of apparent bundling phenomena cross-linguistically (Pylkkänen 2008; Harley 2017).

Chapter 7 by **Chung** adjudicates between competing analyses of Māori negation: one in which it is a verb and one in which it is a functional head. Returning to earlier work by Hohepa (1969b); Chung (1970); and Bauer (1997), she argues that Māori negation is a lexical head, either V or A, and it serves as the main

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intransitive predicate of a clause. Further, she explains why Māori negation *must* be verbal, in spite of the (perhaps false) assumption that in most languages NEG is a functional head. Her account relies on a number of interconnected observations from the interfaces based on previous work on Māori prosody, including the fact that negation precedes the predicate in verb-initial languages; that lexical heads correspond to prosodic words whereas functional heads are deficient; and the requirement that TAMs must combine with a minimal prosodic word to their immediate right (cf. Biggs 1961; Bauer 1993; de Lacy 2003; Herd 2003; and Brown 2015). Chung's chapter thus contributes to ongoing discussions about wordhood in Polynesian; to cross-linguistic studies of negation and clausal architecture; and to the body of current work that integrates the domains of semantics, syntax, and prosody, a rich area of promise in Polynesian studies.

The next two chapters in this volume discuss cross-clausal dependencies. In Chapter 8, **Medeiros**, like Chung, takes a syntax-phonology interface approach, examining the morpheme *ai* in Hawaiian, which also appears in many Polynesian languages (Chapin 1974). The morpheme *ai* is often considered to be a resumptive pronoun, as it appears in or near the gap position of certain moved constituents, but Medeiros argues that it is not a pronoun, having no lexical features (such as phi-features). Instead, its occurrence is accounted for entirely by syntax, which explains why it is never optional, and only appears in a sub-set of constructions. Medeiros considers that *ai* occurs when any non-subject, or any non-local subject, is displaced as a repair for an illicit linearization output. The insertion of *ai* is thus a last-resort mechanism to rescue conflicting instructions at the syntax-phonology interface, similar to some analyses of ellipsis (Fox & Pesetsky 2005). He argues that similarities between *ai* and resumptive pronouns in other languages is due to general properties of locality, with both involving cyclic spell-out domains. Medeiros's linearization algorithm accounts for *ai*, as well as for main clause word order and VP-remnant formation. The chapter contributes to current models of the syntax-phonology interface, and it also lays the groundwork for further study of the morpheme *ai*, which presents interesting micro-parametric variation across Polynesian languages.

Turning from apparent resumption to apparent raising (AR), in Chapter 9, **Otsuka** tackles the conflicting A- and A-bar-like properties of embedded DPs in Tongan that move to a position where they receive matrix case, but also exhibit long-distance dependencies and sensitivity to islands. These have been analyzed as cases of movement of a null operator, but Otsuka argues instead for an analysis where the overt argument bears a topic feature and moves to an embedded CP specifier, where it undergoes case valuation from a matrix  $\nu$ , made possible through a multiple case valuation mechanism. She argues that her analysis can account for the properties of AR such as the impossibility of pronoun movement (due to cliticization requirements) and of movement of an ergative (via syntactic ergativity), as well as the A-bar properties of the movement. Otsuka presents

a detailed analysis of multiple case marking in which a DP can remain active even with a valued case feature if it is located at the edge of a phase, contributing to theories which separate abstract case as a licensing mechanism from the morphological case. Otsuka's chapter continues the long-standing discussions about raising constructions in Polynesian (going back to Seiter 1980 and Massam 1985), which test the validity of standard theoretical assumptions about movement, the clear separation of A- and A-bar operations, and the nature of case-marking.

Pearce's Chapter 10 addresses the spinal architecture of Polynesian languages through a study of preverbal subject constructions in Māori and their interactions with the TAM system, arguing that preverbal subjects must be preceded by a T-marked item, attributed to a general T-initial (vs V-initial) requirement in Māori. In her examination of topic and focus constructions she develops a cartographic analysis of the CP domain of Māori (cf. Rizzi 1997; Benincà & Poletto 2004). While Polynesian focus constructions are widely considered to be clefts, they are problematic in containing neither an expletive nor a copular verb. Pearce develops an analysis in which there are tense and predicate projections within the left periphery, bolstering the traditional cleft analysis. She also supports the proposal that negation in Māori is verbal (Chung, Chapter 7, this volume) and the view that Tense and Case are intertwined (Massam 2000; Doner, Chapter 11, this volume; cf. also the hybrid nature of Case and Det in Niuean nominals discussed in Massam, Chapter 12, this volume). Her chapter explores the key issues of word order, cleft constructions, and TAM systems in Polynesian, and it also augments the cross-linguistic study of the cartography of the left periphery.

One of the foremost ways work on Polynesian languages has left its mark on syntactic theory is in the idea that languages differ with respect to how EPP (Extended Projection Principle) on T is satisfied (Massam & Smallwood 1997). Doner's Chapter 11 focuses on Niuean, and builds on previous proposals for variation in EPP features (Alexiadou & Anagnostopoulou 1998; Davies & Dubinsky 2001; Biberauer 2010) to develop a typology in which the EPP is alternatively satisfied by DP, D features, or the predicate. She argues for a predicative EPP, in contrast to a verbal one, on the grounds that non-verbal predicates can satisfy the EPP, but light verbs cannot, in conjunction with the fact that in languages that have it, verb-raising does not satisfy the EPP. Making reference also to Irish, French, and Inuktitut, Doner presents a clustering of properties that are common to predicative EPP languages, all related to the existence of a high impoverished T head, where T is merged in C (cf. Massam 2000; Pearce, Chapter 10, this volume), often echoed by the presence of a defective D as well (Massam, Chapter 12, this volume). She extends her analysis to Tongan (cf. Otsuka 2005a). In her study, she ties the properties of the Polynesian left periphery to the V-initial word order of these languages (cf. Chung, Chapter 7, and Pearce, Chapter 10, both this volume), as well as presenting a typology of the EPP, and raising questions about its nature.

The final chapter in the volume, Chapter 12 by Massam, also looks at the left periphery, but here it is the DP that is the object of study, with a focus on Niuean as compared with Tongan. Niuean pre-nominal markers of case are cognate with Tongan articles, leading to confusion about their status as case markers or articles. Massam compares the nominal particle systems of Niuean and Tongan, and proposes that the Proto-Tongic case markers disappeared in Niuean, and were replaced by forms that are cognate with the Proto-Tongic articles, synchronically merged in KP (case phrase). The result is the loss of a systematic determiner system in Niuean, but Massam argues that this loss did not result in the loss of D (and DP) in Niuean. Instead, D remains as the locus of the feature [+/- proper], with which the higher case markers agree (cf. C and T discussed in Pearce, Chapter 10, and Doner, Chapter 11, both this volume). As further evidence, she argues that D can host phrases in its specifier, which contribute meanings associated with (in)definiteness and quantification, and further, that D houses a linker when its specifier is filled. Finally, she posits that there are two occasional articles (negative polarity *ha* and personal *a*) that merge in D. Her chapter shows how small historical changes can lead to reanalysis of entire systems, and it clarifies a puzzle in comparative Polynesian about the status of Niuean pre-nominal particles. The chapter also contributes to theoretical debates about the universal nature of DP and its status in languages that do not exhibit determiner systems.

## 1.6 Concluding remarks

This concludes our overview of the contributions of Polynesian languages to linguistic theory and our introduction to the chapters that follow. We would like to extend our deepest appreciation to Susana Bejar, Arsalan Kahnemuyipour, Lisa Matthewson, Yves Roberge, Lynsey Talagi, and Heidi Quinn. We would also like to thank the editorial team at Oxford University Press, especially Vicki Sunter for her guidance throughout, and Joy Mellor, Saraswathi Rajan, and Lydia Shinoj, and the anonymous reviewers who reviewed the chapters. We consider that the chapters herein illustrate the richness of the contribution that the study of Polynesian languages makes to the larger world of comparative and theoretical linguistics.