

# Introduction. Why Andes–Amazonia? Why cross-disciplinary?

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## Andes–Amazonia: What it means, why it matters

The Andean highlands and Amazonian rainforest run cheek-by-jowl for thousands of miles through South America. Popular perception, at least, would have the Andes as a cradle of civilization, set against Amazonia, where even the Incas feared to tread. But is the ‘divide’ between them a self-evident, intrinsic definition of opposing Andean and Amazonian worlds – or a simplistic parody?

A case study in environmental determinism

We begin by setting the Andes–Amazonia divide in its broadest possible context and relevance. In the search for big-picture explanations for the human past, arguably the most fundamental controversy of all revolves around environmental determinism. How far might major contrasts in environment shape and even explain aspects of our cultures and the nature of our societies? How much are any such effects mediated through culture, and indeed how much through subsistence and demography, to the extent that those too depend on ecology? This book explores this controversy across the whole range of disciplines in anthropology and (pre) history. And to do so, it focuses on what is arguably the paradigm case of immediate juxtaposition of radically contrasting environments.

Nowhere on earth is there an ecological transformation so extreme and so swift as between the snowline of the high Andes and the tropical rainforest of Amazonia. Crucially, unlike the world’s other alpine regions, the Andes straddle the Equator and Tropics. Farming and large populations can thus flourish up to elevations far higher here than anywhere else; yet the Andes also abut directly onto tropical rainforest. From jungle to glacier-hemmed peaks to desert coast, a transect of as little as 200 km makes for a roller-coaster through up to 84 of the world’s 103 ‘life-zones’ (Holdridge 1967).

Does this abrupt contrast in environment underlie a divide that goes far deeper, too? Beyond just topography and ecology, does it extend to the people,

cultures and societies that inhabit the Andes on the one hand, and Amazonia on the other? If so, how deep does such a divide run back in time, perhaps even to when humans first populated South America, potentially even by separate Andean and Amazonian settlement routes? And how far has it persisted into recent centuries? These are among the central questions that this volume addresses.

This book is no work of environmental determinism, however. It is not theory-driven, and starts out from no fundamentalist presumptions either way. On the contrary, it aspires to serve as a balanced exploration of the reality – or otherwise – of an Andes–Amazonia divide. It is intended as a compendium that reflects the state of the art of collective insights and diverse views within and across the disciplines. From all their various perspectives, the question asked of all 26 contributors was the same. Geography and ecology aside, to what extent is an Andes–Amazonia divide real on any other levels: cultural, historical, archaeological, genetic, linguistic, and so on? Or to turn that around, to what extent is the idea of a divide just a simplistic, self-perpetuating mirage that clouds and distorts what is and was a much more progressive and complex reality?

To the worldwide debate on environmental determinism, this book aspires to bring a novel and significant contribution. For, despite Amazonia and the Andes representing such an extreme case of immediate environmental contrast, the perspective this book offers remains little-known outside South America. Indeed, even within the continent itself, the Andes–Amazonia divide has rarely been addressed head-on, and from all disciplinary viewpoints together. This is, at last, the explicit theme and objective of this book.

This introduction will now set out some important clarifications on our theme that hold in general, for all disciplines. We then go on to set the book in the context of the broader interdisciplinary project out of which this book arises. Later, we outline how the volume is structured before summarizing the core message of each of the 25 chapters, and how each thus fits into the theme and structure of the book.

## Reality, myth or scholarly tradition?

The Incas' oft-mentioned reluctance to venture far into Amazonia may, at least in part, reflect experiences of specific military reverses there. But it was accompanied in any case by a good dose of myth about the Amazonian 'other' (see [Chapters 5.1](#) and [5.2](#)) – and in this the Incas were not alone. Similar mythical visions of Amazonia and its peoples endured long into the colonial era, in a Spanish Empire that likewise remained at heart a highland and coastal entity (see [Chapters 5.3](#) and [5.4](#)).

It is an open question how far such myths may in fact have come to overrule the reality of any actual Andes–Amazonia divide, and not just in the perceptions of Incas and Spaniards. Scholars of South America have themselves tended to fall into camps of 'Andeanists' and 'Amazonianists'. Their publications, from Steward's (1946, 1948) seminal *Handbook of South American Indians* onwards, likewise often align with this divide (see [Chapter 1.1](#)). To take one publisher and discipline as an

example, when Cambridge University Press extended to South America its series of reference works on the languages of the world, it did not take the continent as a whole, but published separate volumes for *The Languages of the Andes* (Adelaar and Muysken 2004) and *The Amazonian Languages* (Dixon and Aikhenvald 1999). Does this follow some real contrast in the languages themselves, their origins or structures? Or is the divide more one of scholarly tradition and niches? (For more on this particular case, see [Chapters 1.2](#) and [3.4](#).)

It does at least bear thinking about whether the whole concept might in fact be more a reflection on the scholars themselves, and their own preferences, than on the reality of any divide. There can be many reasons (some eminently understandable, others less so) for this split among scholars and publications, irrespective of actual evidence on the ground. Such is the scale and complexity of both regions and their prehistories that either of them already makes for a very large brief to master. Familiarity with and expertise in both demands far more than limiting oneself to either one. Faced with such complexity, there is also a natural pigeon-holing instinct to seek to classify and bring order to it. Stark contrasts in environment can seem ready-made as a neat, straightforward, over-arching criterion, leading to the temptation to (want to) see parallels in culture, too. And there is even a further consideration that one might entertain, particularly in the many disciplines that require extended fieldwork. For scholars are simply different people, and whether intellectually defensible or not, some of us may feel more drawn to and at home in the hotter, wetter lowlands; others in the cooler, crisper highlands.

The divide into camps and publishing trends need not be alike in all disciplines, of course. Quite how it plays out in each one will be taken up in more detail in the first part of this book, in the set of chapters that outline overall perspectives on the Andes–Amazonia divide from a series of different disciplines. It seems clear that it is anthropologists who tend to raise the strongest voices against the concept of a stark divide (as in [Chapter 1.4](#) by Alf Hornborg, [Chapter 1.5](#) by Tom Zuidema, and also Bruce Mannheim during the conference that gave rise to this book). This only highlights another reason why the book should indeed extend to all disciplines – to hear all the alternative perspectives on the ‘divide’.

Beyond individual researchers, it is also conceivable that research in the Andes and in Amazonia might follow different prevailing approaches, or even have a rather different disciplinary mix. There can be various reasons for this. There are apparently obvious differences between the Andes and Amazonia in the visibility and preservation of the archaeological record and the practicability of fieldwork, with significant consequences for how that record is interpreted, as discussed further by Beresford-Jones and Machicado Murillo in [Chapter 1.1](#).

Patterns of survival of the indigenous language record, too, make for a further intriguing illustration. South America has a striking diversity of scores of independent language lineages. The survivors are heavily concentrated in (Greater) Amazonia, however, home to some of the most unusual and exceptional languages in the world (such as Pirahã and Hixkaryana). This linguistic diversity

corresponds to a large number of distinct ethno-linguistic groups, although each is generally small in demographic scale. Many of these Amazonian groups were all but unknown until the last century, some even until the last few decades. So here, linguistic research goes along with a prominent role for the present-day study of anthropology, ethnography and identity. In the Central Andes, by contrast, precious few language lineages are left, almost all having been replaced by just Quechua and Aymara (or Spanish), with their large speaker populations. Those language families are, however, set amid an extremely rich record in archaeology, and feature in the historical record ever since the 1530s, opening up much more scope for language history and prehistory here.

The differing disciplinary mix in the Andes and in Amazonia seems to carry through into default interpretations of processes in prehistory, too. In the Andes, where archaeology and history so clearly demonstrate large populations, complex societies and state-level organization and power, those known factors have to many scholars seemed natural candidates for explaining patterns in our records of the past here – again, including major language families. Debate on Quechua and Aymara origins focuses less on *whether* expansive complex societies were responsible for their expansions, and more on simply identifying *which* (see the various contributions to Heggarty and Beresford-Jones 2012). Research in Amazonia, however, tends more to eschew explanations of such types, in favour of models of network-like interaction, exchange and convergence instead, as in Hornborg’s (2005) ‘ethnogenesis’ hypothesis for the Arawak family.

Applied specifically to the theme of this book, an Andean perspective of state organization seems compatible, at least, with relatively clear ‘frontiers’ and contrasts, particularly along a relatively swift and radical environmental transition. Sharp frontiers would seem a less natural fit, however, with the Amazonian inclination to favour models of interaction and convergence. Clearly, we venture this as no more than a general tendency in scholarship that seems discernible in our experience, ‘on average’ only. Obvious exceptions are to be found in individual scholars working in either region. Moreover, recent years have seen a clear shift, as archaeology has made a stronger case for the prevalence of complex societies and large population sizes in Amazonia too, which in these respects would thus have been not so different from the Andes after all – see [Chapter 1.1](#) on this new archaeological orthodoxy.

## When is a divide not a divide? Andes–Amazonia interactions

One other critical consideration that recurs throughout this book is what to make of the concept of a divide if there is nonetheless also contact across it. For whatever arguments may favour a divide, there is also copious evidence of contacts and exchanges between the peoples of the Andes and Amazonia. How can these two concepts be reconciled?

A ‘fundamentalist’ position might have it that the mere fact of any such contact is enough to disqualify the idea of a divide in the first place. This misconstrues the nature of what is generally intended by the term ‘divide’, however, which does not necessarily break down at the first instance of contact across it. None of our contributors would deny that contact and exchange went on; the point is how significant they were in relative terms. Were they rather limited and incidental to what in many other, fundamental respects remained a meaningful contrast? Or were they so thoroughgoing and intense as to make for a transition so gradual, over such a wide span of territory, that the concept of a (sharp) divide is more a distortion of reality than a reflection of it?

In genetics, for example, are populations markedly more similar to each other within the Andes and within Amazonia than between the two? Does the same hold true of the relationships between their languages? And of the nature and complexity of their societies, to judge from the archaeological and historical records? Assessing this balance in each discipline is the central task for this book.

## Clarifications: ‘Andes’ and ‘Amazonia’, geography and culture

Some clarifications are in order on the use of the terms ‘Andes’ and ‘Amazonia’. Both might at first sight seem essentially geographical terms, with more or less established technical definitions. That said, while the Andes are defined primarily by geology, Amazonia is traditionally (and in this book) taken to refer not simply to the entire drainage basin of the Amazon River. Rather, ‘Amazonia’ is typically used with an additional ecological criterion, to refer only to the (large) part of that drainage basin that is also covered by rainforest (or at least was, before modern deforestation). This qualification is crucial for our purposes here, because of course the Amazon’s main tributaries actually rise far in the highlands, at the periphery of its drainage basin but still, by definition, within it. Such elevations far above the rainforest biome fall into the common working definition of the ‘Andes’, then, and actually outside ‘Amazonia’, when defined as the tropical rainforest region.

This does not yet complete the clarifications needed, however. In practice, both terms are often used rather loosely, in various ways. For in the lowlands, ‘Amazonia’ is often tacitly taken to overstep its basic hydrological definition in any case. Beyond the technical northward limit of the Amazon’s drainage basin lies that of the Orinoco; but it, too, is covered in part by a continuation of the same rainforest that helps define ‘Amazonia’. So if one allows that criterion priority, then a ‘Greater Amazonia’ would run all the way to the northern limit of the rainforest – before it opens out into the more savannah-like *Llanos* of Colombia and Venezuela. Some justification lies in the continuity of the rainforest biome, across what is hardly the most marked of watersheds here; indeed, the Amazon and Orinoco basins are even linked, most unusually, by the Casiquiare ‘tributary’ river between them.



**Figure 0.1** Overview map of South America showing the Andean cordillera(s), the watershed of the Amazon basin, the established boundary of the Inca Empire in 1532, and selected major geographical features. © Paul Heggarty

‘Andes’ also tends to be used loosely, but in this case with a reference much narrower than the basic geological one. There is a sense of a prototypical ‘Andes’ focused on what are geographically just the (north)central latitudes of the mountain range: most classically, Peru and Bolivia, although also extending to Ecuador and southernmost Colombia. So even in a country like Chile, whose very shape is defined by the mountain range, *andino* is nonetheless often assumed by default to refer to regions mostly outside of Chile to its north, so charged is the term with connotations of the indigenous cultures of highland Peru and Bolivia.

Physical environment aside, then, other considerations have long since intruded on how the terms Andes and Amazonia are regularly taken, particularly in the (pre)historical and anthropological disciplines. In practice, both terms are often bound up, explicitly or implicitly, with cultural connotations. Many authors use either or both as names for a ‘culture area’. This, indeed, is precisely the crux of this book: to assess whether this vision of the (Central) Andes and Amazonia as contrasting culture areas is valid, and with it, the implication that the primary cultural division in South America follows and ‘obeys’ the continent’s primary contrast in natural environments (see [Chapter 3.7](#) for more on this).

Given that the terms Andes and Amazonia have various possible readings, different authors may not be consistent in how they define or apply them. More generally, the different disciplines, too, can have their own grounds and criteria for what most meaningfully for them counts as ‘Andean’ or ‘Amazonian’. The main families of languages typically identified as ‘Amazonian’, for instance, extend widely into other neighbouring regions too (for example Arawak, which spread as far as the islands of the Caribbean), although notably for our theme, they hardly impinge on the Andes at all.

Geographically, of course, the Andes and Amazonia cover far from the whole of South America. Alternative two-way ‘carve-ups’ of the continent do incorporate a divide between them, but also bring in all remaining regions that fall under neither – that is, Western versus Eastern South America, or highland versus lowland South America. These alternatives are not without problems of their own, however; not least that the ‘eastern lowlands’ end up extended to environments that include the Chaco, Pampas and even Patagonia, while the western slopes of the Andes embrace some of the world’s driest deserts and extend down to sea level along the Pacific coast. These are so radically distinct from Amazonia as to undermine the meaningfulness and utility of seeking to define the whole continent by only a two-way contrast in the first place.

In any case, our intention here is to keep this book focused on the core case of the most extreme juxtaposition between the two major environments. So by the ‘Andes–Amazonia divide’ we refer here essentially just to tropical latitudes, and follow common usage in focusing our ‘Andes’ on just the central (generally higher and drier) part of the cordillera that borders directly on the tropical rainforest of (‘Greater’) Amazonia (see for example Denevan 2002, 53; Epps and Michael 2017, 935).

## The broader context to this interdisciplinary project

This book does not stand alone; rather, it comes out of a broader interdisciplinary project, ongoing since 2008, that has been based on a series of conferences and has already yielded several publications. This project first grew out of conversations between a linguist (Heggarty) and an archaeologist (Beresford-Jones), then both at the University of Cambridge, which rapidly came to include also a historian

(Pearce, at the University of London). Over the years since, the disciplines involved in the conversation have expanded, to include genetics, anthropology and ethno-history. In general terms, the project focuses on applying interdisciplinarity to the largest issues in the population prehistory of the Andes, and now also of Amazonia. Conferences in the series have taken place in Cambridge and London in 2008, Lima in 2009, Leipzig (one event in 2011; two in 2014), Jena in 2015, and most recently in Belo Horizonte, Brazil, in 2017. The present book derives from one of the conferences held in Leipzig in 2014 and constitutes the fourth volume in a loose series. The other volumes published to date are:

- *Archaeology and Language in the Andes*. Heggarty and Beresford-Jones (eds.), 2012. Oxford: Oxford University Press.
- *History and Language in the Andes*. Heggarty and Pearce (eds.), 2011. New York: Palgrave Macmillan.
- *Lenguas y sociedades en el antiguo Perú*. Kaulicke, Cerrón-Palomino, Heggarty and Beresford-Jones (eds.), 2010. Lima: PUCP *Boletín de Arqueología* 14.

Both the conferences and the resulting publications have taken an unusual format. Rather than present lengthy papers on relatively narrow topics arising from their particular research interests, invited speakers were tasked by the organizers with presenting the perspective of their discipline as a whole on key issues of concern to all: what do we know about the nature of the Wari Middle Horizon in the Andes, for example; or about the distribution and impact of Inca *mitmaq* colonies; or about Inca relations with Amazonia? Participants were to try to speak from a disciplinary rather than a personal perspective and, in this sense, to be as neutral in their presentations as possible, outlining what their field knew on the topic in question, how it knew it, with what degree of confidence, and so on. Presentations were kept decidedly short, so that the majority of each session was given over to debate and enquiry. Only after the conference and in the light of these discussions did speakers write up their contributions, within a framework set by the editors. The overall aim has been to achieve publications that are very different in character and format from standard conference proceedings, and in which the interdisciplinary focus is core to the structure and the organization of the book, as well as to its contents.

Of course, interdisciplinarity is now generally seen as a Good Thing. This is attested anecdotally in the high proportion of calls for academic jobs that now specify some interdisciplinary focus as a prerequisite for candidacy, as well as in the near-ubiquitous presence on CVs and personal statements of references to work that ‘stands at the intersection’ of one field and others. But even if many of us now talk the interdisciplinary talk, it is still the case that rather few of us actually walk the interdisciplinary walk. And with good reason: the biggest lesson for the editors of their endeavours of the past decade is just how hard it is truly to cross disciplinary lines. Different disciplines not only employ profoundly different methodologies, and in some cases even perceive particular problems in profoundly different ways,



they also speak very different research ‘languages’. Among the disciplines represented in this volume, linguistics and genetics in particular deploy a forbidding technical vocabulary, which poses a real practical obstacle to specialists from other fields who seek to penetrate their orthodoxies. Not the least of the challenges when editing books such as this has been the need for every discipline’s perspective to be accessible to specialists from other fields, when contributors are also well aware that too much ‘dumbing down’ of their technical vocabulary will render their work unpalatable to fellow scholars in their own fields. But what are the prospects for the interdisciplinary conversation if it demands as prerequisites an adequate grasp not just of gonosomes, meiosis and phylogenetic analysis, but also of morphophonemic nasal spread and liquid phonemes? Moreover, interdisciplinary work is not only hard to produce, it is hard to consume as well. It falls between the large cracks that still separate the disciplines, even in the very vehicles for publishing their findings.

A further challenge is that to weave together such different disciplines is not trivial. There are no simplistic, one-to-one equations of language = genes = (archaeological) culture, for instance. Our endeavour calls for a far more realistic and sophisticated logic. Archaeology, genetics and linguistics employ radically different datasets that require very different analytical methods. But that also makes their respective records of the past highly complementary to each other, in that they all bear simultaneous traces of the same powerful processes in prehistory – cultural, social, demographic, and so on – that shaped them all. So it is on this level of processes that impacted on past populations and societies, including the languages they spoke, that the disciplines can more meaningfully be linked.

Notwithstanding the challenges, then, we certainly defend the value and the fruits of the exercise. Precisely because the walls between disciplines remain so high, the benefits of scaling them are all the greater. The cross-disciplinary whole – a coherent, holistic vision of the human past – is indeed greater than the sum of its disciplinary parts. It has been a considerable surprise to the editors, over the past ten years, to see just how little we know or understand, as members of given disciplines, of the tools and knowledge of the past that are available to other fields. And it has been an ongoing source of satisfaction, in previous publications as in this one, to witness how the fruits of cross-disciplinary discussions can enrich the research findings of all participants. We trust that these same benefits are evident in this volume, too, as detailed in the Conclusion that rounds off the book.

## Structure of this book

This book contains 25 (generally short) chapters, which are organized into five parts.

Part 1, ‘Crossing frontiers: Perspectives from the various disciplines’, includes those chapters that set out the broad perspective of each discipline on the reality or nature of any putative divide between Andes and Amazonia. The chapters here are

titled simply 'Archaeology', 'Linguistics', 'Genetics' and 'Anthropology'. Their purpose is to provide review footings for the other chapters in the volume by setting out the core methodologies, datasets, and interpretative tools available to each discipline, alongside its broad stance towards the 'Andes–Amazonia divide'. Is a divide perceptible to each discipline? In what ways, and on the basis of what data? How confident can we be as to this interpretation, and what reservations might we feel with regard to it? From the start, as will be seen, there develop strikingly differing views on this question among the disciplines represented.

The remaining chapters are collected into Part 2, on 'Deep time and the long chronological perspective'; Part 3, 'Overall patterns – and alternative models'; Part 4, 'Regional case studies from the Altiplano and southern Upper Amazonia'; and Part 5, 'Age of Empires: Inca and Spanish colonial perspectives'. In general terms, the book is thus organized chronologically, from deepest prehistory up to the Spanish colonial period, and with increasing resolution, from the very broadest scale and topics to more detailed case studies and the most recent times. Above all, each of the book's five parts contains chapters written from a range of disciplinary perspectives: primarily archaeological, linguistic, genetic and anthropological for Parts 1 to 4, and ethnohistorical and historical for Part 5. All chapters are brought to bear on the key concern of this volume: to scrutinize the notion of an Andes–Amazonia divide. Taken together, they do this from multiple perspectives and in most chronological and geographical contexts, where Amazonia meets the Andes from the Colombia–Ecuador border in the north to the Altiplano and Gran Chaco in the south.

## Chapter summaries

Finally in this Introduction, we summarize the 25 chapters in turn, highlighting the main focus and themes of each, as well as their conclusions and major contributions.

### Part 1. Crossing frontiers: Perspectives from the various disciplines

**Chapter 1.1**, 'Archaeology', by David G. Beresford-Jones and Eduardo Machicado Murillo, provides an overview of the Andes–Amazonia divide from the perspective of archaeology. Emphasizing that perceptions of a divide have long been largely based on history and ethnography rather than archaeology *per se*, the authors trace the development of that discipline in South America to show how new methods have gradually led to a 'new archaeological orthodoxy', particularly for Amazonia. That consensus calls attention to a deep-time flux of cultigens and ideas across the Andes–Amazonia divide, and also to Amazonia's significant environmental diversity, which sustained intensive agriculture and dense human occupations in prehistory. While archaeological evidence continues to suggest that trajectories on either

side of the divide proceeded more or less independently, many uncertainties still underlie this new archaeological orthodoxy, so that archaeological data can best be interpreted in the context of the sort of cross-disciplinary synthesis promoted in this book.

In [Chapter 1.2](#), ‘Linguistics’, Paul Heggarty sets out, for readers from outside linguistics, the basic principles and concepts that are needed to understand any apparent Andes–Amazonia divide in language. The Arawak and Quechua language families, for example, dispersed through thousands of kilometres across highly diverse environments – but both largely balked at trespassing over the transition from Andes to Amazonia. The chapter first explores what such language *families*, and in particular their geographical expansions and migrations, can tell us of the ‘divide’. It then switches to the opposing dimension of the linguistic panorama: how languages from multiple different origins can *converge* on each other, albeit to very different degrees of intensity, attesting to the nature and strength of past contacts and interactions between the Andes and Amazonia. Finally, the chapter clears up some common cross-disciplinary confusions, and summarizes the prospects for linguistics – its potential and limitations – to inform on the Andes–Amazonia divide.

In [Chapter 1.3](#), ‘Genetics’, Lars Fehren-Schmitz discusses the science behind human population genetics and the potential of his discipline to contribute to South American population prehistory. Genetics has made major contributions to Amerindian population history at the broadest scale, of first settlement or early migration routes. But alongside the general problems of working with ancient DNA, there are specific challenges to genetic studies of South Amerindian populations. *Inter alia*, comparative studies between populations here require very high resolution to yield useful results, while the quality of available genetic data also varies for the east and west of the continent and from ancient to modern populations. Nevertheless, genetic studies of cross-cultural interactions at the regional level have already begun to bear fruit. And Fehren-Schmitz concludes that the best scope for future advances lies precisely in the interdisciplinary approach pursued in this book, entailing expertise from both the natural and social sciences.

In [Chapter 1.4](#), ‘Anthropology’, Alf Hornborg argues that his discipline is especially well placed to rethink Andes–Amazonia relations. This is because, in its ‘four-field’ conception, anthropology represents ‘an attempt to understand various kinds of cultural phenomena holistically’. Specifically, it can interpret the forms of social organization that may have linked the Andes and Amazonia in prehistory, help understand change and continuity in relations over time, and attempt to unite the analyses of other disciplines in a single, integrated perspective. Focusing on long-distance cultural connections across the ‘divide’, Hornborg then discusses four case studies. He suggests that these case studies indicate a ‘recurring pattern’ of interaction between Andes and Amazonia, with important societal and linguistic repercussions. He also argues that ‘it has been a mistake to assume that Andean polities were necessarily more hierarchical, populous or extensive than

their counterparts in Amazonia', an 'illusion' that has dominated European thinking since the conquest.

In [Chapter 1.5](#), 'The Andes–Amazonia culture area', Tom Zuidema notes the common background and similarities in social and ritual systems of peoples far across any putative divide between Amazonia and the Andes, including the Incas, the Tukano of north-western Amazonia, and even the Ge and Bororo of central Brazil, very far indeed from the Andes. He notes striking commonalities, for instance, between the spatial organization of the Inca capital Cuzco and the villages of the Bororo; between the age-class systems of the Ge-speaking Canela and the Inca *panaca* royal dynastic descent groups; and between the roles of ranked male members of those Andean *panacas* and among the Tukano. Yet these fundamental similarities between cultural models in Amazonia and the Central Andes did not, he argues, derive from direct contact but, rather, through a deep-time cultural continuum that once stretched from the Andes to Central Brazil, which he defines as an 'Andes–Amazonia culture area'.

## Part 2. Deep time and the long chronological perspective

In [Chapter 2.1](#), 'Initial east and west connections across South America', Tom Dillehay reviews the archaeological, genetic and craniometric evidence of Andes–Amazonia relations for the earliest time periods, from first settlement to the Middle Holocene. While emphasizing the scarcity of this evidence, Dillehay outlines some broad trends and themes: the earliest inhabitants of the corridors linking Andes and Amazonia were mobile hunter-gatherers, who established exchange networks along accessible routes through which ideas, resources and technologies could spread, crystallizing into more permanent networks during the early to middle Holocene, when tropical lowland crops first appeared in northern Peru and western Ecuador. By this time, foraging societies were becoming increasingly complex and sedentary, thereby generating various forms of down-the-line exchange and 'reliable networks for accessing exotic food crops'. The chapter emphasizes the complexity of movements of people and resources in 'exchange patterns and cultural transmissions', from the Andes to Amazonia and vice versa.

[Chapter 2.2](#), by André Strauss, discusses 'The Andes–Amazonia divide and human morphological diversification in South America'. For readers from other disciplines, Strauss begins by noting that diversity in cranial morphology is not only unusually high in South America from a global perspective, but also that this diversity broadly aligns 'with an east–west division – or approximately, an Andes–Amazonia divide'. Strauss further notes that 'there is in fact a close link between cranial morphology and population history', so that cranial morphology 'can potentially be used as a proxy for ancestry'. On this basis, he argues that 'the east–west contrast defined by the Andes is most certainly implicated' in all or any of the processes hypothesized as having brought about cranial differentiation. Hence, however it is interpreted, the craniometric evidence 'supports the notion that the

east–west division that the Andes impose on the continent is crucial to understanding the population structure observed in South America’.

Chapter 2.3, by Paul Heggarty, ‘Deep time and first settlement: What, if anything, can linguistics tell us?’, reports the linguistic consensus answer: unfortunately, precious little. Language changes too fast, so the linguistic signal progressively ‘decays’ to become indistinguishable from the background level of resemblances between languages that are inevitable by statistical chance. In South America, linguistic prehistory fades out before we can see back to first settlement. Speculations on long-range language relationships across the Andes–Amazonia divide, once hypothesized in outdated linguistic literature, have long since been abandoned. Population genetics, however, has remained in thrall to one proposed ‘ethno-linguistic’ framework on first settlement, including a potential early Andes–Amazonia divide, which linguistically is vacuous, and is largely just geographical. References are provided to standard sources debunking these claims and providing instead the established, valid classifications of the languages of the Americas from which geneticists could actually make much more of their data.

In Chapter 2.4, ‘Early social complexity in northern Peru and its Amazonian connections’, Peter Kaulicke discusses the archaeological evidence from the north of Peru: a region of particular importance for relations between the Andes and Amazonia, since the highlands here are relatively narrow and low, offering natural passage from Amazonia across the Andes to the Pacific coast. Here, faunal and floral associations (including primates, crocodylians and large felines) extended across 250 kilometres from the coast to Amazonia. Evidence for deep-time interactions across this ‘Huancabamba corridor’ is scarce, but by the Late Archaic, coastal sites such as Ventarrón in the Lambayeque Valley preserve faunal remains such as macaws and monkeys that suggest contacts with the Amazonian lowlands. Thereafter, the archaeological record suggests unfolding connections not only between the coast, northern highlands and Amazonia but also from southern Ecuador to the Bolivian Altiplano, although the precise nature of these contacts requires further research.

In Chapter 2.5, ‘Changing Andes–Amazonia dynamics: *El Chunchu* meets *El Inca* at the end of the Marañón corridor’, Alexander Herrera discusses the ecological, archaeological, linguistic and ethnohistorical evidence for this key corridor between highlands and eastern lowlands. Unmarked monoliths in the Upper Marañón valley are today identified as the lithified bodies of *chuncho* lowland Indians slain by the mythical *Inca*, and they reflect widespread traditions of violent highland dominance over the lowlands. While for the earliest periods, the archaeological evidence suggests influence through the Marañón corridor from lowlands to highlands, afterwards this ‘inter-Andean *yunga*’ came to be dominated by highland cultures: initially by Culle-speaking peoples from the Huamachuco region, and later by the Incas themselves. The stone bodies of the fallen *chunchos* of the Upper Marañón therefore mark ‘a conceptual boundary in the landscape

that may profitably be seen as an indigenous precursor to the Andes–Amazonia divide’.

### Part 3. Overall patterns – and alternative models

In [Chapter 3.1](#), ‘How real is the Andes–Amazonia divide? An archaeological view from the eastern piedmont’, Darryl Wilkinson uses recent work in the Amaybamba valley in southern Peru to argue that the piedmont is more than just a transitional zone between the Andes and Amazonia. Rather, it constitutes a distinct geographical, ecological and cultural region in itself. This is evident not least in the fact that this was perhaps the last major region of South America to be settled permanently, after 1000 BP. This settlement proceeded from the Andes, with an apparently spontaneous first colonization followed by formal incorporation into the Inca Empire. In this archaeological view of the piedmont, the Andes–Amazonia divide was indeed a reality: barely perceptible prior to the Middle Holocene, but unambiguous in later prehistory, as contrasting regional systems emerged with ‘the expansion of imperial states in the highlands and of major linguistic-agricultural complexes in the lowlands’.

In [Chapter 3.2](#), ‘Genetic diversity patterns in the Andes and Amazonia’, Fabrício Santos also detects a divide. For however South Amerindian populations are divided on the basis of their genetics, in all major studies ‘Central Andean populations always appear as a clearly distinctive regional group’. These populations are distinguished by greater genetic diversity within local population groups, higher levels of gene flow between these groups, and greater effective population sizes, while inverse patterns are observable in Amazonia. And the consensus is that, rather than reflecting different founder populations at first settlement, this pattern developed only much later, from no earlier than the Middle Holocene. Santos thus joins Wilkinson and others in pointing to the intensive agriculture and hierarchical social and political organization to develop in the Andes over the past few thousand years as creating a divide with Amazonia that had been largely absent prior to that time.

A further contribution from genetics is [Chapter 3.3](#), ‘Genetic exchanges in the highland/lowland transitional environments of South America’, in which Chiara Barbieri is concerned with the genetics of the peoples of the eastern Andean piedmont itself – a neglected topic. Her chapter both summarizes the results of published studies on four specific populations, from Peru to Argentina, and presents her own wider comparison based on available datasets for South American populations. Overall, Barbieri notes that, in most cases, research reports ‘the sharing of genetic motifs with current populations living at high altitude’, and that thus ‘the global picture ... seems to agree on a predominant influence of the Andean highlands’. Her work supports a scenario of the extension of highland influence into the piedmont in recent millennia, perhaps culminating under the Incas. By contrast, it does not suggest much extension of influence beyond the piedmont, into Amazonia itself.

Chapter 3.4, by Paul Heggarty, surveys ‘Broad-scale patterns across the languages of the Andes and Amazonia’, following the same structure as Chapter 1.2. Firstly, language *families* generally do respect a divide in their expansion histories, although there are some limited counterexamples. The chapter also explores whether some underlying, deeper contrast might explain why the families of the Andes and Amazonia differ in various other respects, too: in the patterning of their distributions, in the size of their speaker populations and in how far back in time their expansion histories go. Secondly, linguistic *convergence* illustrates how languages along the Andes–Amazonia transition clearly did engage in contact, particularly in loanwords, although interactions were more intense within each region than between them. The summing-up inclines to the ‘divide’ being real, and even rather striking when zooming out to set the Andes–Amazonia case in the broadest possible perspective, of the worldwide linguistic panorama.

Chapter 3.5 is Rik van Gijn and Pieter Muysken’s ‘Highland–lowland relations: A linguistic view’. This takes a quantitative look at a dataset of over 20 specific aspects of language structure (in sound system, word structure and grammar) across over 70 languages on either side of the Andes–Amazonia divide, from southern Colombia to the Gran Chaco. The results in fact imply *three* main zones: the Andes, northern Upper Amazonia, and southern Upper Amazonia. Another key conclusion is that where (unrelated) languages are seen to have converged on each other in structure, through contacts between their speakers, those influences ‘operated mostly in one direction, from the highland languages into the lowland ones’. Languages of the foothills are left structurally more similar to their Andean neighbours than to languages of eastern Amazonia, so rather than any radical, sharp Andes–Amazonia divide, a starker one may lie further east, within Amazonia itself.

In Chapter 3.6, ‘Rethinking the role of agriculture and language expansion for ancient Amazonians’, Eduardo Góes Neves argues that ‘distinctive ecological and geographical contexts’ created different economic and political trajectories in the Andes and Amazonia. These do not, however, support outmoded views that saw the Andes as the primary centre for cultural innovation and Amazonia merely as a ‘marginal backwater’. Rather, Amazonia’s great biological diversity engendered a florescence of equally diverse cultural traditions, evident in stone tools and ceramics. Indeed, ceramic production in South America first arose in lowland tropical environments, and Amazonia’s great linguistic diversity similarly reflects this broader cultural diversity. In summary, the ‘distinct economic, demographic and political trajectories’ that unfolded in the highlands and eastern lowlands were likely determined by contrasts between the ‘ecologically diversified and highly productive environments in the lowland tropics’ and the very different conditions on the Pacific coast and in the Central Andes.

In Chapter 3.7, ‘The Pacific coast and Andean highlands/Amazonia’, Tom Dillehay, Brian McCray and Patricia Netherly seek to go beyond the long-standing paradigm of an ‘Andean co-tradition’ constructed partly in opposition to Amazonia. They consider alternative models for interregional exchange, here treating the

Pacific coast as a ‘separate cultural entity’ that interacted independently with other regions. They then consider possible alternative ‘co-traditions’ – those uniting the Andes and western Amazonia, for example, or the north coast of Peru and the eastern *montaña* – or even the notion of a *tri*-tradition, to include coast, highlands and eastern lowlands. (The latter might apply particularly at Chachapoyas, where a ‘mixture of highland, lowland and coastal traits’ is apparent.) While acknowledging the paucity of archaeological data for highland–lowland relations, the chapter suggests that over time there has been a ‘flow of knowledge between eastern, central, and western Andean societies ... in multiple directions’.

#### Part 4. Regional case studies from the Altiplano and southern Upper Amazonia

Part 4 opens with [Chapter 4.1](#), ‘Linguistic connections between the Altiplano region and the Amazonian lowlands’, by Willem Adelaar. The focus is the Puquina language, now extinct but once widely spoken across the Altiplano, and potentially the main language of the region’s greatest indigenous ‘civilization’, Tiwanaku. Even though surviving documentation on Puquina is very limited, Adelaar detects indications of major formative inputs to it from both Amazonia and the Andes. Along with interactions between other highland languages and the adjacent lowlands, Adelaar sketches out a three-stage scenario for the Altiplano: early balanced interaction with Amazonia; then (up to 1500 BP) a significant influx of Amazonian cultural elements; and, finally (from 900 BP), impacts from the Central Andes so powerful that the deeper Amazonian influences were overwritten. This scenario recalls early influential hypotheses in archaeology that pointed to lowland origins for highland civilizations, and sees an Andes–Amazonia ‘divide’ developing only in later prehistory.

In [Chapter 4.2](#), ‘Hypothesized language relationships across the Andes–Amazonia divide: The cases of Uro, Pano-Takana and Mosetén’, Roberto Zariquiey focuses on the nature of connections between these language lineages on either side of the highland–lowland divide in Bolivia. He reviews grave methodological flaws in a past claim that Uro and Pano-Takana go back to a common ancestor language, which would have implied some past *expansion* across the divide. Rather, Zariquiey uncovers a weaker but more valid signal of *contacts* across it. These are only faint between Uro and Pano-Takana, but Mosestén, located geographically between them, does show clearer contacts with Uro. This supersedes the claim of a deep language relationship, and thus paints a very different scenario for language prehistory here, and one that is more consistent with the language data, more coherent and more specific. Zariquiey outlines an initial case for a linguistic convergence area from the Southern Andes into Amazonia, as a working hypothesis that merits further exploration.

The remaining chapters in Part 4 are by archaeologists, and begin with Heiko Prümers’ [Chapter 4.3](#), ‘The Andes as seen from Mojos’. The flat savannahs of the



Llanos de Mojos, covering 150,000 km<sup>2</sup> in northern Bolivia, ostensibly make an ideal case study for Andes–Amazonia relations, since they boast a particularly well-studied archaeological record. Prümers focuses on the period of dense human presence attested for the region for the last thousand years prior to the European invasions, c. 1500–500 BP. His presentation of the archaeology of the Llanos de Mojos is certainly striking: the evidence for contact between the Llanos and the adjacent Altiplano is limited to tiny quantities of imported materials, of stone or metal. Even for the Inca period, *no* ‘Inca-related archaeological evidence ... has ever been reported from the region’. For this densely settled region, then, adjoining the highlands, the divide between Andes and Amazonia appears at its sharpest.

Also discussing the Llanos de Mojos are Umberto Lombardo and José Capriles, in [Chapter 4.4](#), ‘The archaeological significance of shell middens in the Llanos de Moxos: Between the Andes and Amazonia’. The authors here discuss their discovery of shell middens in the Llanos that apparently attest to human occupation dating back more than ten thousand years. The scarcity of archaeological sites for this early period renders these middens of special interest. Most importantly, the evidence from these middens ‘supports the hypothesis of the *independent* emergence of social complexity in the region’ (emphasis added). That is to say, the Llanos represented ‘a centre of innovation where social complexity emerged, rather than a place that was “invaded” by groups stemming from other regions’. The divide between Andes and Amazonia described for the Llanos de Mojos much later in prehistory in [Chapter 4.3](#), then, was apparently already present in far earlier times.

## Part 5. Age of Empires: Inca and Spanish colonial perspectives

The final part of the book opens with [Chapter 5.1](#), ‘The Amazonian Indians as viewed by three Andean chroniclers’, by Vera Tyuleneva. This chapter pores over some key ethnohistorical accounts written from an Andean perspective in the years following the Spanish conquest, so as to establish Andean attitudes to Amazonia and its inhabitants. Its primary conclusion is unambiguous: the well-known tropes that associate the highlands with civilization and the lowlands with barbarism were already deeply entrenched in the Andes in late prehistory and had probably developed there many centuries prior to European contact. By Inca times, native Amazonians were already firmly associated pejoratively with nudity, idolatry and cannibalism. What seems striking in broader perspective is how closely these Inca attitudes correspond with those held afterwards by the Spanish during colonial times. Indeed, the evidence presented here points to a cultural divide between Andes and Amazonia that bridged the historical watershed of the Conquest itself.

In [Chapter 5.2](#), ‘The place of Antisuyu in the discourse of Guamán Poma de Ayala’, Cristiana Bertazoni analyses a major source also used by Tyuleneva: the *mestizo* author Guamán Poma’s *Nueva Corónica y Buen Gobierno*, which is distinguished by numerous unique illustrations. Both in these illustrations and the text,

Bertazoni encounters many of the same tropes regarding Amazonians already described by Tyuleneva. But Bertazoni then goes further, to argue that despite this ‘othering’ of the lowlands and their inhabitants, they were nevertheless considered *conceptually* as integral to the empire. This is an important point, for Bertazoni further argues that this essential ambiguity in Inca attitudes to Amazonia was lost with the Spanish conquest. Despite many similarities in Inca and Spanish relations with Amazonia, then, the Conquest nevertheless marked a real shift, and the true ‘genesis of a sharp division between Andes and Amazonia’ that would only deepen in later centuries.

The final two chapters are by Adrian Pearce, and begin with [Chapter 5.3](#), ‘Colonial coda: The Andes–Amazonia frontier under Spanish rule’. Pearce emphasizes that during colonial times, the Andes–Amazonia divide was a phenomenon of real substance. Amazonia presented few real incentives to Spanish settlement, as well as significant disincentives, and so remained marginal to Spanish interests. The heartland of Spanish rule lay in the highlands and on the coast, while Spain’s presence in the eastern lowlands was limited. Pearce then charts the huge demographic impact of European colonization on the pre-Columbian demography of both Amazonia and the Andes. He concludes by dwelling on the striking similarities between Spanish colonial and Inca imperial attitudes to Amazonia, and concludes that if these attitudes prevailed in two such different polities, then it was surely their *Andean* character – based on intensive agriculture, large populations and urban civilization – that maintained the divide, even across the transition from indigenous to European rule.

Lastly, and also by Pearce, [Chapter 5.4](#), ‘A case study in Andes–Amazonia relations under colonial rule: The Juan Santos Atahualpa rebellion (1742–52)’, provides concrete illustration of how the key themes and processes sketched out in the preceding chapter operated in practice. The mid-eighteenth-century episode discussed by Pearce in this chapter appeared to mark a moment of particularly intense interaction between Andes and Amazonia, sparked by a major rebellion among the peoples of the central montaña. On closer inspection, however, this case study rather confirms the limited nature of Spanish interest in Amazonia, along with the limited predisposition of the colonial state to support colonizing or missionizing endeavours there. The Juan Santos rebellion constitutes an ‘exception that proves the rule’, then: a rare case of vigorous intervention across the frontier during colonial times proved not to be durable, and the general pattern of a clearly defined ‘divide’ quickly re-established itself.

To close this Introduction, we wish to thank all our contributors, both for their chapter submissions and for their patience over the lengthy gestation of this book.