

Not the Incas? Weaving Archaeology and Language into a Single New Prehistory

In September 2008, the British Academy sponsored a unique gathering of world specialists in the prehistory of the Andes.

Dr Paul Heggarty and Dr David Beresford-Jones, the conveners and specialists respectively in the linguistics and archaeology of the region, discuss this test-case in how to converge the divergent perspectives of various branches of the humanities into a single, coherent vision of the human past.

For tourists and scholars alike, few vanished civilisations outdo the Incas in mystique: their wilful choice of breathtaking natural settings for a string of 'lost cities'; the enigmatic, haphazard perfection of their stonework; and their calamitous end at the hands of a tiny band of Spanish adventurers.

The story of this final cataclysmic clash of civilisations is well known; but for all periods before the conquest our sources are mute. The Incas had won and run their 'Stone Age' Empire with neither sword nor pen. They have left us no true history — or at least none we can yet decipher. They encoded their records not in texts but in multi-coloured strings, knotted intricately together into both 'accounting' and 'narrative' versions of the *khīpu* (Figure 1). So elaborate was this record-keeping system that not only did it enable them to administer their vast, mountainous

realm, but it has also frustrated the best efforts of generations of would-be code-breaker scholars.

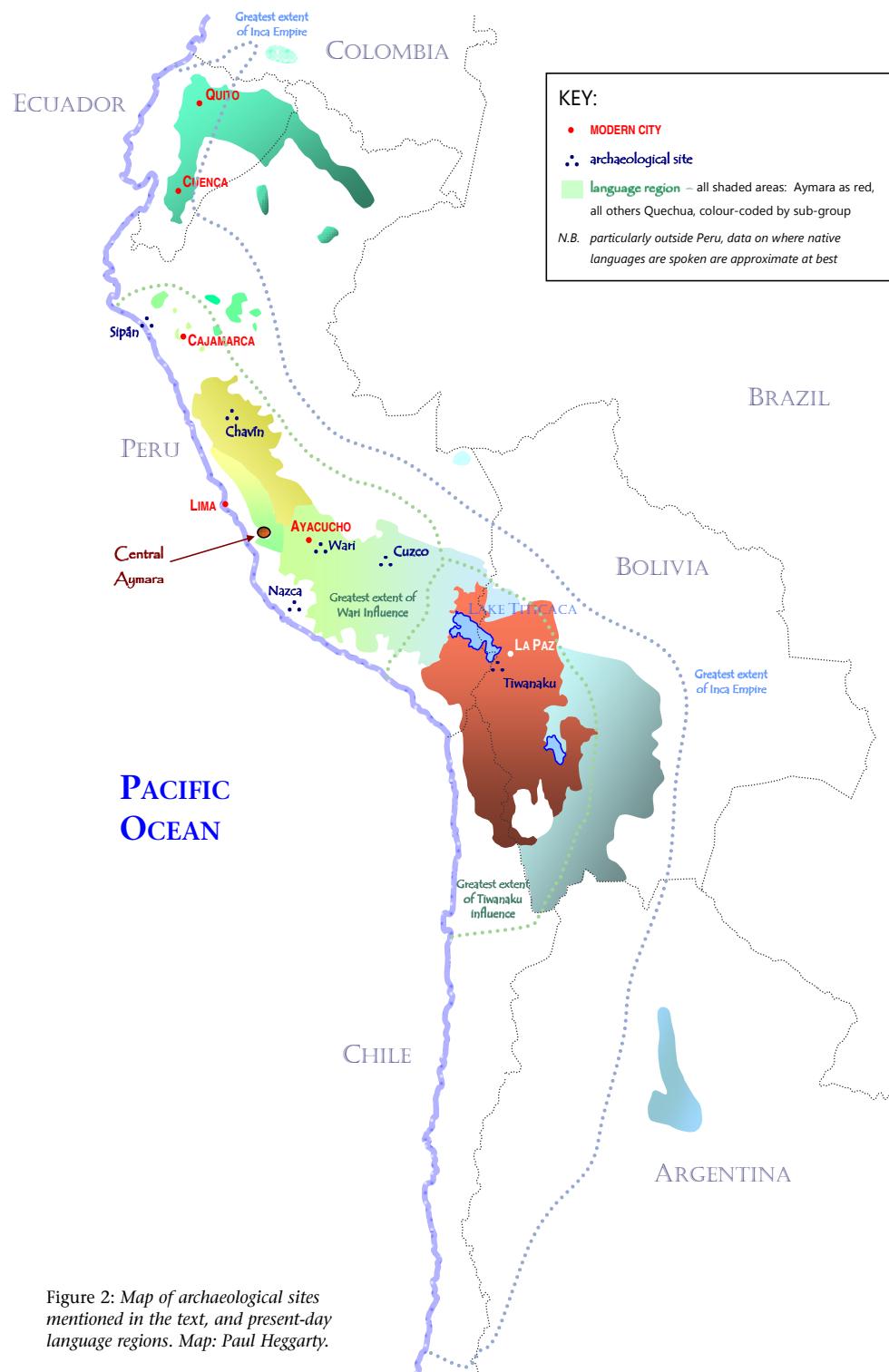
So to piece together an understanding of the human past in the Andes we must look instead to a range of other tools across the humanities. For archaeologists, a succession of civilisations rose and fell in the Central Andes to leave one of the richest material culture records on Earth, ideally preserved in one of its driest deserts along Peru's Pacific coast. Historians and anthropologists, meanwhile, negotiate the many pitfalls in interpreting the conflicting mytho-histories of the Incas, as recorded only through the distorting prism of the conquistadors' world-view. And perhaps least expected is how, by comparing a plethora of indigenous languages and dialects across the Andes, linguists can infer rich *historical* detail in the patterns of their origins. Together these might tell us the tale of the Andean past, a rich seam in the story of humankind. For the Andes rank prominently among humanity's

rare independent hearths of agriculture and the development of a 'pristine' civilisation, with a pedigree of five millennia upon which the Incas are but the icing on the cake.

Yet while each of the disciplines of prehistory opens up its own partial window on the past, frustratingly their different perspectives do not yet converge into a coherent, focused vision. On the contrary, specialists in each field have all too long proceeded largely in ignorance of great strides being taken in the others. The prospects are all the brighter, then, for a spectacular advance in our understanding, if we can at last weave all these disparate stories together. Indeed, the Andes prove a valuable case-study for how one might achieve a more holistic view of prehistory in other regions of the world too. The task is all the more urgent here, as both our archaeological and linguistic records are progressively and irrecoverably destroyed: by 'grave-looting' to supply the market in illicit antiquities; and by the inexorable, imminent extinction of almost all indigenous languages.



Figure 1: The 'khīpu': an Inca-era example of the undeciphered Andean record-keeping (and narrative?) system.



Archaeology and Linguistics in the Andes is a research project under the British Academy's UK-Latin America/Caribbean Link Programme, to facilitate just such a meeting of minds between specialists in all fields with a stake in uncovering the rich prehistory of the region. It is founded upon a partnership

between the McDonald Institute for Archaeological Research at the University of Cambridge, and the linguistics and archaeology departments at one of the leading universities in the Andean countries themselves, the Pontificia Universidad Católica del Perú (PUCP) in Lima.

Our UK phase was held in September 2008. A three-day specialists' symposium was held in Cambridge, followed by a further one-day focus on the post-conquest period at the Institute for the Study of the Americas (University of London). Both institutes provided top-up funding of their own to welcome leading authorities also from North America and continental Europe. Finally, our key international visitors gave an open day of publicly-oriented lectures, hosted by the Americas section at the British Museum. In 2009 the programme moves to the Andean countries themselves, where the British Academy's funding will allow a group of UK specialists to play a leading role in a follow-up symposium at the PUCP, then a public lecture series there and in other cities across the Andes. Three separate volumes of proceedings are being prepared, arising out of each of the symposia.

The Cambridge symposium served first to shatter convincingly a number of popular myths about the language history of the Andes, not only peddled among tourists and guidebooks to Peru, but until now still all too current even among archaeologists and historians.

The greatest survivor from the speech of the Americas before the conquest is Quechua. Yet few appreciate that it is not a single language, but a language family whose time-depth and expansion have significant historical implications. Despite half a millennium of decline under the domination of Spanish, especially acute in recent decades, it clings on as the native speech of an 'ageing population' of perhaps seven million speakers, scattered from southernmost Colombia to north-western Argentina, a living human link to their roots in the time before Columbus. Cuzco itself, the former Inca capital, remains today a heartland of Quechua: the language of porters on the Inca Trail, for instance, and of the very name of *Machu Picchu* (*Old Peak*).

The geographical distribution of Quechua today even makes for an uncannily close overlap with the greatest extent of the Inca Empire in the fateful year 1532 (see Figure 2). The Incas themselves promoted Quechua as their 'official language' of Empire. The parallels seem obvious with how Rome once drove the expansion of Latin — since transformed into its various modern

descendants, the *Romance* languages Portuguese, Spanish, Catalan, French, Italian and *Romanian*. So it was the Incas, surely, who were likewise responsible for spreading the Quechua language family?

The other great linguistic survivor in the Andes is Aymara, in regions centred on Lake Titicaca and the ancient realm of Tiwanaku, whose ruins stand near its southern, Bolivian shore. Again, modern language geography fits neatly with the extent of an ancient state, and the 'linguistics and archaeology' game seems easy. All too easy, in fact; for a closer inspection of the language data turns out to betray Aymara's spread here as far too recent to be compatible with the millennium or more elapsed since Tiwanaku fell. Nor can it explain Aymara's 'long lost cousin' still spoken many hundreds of miles to the north east, in a few isolated mountain villages inland from Lima.

More strikingly still, linguistics also convincingly explodes the popular myth that sees all Quechua as the work of the Incas. For while the far-flung dialects of Ecuador and Bolivia may well be imputed to their imperial ambition, Quechua had spread far across Peru many centuries before the Incas first rose out of obscurity. Their own heartland, meanwhile, is dotted with placenames that are not Quechua but Aymara: the river Vilcanota flowing through the 'Sacred Valley of the Incas', past *Ollantaytambo*, site of a pitched battle against the conquistadors; even *Cuzco* itself, the 'owl stone', recalling one of the Incas' origin myths (the popular 'navel of the world' etymology seems quite unfounded). Spanish chronicles even report a 'secret language' of the Inca nobility, citing a few verses that betray clear Aymara origins, and point at an even earlier stage perhaps to *Puquina*, the likely real language of Tiwanaku, in line with another Inca origin myth.

In short, the Andes provide an object lesson in how comparative linguistics can tear up any simple assumptions based on where languages happen to be spoken today. Our first symposium set about wiping the slate clean, to start afresh from first principles in how to go about linking the different disciplines of prehistory. Direct, strong correspondences need to be established on each of three key levels: geography, chronology and causation. In other words,

archaeological and linguistic patterns must match in the right place, at the right time, and for the right reason. Particular importance was attached to how language spreads do not 'just happen' in a demographic and social vacuum. As with Rome, spectacular linguistic impact occurs *only* when a language has behind it a real-world driving force of a scale to match. On these principles, the conveners launched the symposium with a radically new proposal for the prehistory of the Andes, deliberately provocative for cross-disciplinary thinking and debate.

Archaeologists see the chronology of the region as a sequence of three 'Horizons', periods of interaction or unity across great expanses of the Central Andes; the last of these was the Inca Empire, for instance. Between these came two 'Intermediate' Periods, when that unity broke down into smaller and more regionally limited polities: among them Nazca, responsible for 'drawing' the famous Lines; and Moche, whose splendour is now revealed through the royal tombs of Sipán. The conveners proposed a working principle that great language expansions can occur only when suitable forces are there to drive them. In the Andes, this means that it is the wider-spread Horizons, not the Intermediate Periods, that offer the most natural explanations for the Quechua and Aymara dispersals. The Inca 'Late Horizon' (c. 1470–1532) was too

recent to account for either, however, leaving just the two previous 'Horizons' in contention as drivers of the two major language families.

In geography, both families had fairly similar early distributions, each making for a reasonable fit with the extent of either 'Horizon' (see Figure 2). The Early Horizon (c. 800 BC to AD 100) was focused on the great 'temples' of Chavín de Huantar in the north-central highlands of Peru (Figure 3). The Middle Horizon (c. 500–1000), meanwhile, was centred on the vast site of Wari, near the modern city of Ayacucho in the south-central highlands.

In chronology, however, it seems clear from the relative strength of the two families that an earlier, now weaker Aymara spread came first, followed more recently by a more powerful Quechua overlay. This logic points, then, to Chavín as the homeland of Aymara, with the Early Horizon to propel its dispersal; while Quechua's origins would lie near Ayacucho, whence it expanded in concert with the Wari Empire during the Middle Horizon (Figure 4). This new vision entirely overturns traditional proposals (as well as calling for an entirely new classification of

Figure 3: A 'Chavínoid' feline from excavations in 2007 funded by the British Academy in Ullujaya, Ica: 600 km south of the Chavín homeland, at the far frontier of the Early Horizon – perhaps also the age of the first major language expansion in the Andes. Photo: D. Beresford-Jones.



how the regional variants of Quechua all relate to each other).

Such a provocative and straightforward proposal duly achieved the desired result: a vigorous cross-disciplinary debate through-out the Cambridge symposium. Naturally, alternative scenarios were advanced, two in particular, which illustrate other aspects crucial to working out how archaeological and linguistic patterns might go together. Could the Wari Middle Horizon alone have driven *both* language expansions? In this case, might the linguistic contrast reflect instead a division between a high-altitude population, speaking Aymara and living mostly from potato crops and camelid-herding; and Quechua-speakers living at mid-elevations, cultivating primarily maize? Alternatively, could the main Quechua expansion have occurred in two distinct stages, the first driven by the Chavín Early Horizon, the second by the Wari Middle Horizon? Perhaps most indicative of the progress made was how soon the existing traditional proposals, established since the 1970s, were effectively abandoned by almost all participants.

The Cambridge symposium closed with a look even further back in time, to the single deepest 'big picture' question in bringing archaeology and linguistics together. A leading but highly controversial hypothesis is that the driving force behind many of the earliest and greatest language dispersals in human prehistory was 'the coming of agriculture', the transition from a hunter-gatherer way of life to settled farming. This is claimed to have spread the Indo-European and Afro-Asiatic language families, for instance, and those of Meso-America.

Inexplicably, given their status as one of humanity's precious few independent hearths of agriculture, the Central Andes have so far been all but entirely overlooked in this great debate. Archaeology now understands that the origins of agriculture in South America lie as far back in time as they do in the Old World and Meso-America: some nine or ten millennia. But quite unlike those regions, the Andes do *not* host any great

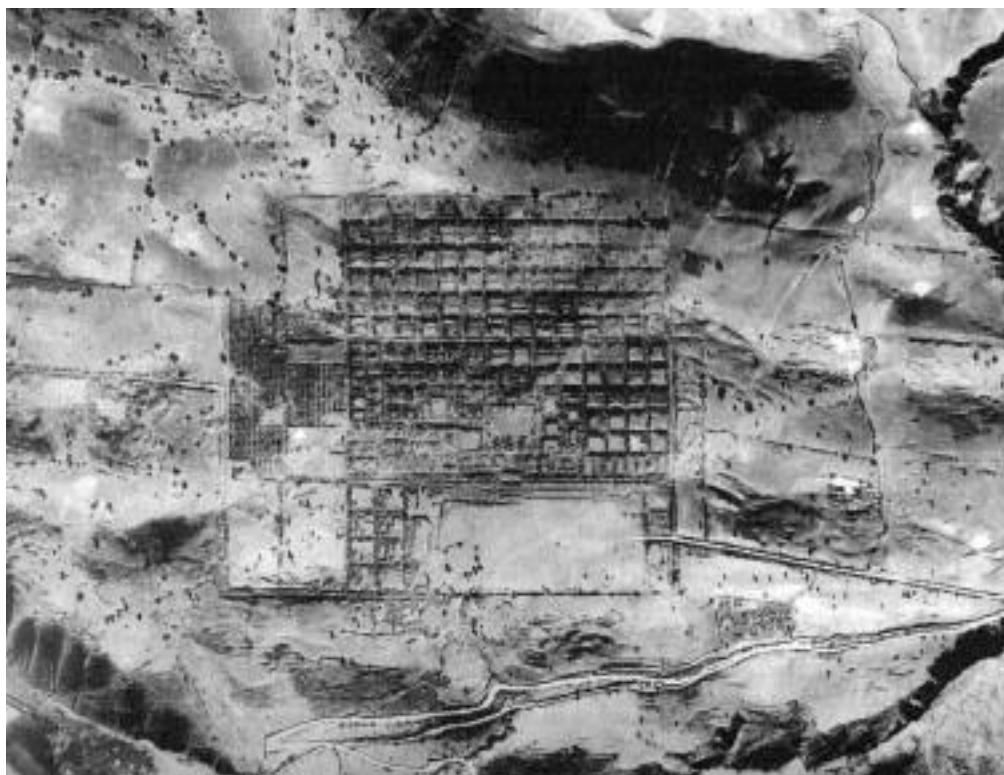


Figure 4: Aerial view of Pikillaqta, a Wari outpost south-east of Cuzco – witness to the Wari Middle Horizon's imperial reach. Courtesy of the Servicio Aerofotográfico Nacional, Peru.

language families that expanded remotely so long ago. So if the 'coming of agriculture' really was so powerful a driver of language dispersal, then what happened to it in the Andes, where it appears signally to have failed to leave any visible linguistic impact?

On this question too, the conveners kicked off cross-disciplinary thinking at the symposium by exploring a number of important idiosyncrasies in the Andean context, which led agriculture to develop here in ways very different to the Old World. The Andes are characterised by: (a) extreme topographical and ecological diversity, from coastal desert to high-altitude tundra to Amazonian rainforest; (b) few large mammals, with only camelids domesticated; (c) exceptionally rich marine resources, so fishing could provide an alternative form of protein; and (d) no true cereal crop, until maize arrived relatively late from Meso-America.

So despite the very early origins of farming here, these Andean idiosyncrasies conspired to postpone when developments could eventually come together into an expansive, cereal-based 'agricultural package'. Not until some three thousand years ago did agriculture

in the Andes cross this critical threshold of intensification, which *does* at last bring us into the plausible date-range for the Aymara and Quechua language dispersals. Simultaneously, the archaeological record detects the first 'Horizon' across the region — and a sudden spread of maize-based agriculture. Could it not be this that fed a population expansion, and with it a language spread too? The Middle Horizon may in turn represent a second quantum leap, thanks to further improvements in maize strains. Moreover, both expansions were further driven by step-changes in 'agricultural technology': the construction of the vast arrays of terracing and irrigation that so characterise Andean landscapes to this day (Figure 5).

These cases illustrate how feedback between the disciplines can advance understanding in each: here the linguistic patterns in turn inform the key debate among archaeologists as to the precise nature of the Early and Middle 'Horizons'. Were they loose networks of relationships based on a shared religious cult and trading links? Or much more than that: military conquest empires, akin to the Incas, rooted ultimately in demographic growth built on agricultural expansion?

Certainly, *some* force must have driven major language spreads around these times, and this in itself argues for a stronger rather than a weaker view of what these archaeological Horizons really were.

Finally, this case-study in agriculture-language dispersals holds out lessons valuable far beyond the Andes. The whole hypothesis needs serious revision, to take into account key requirements that until now were simply taken as read because they were present in how agriculture developed in the Old World context. To confer real advantages in subsistence, an agricultural package must ideally include protein (preferably large domesticated animals), and above all the flexible, storable starch source of a true cereal crop. And to drive a major *dispersal* of language, it needs also to be *expansive*: a

mobile food-web able to be propagated successfully to surrounding regions — if necessary by controlling growing seasons through 'agricultural technologies' such as terracing and irrigation.

To be sure, the greatest questions in the prehistory of the Andes remain far from resolved; but sound foundations have now been laid for a much deeper understanding between the various disciplines involved. The Cambridge and London symposia brought together a first ever quorum of world specialists from across these fields, whose papers will fill the first volumes dedicated to the interface between them. The debate is well underway at last, and great strides have already been taken. The scene is well set for the 2009 meeting 'in situ', in the shadow of the Andes themselves.

Dr Paul Heggarty is a fellow and research associate in linguistics at the McDonald Institute for Archaeological Research, University of Cambridge. Dr David Beresford-Jones has been a British Academy Postdoctoral Fellow, working in the George Pitt-Rivers Archaeobotanical Laboratory, McDonald Institute for Archaeological Research, University of Cambridge. He is working on a book entitled *Putting the Tree back into the Landscape: An Archaeological Case-Study of Ecological and Cultural Collapse on the South Coast of Peru*, to be published as a British Academy Postdoctoral Fellowship Monograph. Their jointly-authored article 'Agriculture and Language Dispersals' will be published in *Current Anthropology* in 2009.

Figure 5: Colca, south Peru. Vast arrays of terracing have defined the agricultural landscape of the Andes for millennia. Photo: Paul Heggarty.

