has Augenti championed the facts, or signalled the promise of new ideas? The scales are just about balanced. He is very cautious about the collapse of towns and the slow revival of urban communities. What appears on archaeological grounds as "an ice age settling down on the Roman Empire" (Durrell 1945: 75) is cast in terms of what was missing as opposed to a momentous social transformation that is emphatically demonstrated by the disappearance of thousands of later Roman rural sites (Cirelli *et al.* 2015), as well as the collapse of urban life (Hodges 2015). On the other hand, he is a proponent of the later first-millennium revival (or 'explosion', as he calls it) of the Italian countryside, challenging the reductive notions of the French historian Pierre Toubert. Hand in hand with this revival goes an industrial revolution of which Augenti provides plenty of rich detail, although he describes sparingly the revival of Italian ports (Amalfi, Gaeta, Genoa, Pisa, Salerno and Venice) in the early eleventh century and their subsequent role in the pre-Renaissance zenith of Mediterranean commerce.

Published in the month that the post-modern philosopher of the Middle Ages, Umberto Eco, passed away, Augenti's text-book provides a basis for understanding the world that is so brilliantly described in Eco's novel *Il nome della rosa* (*The name of the rose*) (1980). Yet it lacks the depth and mystery of Eco's Middle Ages, in part because it is a synthesis of numerous excavations, conducted by regional archaeology departments overwhelmingly funded by and for local communities. The coalition of details and plans provides the basis for grasping how the medieval world was shaped, from the remaking of its towns and villages, to the ethnic characteristics of its politically unstable territories. It is, however, fair to say that Italy never emerges in these pages as a crucible of ideas and invention. The accounts of agronomy using palaeo-economic data, of technology using the evidence of manufacturing and production, and of the melding of Byzantine and Islamic ideas to the traditions of the peninsula, are sparely discussed. Consequently, we fail to appreciate how the opulent marvels of Italy's twelfth- to fifteenth-century communes and villages that mesmerised (and continue to mesmerise) Europe evolved out of conditions that by any standards were prehistoric.

Augenti must be complemented for his book. It summarises the first 50 years of the discipline at a time when Italy contends with austerity by reducing the number of university teachers and by swingeing cuts to local government spending. In these disorienting circumstances, one indisputable prospect needs now to be confronted: the next generation must advance beyond the local to seek succour in the thick description of Eco's world by synthesising boldly across themes, and by demonstrating through good science the material wonders and triumphs of Italy's medieval miracle.

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Volker Sossna. *Climate and settlement in southern Peru: the northern Río Grande de Nasca drainage between 1500 BCE and 1532 CE* (Forschungen zur Archäologie Außereuropäischer Kulturen 13). 2015. 317 pages, numerous colour and b&w illustrations, tables, CD. Wiesbaden: Reichert; 978-3-95490-078-7 hardback €98.

The south coast of Peru is part of one of the world's oldest and driest deserts. Yet, even here, where water is available, life also thrives. High in the Andes, austral summer rains give rise to rivers, which

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surge down the precipitous western flanks of the mountains, bringing inundations of water and rich alluvium, so that their courses are lined with lush riparian oases, and wherein agriculture and a long history of cultural trajectories flourished and waned. The peculiar aridity of this tropical coast is caused by cold seas offshore dictating a climate in a state of delicate balance affected by even the slightest changes of oceanic circulation, not least those that attend the periodic El Niño Southern Oscillation ('ENSO') phenomenon. This sensitivity has long led scholars of the region's archaeology to debate the role of climate in driving social change: the theme taken up here by Volker Soßna.

This book is the product of much intelligence bent with great energy towards an extremely knotty problem. It is elegantly written and beautifully set out and illustrated. Its review and distillation of secondary sources is, mostly, excellent. Yet what really sets Soßna's contribution apart is its foundation on findings from one of the most comprehensive archaeological projects to be conducted in Peru in our times: the Nasca-Palpa Archaeological Project directed by Marcus Reindel of the German Archaeological Institute. This project epitomises the virtues of a German 'total archaeology': well-funded, multidisciplinary research over two decades, entailing real collaborations with the most appropriate Peruvian colleagues. The latest of many publications to emerge from the project, this book (and accompanying CD) disseminates the results of its archaeological survey, encompassing the northern Río Grande drainage from its headwaters in the high Andes, down across the floodplains of a hyper-arid coastal plain, where it joins the southern tributaries of the drainage.

For those who work on the south coast of Peru, these results include revelations, such as confirmation of the largely highland character of Late Paracas, manifest in the form of remarkable 'flower' structures extending high into the *cabezada* sierra hinterlands of the coastal rivers. For those who work in Peru more generally, they provide the first survey encompassing an entire drainage since the Virú work in the 1950s, thereby offering new insights into the waxing and waning of pan-Andean social, political and ecological interactions between coast and sierra over the three millennia from *c.* 1500 BC to AD 1532. And finally, archaeological data on this comprehensive scale offer the possibility of enquiring how variations in climatic and ecological diversity across more than 5000m of altitude may have affected settlement patterns over time: matters of significance well beyond the Andes.

In doing so, Soßna is at pains to identify the often glossed-over problems that attend the juxtaposition of the archaeological record with proxy evidence of past climate. All such records are inevitably highly fragmented so that merely establishing coincidence with sufficient chronological and spatial resolution is problematic enough, before demonstrating any causal linkage. Meanwhile, synthesising interpretations from weakly substantiated data in different disciplines always runs the risk of circular reasoning: "building on each other's myths", as Renfrew (1987: 287) put it. On the one hand, then, Soßna uses Tainter's (1988) classic study to define changing social complexity in the archaeological record—albeit blunted here by an over-reliance on migration as the only mechanism of change—while on the other, he draws upon work of the project's geomorphologists to reconcile *local* proxy evidence for climate change, in the form of loess deposits, with more distant records across the Andes (e.g. Mächtle & Eitel 2013).

Yet despite (or perhaps because of) the richness of the new archaeological record revealed herein, Soßna's interpretations are ultimately ambivalent, noting that "climate reconstruction for the Río Grande drainage, *independent from the interpretation of archaeological features* […] is neither detailed nor free of contradiction" (p. 46, emphasis added). Archaeological features here certainly do offer powerful impressions of changed landscapes, but they lie across a continuum between rain-fed and irrigation agriculture, the latter deriving from water sources arising at distant headwaters, whose interactions with climate seemingly entail contradictions for the present, let alone for the prehistoric past. Do, for instance, strong El Niño events bring *drought* to the Andean hinterlands of the south coast (p. 37, and as occurred in 2016); or do they bring *more* rainfall (as in 1997/1998)? The effects of ENSO climate perturbations are not so easily generalised across space.

Some (e.g. Beresford-Jones *et al.* 2009; Hesse & Baade 2009) have argued that changes evident in the geoarchaeological records of the south coast were human-induced, precipitated by the intensification of agriculture, whereas others (e.g. Mächtle & Eitel 2013) see such evidence as the consequence of long-term climate changes at the desert margin. There

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is a refreshing humility in Soßna's reluctance to distinguish between the equifinal outcomes of these different interpretations. For it would seem that the most satisfying explanation for such change may lie in the self-enhancing feedback mechanisms acting between both climatic *and* socio-economic factors, leading to a gradual reduction of natural habitat and social cooperation.

Be that as it may, this book deserves to become essential reading, certainly for archaeologists of the south coast of Peru, due to its setting out of the exemplary survey data of the Nasca-Palpa Archaeological Project, but also for those working far beyond, including archaeologists concerned with the difficult but important task of unravelling interactions between climate and society in the past, not least for what that may tell us about the present, or indeed the future.

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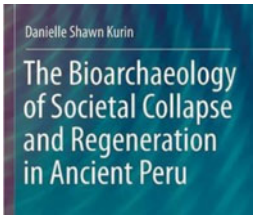
Danielle Shawn Kurin. *The bioarchaeology of societal collapse and regeneration in ancient Peru*. 2016. xv+218 pages, numerous colour and b&w illustrations. Cham: Springer; 978-3-319-28402-6 hardback £74.50.



This study reflects on—to paraphrase Thomas Hobbes—the apparently nasty, brutish and short lives of people in a post-imperial collapse scenario. In this case, the relevant canvas is the Andes, and the people are the inhabitants of the highland region of Andahuaylas. This book covers how communities in the area negotiated the collapse of the Wari Empire (AD 700–1000) during the subsequent early Late Intermediate Period (AD 1000–1450). With Tainter's (1988) seminal book on societal collapse as the ever present backdrop, Kurin employs a strong focus on scientific method to elucidate on social theory involving community, migration, ethnic and social identity, violence, health and diet, and medical innovations.

Based on a detailed study of 477 individuals from four main sites, the author sets out to explain the underpinnings of Chanka and Quichua society in the first 250 years after the retreat of the Wari Empire. The latter ruled a large swathe of land across the Central Andes from its capital, Huari (Schreiber 1992); the Chanka and Quichua were the successor polities. Eschewing the ambiguous veracity of the sixteenth-century ethnohistoric records on the Chanka and Quichua, this volume opts for osteological, archaeological and bio-geochemical methods to tease out a narrative of life after imperial collapse. It is apparent that there are some continuities from the earlier Wari period, but it is the differences that shine through. Compared to the idyllic certainties of the empire, the later Chanka and Quichua lived a fractured and fraught existence, in which the stronger Chanka dominated and isolated the weaker Quichua communities.

Often counterintuitive, sometimes seemingly deliberately so, this volume seeks to contradict accepted dogma, such as the siting of strategic hill-top settlements to facilitate access to, and intensification of, an agro-pastoralist economy, positing that it is the ubiquitous violence of the times that often conditioned site location and function. In this, the author is following, from a bioarchaeological angle, recent scholarship on the pre-eminence of violence during the Andean Late Intermediate Period (Arkush 2011). Indeed, the book is replete with conflict, and describes a society under severe stress.

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