

Tomás Usón

REMEMBERING FUTURE DISASTERS

Temporal Ecologies in the Peruvian Andes



AQUI ESTUVO YUNGAY
(25,000 habitantes)

x

PLAZA DE ARMAS

[transcript] ENVIRONMENTALANTHROPOLOGY

Tomás Usón
Remembering Future Disasters

Editorial

The series **EnvironmentalAnthropology** publishes studies that are based on ethnographic methods, reflect emic perspectives and contribute to environmental theory building. The series is based on a broad concept of the environment, which includes both the social, human-made and the “natural” environment. With this broad thematic scope, the series maps the diversity of culturally specific lifeworlds and practices worldwide. The series also aims at bringing together ethnological studies with an environmental focus and to promoting dialogue within interdisciplinary and international debates. In this way, the writings published in **EnvironmentalAnthropology** make unique contributions to pressing environmental issues of the present day.

The series is edited by Eveline Dürr, Frank Heidemann, Oliver D. Liebig and Martin Sökefeld.

Tomás Usón is a geographer and anthropologist from Santiago, Chile. His research examines the temporalities of disasters, ecological degradation and socioecological justice, drawing on approaches from science and technology studies and multispecies research. He completed his doctorate at the Institute of European Ethnology and the Integrative Research Institute on Transformations of Human-Environment Systems at Humboldt-Universität zu Berlin in 2023, and works as a postdoctoral researcher at the Institute of Geography of the same university.

Tomás Usón

Remembering Future Disasters

Temporal Ecologies in the Peruvian Andes

[transcript]

Zugl.: Berlin, Humboldt-Universität zu Berlin, Philosophische Fakultät, Dissertation, 2023.

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available online at <https://dnb.dnb.de>



This work is licensed under the Creative Commons License BY 4.0. For the full license terms, please visit the URL <https://creativecommons.org/licenses/by/4.0/>.

Creative Commons license terms for re-use do not apply to any content (such as graphs, figures, photos, excerpts, etc.) not original to the Open Access publication and further permission may be required from the rights holder. The obligation to research and clear permission lies solely with the party re-using the material.

2026 © Tomás Usón

transcript Verlag | Hermannstraße 26 | D-33602 Bielefeld | live@transcript-verlag.de

Cover design: Maria Arndt

Cover illustration: Servicio Aerofotográfico Nacional, Perú (National Aerophotographic Service, Peruvian Air Force), 1970. Courtesy of the Air Group No. 31 of the Peruvian Air Force.

Printing: Elanders Waiblingen GmbH, Waiblingen

<https://doi.org/10.14361/9783839427989>

Print-ISBN: 978-3-8376-7889-5 | PDF-ISBN: 978-3-8394-2798-9

ISSN of series: 2629-415X | eISSN of series: 2747-3597

Printed on permanent acid-free text paper.

To my parents

Contents

List of Figures	11
List of Acronyms	13
Preface	15
Acknowledgments	17
Note on Language	21
Prologue	
Andean Cosmopolitanisms	23
Introduction	27
Remembering the future	27
Assembling disasters	30
A cracked Andean region	35
Encountering difference: tinku of figurations	39
An ethnography of temporal ecologies	43

I Yungay, Destruction and Permanence

1 The 1970 Avalanche: Suspensions and Figurations	53
Yungay Hermosura	55
A suspended time	59
Historical figurations	64
Configuring the disaster	75
2 Campo Santo's Intangibilidad	81
An immanent place	81

Enacting the intangible	84
Delimiting the intangible	91
Materialising the intangible	94
The hinterland	99
A limited delimitation	104

II Huaraz, Endurances and Changes

3 The Stones of Pumacayán	113
A personal archive	113
The huanca and the cross	117
The archaeological site	121
The flood	126
¡Salvemos Pumacayán!	133
Scattered stones, continuous past	138
4 Materialising Change: The Reconstruction of Huaraz	143
Strangers in their own city	145
Living with the river	149
Waiting – and building in the meantime	154
Displacing the risk	158
Materialising security	161

III The Lakes, Control and Resistance

5 Mistrusting the Alarm	167
Rage against the machine	167
Controlling time in the mountains	169
Glaciers as a project	175
Who destroyed the SAT? Fuenteovejuna did it	183
The gringo menace	187
Resisting foreign forms of temporal control	192
6 Coping with Abandonment: On Lakes, Pagos and Crosses	197
The absent state	198
Pagos and paperwork	202
Carrying protection	208
Building security amid uncertain times	218

Conclusions	
Disasters, History, Time	221
Disasters and history	226
Disasters and time	229
The documentarist and the documentarian	233
References	239

List of Figures

Figure 1:	Huaraz, the cosmopolitan city	22
Figure 2:	Map of the study area in the Callejón de Huaylas, Peru	26
Figure 3:	'Here was Yungay'. An aerial image of the landslide scar over the city	58
Figure 4:	Campo Santo's main plaza with the Huascarán in the background	88
Figure 5:	A reproduction of the old city's map released for Yungay's anniversary in 2004..	96
Figure 6:	David at his stand, showing his photographs to visitors	97
Figure 7:	Aerial image of the 1970 avalanche	100
Figure 8:	Carved stones with a scale model of Pumacayán behind, both part of Javier's collection	115
Figure 9:	Pumacayán's main entrance of concrete and steel	135
Figure 10:	Señor de los Milagros neighbourhood on the southern bank of the Quillcay River	150
Figure 11:	Inside El Señor de la Soledad neighbourhood	153
Figure 12:	SAT's main monitoring station in Huaraz's Municipality	176
Figure 13:	Remains of the early warning system station in Shonquil Pampa. In the background, Hualcán Mountain, where Lake 513 is located	185
Figure 14:	Syphons installed in Palcacocha, passing under the retaining wall	206
Figure 15:	Runtu (left) and Awaq (bottom right) dancing during Misa de Cruces in Paria-Wilcahuaín, together with other cruces mayores	211
Figure 16:	The assistant priest gives the benediction to a mass of crosses gathered in La Soledad	214

List of Acronyms

ANA	<i>Autoridad Nacional del Agua</i> / National Water Authority
ARRPRY	<i>Asociación de Rehabilitación y Reconstrucción de la Provincia de Yungay</i> / Association of Rehabilitation and Reconstruction of the Yungay Province
CARE Peru	Peru branch of the international humanitarian agency, CARE (Cooperative for Assistance and Relief Everywhere) International
CENEPRED	<i>Centro Nacional de Estimación, Prevención y Reducción del Riesgo de Desastres</i> / National Centre for Estimation, Prevention and Reduction of Disaster Risk
CNA	<i>Confederación Nacional Agraria</i> / National Agrarian Confederation
COER	<i>Centro de Operaciones de Emergencia Regional</i> / Regional Emergency Operation Centre
COSUDE	<i>Agencia Suiza para el Desarrollo y la Cooperación</i> / Swiss Agency for Development and Cooperation
CRYRZA	<i>Comité para la Reconstrucción y Rehabilitación de la Zona Afectada</i> / Committee for the Reconstruction and Rehabilitation of the Affected Zone
GLOF	Glacial lake outburst flood
INAIGEM	<i>Instituto Nacional de Investigación en Glaciares y Ecosistemas de Montaña</i> / National Institute for Research on Glaciers and Mountain Ecosystems
INDECI	<i>Instituto Nacional de Defensa Civil</i> / National Institute of Civil Defence
INP	<i>Instituto Nacional de Planificación</i> / National Planning Institute
JAN	<i>Junta de Ayuda Nacional</i> / National Assistance Board
NGO	Non-governmental organisation
ORDEZA	<i>Organismo Regional para el Desarrollo de la Zona Afectada</i> / Regional Organisation for the Development of the Affected Zone
SAT	<i>Sistema de alerta temprana</i> / early warning system
UGRH	<i>Unidad de Glaciología y Recursos Hídricos</i> / Unit of Glaciology and Hydrological Resources
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Preface

What does it mean to remember disasters that have not yet occurred? In this volume, Tomás Usón takes us into the Peruvian Andes and shows how people in the Callejón de Huaylas region experience disaster events – past earthquakes or future glacial lake outbursts – as dynamic assemblages of material things, stories, political struggles and sensitive landscapes. He argues that disasters are not singular events that strike over time. Instead, he describes them as complex configurations composed of geological forces, urban planning, political narratives and human practices.

The author illuminates how these assemblages of disaster become visible in the ‘temporal ecologies’ of the region: in the monuments commemorating the destruction of Yungay, in the archaeological heritage of Pumacayán being renegotiated through the urban transformation of Huaraz and in the tensions surrounding early warning systems. Usón’s ethnographic lens focuses on these nodes – or, as he describes it using the Quechua concept of *tinku*, a ‘gathering in difference’ – where diverse worldviews, technologies and material forces converge and vie for interpretive authority over the past and the shaping of the future.

Disaster-thinking thus becomes more than a passive act of remembrance. It emerges as an active process of negotiating power relations, shaping memories and building a future in which the next disaster already exists as a possibility. Disasters meet in temporal tensions between past and future events. The book makes clear that in the Andes, the past, present and future do not exist as separate entities, but as an interwoven and contested temporal landscape.

For environmental anthropology, Usón’s approach is significant because, by describing social and material dynamics as assemblages, he moves beyond any dichotomous view of nature or environment. In doing so, he also demonstrates pragmatically how theoretical vocabulary can yield new insights in the empirical analysis of these fields, addressing urgent questions in disaster research and climate change.

Oliver D. Liebig, Editor of the Environmental Anthropology Series

Acknowledgments

As with every project, this research has been the result of diverse encounters. Interviews and conversations with people in the Callejón de Huaylas served as the basis for the ideas and arguments developed on these pages. But it has also been the product of informal chats over coffee, presentation meetings with colleagues, video conferences and personal experiences outside academia. Exchanges that, in one way or another, have shaped the arguments and results of this work.

I cannot begin this book without acknowledging the support of all the people I met in Peru over the years. The relationships I have developed in Ancash and Lima were fundamental to putting into words the incommensurability that disasters entail and the temporal arrangements they inaugurate. I am particularly grateful to all those who were willing to be interviewed for this research, answering my uneasy questions about earthquakes, floods and life in the Andes in general. Many people whom I interviewed were not only willing to support this research, but also wanted their names and stories to be known publicly. I tried to respect those wishes as much as possible throughout this work, while anonymising some of them when I felt that revealing their names might expose them unnecessarily. I hope they can see in this work a true recognition of their life stories and the realities they have shaped.

There are some people from Ancash that I cannot fail to mention in these acknowledgements. César Vargas Arces opened up his home and life in Huaraz and Pichiu San Pedro so that I could learn about the beautiful world of *Ancashino* Quechua. What I have learned from him certainly goes beyond any PhD research or academic endeavour. I am also extremely grateful to Rufa Olortegui and Macedonio Villafán for expanding my knowledge and interest in the guardian crosses and for treating me as a third son – the *tinku* of Tomás and José. Thanks to Jesús Gómez for his friendship and all the mountain stories, and to Mariluz Romero for helping me navigate the institutionality of flood risk management in Huaraz. Yuri Brahas Rea Benites, Yehudi Collas, Ayar Gustavo Escobar, Eugenio Morales, Randy Muñoz, Juan Quirós, Daniel Reeves and Fidel Rodríguez contributed to this work in diverse ways – by sharing with me parts of the Callejón de Huaylas' history or showing me the joys of a good cevichucho from El Calientito.

In Lima, I always found a second home with the Anicama Díaz family. I am deeply grateful to Giovanna for opening the doors of her house during my stays in Lima, and to Joel and Miguel for always giving me the best of times in the vibrant capital. Above all, my deepest thanks to Jahir for his invaluable friendship over the years, for making this project possible from conception to publication and for sharing all the mountains and glaciers of Peru with me. I could not ask for a better friend. Thanks also to Guillermo Salas Carreño for his valuable insights into Peruvian anthropology at the beginning of this research, to Yamina Silva for opening the doors of the Instituto Geofísico del Perú to me and to Joseph Feldman, Joshua Shapero and Noah Walker-Crawford for their support with contacts and recommendations in Lima and Huaraz. I am also very grateful to the Instituto Riva Agüero from the Pontificia Universidad Católica del Perú for granting me access to their superb archive.

In Berlin, the Institute of European Ethnology and the Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys) at Humboldt-Universität zu Berlin have been among the most vibrant working environments of which I have ever been part. I am deeply grateful to Ignacio Fariás for welcoming me to the Urban Anthropology Research Group (URBANT), for helping me to ask the right questions and for showing me novel ways of doing ethnography; and to Sharon Macdonald, for being part of this project, introducing me to the field of memory and heritage studies and her outstanding feedback during these years. Their support and guidance throughout the different stages of my research were fundamental to improving the content of this work. I am also grateful for the indispensable support I received from Humboldt University's administrative staff. Thanks to Wiebke Hampel, Kathrin Klementz, Jeanette Latino, Olof Krüger, Daniela Weber and Stefanie Weißmann for supporting my time at both institutes in every way.

The careful reading and support of many colleagues and friends have nurtured this work in immeasurable ways. I am particularly grateful to Ben Orlove, Rebecca Jarman, Anthony Oliver-Smith and Dave Morris for their reviews of earlier drafts of the manuscript, which substantially helped to strengthen the arguments and ideas expressed here. My deepest gratitude also goes to Melanie Garland, Sina Holst, Lisa Jöris, Indrawan Prabaharyaka and Irina Rafliana for their valuable feedback and discussions on time and infrastructure. Thanks to Juliane Dame, Malik Fercovic, Jelena Grosse-Bley, Sandra Jasper, Axel Klie, Oliver Liebig, Jörg Niewöhner, Tom Pekin, Ariane Phipps-Morgan, Tomás Sánchez Criado, Cécile Stehrenberger, Felipe Torres, Krystin Unverzagt and Zoey Weddige for their support – whether reading excerpts of this work, helping me with funding applications or simply for being a rock to rely on over these years.

This research would not have been possible without the generous funding of the Friedrich Ebert Foundation's doctoral programme between 2019 and 2023. I am

particularly grateful to Beate Eckstein, Kathrein Hölscher, Yvonne Plenckers and Barbara Nauroth for all their support with the administrative work during those years. The preparation of this book was funded in part by the Institute of Geography at Humboldt-Universität zu Berlin and the Berlin University Alliance's project 'Re-Scaling Global Health: Human Health and Multispecies Cohabitation on an Urban Planet', which provided me with the financial means to complete the final edits of this work. I am deeply grateful for this support, especially to Sandra Jasper, Ignacio Farías, Henning Nuißl, Barbara Richter and Barbara Kaun for making it possible.

If not for my friends and family, I may not have persevered during tumultuous times. Thanks to Andrés Benegas, Laura Schneider, Elisa Crocco, Max Telias, Mauricio Tapia, Luis Kliche, Maite Borda and Gonzalo Costa for their friendship and unconditional support. Without them, the skies of Berlin would certainly appear even greyer. Thanks to my parents, María Teresa and Rafael, and my siblings Rocío, Matías and Nieves for their love and encouragement to follow my passions and interests, even if that has meant being away from them. Thanks to Paula Kothmann, my second mother, for her support with the copy-editing of this work and for sharing her joy and love for the B-52s with me. Finally, thanks to Nina Bildstein for all the laughs, the intellectual exchanges, her invaluable feedback on this work and for always being there when I need her – especially in the most difficult moments.

This project has been marked by the effects of the COVID-19 pandemic in ways that I still have not fully grasped. When I was finally able to return to Ancash after two years of strict travel restrictions, I found that many people I met during my first stay in the country had passed away due to the virus. Others had died from other causes, in some cases equally dramatic. I dedicate this work to the memory of those who passed away during these years, especially Juan Benito Congo, Luis Beltrán, David Rodrigo and Alejo Cochachin. I truly hope that, by sharing the stories they asked me to tell, this work can be seen as a humble homage to all of them.

Note on Language

The work you are about to read was conducted mostly in Spanish. Almost all the interviews and informal talks conducted during my fieldwork were in that language, as were the notes I took from my observations. A few interviews were conducted in Quechua (Ancash variant), a language predominant in many places of the Callejón de Huaylas, and were later translated into Spanish with the help of César Vargas Arces and Viankor Cashpa. The interviews conducted in Spanish were transcribed by Maite Borda Labra, Francisca Figueroa Vidal and myself. I am deeply grateful to all of them for their support in this regard.

Working in a bilingual region presents some linguistic challenges. Many of the Quechua words used in daily life by a good part of the population have been adapted to Spanish and vice versa – what Carolyn Dean (2010) beautifully defines as a heterographic rather than an orthographic language system. The common plural form in Quechua, for example, is built with the suffix *-kuna*—e.g., *runakuna* for people. However, it is common to hear words like *huaca* (sacred entities and places) pluralised in Spanish as *huacas*, rather than *huacakuna*. I attempted to maintain the common usage of words as they are applied in their specific settings. Consequently, some Quechua words are pluralised with *-kuna* and others with *-s*, depending on the context.

Many of the quotations presented in this work are the product of informal talks that I captured in my notebooks. *Italics* are used where quoted passages have been recreated from my notes, which I tried to do in the most reliable and accurate way. Statements transcribed verbatim from audio recordings are set within quotation marks.

All translations from Spanish to English are my own, including interviews and informal talks, as well as books and also historical sources such as newspaper articles, technical reports, poems and songs. *Italics* are used in the main text to indicate words or phrases in their original language. Any errors in this regard are mine alone.



Figure 1: Huaraz, the cosmopolitan city
(Usón 2024)

Prologue

Andean Cosmopolitanisms

Huaraz, the cosmopolitan. So it is called. A city at the foothills of the Cordillera Blanca in the Peruvian Andes, shaped by architectural contrasts. Claybrick and concrete buildings of up to five storeys overshadow the few mudbrick houses that survived the passing of the years. It is a mixture of materials that coexist with the strident sounds emerging from a vibrant urbanity. Retail shops in the city centre compete with the shrill chorus of honking taxis and *combis*¹ by playing loud reggaeton and *huaynos*², while street vendors close to the main market sell their products on the narrow sidewalks of this excessively car-friendly city. Chocho³, bread, smartphone cases, perfumes, tamales – the public space screams for attention. Despite being a modest regional capital of no more than 120,000 people – a small town, compared to coastal cities like Chicla or the national capital Lima – it is a vivid place of contrasts, mixtures and encounters. The centre of the Callejón de Huaylas – the ‘first star in the horizon’ in Quechua.

Huaraz, Yungay and other cities of the Callejón de Huaylas – the region on which this book focuses – are places of overflowing newness. They are new cities, with new buildings and new inhabitants: new versions of old towns, clashing with their ancient histories. Contemporary Huaraz is very different from that described by Barbara Bode (2001, 30–31) 50 years ago: a city of a *nada* (nothingness), emerging from the rubble of a deadly earthquake that struck the whole region in 1970. Certainly, it is a different city than that idyllic Andean town remembered by survivors of the earthquake. The subsequent efforts of the Peruvian government to develop a modern urban project from its ruins led, perhaps, to a transformation characterised by unmanaged, excessive novelty. The longed-for beauty of the former colonial settlements, recalled as unique towns of white adobe houses and cobblestone roads, is

-
- 1 A common type of public transport in many Peruvian cities, comprising vans operated by private companies.
 - 2 A style of music traditional in several Andean countries.
 - 3 *Lupinus mutabilis*, a type of edible lupin bean.

now buried under cities of brick and concrete, honking cars and loud shops. Modernity won – partially, at least.

When talking with people from Huaraz, those survivors of the 1970 earthquake and those neighbours whose families arrived to rebuild the new city, one is continually confronted with ambiguous temporal definitions. Huaraz is neither modern nor traditional. Its past was obscured by a recovery process promising a modernity that never arrived. This city, struck by several extreme events in its history, has built its identity on devastation, loss and frustration. What developed was never as traditional as the previous city nor as modern as the promised one. Destruction and reconstruction are the source of this Andean cosmopolitanism that shapes the frustrated sense of belonging felt by its inhabitants.

Cosmopolitanism in Huaraz – and the Callejón de Huaylas in general – refers to something quite different than that modernist pulsation in which local history is ‘deterritorialised, universalised and future-oriented’ (Macdonald 2008, 133). The dream of a universalist moral capable of overcoming nation-states’ discourses (Levy and Sznajder 2002) seems to vanish here and is replaced, in the view of the survivors of the earthquake, by a place without tradition or a past that binds its inhabitants together. It is the city of disaster: an urban project, emerging from the destruction of 1970, that could never regain the beauty of its colonial architecture and past.

Radical transformations are not something new in the Callejón de Huaylas. Cities like Huaraz were founded on a colonial project that inaugurated a *pachacuti* (Quechua for cataclysm, or total upheaval), an ongoing catastrophe that imposed a world arrangement still present today. The colonisation of the Andean world created a spurious division between a native population, the pejoratively called *indios* (Indians), and the new settlers (Spaniards, later *criollos*) sustained by land usurpations, imposed conversion and all sorts of racial and territorial categories. Huaraz, the colonial, was transformed into the ‘civilised’ world, the world of God and the Crown, that would later be placed in sharp contrast to those higher lands of the Andes outside its rule – the ‘savage’ *sierra*. This opposition between the high and the low, rural and urban, would later find a temporal correlation: the backward and the forward, past and future, stagnation and progress. Yet, all these categories became contested by change and disruption, such as that brought by the 1970 earthquake.

Disaster, tradition and progress are a triad that occurs all too often in the stories of cities like Huaraz. Together, they refer to diverse forms of time: times of destruction, awaiting, recovery, hope and despair – sometimes in this order, sometimes all mixed up. The disasters that have befallen cities in the Callejón de Huaylas – the dramatic 1970 earthquake, but also disruptive floods as a consequence of melting glaciers in the Cordillera Blanca – have brought desolation and suffering related to the lost worlds, but also the expectation of wiping the slate clean. A *tabula rasa* for a new, orderly beginning. Efforts to foster future resilience, related in many cases to the dramatic consequences of climate change in the region, have brought new hopes

of modernisation that, at the same time, generated unexpected resistance from people who view with suspicion the new, old promises of development and controlling nature. Disasters led to feelings of stagnation and backwardness, together with the sense of an unwanted transformation resulting from a frustrated modernity: the times and rhythms of an idealised past and a frustrated future that coexist in that long and thin valley known as the Callejón de Huaylas.

Understanding the diverse temporal articulations emerging from these Andean cities shaped by disasters requires exploring the stories of loss and despair of people who have experienced the world coming to an end. However, it also requires inquiring into all the attempts at reconstruction and prevention that came after. It demands looking into the governmental projects seeking to rule and control the wild peaks of the Cordillera Blanca in order to prevent the past from repeating itself in the future. Yet, it also entails exploring the reactions that those projects provoke among the population. Understanding Huaraz and the cities of El Callejón necessarily implies examining the encounters that have shaped their history – between native and foreign, tradition and progress, stagnation and development, disruption and endurance – but also the history of those categories and figures. It requires looking into the dramatic consequences of encounters between extreme past events and projects of Andean urbanism, and the futures that those encounters elicit. Moreover, it demands analysing who is welcome in those future projects and who is relegated to live in the eternal past of an old world order. Understanding El Callejón's urban realities requires, as we will see, an examination of the compelling entanglements between disasters and time.

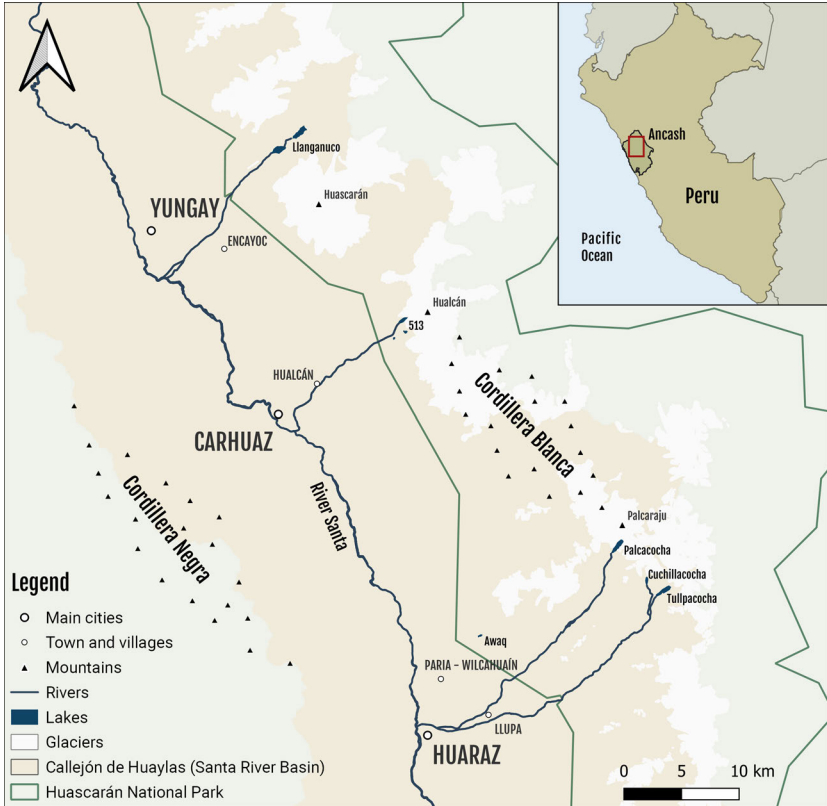


Figure 2: Map of the study area in the Callejón de Huaylas, Peru (Usón 2023)

Introduction

Remembering the future

How do disasters engage with time? This question, as odd as it may sound, is what this book explores. When dealing with catastrophes, we tend to address their relationship with time in a rather unproblematic way, assuming that disasters are moments or processes taking place, happening, accumulating *over* time – and contained within it. Yet, this conception of time as a fixed dimension containing reality, questioned due to the overly simplistic linear orientation that it portrays (Adam 1998; Bear 2016; Sharma 2014; Jacobsen et al. 2020), impedes exploring the concrete ways in which time and temporalities are arranged amid disasters. Can we conceive of the relationship between them otherwise? What do disasters have to tell us about the articulation of time?

Questions about the temporal rhythms of disasters occur today amidst ever-increasing concern: the projection of an uncertain future, in both its short- and long-term forms. The obsession with the forthcoming nowadays escapes from the modern outlook in which those days to come were a source of inspirational progress – a ‘horizon of expectation’ (Koselleck 2004) that opened as an undetermined, but present, future of possibilities. Our times respond more to existential questions concerning an uncertain tomorrow defined by existential dread. For authors like Daniel Levy (2016), this lack of hope for the future relates directly to the weakening of the modernisation project based on the idea of progress – completely in line with ‘the ontological security once provided by nation-state narratives’ (Levy 2016, 5). Similarly to Ulrich Beck (2006), Levy affirms that catastrophism has given rise to a temporal epoch that is overcoming the previous traditional (mythical), religious and political (national) time strands (Gross 1985). The current epoch, which Beck and Levy (2013) define as a cosmopolitan – yes, as in Huaraz – reconfiguration of society, has inaugurated a period of fragmented times lacking a dominant, hegemonic conception of temporality and future prospects. The global trends imposed by the unintended side-effect of modernity are displacing the homogeneous national time and opening space for a cosmopolitan outlook that lacks the guarantees that national projects provided. This movement, Levy affirms, would be behind the disentanglement of

the temporal constructions sustaining our experienced times: a current past 'whose events have been incorporated and remembered' (Koselleck 2004; in Levy 2016, 4) and a horizon of expectations that enables us to *remember the future* and to anticipate it. It is an epoch in which the past seems to have lost its exemplary utility and the future is shaped by the unknown, Levy concludes.

These temporal redefinitions are particularly relevant for cities in the Callejón de Huaylas and their frustrated urban project emerging from both the ruins of disasters and a failed modernity. Neighbouring the Lima Department to the south, La Libertad to the north, Huánuco to the east and the Pacific Ocean to the west, the department of Ancash covers more than 35,000 square kilometres from the Pacific coast to the Andes, with a total population of more than one million. Two-thirds of the region are located in the Andean *sierra*, divided between the Huaylas and Conchucos valleys. The former, also known as the Callejón de Huaylas – literally 'Huaylas passage' due to its long and thin shape – is an Andean interior basin surrounded by the Cordillera Negra to the west and the Cordillera Blanca to the east. The Santa River runs almost 200 kilometres along El Callejón until reaching the Pacific Ocean further in the coastal areas of the department. More than 350,000 people, around one-third of the department's population, live along this narrow but long valley concentrated in its main cities: Ancash's capital Huaraz, Yungay, Caraz and Carhuaz.

Located in the foothills of the mountain range with the highest concentration of tropical glaciers in the world (Vuille et al. 2008), the region has been experiencing the dramatic consequences of climate change for almost a century. A phenomenon known as glacial lake outburst flood (GLOF), triggered by the collapse of mountain lakes formed after glacial retreat, has occurred in the zone several times in the past decades. The weakening of the ice sheet in the Cordillera might also have been a factor in a massive avalanche, triggered by the 1970 earthquake, that buried entire villages and cities. It is a region that has been forced to coexist with climatic transformation and disruptive events.

Cities like Huaraz, part of a larger constellation of colonial settlements in the region, lament their lost past while aspiring to development that is yet to be realised. Authorities in the Callejón de Huaylas are engaged in massive efforts to develop appropriate strategies for coping with the uncertainties that climate change brings to cities in mountain regions, which are among the most vulnerable areas to the climate crisis worldwide (Messerli et al. 2004; Viviroli et al. 2007; Milner et al. 2017). But in many cases, the promises of modernity that those efforts bring seem to conflict with practices that are not rooted in the scientific realm. In the Callejón, ancient forms of relating with the mountains, unrecognised by modern politics, sometimes clash with authorities' efforts to control nature and its disruptive forces. The aspirations of lowland urban settlements for entering the modern era have supposedly been frustrated by the unwillingness of an allegedly uncivilised highland population

to move away from archaic lifestyles. While romanticised as belonging to an ancient past that provided the nation with historical depth and tradition, the rural world is also portrayed as stagnant and hindering the progress of the urban world. This tension – a rurality valued as an expression of the past but rejected when it comes to building a modern present – is a crucial element of the cosmopolitan Andean city: places where the past has been lost, and the future seems to be marked by the arrival of rural actors living in a stagnant past.

Huaraz, like other cities in the Callejón de Huaylas, is in this permanent state of tension: willing to preserve a lost past buried by earthquakes and floods, while preparing for an uncertain future jeopardised by the backward lifestyles of their rural counterparts. In this tension, a whole world seems to be relegated to the impossibility of cohabiting in the future. Thus, it becomes fundamental to ask what remains hidden under these new global regimes; those world configurations that, in the words of Marisol de la Cadena (2019), are the not-seen of the Anthropocene. This question does not aim to neglect the existence of the cosmopolitan view amid global risks, but to think about how this new outlook might seem to be contested at different levels and in diverse realities by forces that appear to be excluded from the official history of the past and projections towards the future. It is a question about historical divergences made invisible in time, but also about future constructions neglected by the political arena – all this in a scenario of high uncertainty due to the catastrophic consequences that extreme events can have for the creation of common urban projects.

This book examines these tensions through the ecologies that sustain disaster events over time. It seeks to understand how disasters produce forms of past, present and future, by inquiring into the vast set of practices and materialities sustaining those temporal arrangements – as well as the contests they can arouse. By analysing what I later define as temporal ecologies around places and devices of memory and future-making, including memorials, archaeological sites, construction materials and early warning systems, this work explores the plural – and sometimes conflicting – forms in which past, present and future coexist with disasters. With this goal in mind, I seek to analyse how disasters – as both virtual and actual arrangements, as semiotic and material things – are articulated in, for and across time.

Based on my ongoing research in the Callejón de Huaylas that began with my PhD project almost ten years ago, this work seeks to explore how disasters, in their past and future versions, have (re)configured urban environments in the Callejón de Huaylas. It is an effort to analyse what sorts of transformations those temporal exercises have produced in the Andean cities of Ancash, and at what expense. The work takes as a starting point the news about a group of *campesinos* (the Spanish word for farmers, or ‘peasants’), or, more specifically, *comuneros* (members of *campesino* communities), that destroyed an early warning system installed close to Mountain Lake

513 in late 2016 (Cecale 2017; Miroff 2017). Those sources suggested that *comuneros* accused this foreign technology of intentionally ‘blocking the rain’ and inhibiting its fall, which was claimed to underly a severe drought affecting the region in the previous year. However, stories around this incident left the same central question unresolved: How is it possible that local inhabitants developed such an explanation in the first place? What stories might have related the prolonged period of low rainfall with this newly inaugurated technology for warning the population about GLOFs that had impacted and threatened cities in this region several times in the past? By taking this case as an initial moment of inquiry, this work considers the conflictive encounters – which I further conceptualise with the Quechua word *tinkuy* (‘gathering in the difference’) – that modernisation impulses have brought to the region, together with the reactions of an urban world feeling threatened by an ungoverned highland rejecting what is regarded as a national civilising project.

Despite the fragmentation inaugurated by the cosmopolitan epoch, and the apparently unentangled way in which past and future seem to operate nowadays, the recall of the past and the construction of the future under uncertain times allow the possibility of exploring how entangled the practices of past and future production may become amid disasters. Unfolding these connections can reveal how arrangements around disasters and time are entwined in ways that are often overlooked. Disasters result from the accumulation of sufficient tension to trigger disruptions that require response and decision making. A myriad of choices and pronouncements are necessary for a return to normality – to how things were. In the past. Towards the future. Decisions about reaction, recovery and adaptation, to avoid similar situations amid further extreme events, requires a massive amount of preparation and response involving several temporal assumptions. This temporal location of disasters is, at the same time, defied by their unbearable scale. Disasters elude any foreseeable attempt to estimate the magnitudes of future events. Once disasters happen, they occupy our minds and thoughts for days, months and years afterwards. They remain there as immutable, unbreakable things, reminding us of former modes of existence that we can no longer recover. All the things we lost. All the victims who perished.

This temporal tension that originates with disasters will be the starting point for my theoretical approach, which I conceptualise in the next section under the notion of temporising assemblages. Based on this concept, I argue that disasters make us think of time because they produce it.

Assembling disasters

Tensions shaping the ambivalent linkage between disasters and time seem to originate from a still-ongoing debate in the field of risk and disaster studies. In their

already classical definition, disasters have been commonly conceived as events and/or processes (Oliver-Smith and Hoffman 2002) leading to the dysfunction of networked systems (Fortun et al. 2016). As events, they are portrayed as eruptive situations *taking* – or disruptively occupying – place in a specific moment. As processes, moreover, they are commonly defined as the accumulation of environmental and societal tensions during a particular period. The first definition places the occurrence of a triggering event – the hazard – as the primary explanation and cause for disruption, whereas process-based approaches to disasters have focused on the levels of vulnerability that exposed populations can show, emphasising the ‘unnatural’ and rather socio-political nature of disasters triggered by events such as earthquakes or floods.

Despite how influential event- and process-based approaches, commonly defined as the hazard and vulnerability paradigms (Gaillard and Mercer 2013), have been in developing a rich field of disaster and risk studies, both positions present limitations. Hazardist approaches, such as those promoted by positivist, technocratic positions, run the risk of ‘naturalising’ disasters (Guggenheim 2014) as objective events that can be avoided, prevented or coped with; situations that take place ‘outside’ the norm and, thus, external to society. An uncritical approach to disasters obscures the inherently social nature of catastrophes, placing excessive attention on the strategies that can be followed to avoid external forces impacting exposed areas. The focus here is on exposition, rather than the underlying conditions or internal configurations that produce it.

Critical perspectives emerging from the vulnerability paradigm, moreover, risk neglecting the material conditions of disasters when considering them as simple analytical or rhetorical devices. Scholars have increasingly come to emphasise the discursive condition of the notion of disaster, sometimes even neglecting that such a concept has a real material counterpart. ‘There are floods and earthquakes, wars and famines, engineering failures and economic collapses, but to describe any of these things as a disaster represents an act of interpretation’, suggest Andy Howoritz and Jacob Remes (2021, 1). The idea behind this argument is that notions of disaster would not comprise first-order observations but rather distinctions, forms of classifying reality following a concrete political purpose (Bond 2013; Fortun et al. 2016). Arguments around this idea are certainly justified. Authors have argued against the openly colonialist ethos behind the modern notion of disaster, founded on an explicit and artificial society–nature division (Gaillard 2021). It is a categorical distinction that evidences how our ‘epistemological approaches reflect the hegemony of Western, Eurocentric discourses on disaster. So hegemonic that they have become common sense’ (Gaillard 2022, 14). Thus, the argument at hand is that disasters are, after all, simple analytical conceits, ‘interpretive fictions’ (Hagen and Elliott 2021) with a concrete history and genealogy, and that their implementation obeys specific

political agendas ranging from militarism (Davis 2007; Masco 2014; Orsini 2022) to neoliberal shock doctrines (Klein 2008).

It is clear that any of these critical positions aim to relativise the consequences of disaster-alike contexts. They are not putting into question the pain and suffering of victims or neglecting the practices articulated around the concept. As Horowitz and Remes (2021, 4) suggest, ‘we do not claim that how disaster is constructed or defined does not matter. On the contrary. The consequences of “disaster” as a belief are made real in the distribution of sympathy, material resources, and state power’. However, there is a clear analytical risk when proposing that disasters are conceits or beliefs, simple products of colonial history; and, as such, a concept that we could – or should – ultimately get rid of. Giving up on the notion of disaster and its real, ontological existence is to relinquish the analysis of how such a fundamental concept is enacted and articulated in practice; how the existential threat it aims to portray is embodied in institutions and risk plans but also in survivors and the exposed population. Disaster can be a concept, but its ontological condition transcends the combination of letters the words offer. Moreover, statements aiming to denaturalise disasters, emphasising the societal conditions creating them, can lead to another big question: ‘If disasters in X location are not natural, then what are they?’ (McGowran and Donovan 2021, 4).

Recognising the tension between the material and semiotic nature of disasters opens up an interesting perspective by which to explore not only how disasters as a concept are constructed – or, in its other variant, how disasters as external forces affect a pre-established social regime – but mostly how they lead to (re)configuring the social. Here, the notion of assemblage, specially referred to its urban application (Amin and Thrift 2002; Farías and Bender 2009; Farías 2011a; McFarlane 2011), becomes particularly helpful in exploring the mutual influence that disasters have on the configuration of settlements such as cities, and the ways in which cities also shape and reshape our understandings of disasters. Conceived as the meshwork of multiple and heterogeneous urban projects (Farías and Blok 2016), cities as assemblages emphasise the open-ended entanglements among materials, relations, knowledges and engagements configuring urban articulations. It includes large-scale geological and climatic forces within extensive urban assemblages as elements that facilitate – and restrict – their constant expansions and transformations. Disasters, from this perspective, operate as concrete arrangements within the vast entanglement of versions composing the urban as a project, emphasising the permanent processes of destruction and reconstruction that urban environments experience throughout their history. As Elizabeth Angell (2014, 676–77) suggests, ‘cities are always falling apart, burning down, flooding, crumbling; they must be continually shored up, repaired, stabilised, renewed. It is partly through the material politics of such processes that the city is assembled anew’. As disruptions, disasters are part, not an exception to, the urban composition – ‘an actualisation of one of many pos-

sible futures of an assemblage of expressive and material components' (McGowran and Donovan 2021, 8). And a very important one.

As assemblages, disaster reveals both the actual conditions leading to a specific disruption – the here-and-now at a given spatiotemporal scale – and the enunciations making sense of that disorder and extrapolating it to future scenarios of political control and management. This distinction between the material and expressive nature of disasters strongly resonates with what Gilles Deleuze and Felix Guattari (1987) differentiate between machinic and enunciative assemblages – not as ideal types but as elements composing them. For the authors, the machinic assemblage denotes the actual conditions of a socio-material arrangement. It refers to the mechanical entanglement 'of bodies, of actions and passions, an intermingling of bodies reacting to one another' (Deleuze and Guattari 1987, 88). Enunciative assemblages, moreover, are defined as diagrams: a set of relations defining and structuring the space of possibilities of an assemblage – i.e., 'incorporeal transformations attributed to bodies' (Deleuze and Guattari 1987, 88). Both machinic and enunciative roles respond to two different limits of assemblages: 'The system of strata and the plane of consistency' (Deleuze and Guattari 1987, 337). Enunciative diagrams control their machinic counterparts; societal control and order could not occur without them. But such a diagrammatic – or cartographic – effort requires a socio-material counterpart – its strata – to operate. Without it, concepts like disaster are simple empty formulations.

This equation between mechanical and enunciative operations ultimately allows disasters to be actual stages and interpretations. As events and processes operating simultaneously, disasters can be described as becoming: an event in-the-making that leads to processes of identity destabilisation and (re)stabilisation – known by Deleuze and Guattari as de- and re-territorialisation (DeLanda 2006, 12). As soon as disaster risk is named and defined, it is turned into a diagram, a virtual possibility. As soon as it is accepted – i.e. observed or determined – as such, it is turned into a machine, an actual singularity. In other words, what the distinction between the machinic and the enunciation allows is to set the analytical and normative nature of disasters: what disasters (apparently) *are* – based on the socio-material arrangements leading to a specific situation to be considered disastrous; and what disasters potentially *could* or *should* be – based on the tacit impulses of political control aiming to turn disasters into a source of progress, crisis normalisation or stagnation.

Considering disasters as assemblages – an event in-the-making – leaves, however, a central question unresolved: How to deal with time and the temporalities making sense of it in the first place? Mostly, what role do disasters play in understanding time as an ontological dimension and a historical event? Disasters, as Cécile Stehrenberger and I suggest elsewhere (Usón and Stehrenberger 2021; 2025), are temporising arrangements that help us configure what we understand by events and processes across time. Time, based on an assemblage perspective, is neither a pri-

mary phenomenon, a given abstract dimension nor a measuring unit. It is instead an emergent property of assemblages produced by their shifting and changing nature (Crellin 2020) – the consequence of the re-alignment between entities and the displacements that those alignments elicit. Whether as a lived experience or as a measurement of instruments like clocks and calendars, ‘bodies that have the strange peculiarity of remaining fixed through motion’ (Latour 1997, 180), time as difference enables us to reflect on the entanglements that diverse materialities and practices marking the passing of time may elicit. Disasters, from this perspective, are moments in which time emerges as a property and category, an intrinsic component of their operations that, at the same time, allows us to make sense of the massiveness that disasters entail. In line with their machinic condition, disasters are arranged in time, massive arrangements situated within the flows of history, following their mechanical condition of complex entanglements. But they are also temporising devices, something that we invoke to make sense of their consequences: the lost past; the frustrated future; the temporal suspensions; waiting and accelerations.

As temporal articulations, disasters are semiotic and material arrangements (Law 2008) that, albeit chaotic, lead to certain forms of order. The idea that disasters are not only an anti-stage but arrangements that participate in the constant reassembling of the cosmos – whether in its urban (Angell 2014) or other versions – is strongly supported by the assemblage thinking promoted from diverse disciplines and perspectives related to this field of study (Donovan 2017; McGowran and Donovan 2021). As assemblages, disasters are conceived as one among many cosmopolitical arrangements (Latour 2004; Stengers 2010) – a politics of world-making that does not just challenge the idea of a common world of value orientations but also the idea of a common natural physical world. This perspective defines politics as an always precarious, incomplete and conflictive process of bringing together, arranging and articulating entities and relations in common worlds of cohabitation (Fariás and Blok 2016). When conceived as assemblages, disasters are a form of collective social experience by which the agency of the material world gains a particular relevance – ‘for it is especially “when things strike back” (Latour 2000) that we are abruptly confronted by the force of those things ... as active participants in the making and the unmaking of social worlds’ (Angell 2014, 668). The disruption that accompanies a collapsing material world allows us to reflect more than ever on how politics is not only about discourses but mainly concerns the complex entanglement sustaining those material orders. It is in the collapse of those arrangements that new versions of the world emerge – an interregnum that, paraphrasing Antonio Gramsci, can also be the time for ‘new monsters’ to appear.

Whether as ruptures or exaggerated continuations of the normal, ‘the disaster itself is noteworthy for its capacity to produce a particular kind of politics’, affirms Michael Guggenheim (2014, 6). In tune with this argument, I suggest that one of the pivotal forms of political arrangements that disaster arouses is that related to

the temporal ordering of the world. The machinic and enunciative characteristic of disasters positions them as temporal singularities located in and for time, but also temporising agents producing those times. However, the types of temporal configurations that disasters entail are strongly defined by the component and relations making sense of disasters in the first place. Dealing with disasters as temporising assemblages is mostly a methodological and analytical tool that enables us to explore in better ways places where disaster – as a state and concept, as a material arrangement but also as a semiotic construct – fulfils a pivotal role in the articulation of societies across time. Thus, if previous works have expended effort in thinking through the Anthropocene (Clark and Szerszynski 2020) and like a climate (Knox 2020) to explore how we can revise the ways in which we reconceive the social amid planetary change, this book is an invitation to explore how can we think with and through disasters over and about time; how such an elusive concept allows us to think about the ways the world is recomposed in multiple levels; and who is considered as a legitimate actor for those recompositions.

A cracked Andean region

Disasters have marked the past, present and future of the Callejón de Huaylas in multiple and heterogenous forms. The extreme events that the region has endured have produced a profound sense of permanent disruption that its inhabitants have experienced over generations.

Callejón de Huaylas is characterised by its rugged, mountainous landscape and idyllic beauty. Cordillera Blanca's astonishing *nevados* (*rajus* in Quechua: snowed peaks), attract thousands of tourists annually – mainly during the dry season between May and October. The Huascarán, Peru's highest mountain with almost 7,000 metres above sea level, has been a key destination for mountaineers and scientists from all over the world since the first Andinist expeditions at the beginning of the twentieth century (Carey 2012; Carey, Jackson, et al. 2016). Exploratory missions over the Cordillera's main peaks gave Ancash a world-renowned reputation, turning the Cordillera Blanca into 'the country's leading site for mountaineering, a playground for European and North American climbers' (Carey 2012, 109) in the following decades. Its exceptional scenery, unique mountain ecosystems and massive ice bodies led the Peruvian government to declare the Cordillera Blanca one of Peru's first protected areas, creating the Huascarán National Park in 1975. Representing almost two-thirds of the Callejón's de Huaylas extension, since its creation the park has sought to balance natural conservation with local production and rural development (Barker 1980).

Despite its astonishing beauty, the Cordillera Blanca' geomorphology is also the region's main threat. Callejón de Huaylas' irregular topography makes the region

highly exposed to extreme events, including flooding, landslides and avalanches. The most lethal of these hazards have been GLOFs, a phenomenon directly related to the dramatic consequences of climate change in the region over the last century. Studies have shown that the glacial area of the Cordillera Blanca has shrunk by nearly 40 per cent in the past 60 years (INAIGEM 2018) – an accelerating trend in tune with the massive glacial loss that the country has experienced in recent decades (UGRH 2014). Besides the expected critical consequences for water storage (Baraer et al. 2012), glacial retreat has also led to the formation of hundreds of mountain lakes over the glacial beds, in many cases sustained by unstable moraines left by the same glaciers feeding these new water bodies. The combination of large volumes of water accumulated over the years and a weak morainic dam can lead to catastrophic flooding, triggered by calving – in which large pieces of ice or debris break into the water, producing massive waves that can lead to the collapse and further outburst of the lake (Emmer and Vilímek 2014).

Glacial-based events, which include GLOFs and avalanches, have occurred several times in the Cordillera Blanca with severe consequences. According to Mark Carey (2010), at least 30 extreme events have been recorded in the region's history. The list includes a GLOF that impacted and buried a considerable part of Huaraz in 1941, and an avalanche from Huascarán, triggered by the 1970 earthquake, that buried cities such as Yungay. Nowadays, 40 lakes located in the Cordillera Blanca have been identified as susceptible to possible outburst floods (Emmer et al. 2016), including Lake Palcacocha and Lake 513 that could overflow onto the cities of Huaraz and Carhuaz respectively, putting at high-risk the inhabitants of several towns and villages, together with livelihoods and infrastructure. Outburst floods and avalanches are expected to increase as glaciers keep retreating, and more than 200 sites with overdeepened glacier beds have been identified, where new lakes could form (Colonia et al. 2017).

The consequences of these extreme events have marked Ancash as a catastrophic region, defining perceptions of the region throughout Peru. Added to the several thousand victims of GLOFs (Carey 2010) are the nearly 70,000 deaths and almost a million victims of the 1970 earthquake and avalanche – numbers that are constantly repeated among *Ancashinos* and people from other regions. *El terremoto de Ancash* (Ancash's earthquake) is a moment that marked a before and after in the country's history – especially for developing a robust nationwide system for disaster risk reduction and preparedness. It is an event taught in history classes at schools, and its anniversary on 31 May is commemorated as Peru's Disaster Prevention Day – with a minute's silence observed in memory of the victims, and earthquake drills taking place nationwide. As in any other cases of massive violence and tragedy, such as instances of genocide and human rights' violations (Bernasconi et al. 2022), numbers operate as a seductive means of mobilising public concern around this event. I found myself several times giving estimates of the 1970 victims as a form of quantifying

the magnitude of the disasters in the region – and hence justifying the relevance of my research. It is a strange way of honouring those lost lives – with numbers, functioning paradoxically as something ‘necessary and complicated, reparative and dehumanizing’ (Nelson 2015; in Bernasconi et al. 2022, 3). But it is also a form of developing what Sharon Macdonald (2013, 40) defines as ‘number sickness’ – magnitudes that can produce a dizzying effect while validating suffering only because of its superlativeness.

The destruction caused by these events has left deep feelings of loss and dispossession among the region’s population, driven not only by the loss of homes and human lives but also due to subsequent radical transformation fostered by diverse political reforms. Both the 1941 flood over Huaraz and the 1970 earthquake were moments that led to deep urban and institutional changes aiming to modify the relationship of Ancash’s Andean cities with geological and climatic forces. They were also conceived as perfect moments to instigate radical transformation of the old Andean order. Particularly relevant in this regard were the reforms pushed forward after the earthquake in 1970 by the revolutionary government of Juan Velasco Alvarado, a left-wing military regime that aimed to radically transform Peruvian society by eliminating social injustice and redistributing wealth. Velasco Alvarado’s regime saw the disaster as the perfect scenario through which to implement an ambitious recovery plan seeking to make Ancash a model region for the whole country. Policies included the modernisation of main urban settlements and the redistribution of urban lands that, at hand with an ambitious agrarian reform, aimed to provide marginalised groups, including *indigenas* and *campesinos*, with land titles to halt centuries of exclusion and precarity.

The radical transformations brought about by both extreme events and Velasco Alvarado’s reformist efforts led to the emergence of new urban realities that challenged the rigid urban–rural divide that was established by the colonial project and rooted in a territorial system of racialisation and exclusion. The dramatic consequences of the earthquake, combined with the promises of building a new society from the ruins it left behind, triggered an important migration movement of people from rural areas willing to rebuild their lives in the cities. Nowadays, almost 50 per cent of the population in cities like Huaraz self-identify as Quechua¹ – compared to 40 per cent that consider themselves *mestiza* and only three per cent white (Branca and Haller 2021). These transformations, however, were highly contested by urban residents, who saw in the changes of the old colonial cities a dramatic loss of their

1 In the strict sense, Quechua is not an ethnic group in Peru but a language family, one of the most widespread throughout the Andes and South America. Quechua presents significant differences across its areas of influence, with diverse regional variations. In Ancash, specifically in the Callejón de Huaylas, the spoken variety is Ancashino or Huaylas Quechua, which belongs to the Central Quechua family.

traditions and heritage. The Quechua population is still considered as outsiders, a foreign group that arrived only after 1970 and changed the city's identity forever. Migrants of rural origin, together with groups that arrived from other parts of the country, are considered responsible for the new urban constructions of concrete and brick that end the traditional order rooted in centuries of colonial rule. These new urban inhabitants will inaugurate, under the eyes of old residents of cities like Huaraz, what we at the beginning presented as *la ciudad cosmopolita*: urban settlements comprised of migratory groups that came after the event, and employed a multitude of construction materials and architectural techniques.

Besides urban transformations, many scientific studies and engineering works have been conducted to evaluate and reduce the risk of glacial events in the region in recent decades. The combined efforts of scientists, engineers and mountaineers, together with the creation of state offices and corporations, have led to the development of diverse projects to mitigate the possible consequences of outburst floods from unstable lakes, including dams, flood barriers and drainage systems (Carey 2010). Moreover, different types of devices have been placed close to the sources of danger to assess anomalous events at glacial lakes. Instruments such as early warning systems, meteorological stations, video cameras and communication systems have been installed to warn of extreme events and give downstream populations enough sufficient time to evacuate exposed areas. As we will see in this book, the politics and programmes developed as a consequence of these events will have significant resonance for the creation of Peru's current disaster risk reduction system, and international significance on many levels. Research conducted in the Andean region, which has experienced disasters throughout its history, has led the development of direct interventions for emergency response worldwide, and theoretical approaches to studying disasters that remain relevant today.

Despite their relevance for preparedness plans amid outburst floods, technological devices have also been a source of disputes and controversies. The destruction of the early warning system installed close to Lake 513, a lake so newly formed that its only name references the number of the melting glacier that feeds it, is not an isolated event. Over the decades, local communities from the upper lands of the Callejón de Huaylas have attacked and destroyed scientific equipment in different areas and installed for diverse purposes, including meteorological monitoring and risk assessment. Groups of inhabitants from the highlands have even intercepted and expelled scientific excursions working in the Cordillera Blanca while accusing them of being behind the installation of those instruments. As we will see in Chapter Five, there are various reasons behind these attacks, including allegations that some devices were blocking the rain, but also associating instruments with unwelcome mining projects seeking to explore and exploit new deposits close to highland villages. Others have linked the assaults to efforts by local leaders to position themselves within their communities by creating a common narrative against an exter-

nal enemy. Irrespective of their motives, all these stories have ultimately reinforced a division shaping the social configuration of regions like the Callejón de Huaylas: a rural Quechua population living in the highlands, repeatedly accused of being uneducated and driven by superstitions and primitive beliefs, versus an urban *mestiza* population from the lowlands, associated with a modern, civilising project.

Extreme geoclimatic events and the conflictive relationship between the highlands and lowlands are processes that have brought changes not only in the composition of groups inhabiting those lands but also entirely new forms of relationship with the territory. As Mathias Rasmussen (2015) suggests, previous relations with earth entities such as mountains and lakes, fundamental for the cosmopolitical arrangements in the Andes, will slowly be replaced by government territorial structures and resource management entities, 'a complex institutional and bureaucratic reality in which *comuneros* must navigate' (Rasmussen et al. 2019, 6). But instead of eliminating the historical categories that shaped the relationship between highland inhabitants and the lowland population, those transformations came, as we will see, to reinforce them by installing the idea of a social group incapable – and unwilling – to deal appropriately with those political changes.

Encountering difference: tinku of figurations

As with any other region shaped by colonialism, the history of the Callejón de Huaylas is one of encounters and conflicts. It is a history marked by violent clashes, exclusion and discrimination – by dispossession, forced religious conversion and genocide. The region's past entails stories of struggles between social groups that, with the passing of time, create new forms of distinctions – new figurations – while retaining the old ones as sediment accumulating over the years, like the debris dragged by floods over the Andean valleys across time. The dramatic encounters experienced in the region – both extreme geological and climatic forces erasing entire villages, as well as the instauration of colonial rule over native lands – will also be followed by other forms of synergies, tensions, discrepancies and resistances. The reconstruction of cities after extreme events will be the scent of strong disputes between progressist governments aiming to push forward modernisation plans, and a local urban population opposing what is conceived as the cosmopolitan impulse – the opening of the old colonial cities to foreign migratory groups. Strategies for anticipating the possible consequences of climate change in the region will also be contested by local inhabitants who view the installation of foreign infrastructure as a direct threat to their environments. The notions of progress and tradition, modernisation and preservation, change and continuity will be constant sources of tension in these encounters.

The encounter as a historical moment has certainly shaped the identity of Peru as a nation – the encounter of worlds, traditions and cultures. It is an attitude towards history that, although problematic due to the inextricable essentialisation it commonly creates, has been pivotal for the articulation of a national identity based on a hybrid synthesis – ‘a plain result of the biological or cultural “mixture” of two (formerly discrete) entities’ (De la Cadena 2005, 262): the *indio* and the *criollo*. Whereas in some cases the expression of these encounters has been related to a syncretic harmony, embodied ultimately in the figure of the *mestizo*, authors such as Antonio Cornejo Polar (2003, 89) instead suggest that these encounters have inaugurated a transcultural existence based on precarity and exclusion – a ‘forced, difficult, painful and traumatic cohabitation’. This view of the encounter as a moment that highlights the conflict – rather than the union – relates to what Mary Louise Pratt (1991, 34) defines as contact zones: ‘Social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power, such as colonialism, slavery, or their aftermaths’. Encounters as contact zones are, in the words of Anna Tsing (2004, 4), forms of friction: ‘The awkward, unequal, unstable, and creative qualities of interconnection across difference’. They are moments of strict domination, but from where new political arrangements emerge – sometimes as a form of subordinated resistance against the dominant culture.

The disputes between the different groups in the Callejón de Huaylas, which have shaped efforts to manage and reduce the risk of outburst floods in the region for decades, exemplify the diverse figures endowing the stories behind disasters, as moments of encounters, with historical thickness. An exploration of the ecologies shaping the semiotic and material composition of disasters in relation to time, in this sense, necessarily requires analysing those figurational practices behind the efforts of disaster recovery and risk management in the region – the notions of lowlands, highlands, of *mestizo*, *criollo*, *indio* and *campesino*, to name a few. A historical approach to the entanglements of time and disasters, in this sense, invites exploration of how these figures have come to characterise the local constructions and expressions of the disaster; how the disaster, as a semiotic-material arrangement, is also *configured* by figurations: practices that, by giving form to certain figures, sketch the contours of society. The figures emerging from such exercises may convene but also divide: figures of victims and heroes, as we will see in Chapter One, together with the figures of an urban population feeling itself *invaded* by a rural mass.

Calling upon the history of concepts, categories and figures around disasters through specific places and objects, this book explores the actual condition of historical figurations (Haraway 2018): how current circumstances can be explained by the histories and futures they contain. Following Anna Tsing’s (2010) suggestion, it is an effort to incorporate both the figurations that the ecologies of practices and materialities enact around disaster temporalities – in line with the Latourian project of actor-networks – but also the incommensurable worlds in their past and future ver-

sions in which those figurations take part – in tune with Marilyn Strathern's anthropology of juxtapositions. In the words of Tsing (2010, 20), 'we cannot understand the figurations of our actors without engaging with parts and wholes. Even where they do not include each other as significant figures, the worlds they spin are revealing for what they leave out'. Juxtaposing wholes and parts, thus, enables us to explore the connections – 'the proximities in space and time' (Strathern 2005, 54) – between the heterogeneous pasts and futures to be found in El Callejón; the continuities that the figurations present as well as the ruptures they portray.

Here, I return to the story that operates as a starting point for this work: the destruction of the early warning system installed close to Lake 513. Rather than a simple anecdote, this initial conflict offers a methodological opportunity to inquire into the controversies emerging from the history of disasters and risk management in the region. It is an encounter between positions that unveils – or better articulates – differences with a historical thickness and based on figurational practices configuring past and future. As a controversy, the destruction of the early warning system can problematise objectual, epistemic and institutional arrangements, making visible the vast network of materialities and practices that configure what is assumed as normal and what is not (Tironi 2014). It is a moment where, paraphrasing Rebecca Jarman (2023b), the dominance of a single, universalising explanation of the problem is refuted, opening the floor for an ontological dispute that, eventually, can lead to new forms of negotiation and diplomacy (Latour 2004).

Although the destruction of the early warning system is indeed a central ethnographic moment through which to study controversies around past and future disasters, during my fieldwork I also came across many other situations in which those historical tensions emerge. Places and things enabling encounters where past and future disasters were evoked with their enunciative power, but also cases where the material consequences of past events were dramatically exposed. Inspired by that first conflictive encounter revealed by the destruction of the early warning system, I came to depict other moments in which disasters emerge as a matter of temporal concern but eliciting different sorts of cosmopolitical disputes: the encounter of historical figures shaping the practices of memory around the 1970 earthquake and avalanche; a memorial built over the buried city of Yungay to commemorate its victims while excluding other *unwelcome* actors; an archaeological site in Huaraz and the citizen efforts to protect it against foreign invaders; the construction materials constituting cities in the Callejón, and the changes and endurances they elicit; and the protection against flooding provided by other types of entities, including guardian crosses located over the Cordillera Blanca's heights. All these things and places operate as controversial gatherings at which historical figurations emerge, where memory is produced, contained and protected, but also devices used to face an uncertain future. Situations in which heterogeneous positions about the fate of the Callejón clash. Arrangements that produce certain forms of temporal stages,

defining who can join those different versions of past and future and who cannot. By analysing all these places and devices, in this book I inquire into the controversies that different versions of the past and future can elucidate in concrete situations when facing the dramatic consequences of disasters over time.

Interestingly, there is a very accurate concept in Quechua to define what I am trying to express here – that ‘violent harmony’ (Stobart 2006) characterising the rugged encounters shaping the Andean worlds: the notion of *tinkuy*, roughly translated as ‘to encounter in the difference’. A *tinku* (as a noun) can refer to festive fights and choreopolitical dances (Stobart 2006; Van Vleet 2010; Cortés Rojas 2019) but also to concrete encounters, applied nowadays as a synonym for gathering. In some regions, the concept is used to name meetings between children with different cultural backgrounds – a space that embraces cultural exchanges in a country with extremely diverse traditions (Valiente Catter 2016). According to Catherine Allen (2002), it can also refer to concrete things and sites, such as places where roads join or where rivers converge into a single, larger stream. ‘*Tinkus* are powerful, dangerous places full of liberated and uncontrollable forces, ... where antagonists meet in a violent union’, argues the author (Allen 2002, 176). Due to its particular meaning, it is a concept that eludes precise translation. Allen suggests that *tinkuy* can be associated with the notion of dialectic; however, she immediately affirms that this concept is far too abstract. More than a form of reasoning, *tinkuy* refers to the concrete act of gathering in the difference, and *tinku* to a specific place or thing resulting from that encounter.

The interesting characteristic of *tinkuy* is that these encounters are not only spatial but also temporal. The semiotic and material articulations to be found in the gatherings of *tinkus* enables exploring how the encounter of heterogeneous world productions – or *worlding*, as different authors have defined the process of making and claiming our modes of existence (Haraway 2007; Tsing 2010; De la Cadena 2015) – are also moments of temporal configuration. The destruction of the early warning system, as we will see later, shows us how explanations of that moment are sustained through practices of figuration sedimented in time – the figure of barbaric *campesinos*, elsewhere *indios*, from the highlands putting at risk the safety of urban residents (once the Spanish settlers) in the lowlands. It also involves the threatening figure of *gringos*, the mining industry and the environmental destruction of extractivism that emerges as a response to foreign devices putting mountain territories at risk. This configuration of the *tinku* as a place of conflictive encounters shows how ‘the practice of creating relations of life in a place and the place itself’ (De la Cadena 2015, 291) is not only a spatial endeavour but also highly temporal. Emphasis is placed on those past and future worlds destroyed, endured and threatened by disasters that we come to locate and inhabit – sometimes in peaceful terms, sometimes in conflictive ways.

Understanding past, present and future sheds light on how *tinkuy*, the act of gathering in places and things where difference prevails, are moments of tempo-

ral convergence that allow making sense of time in the first place. Memorials and archaeological sites, specific devices such as the early warning system close to lakes, and building materials – all of them operate as things through which temporal constructions emerge in conflictive but also complementary ways. They are situations of temporal encounters in the difference, cosmopolitical moments in which different forms of inhabiting time coexist.

An ethnography of temporal ecologies

By considering the cracked condition of the Callejón de Huaylas, in its geoclimatic and historically figurative sense, this work explores how disasters, as assemblages, produce different forms of time – times of disruptions, suffering, recovery and planning; times that are suspended but also accelerated. It is a work about the temporising capacity of disasters as past disruptions and future threats – the temporal realities that disasters as mechanic and enunciative arrangements elicit.

In order to make sense of those times from a historical point of view, a study of the figurational practices around disasters is also required. By analysing the figurations around disasters and the ecologies of practices and materialities sustaining them, this book aims to explore how people in the Callejón de Huaylas position themselves in those times that disasters inaugurate, and the concrete forms – or figures – those historical positionalities create. To do so, it takes into consideration specific places and things through which encounters in difference are enacted, which we previously defined as *tinkuy*. By exploring those places and things eliciting controversies, my work explores how historical figures around disasters, rather than essential categories based on biological or cultural characteristics, are enacted by the same conflictive encounters from which they emerge.

Assemblages and figurations operate, under these terms, as complementary analytical concepts – similar to the notions of the actual and virtual (Bergson 1911; Deleuze 1990). The semiotic-material condition of assemblages provides a concrete realm in which figurations are enacted. The virtual condition of figurations, moreover, grants assemblages with the historical thickness – and, thus, the ideal representations that figurations offer. The continuum that those virtual images create is, in the words of Elizabeth Grosz (1994, 167), the strata that provide forms of organising the hierarchical divisions that we find in regions like the Callejón de Huaylas – lowlands and highlands, *indios* and *criollos*, modernity and tradition. Figurations help us to explore the relations of people in the Callejón historically with the times that disasters inaugurate – ‘historically, that is, moving across several times at once, putting into play the present and the past, or rather pasts in the plural, however far apart they may be in space and time’ (Hartog 2015, 16). In combination, assemblage and figuration allow us to explore the temporal configurations that the

material irruption of disasters elicit and the historical sense that those disastrous arrangements arouse.

In order to explore the entangled ways in which assemblages and figurations operate, this book offers an ethnographic work on the temporal ecologies shaping disasters in the Peruvian Andes. Similar to what other scholars have defined as timescapes (Adam 1998; Bear 2016; Lord et al. 2020), geographies of temporality (May and Thrift 2001) or temporal regimes (Torres 2021), temporal ecologies as an analytical concept aims to reflect on the praxis-oriented condition of time². It draws attention to the delicate balance (or lack of it) of language, practices and materialities across communities and organisations (Bateson 1978; Star and Ruhleder 1996, 117). Rather than falling into the common dichotomy of time as a physical, objective dimension (something we are ‘immersed in’) or a subjective experience (something we ‘live on’), the notion of temporal ecologies calls upon Latour’s (1997, 173) understanding of time as a reflexive difference ‘rooted in a long material and technical practice of record-keeping’. Temporal ecologies, in this sense, aim to emphasise that, when building past, present and future, we are not only thinking them upon – but also placing and inhabiting them in – diverse forms and with different purposes. Exploring those heterogeneous forms of cohabiting temporal stages amid disasters, and the figurations those cohabitations generate, is a crucial goal of this book.

My approach follows the tradition of ethnographic accounts in the Andes exploring moments of encounters – the *tinku*, where difference gathers. Yet, my interest in the idea of the encounter refers more to an ‘epistemic gesture’ (Ballesterero 2019, xiii) than a moment when biological and cultural distinctions between social groups are replicated and essentialised. My interest here is concerned less with the *contact* and more with the *zone*; focused less on the apparently inextricable worlds that gather and more on the place or thing propitiating that encounter. This distinction, which might seem trivial, marks my differentiation from previous works dealing with the idea of encounter – whether as a syncretic harmony or a conflictive cohabitation –

2 The advantage of an ecological understanding of worldly temporal arrangements over notions of landscape or geographies of temporalities, I would suggest, is its capacity to take some distance from an all-too spatial metaphor of temporal relations. The idea of landscape (Ingold 1993; Hirsch and O’Hanlon 1995) and its derivatives – including timescapes, but also waterscapes (Swyngedouw 1999; Sultana 2013), hydrosapes (Nüsser 2013; Lord 2014) and memoryscapes (Edensor 1997; Butler 2007; Ullberg 2013), to name a few – presents a common dilemma: they are still subordinated to a spatial distribution of their elements. Even in its temporal application, the ‘scape refers to the spatial arrangement of objects in time. When dealing with temporal ecologies, we are not referring to the position of objects but their copresence and coexistence – their relations and consequences for articulating specific world projects.

and the problematic forms of time created by the anthropological endeavour studying those divisions³. What I seek here is to explore the concrete materialities, practices and relationships making possible the idea of encounter in the first place. I am interested in analysing how concrete settings or things can lead to articulating figures that gather in peaceful or conflictive ways. With this methodological orientation, I hope to explore how the apparently indissoluble divisions that categories such as highlands and lowlands, rural and urban, indigenous and *criollo* are historically configured and entangled. I am less interested in dealing with those categories as essential differences, and more as historically condensed arrangements that, although virtual, have strong repercussions for the articulation of reality.

Combining figurational and assemblage approaches to disasters and time, I must admit, has not been an easy task. At times, the emphasis falls more on the material arrangements of disasters and their temporalities; at others, it leans more towards figuration as an immanent practice of historical sense-making; and occasionally, there is a more balanced consideration of both. These uneven emphases may reflect the disparate fields of research in which this work is situated – particularly, new materialist approaches (in connection with assemblage thinking) and historical approaches to disasters (in relation to figuration theory), all intersected by decolonial and feminist-oriented perspectives as key sources of inspiration. While I have attempted, as a *tinku* in itself, to bring these perspectives together as evenly as possible, opening a dialogue between these traditions has been a significant challenge. This may have resulted in varying weights given to each perspective at different points within the book. Far from being a limitation, I view these imbalances as resonant with the very nature of this work and its structure: an open exploration of a myriad of entities, devices, figures, materialities and the encounters they generate around disasters and time.

This book is the result of an ethnographic research process in the Callejón de Huaylas that started with the beginning of my PhD research in 2018. The most important fieldworks for this work were conducted between November 2019 and March 2020 –

3 As Johannes Fabian (1983) notably argues, anthropology as a discipline has been an active field in creating borders, positions and cultural differences between societal groups. Time, the author affirms, has been used as an active distancing device to pursue a denial of coevalness: 'A persistent systematic tendency to place the referent(s) of anthropology in a Time other than the present of the producer of anthropological discourse' (Fabian 1983, 31). The discipline's evolutionist past strongly influenced the creation of labels used to describe the Other, including mythical, ritual and tribal, which only served to create a temporal distance with its 'archaic' subjects of study.

interrupted by the COVID-19 outbreak in Latin America – and during 2022 after the lifting of travel restrictions to Peru. It is based on the combination of interviews and life stories, participant observation and the exploration of material traces. It also considers the analysis of diverse documents, including books, reports, master plans, newspapers, pictures and a vast set of alternative sources – at least for the official history – such as popular stories and legends, poems, chronicles and songs. Building on these heterogeneous sources, this work analyses how different voices, strategies and materialities articulate moments when disruptive events reshaped the history of the Callejón de Huaylas. Moreover, it also explores the diverse arrangements considered in order to cope with the uncertainties of the future and the conflicts that those past and future constructions may elicit.

By considering these heterogeneous sources for time exploration, my research deals with three main urban clusters and their areas of influence: Huaraz and its connection with the Palcacocha Lake; Yungay and all the interior valleys connecting with the Huascarán mountain; and Carhuaz and the villages located throughout the area influenced by Lake 513. Concretely, the book examines in depth three main events within these zones. First, I explore the history of the glacial lake outburst from Lake Palcacocha that destroyed an important part of Huaraz in 1941. Secondly, I analyse the consequences of the 1970 earthquake throughout the Callejón de Huaylas, and the resulting massive avalanche on the Huascarán Mountain that buried entire villages and cities of Yungay Province along its path. Finally, I deal with another GLOF from Lake 513 that headed close to the city of Carhuaz and its surroundings in 2010. Although this event did not represent a substantial threat to the region and its population, it triggered a series of political reforms fundamental to flood risk management in Ancash. These events, as we will see through the course of the book, have aroused diverse strategies to preserve public memory of the deceased while defining who has the right to be remembered as a victim of this catastrophe and who does not. Furthermore, these moments will bring massive transformations for these areas and the articulation of new forms of urbanism while reinforcing the presence of figurations that have shaped the Callejón de Huaylas and its history.

Setting a case study based on different moments in time defies the temporal stability that is implicitly assumed by spatial limitations around the field. When approaching cities of the Callejón de Huaylas over the decades, we are not dealing with the same places in different stages but instead changing versions with autonomous, yet interconnected, existences. Thus, rather than a strict analysis of the spatial cohesion and interactions between those three regions, in tune with what we could consider a multi-sited approach (Marcus 1995), the definition of my case study speaks more about the delimitation of several moments in and for time. It is an exploration of what remains when we talk about places over time, what is held in those places – especially under drastic moments of disruption that disasters entail. In tune with what Sharon Macdonald (2013, 52) defines as a multi-temporal approach – an in-

quiry into the multiple ways in which 'people variously experience, understand and produce the past [and future] in the present' – I consider this work a study about different times shaped by disastrous moments, together with the figurations that those moments elicit.

The book is divided into three main sections of two chapters each, exploring concrete places and devices where forms of encounter emerge from the entanglements of disasters and times. Rather than following a strictly chronological account of the three main events in the Callejón, or having those events as the central topic of the different chapters, I focus more on the temporal tensions that emerge from these different encounters: what is lost and what remains; what is transformed and what endures; and what is intended to be controlled versus what resists such steering efforts. In the first section, I focus on the tensions between destruction and permanence – between the drastic losses associated with disasters and the memory of those lost places that survive the passing of time. Chapter One analyses the stories of survivors of the 1970 earthquake and subsequent avalanche that buried the old city of Yungay, to explore how that massive and dramatic event is reconstructed in the present. By paying particular attention to the rhythms and structures that these stories entail, the chapter shows that the extremely detailed testimonies of the moments before and during events like the 1970 avalanche give space to a suspended time from which concrete figures – the hero and the victim – emerge to make sense of the aftermath. In doing so, the chapter also briefly explores the relevance of the Callejón de Huaylas for risk and disaster studies, and how this region has served as a focal point for scientific research where different understandings of disasters have been applied and developed. Chapter Two, moreover, analyses the spatial configurations produced by the politics of memory around the 1970 earthquake and avalanche. By exploring the case of Campo Santo, an open memorial founded over the buried city of Yungay, I deal with the strategies and materialities that survivors and authorities followed to preserve the memory of the old town and the victims of the event. Concretely, I explore how the absence left by the avalanche is brought into presence under the notion of *intangibilidad* (intangibility): a legal title that recognises the immaterial value of the memorial as a site of cultural heritage.

Section Two addresses the continuities and transformations that the aftermath of disasters brings to urban areas. It explores how the city of Huaraz has endured its destruction over time, and what type of material changes those destructions have elicited. Chapter Three analyses how the reminiscences of destroyed pasts are turned into a part of history; how, in other words, rubble is turned into artefacts of archaeological value. To explore this issue, I take the case of Pumacayán, an archaeological site located in the middle of Huaraz. There, I pay special attention to the stones of this site and the multiple operations they have fulfilled over time – as ancient guardians of the city, construction materials, reminiscences of distant past under the notion of archaeological objects, or simple rubble to be discarded. Stones

help show how the construction of ancient history at this site, sharply defined by the idealisation of an old urban world and its indigenous heritage, clashes with the new urban figures brought forth by the 1941 flood and, notably, the 1970 earthquake. Chapter Four, moreover, deals more in detail with those urban transformations experienced after the 1970 earthquake, to explore the emergence of what we initially defined as the cosmopolitan city. The traditional mudbrick houses have been replaced by clay brick and concrete, inaugurating a sense of identity loss among the old *Huarcinos*. Yet, those same materials also provide the only means of creating a sense of security for that part of the population living in the area exposed to floods – a basic stability amid precarious forms of life while they await a more definitive housing solution.

The third and last part of this book moves the focus from the efforts to deal with a lost past, to the strategies for building a stable future in a highly unstable region, emphasising the different mechanisms for keeping anticipatory strategies around outburst flood risk up to date. Chapter Five explores the history of flood risk management in the Callejón de Huaylas to analyse how attempts to control nature led to the articulation of new forms of time in the Andes: a time of engineering mitigation, but also times of labour and shift-work regulating the rhythms of the local population working in the lakes. Moreover, the chapter also analyses the frictions and conflicts that efforts to control nature can lead to. By exploring the attacks against Lake 513's early warning system, a new type of technology in the region that monitors in real time those mountain lakes at risk of outburst, the chapter reflects on the temporal interruptions that socio-technical systems elicit. The complexity of the case, expressed by the diverse explanations and stories around the destruction of the monitoring equipment, are condensed and simplified through certain figures configuring two apparently irreconcilable realities: an urban lowland aiming to push a civilisation project throughout the region versus a rural highland resisting the implementation of foreign machines seeking to control nature. Chapter Six closes this last section by exploring alternative practices for dealing with the insecurity originating from the region's increasingly unstable glacial lakes. By analysing forms of relating to lakes in ways that diverge from scientific understandings of nature, the chapter explores how institutional risk mitigation efforts are deeply intertwined with ancient forms of connecting with mountain entities. Furthermore, the chapter explores how the relationships to other entities, including guardian crosses located in the highlands, can create forms of security based on diplomatic relations of partial recognition.

The book concludes by returning to a general view of figurations and assemblages as central analytical concepts for this work. Specifically, I reflect on how both concepts can allow us to explore disasters through historical and temporal lenses, considering both dimensions as separated, yet interconnected, arrangements that provide different perspectives on the understanding of disasters. Finally, I close with

some words about my own ethnographic work as a Chilean and *gringo*⁴, as people used to call me in the Callejón, two figures representing an uneasy, historical otherness in the region. By considering my positionality as a foreign researcher, I conclude by reflecting on how my work can be related to documentarist and documentarian efforts defying the very temporal articulations of anthropology as a field.

There are some limitations to the exploration, presented herein, of the temporal ecologies around disasters in the Callejón de Huaylas. A project like this does not aim to present an exhaustive compilation of all the attempts throughout this region to preserve memories and stories around disasters. There is a broad collection of books in this regard, including the work of Rómulo Pajuelo Prieto (2002; 2010), Steven Wegner (2014), Danilo Barrón Pastor and Filomeno Zubieta Núñez (2020) and Lucio Meza Marcos (2021), to name a few. This book is not intended as a detailed study of the aftermaths of those catastrophes; instead, the work of Anthony Oliver-Smith (1986), Barbara Bode (2001) and diverse testimonies of local authors such as Marcos Yaurí Montero (1971), Manuel Valladares Quijano (2011), Leoncio Vega Rizo Patrón (2011; 2012), Nehemías Vergara Méndez (2013), Javier León León (2016) and Roque Otárola Peñaranda (2020) deals with those issues. Neither is it an exhaustive review of regional efforts to deal with threatening events such as GLOFs and avalanches. The work of Mark Carey (2010) is a remarkable source in that respect. This ethnographic work – a graphic production, sometimes poetic, certainly frustrating at moments and mostly embedded in concrete moments of pedagogical creation (Ingold 2014) – is instead an effort to understand how disasters produce forms of times as diverse as the stories containing traces of those past and future disasters. Thus, it is a study about the temporal implications of disasters, as semiotic and material arrangements, and the figurations that emerge around them to make sense of the worlds lost and those to come.

4 Originally referring to people of US-American origin, the word *gringo* is also used in many South American countries, especially in rural areas, as a synonym for foreigners of 'white' appearance. Whereas I do not necessarily consider myself white in the European context in which I am immersed while writing this book, I am identified as such in countries such as Chile and Peru in accordance with the Spanish ascendancy of part of my family. Marisol de la Cadena (2004) reflects on these identity differences when studying racial discourses around the notions of indigenous and *mestizo* in Peru. She recognises having 'indigenous looking features' that is easily associated with an indigenous heritage in Northern countries; yet, in Perú most people consider her white. 'Taxonomies and labels belong to interconnected histories ranging from the personal to the collective and from everyday, to artistic and academic practices that connect Europe and the Andes', she affirms (De la Cadena 2005, 261). Historical categories around race and ethnicity, in this sense, are not only applicable to people from the low- and highlands in the Callejón; they are also part of the labels that a researcher like me embodies when conducting fieldwork.

I Yungay, Destruction and Permanence

1 The 1970 Avalanche: Suspensions and Figurations

The clock in the church struck the hour,
again and again, again and again, as if
time had somehow contracted.

Juan Rulfo

Deysi remembers that day very well. Maybe too well. Even the preceding days. She recalls that a deep sadness invaded her that week, triggered by intense dreams and thoughts about what would happen if her mother suddenly died. She was 22 years old at the time and very attached to her family. The feelings of loss assaulted her during those days to the point of inconsolable tears. It was a sort of premonition for the things about to come, she posits.

Deysi had been living in Lima since the beginning of that year, 1970, to study at the university and become a teacher. She was only visiting her family in Yungay for a couple of weeks to ultimately celebrate Mother's Day that Sunday, the 31st of May. Although this was several decades ago, the details of Deysi's narration offer an extremely vivid account of everything she and her family did during that day. Around noon, she remembers, they had a big lunch to celebrate her mother. She recalls almost automatically what they ate: *Olluco*, a type of tuber, with meat. Deysi argued with her mother because she only wanted *olluco*, whereas her mother insisted that she also eat some potatoes. Potatoes were not her thing, Deysi admits with laughter, but she obeyed her mother to avoid any trouble. After lunch, her mother went to the *chacra*, the family farm, with her brother to take care of the crops, while Deysi stayed in the town to take care of the family's shop, where they used to sell liquor and basic groceries. Before leaving, Deysi's mother informed her about the open bills of some customers that needed to be settled. With Deysi's mother and uncle gone, and while she was behind the shop's counter, the earthquake began.

Like the testimonies of many other survivors, Deysi's account of the earthquake and landslide that struck Yungay that day in 1970 is as detailed as the description of the moments before. She narrates insightfully how she escaped from the shop before it collapsed as a result of seismic movement; how she saw that an avalanche triggered by the earthquake started descending from the Huascarán Mountain towards the city; and how she instinctively took her sister and younger cousin by the hand and

ran to the city's cemetery over the Huansacay Hill, the point where 90 people – the highest concentration of survivors – gathered to escape death. She remembers extensively, like many others, how the avalanche buried the city and the lives of almost its entire population. She recalls how the voices from the landslide scar screamed for help until they began to still as the hours passed. She can still feel the chill, brought before dusk by a thick cloud of dust resulting from the mud, rocks and ice dragged from the Huascarán; how she spent the night on the top of the cemetery, together with her siblings and cousin, covered with a blanket provided by other survivors. She remembers all this with sadness to the point of crying, while her husband comforts her. But despite how shocking and upsetting Deysi's story is, she gets to share it with affection and a warm smile – even emitting a contagious laugh while sharing some funny anecdotes of her life.

Deysi is a good storyteller. Although she acknowledges that she does not like to talk about the event and sees our conversation on the matter almost as an exception, she seems comfortable sharing her survival experience and other aspects of her past with me. While listening to her at her house in the new Yungay, where she and her husband have lived since moving there almost 50 years ago, it almost feels that her story, rather than improvised, has been repeated to the point of developing a unique rhythm – a feeling that I encountered several times while speaking with many survivors of the 1970 avalanche. Like hers, countless testimonies of that day have been collected in books, interviews, chronicles and even artistic interventions, many of them produced by the same survivors. It is an outstanding articulation of memory practices and materialities that, as we will see, also shows strong differences in how the events of that day in 1970, together with its aftermath, are remembered nowadays.

This chapter explores the times and rhythms configuring the memory of a disaster. It analyses the multiple expressions and interpretations that disasters, as assemblages with concrete but diffuse temporalities, depict, enact and manifest (Law 2004, 94). As a non-coherent multiplicity, catastrophes produce temporal arrangements that can lead to apprehensions and conflicts. The memory of events like that in 1970 lead to deep temporal ruptures that remain in stories and objects – an ecology of practices and materialities that shows the diverse ways in which the trauma of the disaster, together with the challenges of recovery, configure the way the past is maintained and updated across time. Yet, these diverse temporal configurations can also lead to conflictive strategies for producing the past, generating heterogeneous interpretations and explanations of how events unfolded following the destruction left by the earthquake and avalanche.

Based on direct testimonies of survivors of the 1970 earthquake and avalanche, together with historical material from governmental reports and academic studies, this chapter digs into the differences that narrations can have when recalling the destruction and reconstruction of a city like Yungay. By taking into account different sources dealing with the city's past, I explore the multiplicities of voices that, when placed in relation to one another, can 'shed light on the silences – and possible motives for the silences – of others' (Macdonald 2013, 57). Rather than a triangulation of sources for testing the veracity of past narrations, the contrasting accounts of the disaster serve to understand the differences we can find when constructing the past through diverse experiences and rhythms. It is an exploration of the multiple forms of inhabiting in and across time, granting all those versions a concrete existence sustaining the notions of survivor and victim, native and foreign – an *us* and *them* that operates in time and space.

Throughout this chapter, we will see how the vivid accounts of the moments before and during the earthquake and avalanche offered by survivors like Deysi are followed by a diffuse time of waiting – what Lisa Baraitser (2017) terms a suspended time – that survivors seem to enter when narrating the aftermath of the earthquake and avalanche. The chapter then analyses the diverse strategies for providing accounts of the challenges and difficulties experienced during the reconstruction, and the conflicts that those differences gave rise to. Concretely, we will explore how local testimonies call upon the heroic work of survivors in rebuilding the new city, in contrast to sources from governmental agencies and researchers at the time, which depicted survivors as traumatised victims requiring support. The historical figures of hero and victim will operate as concrete devices by which to make sense of the disaster in temporal terms. Based on Donna Haraway's (2018) notion of figuration, the chapter analyses these figures as semiotic and material abstractions that emerge from the multiplicity of stories and accounts around the 1970 earthquake and avalanche, emphasising the temporal configurations that those abstractions lead to.

Yungay Hermosura

My story with Deysi begins some days before our interview, while talking with her husband Filomeno at his office close to the *Plaza de Armas*¹ in the heart of the new

1 Literally 'Weapons Square,' the *Plaza de Armas* is a common feature of the colonial city inaugurated by Spaniards. It consists of a central square commonly surrounded by administrative buildings, churches and other constructions of political and cultural significance. See Valerie Fraser (1990) for a historical analysis of this space and Setha Low (2000) for an ethnographic account of the lives and rhythms around central plazas in Latin America.

Yungay. Filomeno is part of the directorate of the *Sociedad de Beneficencia*, Yungay's charitable society that owns and administers the city's cemetery – where his wife survived the avalanche that buried the old city. With my visit, I expect to learn from him and other directors more about the history of the institution and the cemetery – one of the city's most famous attractions, and a source of pride for *Yunguinos* across the decades.

Once a wealthy organisation, the offices of La Beneficencia (as it is known) show the precarity of an institution that, despite being a major landowner, has long learned to function under a tight budget – at least since its re-founding in 1970. The directors tell me that they suspect the organisation was created around 1820, but no longer have any documentary proof of this. The debris and mud brought by the avalanche left no traces of its past, no record or document from the old days. Simple facts about Beneficencia's history, like the year of its foundation, are just a mystery now buried several metres underground. Some historical sources mention the figure of a similar institution providing education for indigenous children close to Yungay, dating back to 1780 (Melgarejo Méndez 2013). Whether that is the same charitable society as today is something that no-one really knows. The directors do know that the institution was a philanthropic organisation, apparently a very wealthy one, and that profits from its land holdings – derived from the unremunerated labour of residents, as in any other *hacienda* at the time – were used to finance its charitable work. Its properties included large pieces of land, buildings and the old Yungay cemetery located within the city on Villón Avenue; a graveyard of which, as with most of old Yungay, there are now no traces.

Likely inspired by hygienist currents of European urbanism, local authorities decided to relocate the cemetery outside Yungay by the end of the nineteenth century. Huansacay, then an abandoned hill on the outskirts of the city, was chosen as the location for the new, modernist graveyard. The Swiss architect Arnold Ruska was in charge of designing the three levels of white, rounded funerary niches in 1891, the construction of which, headed by the *Yunguino* Esteban Montañés, would be immortalised in Yungay's history books. Decades later, in 1962, the *Huaracino* artist Godofredo Zegarra designed and installed the Cristo Monumental, a ten-metre-high plaster sculpture depicting Christ with open arms looking to the Huascarán Mountain. *Yunguinos* decided to erect the Cristo as a sign of gratitude for protecting the city against an avalanche from Huascarán's Glacier 511 that buried the neighbouring town of Ranrahirca in 1962. Some say that the extended arms of Christ were meant to bless the mountain. Others, however, affirm that the hands facing outward suggest that the Christ is trying to hold back the Huascarán and any threat coming from there – an interpretation that would be used to explain why the avalanche lapped exactly at the cemetery's base some years later, in 1970 (Bode 2001).

Despite the apparently abandoned condition of Huansacay, this hill was the location of an archaeological site dating back to the Chavín period (1200–400 BCE),

something that *Yungainos* unaware of at the time or simply decided to ignore. Stories affirm that the place was one of the entrances to an extensive network of underground tunnels connecting the territory, spanning hundreds of kilometres from north to south. The most accepted description of this place, however, says that the hill, placed near the former settlement of Yunkaypampa (or 'the place over the valley of temperate climate'), was used as a strategic fortress by different groups, including small but powerful state-like administrations of the Recuay and Wari cultures. The site was later annexed to the Inca Empire after Cusi Yupanqui, son of the Inca Wiracocha, defeated the *Sinchi* (warrior lord) Kuismanco in 1370 (Silva Santisteban 1972). It is also believed that both Yunkaypampa and Huansacay were later utterly devastated around 1385 by an avalanche originating from the Huascarán that, as in 1970, was likely triggered by an earthquake. However, all these versions of the past are merely speculative, given the lack of historical information. There are almost no records left by the Spanish when they arrived in those lands that might shed light on previous settlements. Moreover, the scarce archaeological research in the area is insufficient to fully determine what previously lay behind the hill. The foundation of Yungay over the place in the sixteenth century, the construction of the cemetery over Huansacay at the end of the nineteenth century and the further destruction left by the 1970 earthquake and avalanche; all these processes have added multiple layers of sediment and debris over those ancient soils, making any archaeological effort to elucidate the story of the place an increasingly challenging task.

Although heavily damaged by the 1970 earthquake, the cemetery was one of the few places in Yungay that was not completely covered by the subsequent avalanche. Located on the city's opposite side to the Cordillera Blanca, the landslide scar reached only the base of the cemetery and impacted just the first levels (see Figure 3). In front of it, the avalanche left a giant expanse of mud and rocks, together with four palms from the former *Plaza de Armas*. As a substance that refused to leave, the mud remained for some time – first as a fresh sludge staining survivors' clothes and then as dried sediment covering everything with dust and grit. With time, the mud turned into soil, where the gardens of the Campo Santo, the massive memorial that commemorates the destruction of the old Yungay and its victims, are located nowadays. In some areas, it is still possible to find sediment deposited by the avalanche, such as a bus that was dragged hundreds of metres and destroyed in the process. The mud, however, is most present in survivors' stories, functioning as a binding material that merges their testimonies into a common, unified experience of loss and trauma.



Figure 3: ‘Here was Yungay’. An aerial image of the landslide scar over the city (Peru’s National Aerial Photography Service 1970. Courtesy of the Air Group No. 31 of the Peruvian Air Force)

The fame of Yungay’s cemetery did not come out of nowhere. Just like Rushka’s work, the old city of Yungay was a well-known urban centre of the Callejón de Huaylas: an ancient colonial city that today is still remembered as one of the most beautiful towns in the region. Yungay *Hermosura* (Yungay Beauty), as the city was named by the Italian geographer Antonio Raimondi for its stunning architecture and landscape, was renowned among the aristocratic circles of Ancash and Lima, even gaining the attention of international tourists that would visit this small Andean town of white, red-roof mud houses and narrow cobbled streets. The proximity to natural monuments such as the Huascarán, which was seen from almost every point in the city, and glacial lakes such as Llanganuco, made it a strategic location for a flourishing tourism sector in the region – *Peru’s first touristic city*, as some elder inhabitants tell me sometimes.

The fame and recognition that Yungay enjoyed during its glorious years are almost entirely gone. The new city, built two kilometres north of the former, attempted to replicate the beauty and charm of its forerunner but without success. Its inhabitants and institutions, such as the same *Sociedad de Beneficencia*, seem to live from the memories of a glorious old past. Once a wealthy organisation, La Beneficencia lost a large part of its real estate properties, first due to Juan Velasco Alvarado's agrarian reforms of 1969 and then as a consequence of the 1970 earthquake. The cemetery, rebuilt some years after the earthquake, is now the most emblematic property that it owns, and selling cemetery niches and mausoleums is, according to the directors, the main activity for its maintenance. The organisation does not receive any state support nor part of the profits from the tourism that Campo Santo attracts yearly. The entrance fee to the memorial (5 Soles, approximately USD 1.5) generates barely 130,000 Soles (USD 33,000) per year, and allocated entirely to the maintenance of Campo Santo's gardens and its tourist zones. Despite the almost nostalgic beauty it depicts, the passing of time over the cemetery does not come as a surprise. The lack of funding for maintaining the cemetery is evident in its cracked walls and some of its abandoned platforms still awaiting refurbishment.

While we inspect a brochure of La Beneficencia containing some old pictures of the cemetery, Filomeno shares with me some details of his life. A man in his early seventies, he comes from a small town close to Yungay that he left to study and become a schoolteacher. He met his wife some years after the earthquake while working at the primary school of a nearby village. They later decided to move to the new Yungay and apply for one of the houses the government was providing to the victims of the 1970 disaster. Whereas Filomeno considers himself a *Yungaíno*, he admits that he is not a *real* one. He says that his relationship with those lands is only partial, as he did not live there before the avalanche, nor is he a survivor of that event. Filomeno proudly says that, unlike him, his wife Deysi is a *Yungaína neto y neta* (authentic and by-birth), a survivor who escaped from the landslide by seeking refuge at the cemetery. Deysi is therefore part of another group, whose members – as we will see – are considered the real citizens of those lands.

A suspended time

The house that Deysi and Filomeno own, located in the upper part of new Yungay, is on the same land plot that the state gave them after the catastrophe. What used to be a small, single ambient wood cabin – *full of holes everywhere*, as Deysi describes it amidst laughter – is now a massive three-storey house of *material noble* (hard material), a concept that people in Ancash use frequently to refer to claybricks and concrete. Unlike adobe, those materials are more valued due to their robustness – strong enough to even withstand an earthquake. Many figures and pictures of saints, *pa-*

tronos and virgins decorate the house. One is a representation of the Cristo Monumental – the same that witnessed how Daisy fled the city to the top of the cemetery while extending his arms to the avalanche.

During my visit to Deysi's house, we start reconstructing the events of that day: the story of the avalanche and how she escaped from it. The 1970 Ancash earthquake measured 7.5 on the Richter scale, lasted for 45 seconds and had its epicentre in the Pacific Ocean about 40 kilometres offshore from the city of Chimbote on Peru's northern coast. The resulting seismic movement reached Yungay at 3:23 pm on that Sunday, destroying most of the white, red-roof mud houses located along the narrow-cobbled streets – the same that attracted tourists from Lima and overseas. The earthquake was followed by chaos, confusion and an immediate deafening sound – 'as if 20 or 30 planes were passing by', says Diana, another survivor. With her memory still fresh of the 1962 avalanche that buried the neighbouring town of Ranrahirca, Deysi's immediate reaction was to evacuate when she heard someone warning of a landslide heading from the Cordillera Blanca. 'The Huascarán is coming down!' (*¡Se viene el Huascarán!*) is the expression that comes from every survivor's mouth when referring to that moment.

Technically, what buried Yungay was a debris and mud flow. It was triggered by a huge body of rock and ice that broke away from the sheer north peak of Huascarán at approximately 6,400 metres above sea level due to the seismic movement. In his report on the event, the French glaciologist Louis Lliboutry (1975) estimates that, during its freefall, approximately one million cubic metres of ice impacted Glacier 511 at 5,400 metres elevation, increasing its volume to 24 million cubic metres. The friction of the impact melted a considerable part of the ice, instantly releasing two million cubic metres of water. The mass of ice and water transported approximately 53 million cubic metres of soil, vegetation, and rocks. Travelling at an estimated 400 kilometres per hour (Ericksen et al. 1970), the resulting debris flow reached the city of Yungay and part of Ranrahirca, located 14 kilometres away, in two to four minutes. Many *Yungayinos* liken the debris flow to the approach of a massive dark cloud, a black plume of smoke throwing sparks and flames due to the clashing stones falling from the mountain – an apocalyptic image and feeling of panic that most claim they will never forget.

Deysi, who was at the family shop, reacted by leaving the building before it collapsed from the earthquake, and fled with her younger sister and cousin to the cemetery over the Huansacay Hill, the safest point she could come up with near her house. Unfortunately, this was not an automatic reaction among most of the population. The old Yungay used to be located over the foothills of the Aira Hill, which separated the city from the basin of the river Llanganuco – the natural course of landslides coming from the Huascarán. Consequently, Yungay inhabitants commonly conceived it as being protected against floods, landslides and avalanches (Valladares Quijano 2011; León León 2016). The 1962 event, which Yungay escaped unscathed

thanks to this natural topographic barrier, reaffirmed this feeling of security. However, the 1970 debris avalanche was three to five times larger than its predecessor and four to five times faster. The unprecedented mass of debris, mud and ice engulfed the 100-metre-high Aira Hill, taking *Yungainos* completely unaware and unprepared to react.

While escaping, Deysi overcame several obstacles that made her route to the cemetery very difficult. She faced a panicked mass of disoriented people running without any clear direction – many of them praying on their knees and surrendering to the end of the world (as many survivors portray it) – while sidestepping collapsing mudbrick walls and avoiding falling power lines that would prove immediately fatal. As she reached the upper part of the cemetery, she felt the landslide hitting the lower part of Huansacay. When she turned around, less than five minutes after the beginning of the earthquake, her hometown was gone. ‘Everything was mud; everything was dust’, she remembers.

We began this chapter by stating that Deysi remembers the day of the earthquake very well. Maybe too well. Even the preceding days. The testimonies of people like her about that day are full of details giving an account of their experiences when facing the destruction of their hometown: what they ate in the hours before the earthquake, how they escaped from the landslide to safer areas or how they spent the first hours of the cold night. They recall those moments from more than 50 years ago as though they occurred yesterday – as if they were frozen in time; static; full of facts and emotions that make their testimonies extremely vivid and not easily forgotten.

No matter how detailed they are, memories of the past are never a complete account of all the possible ecological relations that practices and materialities elicit. The practice of memory, according to Johannes Fabian (2007), is a constant process of remembering and forgetting, a selection of moments that allows creating a logical narration of the past without getting lost in an overwhelming existence that is impossible to fully comprise. This selection can be related to what Bruno Latour (1990) conceptualises as a trajectory, a collection of the movements of associations and substitutions an actor makes across a network over time. As a record of those movements, trajectories are never complete lists of relationships but instead the crystallisation of some of those associations that, for one reason or another, gain more visibility along the way. It is a partial set of movements that ultimately gives greater prominence to some entities and reduces the complexity of portraying the past. ‘By cutting across the translations, the notion of trajectory invents surrealist “*cadavres exquis*”’ (Latour 1990, 114) – fictive constructions that allocate the power of a network to concrete actors. Whether incomplete or not, such trajectories are what confer a

history, an accumulation across time ‘that gives the impression that we have gained some reality’ (Latour 1990, 109).

Trajectory is both literally and figuratively a precise term to describe Deysi’s story. It conveniently relates to her displacement, the ‘trajectory of movement’ that allowed her path to safety while overcoming all manner of obstacles and challenges to *become knowledgeable* (Ingold 2010). But trajectory also implies the selections that survivors make in narrating their stories, the compilation and use of as many details as possible to give the impression of giving ‘the full picture’ of the events that day. This trajectory, both literally and figuratively, creates a particular form of time, one that seems to be compressed in the minutes before and during the earthquake and landslide. It is a time overflowed with actions, emotions and objects from the beginning to the end of their travels. Their trajectories are presented as the account of a moment that, since it took place more than 50 years ago, we do not expect to be particularly exhaustive and vivid, but yet they are. The personal testimonies of survivors give the feeling of being there with them, experiencing grief at the loss and suffering they experienced. It is a time fully condensed, because the events happening during that moment require extensive explanations, with a massive amount of detail to make them believable, sensible and logical, independent of how perplexing the narration of a whole city erased by a landslide might sound. Even when recounting a moment in which it seems the world comes to a sudden end, there is a succession of actions and events that need to be fully accounted for. No matter how dramatic the disruption, survivors must somehow make sense of that ending.

Yet, the richness of the survival testimonies, and the trajectory of the path followed before and during the event, contrast sharply with what came afterwards. The day after the event, people who survived in the cemetery started to move to the lower areas to locate their relatives. Deysi remembers being horrified in the days following the avalanche: there was absolutely no certainty about where to go or what to do. Neither was it clear whether the authorities in Lima knew what had happened with Yungay and if they were sending aid in the short term. The place, moreover, depicted a terrible scene. Besides the four palms from the former *Plaza de Armas* that resisted the landslide, the entire town was covered with mud. Both animal and human remains were everywhere, sometimes unidentifiable as men or women, children or adults.

With the exception of some written accounts, personal oral stories about the aftermath of the earthquake commonly turn somehow vague and diffuse – at least compared with the vivid details offered by survivors to reconstruct the minutes before and after the city’s destruction. Comments such as *we waited for days and weeks for help to come; we were desperate and without any food... and I couldn’t find my family as the days passed...* are common themes in describing what came afterwards. The detailed descriptions of how people escaped to safe areas seem to be replaced by much more

general narrations of the aftermath. This is by no means surprising, since the subsequent days turned into a long, terrifying wait before the arrival of governmental help. People like Deysi, still in evident shock, tried to survive with the means at hand. Like others, she recalls their efforts to collectively find food wherever they could as they hoped for help. Waiting turned into despair, and despair into temporal disorientation. The elapsed time, built upon the eternal minutes of the catastrophe, seemed to expand into infinite days of uncertainty and desolation without any logical sequence of events. Withstanding was the only goal.

Descriptions of the landslide aftermath resonate strongly with what Lisa Baraitser (2017, 1) defines as a suspended time: ‘Time conceived no longer of as a viscous fluid takes on a different form, no longer a line with direction or purpose but a pool, the welling up of present time that will not pass and has no rim’. For Baraitser, suspended time escapes from the dichotomy of rupture and constant motion paradigmatically exposed by Alain Badiou’s notion of event and Gilles Deleuze’s becoming. For the former, social change can be only conceived through the appearance of something new, or truth brought through the rupture of an event, whereas the latter emphasises movement as the ultimate condition of life, with time being defined by the displacement of an object. In contrast, Baraitser (2017, 13) focuses on the lived experience when ‘nothing at all is changing, when “something like a globe holds you”’. This understanding of time differs from the classical relationship of time and history defined by George Kubler (2008, 65), in which ‘without change there is no history; without regularity there is no time. Time and history are related as rule and variation: time is the regular setting for the vagaries of history’. Under suspended time, stories are built precisely on extraordinary regularity rather than the change granted by unique events – a history of time stuck in its purest sense.

In the days after the landslide, waiting was related to the anxiety of a delay that ‘holds the future hostage to the present momentum originating in the past’ (Lampert 2014, 14). The disruption the earthquake produced subsequently gave way to a state of unknowing, with survivors awaiting their fate, making the future unreachable from a never-ending present. In this suspended state, time operates differently to those moments when survivors escaped to safe zones: an irregular, expanded time consisting of disruptive events taking place simultaneously. It is the second inversion of the classical time–history relation: Time no longer as regularity but as abrupt change, a moment in which life seems to turn upside down without any certainty of returning to its normal path. When faced with this abrupt destruction and subsequent waiting, the aftermath turns into an absurdly long moment of despair and horror, in which the consequences of the catastrophe are more vivid than ever. There is nothing else to do but wait – and survive – with the means at hand. It is time lived, but without its flow (Riley 2019); a moment trapped in the mud of the landslide scar.

Historical figurations

The suspended time inaugurated during the aftermath of the disaster would come to contest the unconditional authority that survivors had as narrators of the earthquake and landslide. The suffering and loss experienced that day prevailed as a form of justifying the veracity and plausibility of the narrated facts for the moments before and during the event. However, once survivors enter the open and diffuse space inaugurated by the suspension of time following the destruction of the city, personal testimonies around this period would lose their unquestioned cohesion as the ultimate sources for exploring the past of Yungay.

That the accounts of the aftermath provided by survivors are less detailed than the moment before does not mean that there are no descriptions of what happened afterwards. The trajectory produced by survivors seems to lose its profusion, to be replaced by a suspension of the flow of time; other sources seem to fill the gaps left by the personal testimonies, thereby narrating the events of the weeks and months following the landslide. Alternative strategies for accurately and reliably recalling the past would start to be developed – approaches to the past that would shape the abstract and ethereal condition left by the temporal suspension characteristic of the aftermath.

This shift in the sources providing narratives of the past would also come with the introduction of new figures: Characters beyond the individual personalities narrating first-hand what they experienced during the aftermath. Figures that, in some cases, would be related to the account of heroic actions fulfilled by the same community members of the *campamentos*, while in other cases closer to the figure of traumatised victims that would inhabit all sorts of reports and studies concerning the disaster. Throughout these figures, recollections of the reconstruction process would be formed and shaped, while the boundaries of who can be considered part of that recovery and who should be considered a threat would be defined.

Resisting the relocation, recovering from below

If the hours and first days after the landslide were marked by the destruction and despair of losing one's hometown, the following days, weeks and months would be defined by intense feelings of frustration, helplessness and discontent. According to *Yungainos*, the emergency response from the government at that time would be anything but acceptable, resulting in feelings of disappointment and impotence among the local population when they started receiving what was considered entirely inadequate humanitarian aid.

Diana, a survivor of the landslide now residing in Lima, remembers those days bitterly. 'After 15 or 20 days', she affirms, 'the planes arrived with aid but in terrible conditions. There were no new clothes; everything was second-hand. There were

loads of shoes and ties. Who wanted to grab ties! I went to find some shoes because I did not have any, but I could not find a pair; they were all unmatched. There was not a single complete pair of shoes'. Diana attributes the poor quality of the humanitarian aid to ill intentions of governmental agencies such as the National Assistance Board (JAN) charged with distributing essential items such as food and clothing, or even the Committee for the Reconstruction and Rehabilitation of the Affected Zone (CRYRZA), an institution created some days after the earthquake to cope with the short- and long-term challenges of the reconstruction. According to the survivors, those agencies habitually retained high-quality products – commonly associated with donations from countries such as Cuba, the Soviet Union and United States – while only distributing leftovers received from domestic donors. Some accuse relief agencies of a discriminatory attitude against *Yungainos* for the sole reason of belonging to the *sierra*. Javier León León (2016, 59) alleges that 'clothing and blankets sent from Europe for the wintertime were not distributed among the victims' because authorities in Lima contemptuously argued that 'the *indios* did not know how to use such garments. They were used instead by the Peruvian humanitarian agents'.

Perhaps one of the pivotal conflicts between survivors and central authorities referred to the relocation of the new Yungay. Staying as close as possible to the buried city and its surroundings, including the 'treacherous Huascarán', had an emotional meaning for the survivors; it was seen as a way to stay close to their origins and homeland. However, it also had a political dimension. Besides the *campamento* of Pashulpampa (also known as Yungay Norte), the nearest to the old city and where most of the surviving *Yungainos* were located, three other camps were willing to claim the name of Yungay. One, situated on a land extension near the city of Tingua, was the government's choice due to what they considered a safe location against further landslides from the Huascarán. The inhabitants of Pashulpampa fiercely rejected this decision, since the site was located around 15 kilometres from the old city. Furthermore, they claimed that its 40 hectares were not large enough to contain a provincial capital, contrasting the almost 100 hectares available in Yungay Norte. The connectivity of the old Yungay to other localities was also a compelling factor. As a nexus between cities like Caraz and Carhuaz in the Callejón de Huaylas and Yanama on the other side of the Cordillera Blanca, the old Yungay was considered a strategic location for business and commerce. The old Yungay hosted one of the most important markets in the Callejón de Huaylas, where urban residents and local *campesinos* from the highlands sold their products. Relocating the city to Tingua would have meant losing this geographical advantage over other important cities.

According to survivors, the most common strategy used by the government to push forward the relocation was to withhold essentials such as food and shelter. León León (2016) and Vergara Méndez (2013) accuse JAN and CRYRZA of explicitly denying aid to Yungay Norte as a means of forcing survivors to move closer to the

storage centre located in Tinguá. People who were settled in Pashulpampa, they affirm, used to walk several kilometres during the first months to obtain food, water and clothing. The allocation of tents and the construction of provisional houses, moreover, took longer in Yungay Norte than in any other camp in the zone. What at the beginning of the aid distribution was expressed as feelings of disappointment and impotence soon became anger and grievance.

Months after the catastrophe, and with what was considered scarce support from state agencies, survivors started to organise their own rehabilitation strategies. Besides the educational centres, one of the first infrastructures used in Pashulpampa to dispute the title of Yungay was the market – thereby emphasising the relevance of this place for the old city. The lack of *material noble* was countered with *materiales a mano* (materials at hand): ropes delineated the market's perimeter where modest stands of sticks, branches and agave leaves started appearing. The delimitation of this place, without the authorisation of central agencies, aimed to give a sense of stability and security to local suppliers. The improvised market was relocated to a nearby area and replaced by a more robust infrastructure three months later, which was received with discomfort by survivors, until the definitive market of *material noble* was built four years later. This was followed by the reactivation of basic services and administrative agencies, including the Municipality, the civil guard, a bank agency, Yungay's *Sociedad de Beneficencia* and some groceries shops – 'all re-established within three months of the disaster', according to Oliver-Smith and Goldman (1988, 112).

Perhaps one of *Yungainos'* proudest works in those first years was the replenishment of water supplies for agriculture and human consumption. Nehemías Vergara Méndez (2013), new Yungay's first Major and later Director of Public Works, narrates the struggles and various challenges involved in providing water for human consumption and irrigation. As with almost every aspect of life after the landslide, water supply began with *materiales a mano*. The scarce muddy water available was initially collected in small wells and filtered with the cladodes of the *tuna* (prickly pear cactus). As time passed, water distributed by the government some kilometres away was neither sufficient to supply Yungay Norte adequately nor to sustain the croplands that survived the landslide. With the help of surrounding villages, and the Church's financial support secured by the direct intervention of the renowned and beloved *Monseñor* (Bishop) Luis Bambarén, Yungay Norte decided to rebuild the old irrigation canals, a task that took them four months. It is narrated as an extraordinary feat and an example of unity between *Yungainos* and *campesinos*, a heroic campaign that allowed the local population to meet their basic needs with their own hands.

Despite their apparent unity as a ruling group, urban survivors also presented contrasting positions. Vergara Méndez (2013) manifests his discontent with several *Yungainos* involved in the recovery and reconstruction. Specifically, he reprimands organisations of *Yungainos* based in Lima, such as the Association of Rehabilitation

and Reconstruction of the Yungay Province (ARRPRY). According to the author, it took nine months to establish the organisation while survivors were fighting for their lives against the indifference of CRYRZA and the central authorities. One of the leading figures of ARRPRY was the doctor Asunción Caballero Méndez who, 'splattered with *rojimios* [red-like ideological thoughts] and stimulated by the dictatorship of Velasco Alvarado of communist hue, wanted to take advantage of the situation to revive his political image, controlling in his own way the surviving *Yungainos* of the Yungay Province' (Vergara Méndez 2013, 109). Notably, the author not only explicitly differentiates between the *Yungainos* and the rest of the province's inhabitants but also between the *Yungainos* who were in the city during its destruction and those living in Lima at the time. According to this view, to be a *sobreviviente* (survivor), and not being born in Yungay, is what distinguishes a '*neto y neta Yungaino*' from the rest of the world.

Despite all the controversies and struggles that the recovery process arouses among *Yungainos* in the Callejón de Huaylas and those in Lima, there is also a common recognition of the central figures that took part in the reconstruction. *Yungainos* still remember people like Nehemías Vergara Méndez and Asunción Caballero Méndez, both deceased, as pivotal figures in the city's refoundation. Their legacy has been maintained thanks to public homages during official commemorations. During the 100th anniversary of the Province of Yungay in 2008, Vergara Méndez was honoured as *hijo ilustre de la ciudad* (distinguished son of the city) due to his role as the first major after the earthquake. Caballero Méndez, moreover, has been honoured several times in events of the Club Yungay in Lima. Together with other public figures such as Monseñor Luis Bambarén, their names are mentioned in books as remarkable *Yungainos* (see León León 2016; Pajuelo Prieto 2002; Valladares Quijano 2011). Figures like them live through testimonies and stories about the city's recovery, embodying the heroic commitment of *Yungainos* amid the reconstruction of Yungay, together with the conflicts existing between different groups at the time. This embodiment, which is repeatedly applied as a source of memory production, can be related to a first historical figuration articulating how a past world is recalled.

Heroic figures of the reconstruction are repeatedly evoked as exemplifying the determination of the survivors. They function as vivid figures of community, cooperation and solidarity – values that are constantly mentioned when thinking about *Yungainos*' response in the aftermath of the disaster. The heroic narration around the re-establishment of Yungay helps to create a common survival experience built on a shared feeling of surviving and resistance, even among the new generations that did not live through the atrocities of the disaster but that, nevertheless, inherited the suffering of the older generations. Heroic figures such as Vergara Méndez and Asunción Caballero, in this sense, condense a vast network of actors that jointly worked to achieve the goals proposed for rebuilding the city, and the sacrifices they

made to recover a lost home. They give a tangible face and a sense of leadership to the recovery process, even though the reconstruction, far from being an individual act, resulted from a collective effort of mobilisation and negotiation.

Beyond ill intentions: pathologising the victims

Whereas local sources describing the tragedy, such as the books by Vergara Méndez and Javier León León, recall the heroic work of the local population to stimulate processes of reconstruction and recovery, governmental interpretations of the situation at the time show a somewhat different approach when managing the emergency. The heroisation of survivors amid the reconstruction efforts would be replaced by a rather assistance-related vision of the catastrophe, one in which the response and recovery agencies would be in charge of providing proper tools and humanitarian aid, calling upon the figure of a victim that needs to be saved through rapid state support provided in a specific time.

In its National Plan for the years 1971–1975, prepared by the National Planning Institute (INP 1972), the government portrays Ancash's *sierra* as an underdeveloped zone experiencing strict emigration processes, highly related to the accelerated industrialisation of the region's coastal areas. In tune with the recently inaugurated Latin American theories of dependency in the late 1960s (Frank 1967; Cardoso and Faletto 1969; Contreras Elvira 2002), the INP remarks that the underdevelopment that then characterised the affected zone was a consequence 'of the historical process followed in the country, defined in general terms by the subordination of the Peruvian economy to the needs and interests of the capitalist system, and in particular by its interregional dependence to the needs and interests of Metropolitan Lima' (INP 1972, 87–88). Ancash's main Andean cities were depicted as shrinking zones, experiencing dramatic depopulation even before the earthquake, which purportedly worsened with massive emigration to coastal areas after the event. The disaster, in this sense, only came to 'accentuate the spatial imbalances' (INP 1972, 90) that defined the relationship between *sierra* and *costa*, portraying the catastrophe as an accelerationist event of internal migration and economic dependency. In the words of CRYRZA, 'the earthquake of the 31st of May 1970 confirmed the unequal and unjust socioeconomic and political order existing in the Affected Zone, a situation that as revolutionary Peruvians we have the obligation to change through the tasks of Reconstruction and Rehabilitation' (CRYRZA 1972; in Bode 2001, 178).

Authorities also explained the earthquake's drastic consequences through the poor coordination capacities of the local population, linked to decades of social capital dismantling. According to the report, 'the earthquake proved the inefficiency of the scarce levels of social organisation in the majority of the population', leading to 'a set of dispersed demands' (INP 1972, 91) that were portrayed as very difficult to satisfy. Such a scenario, the government remarks at the time, only benefited a local elite

that traditionally influenced the region's productive activities – a group of the population that, 'given their organisational capacity and the cohesion of their interests, became the most important lobbying and influencing sector' during the reconstruction (INP 1972, 91). Under this context, the government's mission in the aftermath was not only to reconstruct the regional settlements under new modern standards; above all, it was the rearticulation of the social fabric and improvement of the highland's productive capacity as a form of overcoming its dependency on the coast. To achieve this, democratisation of the urban public space was required – a process that aimed to restrict the hegemony of the white and *mestiza* elite while redistributing wealth and access to urban services among the indigenous and *campesino* population.

Weeks after the earthquake, the area surrounding old Yungay became an operational centre not only for governmental organisations coordinating immediate help and further reconstruction, but also for international groups from all over the world willing to support the region's recovery. The magnitude of the destruction would foster massive international aid from countries including Chile, Cuba, both East and West Germany, Mexico, the Soviet Union and United States. Inscribed within what Anne-Emanuelle Birn and Carles Muntaner (2020) define as the Cold War's disaster diplomacy and South–South medical solidarity, the two main geopolitical blocs of the time sought to demonstrate their supremacy and support by sending anything considered profitable for recovery purposes: monetary donations, clothing, machinery, satellite phones, prefabricated houses and hospitals, tents, healthcare volunteers and professionals, medicine and even blood – with Fidel Castro's supposedly running among Ancash's veins nowadays². This 'earthquake of world solidarity' as it was termed at the time (Bode 2001, 164) was one of the first expressions in the history of international aid amid a catastrophe of such magnitude (Álvarez 2019) and was covered by journalists worldwide.

The consequences of the event, together with the strong presence of a diverse set of professionals, would leave a profound influence on different disciplines. A notable example is the work conducted in the region by psychiatrists and other mental health professionals. Supported by a vast network of volunteers and humanitarian agencies from all over the world, psychiatrists from Lima and countries like the United States produced vast numbers of reports diagnosing post-traumatic stress disorder, the most common pathology identified. Signs of this diagnosis commonly

2 It is commonly said among *Huaracino* leftists that Fidel Castro was the first donor of blood sent from Cuba to Peru. I learned this while joining the Huaraz-based National Encounter of Peru–Cuba's Cultural Centres (*Casas de la Cultura Perú–Cuba*) taking place in November 2019, where assistants constantly shouted with joy ¡*La sangre donada jamás será olvidada!* (The blood donated will never be forgotten!) and ¡*Gracias, Fidel, tu sangre en mis venas!* ('Thank you, Fidel, your blood in my veins!').

included anxiety and distress reactions, psychotic and neurotic reactions, depression and dissociation – a feeling also described as ‘automatism’ (i.e. the inability to perceive cold / hunger, or to react to immediate disturbances). In other cases, it also included violent reactions and loss of memory. Some passages from a report of the time exemplify this:

On June 20 [1970], a meeting with the inhabitants of Lucumapampa was convened to transfer the isolated people from one camp to another where the JAN could provide help. This meeting consisted of an agglomeration of people behaving without any sense of unity or defined goals, acting like six- and seven-year-old children. Open aggressivity and clear manifestations of affective ambivalence were felt floating in the air. Aggressivity was towards themselves or the rest. Individuals threatened to kill themselves if, for example, a particular request was not fulfilled.

... Other interesting reactions were observed within the group from Ranrahirca on June 25 [1970]. This population was better organised: they had installed some tents, given names to the streets and allocated silos.

When the assembly began, the Peruvian flag was raised. The reaction of the group was instantaneous: some individuals cried, others laughed, others manifested frenetic joy while jumping and hugging each other, others laughed and cried at the same time, others sang the national anthem loudly’ (Infantes et al. 1970, 176).

Critical here is how these reports ultimately led to a pathologisation of post-disaster behaviour, in tune with the diagnoses that were spread by disaster research groups linked to the United States Army at the time³ and common in contemporaneous literature of disasters studies⁴ (Stehrenberger 2016; 2017).

3 The connection between military research groups and disaster risk management for preparedness and response has been extensively researched, including the work of Tracy Davis (2007), Joseph Masco (2014) and Davide Orisini (2022).

4 Moreover, this event had implications for post-disaster psychological studies and other interventions. According to Cécile Stehrenberger (2016), the 1970 event led scholars such as Dr. Raquel Edelmann Cohen, a prominent Peruvian researcher in the field of mental health, to apply their findings and diagnoses in other disaster-related settings, such as the 1972 earthquake in Managua, Nicaragua. Similarly to Ancash, the aftermath of Managua’s earthquake would turn Nicaragua’s capital into a Cold War ‘battleground’ (Johnson Lee 2015). Supported by the US and international urban planners, the authoritarian regime of General Anastasio Somoza Debayle would produce an incomplete and contradictory modernisation plan, creating the feeling – of an ‘unfinished’ and ‘unrecovered’ city – that still prevails among the population. See David Johnson Lee (2021) for a detailed analysis of the US intervention in Managua’s reconstruction process and the influence of the failed recovery process in the 1979 Sandinista Revolution.

The unfolding of the 1970 earthquake and its aftermath would also be particularly significant in developing an emergent and weakly addressed field of anthropology of disasters at the time⁵. Events like the 1970 Ancash earthquake and the landslide that buried cities like Yungay were one of the first moments⁶ when anthropologists could observe first-hand the consequences of such a disruptive event and the challenges experienced by surviving groups to recover 'normality'. The work of Paul Doughty (1971), Stephen Dudasik (1980), Jorge Osterling (1979), and most prominently Anthony Oliver-Smith (1977) and Barbara Bode (1977) around the aftermath of the 1970 earthquake in the Callejón de Huaylas provided a solid impulse to the predominantly incipient anthropology of disasters, to focus on the institutional challenges that societies in the so-called path of modernisation and development face after the occurrence of extreme events. The disaster agent, according to William Torry (1979, 519), would become 'one of several interacting forces which disrupt social stability and promote change', providing the discipline with new research horizons beyond primitivist approaches to traditional societies.

The strong presence of anthropologists in the region was in any case accidental. Since the 1950s, the Callejón de Huaylas hosted the Vicos Project at the hacienda of the same name, a world-leading research institute of applied anthropology associated with Cornell University. Similarly to many other applied anthropology projects in the Andes at the time, Cornell's scholars aimed to enhance – through what Allan Holmberg, one of its founders and directors, defined as 'participant intervention' – conditions that would promote social and economic development within the local Quechua-speaking population living at the hacienda (Greaves et al. 2010). Strongly influenced the expansion of a developmentalist anthropology – commonly related to an 'inherently capitalist character' (Klarén 1973, 550) – in the region, the project's main goal was to 'bring the indigenous population into the 20th century and integrate them into the market economy and Peruvian society' (Cornell University 2005). The presence of the Vicos Project until the late 1960s, together with the dramatic social disruption that the 1970 earthquake and landslide entailed, provided a perfect scenario for the conjunction of research perspectives that had somehow been

-
- 5 Before events like the 1970 earthquake, anthropological studies of disasters had been relatively rudimentary and based on scarce empirical studies. According to William Torry (1979), the first anthropological studies on hazards were mainly focused on exploring the capacity of tribal groups to adapt and maintain, 'under aboriginal conditions', long-term stability amid harsh environmental circumstances – related primarily to scenarios of drought and famine. Studies in this regard included the pivotal work of scholars like Edward Evans-Pritchard (1940), Fernando Ortiz (1947), Paul Spencer (1965) and Victor Turner (1967), among others.
- 6 Other studies conducted in the aftermath of events at the time include the work of Cyril Belshaw (1951), Felix Keesing (1952), Raymond Firth (1959), William Lessa (1964), Joan Miller (1974) and Kai Erikson (1978).

separated until then⁷: an applied school of anthropological research focusing on establishing conditions to support economic progress, and a rather modest field of disaster studies focussed chiefly on understanding the impacts of hazardous events for the integrity of communities. Among them was Anthony Oliver-Smith, a young PhD candidate who, while preparing his doctoral thesis on traditional markets in the Callejón de Huaylas, would be forced to reorient his research on Yungay's recovery process as a consequence of the devastating earthquake and avalanche. Condensed in his seminal book *The Martyred City: Destruction and Rebirth of an Andean City*, Oliver-Smith's work would offer key insights for a research field that, to date, had focused on exploring how to mitigate the consequences of extreme events and improve society's response capacity amid crises.

Just like Kai Erikson (1978) while studying the 1972 Buffalo Creek flood in West Virginia, Oliver-Smith would strongly emphasise the post-traumatic consequences experienced by *Yungainos* due to what scholars at the time would identify as a 'loss of community' and the incapacity to rebuild the lost social fabric. Oliver-Smith's work was fundamental in establishing and reinforcing many of the implicit assumptions we face nowadays when dealing with social studies in disaster and recovery: the existence of a traumatised population that, in their communitarian efforts to recover their old forms of life, must deal with a centralised apparatus that, incapable of broadly understanding the 'real needs' of survivors, forced upon them a processes of relocation that in many cases ended up destroying the cohesion of social groups – ultimately resulting in 'greater change than the disaster agent itself' (Oliver-Smith 1977, 5). Similarly to Barbara Bode (2001), who was also conducting ethnographic research in the region at the time, Oliver-Smith would suggest that urban elites – the same group that the government identified as influencing the region's decisions and politics – viewed the relocation as an attempt, through land redistribution, to suppress the strong class and race divisions that had traditionally marked the relationship between *criollo* and indigenous populations (Bode 2001). The reconstruction of the new Yungay, in this sense, is portrayed by Oliver-Smith (1986) as a constant tension between the will of local inhabitants from the former Yungay versus the recovery plans of central agencies.

Whereas the tension between governmental agencies and the local population is a diagnosis shared by survivors of the tragedy and scholars working in the affected

7 An exception to that rule relates to the work of Anthony Wallace (1956), who analysed the consequences of a tornado over Worcester, Massachusetts, and the community and individual reactions to the situation. According to Anthony Oliver-Smith (2021), Wallace's main contribution at the time was to develop a spatial-temporal matrix that allowed him to differentiate temporal periods and spatial domains according to the distance from the impact zone and across well-defined moments: pre-disaster, warning, threat, impact, inventory, rescue, remedy and recovery.

zone at the time, it is important to highlight differences in how this conflict is portrayed. In Oliver-Smith's narration, the heroic figures embodied in local authorities and leadership are replaced by a much more vulnerable character, one facing the dramatic consequences of a devastating event. In his description, personalisms are overshadowed by what he considers a genuinely collective work of survivors and authorities without clear leadership or visible faces. There is scarcely space for strong figures leading the reconstruction; quite the opposite – his ethnographic description of local actors aims to portray the difficult living conditions and severe post-traumatic consequences that survivors faced in the year after the earthquake and avalanche. Here, Vergara Méndez and Caballero are not historical figures that reflect the heroic values of a devastated community trying to rebuild its life. Instead, emphasis is placed on other local figures such as Rosa Martínez, the owner of one of the few restaurants and a survivor who lost her entire family in the landslide, or the *Chupamaros*⁸, a group of local survivors known for their heavy alcohol consumption. Oliver-Smith's work reveals, common to both Rosa Martínez and the Chupamaros, feelings of unbearable pain and loss in the aftermath of the avalanche. The former, portrayed as a beloved figure among Yungaínos due to her charismatic personality and solidarity among survivors, is also depicted as experiencing deep anguish resulting from strong feelings of loneliness and loss. 'I have no more *compadres*, no more *ahijados*, all dead, all buried in the avalanche. I am lonely. Who will care for me? Who will keep me company when I am old? I am alone in the world now', she exclaimed (Oliver-Smith 1986, 176). In the Chupamaro's case, moreover, heavy drinking and alcoholism are understood as a natural reaction to the difficult living conditions of the time.

This emphasis on trauma as an articulating emotion for ethnographic testimony seems not so dissimilar from institutional positions dealing with the survivors at the time, and is certainly not an isolated institutional response to the aftermath of the 1970 earthquake. As the vast literature on the matter shows, it has been a common attitude related to problematic naturalisation and homogenisation of reactions amid extreme scenarios through the use of a specific set of instruments (see Young 1997; Terheggen et al. 2001; Fassin and Rechtman 2009; Good and Hinton 2015). Rather than rejecting the existence of trauma as such, these approaches view trauma as a social phenomenon, constructed and mobilised by different actors in ways that lead to the traumatising of experience (Fassin and Rechtman 2009) – the creation of a present, conditioned to the painful scars of the past, that precludes and suspends the

8 The name Chupamaro combines Tupamaros, a revolutionary guerrilla group active in Uruguay and Argentina at the time, with *chupar*, a slang term for getting drunk. As the author explains, the name emerged from 'the coincidence of the two words *chupar* and *Tupamaro* in the context of this heavy drinking and tightly knit group of friends who now saw themselves as independent of society's opinion' (Oliver-Smith 1986, 172–73).

expected passage of time. The particularity of pathologising approaches to trauma, moreover, is the form that articulates the existence of subjects under a historically situated category like post-traumatic stress disorder (Young 1997; Good and Hinton 2015). Understood more as a resource, trauma can be considered, in this sense, an operation that aims to characterise, or rather classify, bodies that have experienced situations of extreme violence, suffering or tragedy. Trauma, from this perspective, functions not as a condition that suppresses natural reactions to highly intense situations, but as a tangible mechanism by which to name and classify experiences and feelings that are outside the norm.

Post-traumatic disorder was not the only problem depicted by authorities and researchers at the time. Oliver-Smith (1986) narrates the escalating tensions that arose surrounding aid distribution, especially housing allocation. According to the author, when social workers sought to justify the equal distribution of housing irrespective of socioeconomic condition or ethnicity, the urban population tended to react critically, even shouting '*¡No somos iguales!*' (We are not equal!) while demanding better treatment and conditions than *campesinos*. 'Hostility between the social workers and the urban survivors became so sharp that eventually the social workers refused to come to Yungay to assist with the distribution of doors and windows for the houses as well as with other organisational aspects of the project' (Oliver-Smith 1986, 145). Such passages contrast sharply with the versions of the survivors, who saw their behaviour as a real example of local organisation and virtue based on the principles of humanity and compromise with their homeland. The *Yungainos* from *Campamento Norte*, who, 'with the help of *campesinos*, ... drawing strength from their courage and grief, overcame their misfortune, desolation and death and raised a new village' (León León 2016, 42), were instead depicted as a traumatised population susceptible to severe outbursts of violence that, in many cases, presented evident discriminatory attitudes against other members of the *campamentos*. Thus, the government's position was that it was dealing with a vulnerable population barely able to make rational decisions about the reconstruction of the city.

It is maybe not surprising, therefore, that Oliver-Smith and other authors do not put great emphasis on clear, recognisable faces when dealing with the process of reconstruction and recovery. For those focusing on the relationship between the institutional handling of the situation and the local reaction to aid distribution and reconstruction efforts, local leaderships were less relevant than the community and the agencies working in the zone. This perspective, moreover, portrays the frictions between the national agencies and survivors as the result of an overwhelmed apparatus that aimed to deal not only with the immediate response to the disaster but also with the structural asymmetries and power relations within the Peruvian society. From this perspective, figures like Vergara Méndez or Caballero Méndez are no longer drivers of change, but the result of 'the relationship between the old and the new event structures and the passage which people must negotiate between the

two' (Oliver-Smith 1986, 16). What is considered by local actors as orchestrated negligence by central authorities seeking to retain resources donated by international agencies, is instead depicted by Oliver-Smith and other authors as simply inefficiency or incapacity to deal with a catastrophe of such magnitude, fed by 'paternalistic forms of disaster aid which do not involve the recipients in decision making, management and implementation' (Oliver-Smith 1986, 159).

In all these narrations of the aftermath, it is the figure of the victim – embodying the trauma of loss and survival – rather than the reconstruction itself that assumes a stronger protagonism. Rosa Martínez, 'a tragic figure among tragic figures', Oliver-Smith affirms, 'became for a time a living symbol of survival. ... In the first year, she also became an important ritual and symbolic presence, much like the palm trees on the avalanche and the cemetery' (Oliver-Smith 1986, 219). It is the stories and experiences of the traumatised survivors that are at the centre of these accounts of the disaster – and how, despite the horrors experienced, they managed to remain alive while their entire world fragmented. Heroism, in this sense, was far from being the centre of attention but instead a distant discourse that only the local population seemed to articulate.

Configuring the disaster

This chapter gave a first glimpse of temporal arrangements that are produced while keeping the memory of past disasters alive. We explored how the temporal rhythms of survivors' accounts vary across the different stages of their testimonies; how the fully detailed narrations of people like Deysi, concerning the moments before and amid the earthquake and avalanche, are replaced by a time in which survivors were immersed into an ontological suspension – a time of waiting for things to happen. By paying attention to the diverse sources narrating the loss and recovery of the city of Yungay – a strategy that allows inquiring into the plurality of temporalities emerging from different actors and voices (Macdonald 2013) – we also explored how the gaps left by personal accounts of the aftermath are filled with other types of narratives. Narrations contained in books and historical material complement the authority of individual testimonies of the catastrophe with broader, generalisable figures that, as we saw, emerged as conflictive and almost antagonist approaches regarding the role and necessities of local inhabitants amid the aftermath.

From the previous observations, some initial conclusions could be outlined. We could argue that, on the one hand, members of the affected community base their remembrance of the recovery phases on figures such as Nehemías Vergara Méndez and Asunción Caballero Méndez, framed as fighting the injustices committed by an obtuse government with wicked intentions. Recognising visible, heroic figures is common in past narratives, a selective construction of the past that some schol-

ars have defined as 'cumulative heroisation' (Welzer, Moller and Tschuggnall 2002; in Macdonald 2013, 60–61). On the other hand, we might say that central governmental agencies like CRYRZA, JAN, and even scholars like Oliver-Smith, built their response action, diagnoses and analysis on the notion of trauma – in the case of Oliver-Smith, portrayed in figures such as Rosa Martínez or the Chupamaros. Depicting victims of disasters and extreme experiences as vulnerable, traumatised subjects has been a usual response from authorities and scholars, as previous studies on this issue have shown (Young 1997; Fassin and Rechtman 2009; Good and Hinton 2015). We could say that these two contrasting but complementary figures clashed at some point, creating tensions around what is meant to be a survivor – i.e., a true expression of resistance and endurance versus fragile beings that must be saved and supported.

Furthermore, we could also argue, as some sources affirm, that behind the survivors' responses to the catastrophe lies a true expression of class and racial conflicts deeply rooted in Peruvian society. In this reading, central agencies like CRYRZA saw, in the transformations made after the earthquake, a mechanism to balance the hitherto unequal conditions in which the urban and rural populations lived, whereas urban survivors considered reconstruction a threat to their historical privileges and domination over rural communities. These differences would have led to strong disputes about who were the real survivors (*sobrevivientes*) versus those portrayed only as victims (*damnificados*), thereby radicalising the differences between the urban and rural populations. Conflicts between community members, which are seemingly common in aftermath and recovery processes (Hoffman 2019; Fuentealba 2021), can lead to different forms of memory constructions among survivors. To build a shared history, in this sense, is to build a common otherness, a stranger – 'a large task of suppression and denial of incongruous or undesirable elements' (Hodgkin and Radstone 2005, 170). As Sara Ahmed (2000) affirms, identifying a stranger is a recognition that implies a fetishisation; the displacement of social relations 'through the transformation of objects into figures' (Ahmed 2000, 5) that turns the other into a common, generalisable unit. In line with the scholars conducting research at the time, we could say that while efforts to depict Yungay as a city of *criollos* completely erased the fundamental role of *campesinos* within the urban area (Williams 2001), it also left the latter outside the group of those who were considered the real *sobreviviente* of the avalanche – and, thus, ineligible for state support (Oliver-Smith 1986).

These initial conclusions are indeed coherent. But the reality is, as always, much more complex. Despite his strong emphasis on the trauma, Oliver-Smith also describes his contacts in Yungay back then as strong and dedicated people whose 'attempts to forge a new, meaningful existence in the face of almost total destruction of their town may tell us a great deal about how people cope with and adapt successfully to massive social change' (Oliver-Smith 1986, 13). Although mostly paternalistic, governmental agencies appealed to empower local communities through

'consciousness-raising' (Bode 2001), notwithstanding the adverse responses these politics had on the population. Furthermore, *Yungainos* at some point admit that organisations like the JAN were not 'established or created to cope with situations of emergency like the one of 31 May 1970', and 'maybe that was the reason' – rather than ill intentions – 'why it was not possible to deploy an effective work' (León León 2016, 100). Even the rivalry between Vergara Méndez and Caballero Méndez seems to dissipate at some moments – for example, when the former recognises the arrangements made by the latter to receive one of the hospitals donated by the Cuban government (Vergara Méndez 2013, 110). All these excerpts can be seen as contradictory to the testimonies presented throughout this chapter. But the truth is that stories are always partial accounts. As such, coherence and single explanations are simply difficult, if not impossible, to achieve – even from the versions of the facts provided by a single informant.

Contradictions in testimonies do not necessarily make the existence of conflictive historical figures a false abstraction; it makes them, precisely, a figurational practice – the articulation of actual and figural entities fundamental for the constitution of our live-material worlds (Haraway 2018). Figures deployed by survivors, authorities and researchers offer arrangements that, according to Donna Haraway (2018, 11), operate as 'performative images that can be inhabited. Verbal or visual, figurations can be condensed maps of contestable worlds'. As a practice, figuration provides an abstraction that can help us to navigate the complex entanglements of the past – a trajectory that, as previously mentioned, creates a record of displacements that gives certain associations greater visibility than others. It is an operation that, by holding 'the material and the semiotic together in ways that become naturalised' (Suchman 2012, 49), leads to fictive constructions that persist over time. It is important to reiterate that fiction does not necessarily mean false. They are virtual creations that imply a mode of production and actualisation, 'as the circulation of figures implies their recontextualization, multiplicity and at least potential transformation', continues Suchman. Figures, in this sense, have a real presence in the world as they offer new forms of making sense of reality – independently of how they are produced or mobilised.

Whether Vergara Méndez narrating how *Yungainos* overcame the devastation of the avalanche *vis-à-vis* a corrupted government, former authorities depicting survivors as a traumatised population that was necessary to assist, or scholars such as Oliver-Smith calling upon the suffering experienced by survivors and the conflicts with a government incapable of understanding their *real* needs, all of them based their accounts of the past on figures with a historical background. They give a sense of the unfolded events because they shape those moments and narrations, leading to different versions of the past that, in many cases, are conflicting. The once undisputed authority of Yungay's urban elites, for example, is troubled by the arrival of a vast number of foreign actors with different goals and logics, whose diverse oper-

ational principles clashed with the intentions of those local *Yungainos* to remain in the location of the original city and rely on their historical privileges. These differences construct not only divergent and contesting urban projects among the actors involved; they ultimately create different times that clash with each other: an idyllic past of glory contrasted with a present of loss and hopeless future for some, versus for others a past of exclusion and inequalities that the post-disaster policies aimed to overcome in pursuit of a more equitable present and future.

As historical figures, both hero and victim promote temporal strategies for configuring the past. This applies to local narrations mobilising those figures in an effort to configure the disaster, endowing it with historical substance and coherence. But it also applies to reports and academic studies that, in an effort of figuring out, of ‘fitting figure to ground’ (Fortun 2009, 169), sought to understand what happened in the affected area and how it is possible to explain the behaviours, responses and attitudes that survivors showed. By invoking these figurations, all the sources dealing with the aftermath of the disaster aim to create a narration sufficiently persuasive to convince that their account of the facts is accurate and coherent. Yet, the creation of abstract figurations is not only a result of the eye-witnessing process; it is mostly a strategy that enables the construction of a generalisable and thus pervasive narration affirming that the author, the witness, knows what is going on there. By allowing totalising descriptions, generalisations and interpretations, the figurational exercise is a rhetorical strategy that creates part and whole simultaneously. The figuration, in other words, is what articulates the ground.

The conflicts and divisions produced by these historical figures are the first *tinku* of this work: the encounter of antagonistic figures marking the way in which the past is built and maintained. As abstractions, figurations are forms of gathering together (Haraway 2018); in the case of Yungay’s testimonies, propositions resulting from the multiplicity of the stories emerging from the disaster and its aftermath. Sustaining the past requires technical reports, academic studies and the countless testimonies presented in the books about the tragedy that have been published year after year by the survivors. It also requires concrete materialities that must be recreated and reproduced, like the destroyed cemetery, or elements that must be erased and turned into something else, like the dried mud left by the avalanche since transformed into the fertile soils of Campo Santo memorial. These forms of maintenance sometimes create antagonistic figures based on different operational principles. It can portray survivors as heroic figures fighting for their hometown, but also as vulnerable actors guided by trauma and the loss of privileges.

This first encounter invites us to think on memory and history as situated categories articulated around the conflictive encounter of temporal figures defining how the past is arranged in the present. Temporal delimitations of the 1970 catastrophe define who can be considered a real survivor and who is not. It is, in other words, an exercise that determines who should be included in what Jacques Rancière (2004) depicts as the distribution of the sensible: the definition of what elements are considered to take part in the common orders of the world versus those that are not, and which place they assume in those arrangements. But this creation of restricted pasts is not the only way in which inclusion and exclusion may take place. In what follows, we will explore how the practices and materialities aiming to demarcate the spatial limits of the avalanche can also be a decisive ecology for developing a regional memory of the catastrophe that, as we will see, can also lead to exclusionary temporal practices.

2 Campo Santo's Intangibilidad

An immanent place

In the hours and days after the 1970 avalanche that buried Yungay, survivors gathered in the alluvial scar, first at its borders and then in the centre, to search for their missing relatives. The wide, desolated pampa left by the landslide over the old Yungay started to be known as *la playa* (the beach) due to its clayey colour and emptiness. As the weeks passed, the victims' relatives started placing modest wooden crosses and flowers over what they estimated to be the locations of their buried houses. Over time, the extensive field slowly changed in status, from a place to search for victims to a site of mourning. 'It had not been long after the avalanche, as soon as it was realised that the dead were already buried by several feet of alluvial debris, that the *playa* was declared *Campo Santo* and was made a national cemetery' Barbara Bode (1977, 53) argues. Having been declared 'holy ground', Campo Santo became a place commonly visited by survivors seeking to remember their loved ones buried beneath. Weeping for lost relatives was conceived as a *desfogue* (release), a necessary act of mourning, and the landslide scar the most appropriate place for it (Oliver-Smith 1986, 183–85).

The space for grieving offered by the Campo Santo in the aftermath of the disaster is still used by many survivors and relatives of the victims. One is Luis (Lucho to his friends): 'I come often to visit my deceased relatives, to take a walk, to *distraerme* (get distracted), to remember the past', he says to me during a visit to the site. Lucho comes from a traditional, middle-class *Yungaino* family that, with the exception of one aunt, all survived the tragedy in 1970. His family was out of town that day visiting relatives, while Lucho, then aged fifteen, escaped the avalanche when he and some friends were trying to sneak into a circus show at the local stadium on the outskirts of the old city – the same site where around 80 children survived the catastrophe. With their hometown gone, he and his family moved to Lima, where they lived for several years. After finishing school, Lucho returned to live in the new Yungay, where he has spent his entire life since. Throughout that time, he has witnessed the changes and transformations of the zone – from the first years after the foundation of the new city and its development across time, to the creation of the Campo Santo

memorial cemetery. As we walk through the memorial, his childhood memories are constantly intertwined with the institutional history of the site. He gives a vivid account of the exact place where the earth opened as a result of the earthquake, or the gutter he ran into while escaping, while sharing with me all the projects and efforts that aimed to turn the site into a prominent place of memory and tourist attraction.

At some point, he says something that I constantly hear during my visits to Campo Santo: that despite being an intangible site, a place of *intangibilidad* (intangibility) due to the intrinsic value it possesses as a site of collective memory, Campo Santo is in a worrying state of abandonment. Maintaining the site and protecting it from what he calls depredatory acts and inappropriate uses of the space should be the primary role of the Municipality – a task that, according to him, has not been appropriately fulfilled. Without proper protection and recognition, the memorial is at risk of disappearing, he confesses, together with its intangible value as a site containing the history of a vanished city.

Throughout my visits to the place, and after talking with several people, I realised that Lucho's opinion about the abandoned state of the site is commonly shared among *Yungainos*, especially elderly survivors. They blame the site's abandonment on what they define as a lack of political will and the stubbornness of some old *Yungainos* opposed to any form of change in the place, which has impeded the development of an economically attractive tourist and heritage site. Protecting the site where a fundamental part of his past is buried has become a major concern for Lucho and many others *Yungainos* – a task that has required decades of work, discussions and even struggles. Like others, Lucho agrees that the declaration of *intangibilidad* was a critical measure for protecting the place against depredatory acts and *invasiones* (invasions), a common word in Peru to refer to land seizure. However, that single legal statement has not been sufficient for that purpose.

While hearing accounts by people like Lucho, I wonder what exactly intangibility means in this case. What is, in other words, the immanent condition of those lands that a site like Campo Santo aims to protect? Intangibility is normally applied in cultural heritage as a form of recognising the intrinsic value of nonmaterial products and cultural processes (Foster 2015). Rather than focusing on more obvious historical monuments, archaeological sites and natural parks, the notion of intangible heritage commonly emphasises living traditions, embodied skills and oral expressions (Alivizatou 2012). It is, in other words, an invisible type of value that groups of people are willing to foster and protect across generations and in response to their environments and history (UNESCO 2003). The concept has been clearly influenced by the anthropological understanding of culture, encompassing 'all those practices – including rituals, tales, performing arts, crafts and ceremonies – that are transmitted orally from the past and act as symbols of identity in the present' (Alivizatou 2012, 15). In tune with the standard use of the term by social scientists, the intangible comes to represent those social conditions preceding conducts and behaviours.

It is, paraphrasing Latour (2007), those 'invisible forces' of society that have called the attention of the sociological field over the years.

In Peru, however, the concept seems to have its origins in the protection of archaeological sites¹. Fernando Armas Asín (2018) shows in his study on the history of tourism in Peru how the notion of *intangibilidad* had its first boom in the 1930s and 1940s thanks to the longstanding work of renowned scholars like Julio C. Tello – and the commercial opportunities of an increasingly expanding tourism industry sustained on the country's cultural heritage (Rice 2018). Over time, the figure of *areas intangibles* evolved to protect the nation's cultural inheritance and other places directly or indirectly related to what is considered part of those sites, being officially recognised as an inviolable principle thanks to the creation in 1971 of the National Institute of Culture (*Instituto Nacional de Cultura*, or INC) as the country's primary steward of cultural heritage (Asensio 2018). Nowadays, the notion of *intangibilidad* is generally applied as a legal concept that restricts uses and rights in order to protect places, properties or resources that are of strategic or immaterial value for individuals or the country (Casafranca Álvarez 2017). It is, above all, a moral principle (Asensio 2018), a concept that sets sharp – yet ambiguous, as we will see – boundaries against the transgression of sites of national interest.

In Yungay and its surroundings, the notion appeared for the first time in an executive order (*resolución suprema*) presented by the Peruvian Government in October 1977. The document aimed to recognise the intrinsic value of the place where the old city of Yungay and its former inhabitants are buried – a site threatened by so-called 'depredatory actions' and the expansion of the new city. People directly or indirectly involved with the maintenance and protection of Campo Santo use the term on a daily basis to refer to the restrictions applied to the memorial. However, the use of the term *intangibilidad* in this case differs from the common uses of the term. The site is not a concrete representation of an ungraspable cultural heritage; it is not even an archaeological site harbouring the ruins of an ancient city. Campo Santo is instead the commemoration of a place that no longer exists: an absence, a vacuum. It would certainly be easy to dismiss these understandings of *intangibilidad* as misinterpretations of the word, but this would disregard the concrete forms in which this concept is enacted when referring to the memorial and its surroundings. Furthermore, it would impede reflections upon what lies behind the protection of a place like Campo Santo, together with its implications for keeping alive memories of the 1970 disaster and its consequences.

In this chapter, I analyse what it means to recognise an intangible place that must be protected from the passing of time. By exploring the history of Campo

1 See Raúl Asensio (2018) for a comprehensive analysis of the role of archaeology in the construction of a national cultural identity grounded in a deep moral relationship with pre-Hispanic materials.

Santo together with its present role in the configuration of the new Yungay, I reflect on how survivors succeed in bringing into the present the invisible figure of a disappeared city through concrete devices that enable enacting *intangibilidad* in the first place. Rather than considering intangibility as an intrinsically *immaterial* phenomenon driven by a perceptual understanding of memory-making, this chapter proposes a material-based approach to explore how absence is made present and actual. Specifically, I explore how the notion of intangibility, a nonmaterial concept with an apparent strong influence on the politics of memory around the 1970 disaster, is enacted through tangible but diverse operations and devices seeking to turn the vanished city into a visible figure that can endure over time, together with the forms of temporalities the site produces. This involves the question of how such an elusive notion as *intangibilidad* gains presence and manages to mobilise a vast network of actors, devices and materials along the way, and what sort of temporal arrangements such mobilisation produces. If we agree with Kristin Kuutma (2013, 11) when she says that ‘heritage is an abstraction, and what it signifies is subject to an interpretation and an evaluation that may fluctuate between positive and negative over time and space’, we need then to ask ourselves which operations sustain and maintain such abstraction in the first place, what forms of temporal delimitations those operations produce and what are the social consequences of those delimitations.

Enacting the intangible

In 1977, the Peruvian Government enacted Executive Order Nr. 0005², which declared the location of the buried Yungay a protected site in the following terms:

Considering:

That the area of the old city of Yungay, since the date of its destruction by the earthquake and avalanche of 31 May 1970, has been considered a true Camposanto since the remains of its former inhabitants lie there;

That still not having defined the use that will be given to this area, and that it is appropriate to declare its intangibility and to preserve it from predatory acts ...;

It is resolved:

1°. – To declare intangible the lands that constitute the area of the ancient city of Yungay, capital of the province of the same name of the Department of Ancash, for the reasons considered above.

2 Resolución Suprema Nº 0005. 12/10/1977. ‘Declaración de Intangibilidad de Campo Santo’. Lima. Archive of Yungay’s Provincial Municipality.

This excerpt leaves several questions open. What does intangibility mean in this case? What precisely must be preserved? And what are the depredatory acts that the text refers to? In the second resolutive article, the document empowers the Regional Organism for the Development of the Affected Zone (ORDEZA), which replaced CRYRZA in its work for the region's recovery and rehabilitation, to carry out this resolution. However, the Executive Order refers neither to the old Yungay's limits nor the spatial extent of the place to be declared *intangible*. Was ORDEZA in charge of defining those limits in the first place?

From the 1977 resolution, it is possible to infer that Campo Santo's *intangibilidad* was granted due to the spiritual value that such a place had for the survivors – 'since the remains of its former inhabitants lie there'. However, other sources affirm that the protection of the place initially had another *raison d'être*. In Chapter One, we saw that one of CRYRZA's concerns in rebuilding the city of Yungay near the landslide scar was its susceptibility to a similar future event. By applying land use zoning to exposed areas, the government aimed to reduce the risk of future disasters and restrict further construction over the scar left by the landslide. The declaration of *intangibilidad*, in this sense, was not only a way of preserving memory but also of protecting the population by precluding urban expansion within the devastated area. Some sources confirm this, including a letter written by Julián Ángeles (2013, 7). There, the author affirms that the Director of the National Directorate of Infrastructure, the engineer Santiago Agurto Calvo, in a meeting with survivors and members of ARPRY in 1972 expressed that 'the chances that a mudflow may happen again are high and the conclusion after the experts' studies is definitive'. Thus, 'the zone where the city was located will be declared intangible, and we will not allow the construction of even a single house'. Similarly, Oliver-Smith and Goldman (1988) affirm that even after winning the battle to stay near the old city, reconstruction authorities prohibited inhabitants of Yungay Norte from locating major structures in the camp and around Campo Santo, as a form of slowing down the reconstruction in the area. Barbara Bode's (1977, 53) ethnographic work a year after the catastrophe also confirms the authorities' apprehensions concerning the site's imminent reoccupation:

The *Yungainos* wanted to be as close as possible to the alluvial scar. With passing months, and years, the feeling grew that Yungay should even be rebuilt in the very same place. There was an overwhelming desire to live with the dead, to be able readily to go and mourn over the small crosses on the *playa de los muertos*. Sweeping his arms across the panorama of the *playa*, one survivor exclaimed, 'Here there is life!'

The desire to be as close as possible to Campo Santo, with some people even willing to reinhabit the place, contrasts with the strong defence that *Yungainos* made to maintain the site as intact as possible. Bode affirms that survivors opposed any

intervention in the field that was not related to mourning the deaths. For example, in 1972, authorities dynamited some boulders left in the area by the avalanche and used the fragments to rebuild the airport strip. ‘These blasts on the mute *playa* disturbed survivors’, argues the author, ‘who said that *all should be left as it was*, every last rock, as a witness to that day’ (Bode 2001, 54; own emphasis). In the same way, survivors were strongly opposed to the looting of the city’s buried remains, which started taking place all over Campo Santo as the dried mud allowed people to walk above the buried city without the risk of being swallowed by the formerly unstable soil, and also enabled any form of agricultural activity. Both types of practices, unsurprisingly, were and still are commonly related to people coming from rural areas³, who are accused of an outrageous violation of the memorial’s main goal of preserving the memory of the deaths and the buried city.

Survivors were not opposed to every intervention at Campo Santo. The first anniversary of the tragedy was marked by a crowded commemoration, with hundreds of visitors coming from Lima and other main cities. Since the anniversary included a religious service in an improvised place made of palm tree leaves and branches, survivors decided it would be convenient to construct a ceremonial centre at which to hold mass in subsequent years. According to Bode (2001, 53), ‘it was envisioned that a chapel would be built near the four exposed tops of the palm trees and would become a national monument’. This construction, however, never took place. Instead, an open-air altar was placed to commemorate the anniversary each year.

Interventions as part of the memorial proposed by *Yungainos* also included projects with commercial purposes. As a form of reactivating new Yungay’s economy some years after the earthquake, some survivors proposed planting a field of roses and building a greenhouse in the area to support export-based commerce. The *Parque de las Siete Rosas* (Park of the Seven Roses) aimed to provide the country with seven types of roses for religious festivities and celebrations throughout the year. ‘Let’s start with the month of May, Mother’s Day, red and white [roses]. Red means that your mother is alive and white means she is resting. There are specific colours for every occasion’, Lucho explains to me while we walk across the memorial’s gardens. This project, however, did not receive approval from all the survivors. As with many other projects throughout the years, *Yungainos* have complained about the high costs of those interventions. Moreover, some were opposed to conducting commercial activities within the field, considering it a deviation from Campo Santo’s memorial purposes. Lucho, however, thinks that those activities are not only compatible but also necessary to make Yungay a renowned tourist destination again – with the memorial as its main attraction.

3 Although *Yungainos* mainly associate looting with *campesinos* from the highlands, sources say that it became a common practice, regardless of socioeconomic status or origin (Infantes et al. 1970, 174). It was a practice born from the desperation of survivors.

Proposals to turn Campo Santo into a profitable economic project have persisted throughout the site's history. Perhaps the clearest expression of this impulse occurred during the administration of a *Yungaino* named Mauro Dueñas, who survived the avalanche in his early twenties. Almost every survivor agrees that in the first two decades after the avalanche, and despite its *intangibilidad*, Campo Santo was an abandoned place threatened by uncontrolled grazing and *invasiones*. However, this started to change in the 1990s, when Dueñas was twice mayor of the city during two periods between 1993 and 2005. *Yungainos* remember this as a key time in the history of the new Yungay, during which several public works were conducted, including water infrastructure, roads and basic services. 'We made hearts from guts (*hicimos tripas de corazones*), as it is commonly said. We brought electricity, drinking water and roads to all the communities, despite not having a big budget', Dueñas tells me proudly during one interview. The reconditioning of Campo Santo at that time, however, is one of the works during Dueñas's administration that is best remembered and appraised by *Yungainos*.

Supported by architects and landscape planners from Universidad Femenina del Sagrado Corazón de Lima, the Municipality planned what was known as the Memorial Yungay. The architects behind the project affirmed that it was an ambitious touristic, recreational, ecological and landscape plan that aimed to turn Campo Santo into 'an homage and reminder of the physical, historical and social trajectory that the city of Yungay lived since its origins until the natural phenomena of the May 1970 earthquake' (Carbajulca et al. 1993, 3). The projected infrastructure included the famous *Cruz Monumental* (monumental cross), a crucifix-shaped polygon conceived as the backbone of the field. Campo Santo's most important milestones were also to be included there: the reproduction of the old church at the very top of the cross, an open-air religious centre where the rest of the old church was located, a homage to the old *Plaza de Armas*, and several minor thematic plazas also containing commemorative plaques and monoliths. 'Many *Yungainos* were pleased with the project done because it was in memory of all those who had fallen', Mauro Dueñas tells me. It is a time remembered with nostalgia for all the tourism it generated, something that, according to survivors, has since been lost in subsequent decades.

Most of the memorial interventions were realised during Dueñas' administration. The main entrance with parking lots, and a large gate bearing the legend '*Bienvenidos a Yungay*' (welcome to Yungay), was built at that time, as well as the religious centre with its altar located near the remains of the old church. Many plants decorate the area comprising the *Cruz Monumental*, including roses and other flowering plants, palm trees, endemic species and eucalyptus – most of them grown at a local greenhouse years ago. In the centre of the cross is a reproduction of the old plaza, one of Campo Santo's most significant sites (see Figure 4). Located exactly where the original plaza was situated, this place seems to structure the entire complex,

providing a recognisable centre enabling visitors to orient themselves around the memorial.



Figure 4: *Campo Santo's main plaza with the Huascarán in the background*
(Usón 2022)

Due to time and funding constraints, Dueñas' first administration could not complete the Cruz Monumental project in its entirety. That very first impulse was thwarted by a reduced budget and alleged lack of political will among subsequent administrations. With time, other plans and efforts came to fill the voids and gaps left by the unfinished Memorial Yungay project. Perhaps the most famous – and also conflictive – has been the project financed by the Especial Regional Project Plan Copesco (*Proyecto Especial Regional Plan Copesco*), a branch of the Ministry of Tourism in charge of planning and executing basic tourist infrastructure nationally⁴. Sup-

4 Created in the 1960s as a collaboration between the Peruvian state and UNESCO, the agency's main goal since then has been the promotion of the country's heritage and archaeological legacy through funding for tourist infrastructure and facilities. See Mark Rice (2018) and Fernando Armas Asín (2018) for the history of this agency and its influence in the development of touristic projects across the country. A description and pictures of Plan Copesco project in Campo Santo can be found in Rebecca Jarman's Moving Mountains project: <https://www.mountainmoving.org/evidence/plan-copesco/>.

ported by this agency and private actors, the Municipality began the construction of a documentation centre and tourist facilities at the entrance of Campo Santo in 2016⁵, which came to be known by the local population simply as Plan Copesco. It is an ambitious project comprising photo galleries of the old city and the avalanche, interpretation rooms presenting the history of Yungay and the 1970 event, and recreational areas including souvenir and food stalls, a small lagoon and a barrier-free viewing area of the memorial. Despite perhaps seeming highly positive, the project has been mired in disagreement, controversy and scandal.

Initially planned for completion by the end of 2019, operations ceased some months before the deadline and left the project unfinished for several years until its inauguration in 2024. With most of the infrastructure already built, part of the population, especially survivors of the earthquake and avalanche, expressed strong discomfort with the infrastructure that was actually delivered, as they argued that it did not consider the basic construction standards required for such a place. Firstly, the architectural style of the centre, based on grey, sober concrete and wood buildings, bears little resemblance to the traditional *casas serranas* of mudbricks and red-tiled roofs. According to *Yungainos*, this issue is not only stylistic: the materials used are unsuited to the extreme temperature fluctuations of the *sierra*, while the orientations of ceilings and entrances risks flooding the rooms during the rainy season. Moreover, people who were close to the construction process affirm that the foundations of the buildings are not deep enough to deal appropriately with the soft, unconsolidated soil comprising debris left by the landslide.

But perhaps the project's most critical flaw is the lack of attention given to the sacred condition of those lands. Some people affirm that, during the construction, workers removed the soil and debris from the site, including human remains, without any precautions. 'Some neighbours, some friends that worked here told me that a great number of bones came out. They also removed mugs, flowerpots ... everything. They made everything disappear. They threw it away', says Julio, an elder *Yungaino*. It is a project that, aside from showing little respect for the fields of Campo Santo, is also surrounded by rumours of economic malfeasance and overspending. People I spoke with openly referred to it as a case of corruption and misappropriation of public funds, something that stands in stark contrast to the solemnity that survivors expect in the intervention and management of a memorial like this.

So, what do you think about this place? Lucho asks me curiously, during our visit to the site. Campo Santo, I think for a moment, is a place that shows a fascinating con-

5 One of the meetings between the municipal authorities, local actors and Copesco agents in 2015 can be found at <https://www.youtube.com/watch?v=1X60tu4hhDI>.

trast. On the one hand, it is a powerful memorial, a cemetery where people can visit deceased relatives and, at the same time, somehow revive an old city that no longer exists. But, on the other hand, it is also a beautiful park where people can spend the day in nature and relax. The new city of Yungay does not have many green areas, and Campo Santo addresses that deficit with vast fields of grass and trees, providing shadow against the intense *serrano* Sun. It is a place where the wind blows fresh and the Huascarán shows its grandness on sunny days. It is true that some things could be improved, but the gardens are beautifully kept, and the installations well-maintained. Lucho, however, seems not to share my genuine and honest opinion. *Well, I think it's abandoned*, he affirms sharply after some seconds of silence. It is an opinion that, as we have seen, is repeated by almost every survivor or person having a personal connection with the place.

From an empty, extensive place of searching and despair with unclear boundaries and demarcation, Campo Santo slowly became a place of mourning and grief, a cemetery and memorial to the disappeared city. The survivors' fervent need to connect with their lost past would start merging with the early governmental urgency to zone the field as a risk area, which finally led to the official declaration of its intangibility in 1977. These two logics of operation, however, would not be tension-free. As time passed, they would lead to differing interpretations of the memorial's boundaries and goals, resulting in different temporal orientations: a site safeguarding the past of a disappeared city while ensuring the future security of the population. These two interconnected, yet sometimes conflicting, orientations would shape Campo Santo's temporalities throughout the years.

Similarly divergent viewpoints concerning the maintenance and interventions within Campo Santo show us how the boundaries and valuations shaping the memorial and its intangible value began to flourish. The *intangibilidad* started emerging as an overwhelming effort from survivors to keep the memory of the old city and victims intact while interacting with the site in diverse ways. It arose as a tormenting imperative to perpetuate the traditional image of Yungay while integrating it into the daily life of its surviving inhabitants. In some cases, it seemed easy for survivors to define what should be allowed and what were so-called depredatory activities. There was common agreement on allowing objects such as crosses, mausoleums or other forms of commemorative infrastructure from the very beginning, while rejecting other non-appropriate interventions such as looting or agricultural activities. But with time, these categorical definitions would open the door to ambiguous positions around commercial uses that remain unresolved among *Yunguínos*, exemplifying the difficulties of agreeing appropriate land uses within the memorial zone.

Delimiting the intangible

During our walk throughout the memorial, Lucho demarks some of the former city's limits. One is Libertad Avenue, Yungay's northern border with Cochahuáin. 'From here, it was city already', he says while indicating the extensive field located on the southern side of the avenue. Now the outskirts of new Yungay's urban sprawl, Cochahuáin used to be a neighbouring hamlet of *chacras*, many of them belonging to the same inhabitants of the city. But it was also the last place that the landslide impacted to the north. As such, part of this neighbourhood is nowadays considered integral to the memorial.

As Lucho indicates the limit based on Libertad Avenue, I see some houses located on its north side, immediately after what he considers the old city's boundary. When discussing the memorial's history, many people refer to those houses exemplifying the various *invasiones* that have occurred during the last 50 years. Lucho has a similar opinion: people have entered the place and occupied it illegally over these years. On many occasions, the same Municipality of Yungay's province, the legal owner and official administrator of the site, has supported those settlers by providing them access to basic services. 'There have been actual *invasiones*. Thus, there is no such thing as *intangibilidad* anymore because the authorities themselves have violated the intangibility. ... By installing water and electricity, they have granted *legalidad* (legality)', says one director of Yungay's Beneficencia during my visit to their office.

This issue concerning the boundaries of Campo Santo keeps me thinking. According to Lucho and other *Yungainos*, parts of Cochahuáin and other areas are officially within the memorial site, especially those at the edge of the landslide scar. However, they were not part of the city back then. Is the memorial, then, a site that delimits the old city's boundaries, or rather the complete extension of the landslide? If the former, why are lands located on the north of the Libertad Avenue considered part of the memorial? But if the latter, why are other areas also impacted by the landslide not considered part of the protected site nowadays?

The history of Campo Santo's limits is built on gaps and ambivalences that made the demarcation of that place a complex task since its inception. In its first article, the previously mentioned 1977 Executive Order declares 'intangibility the lands that constitute the area of the ancient city of Yungay'. However, the document does not give any coordinates, points or physical references to specify those spatial limits. Instead, it placed ORDEZA, the agency responsible for developing the affected zone at the time, in charge of defining the perimeter referred to as Campo Santo. The agency established the perimeter within Resolution Nr. 0417-77-ORDEZA, enacted later in

1977, setting the current area of 99.5 hectares composed as an irregular polygon of 33 vertices. However, throughout my fieldwork in the zone, I was unable to locate any document or person who could explain to me on what basis that polygon was delimited. Only in 1994, under the chair of Mauro Dueñas, did the Municipality enact Resolution 028–94-MPY-A⁶, including a technical file that approved and officially declared the specific location of Campo Santo's boundaries – documents, however, to which I never gained access.

With the limits finally settled, authorities and *Yungainos* at the time argued that the Municipality could finally put into operation its endeavour of protecting the memorial against external threats and expelling the *invasores* who had been occupying part of the field in recent decades. However, with no landmarks, fences or any physical delimitation being settled, the allegedly illegal occupiers never left. Furthermore, additional attempts to occupy more parts of the field took place on two other occasions during Dueñas' second administration at the end of the 1990s, which were stopped by municipal authorities assisted by the police. In response, the Municipality decided to locate small rock landmarks all over the area, delimiting the borders in 2000 based on the 1994 technical file, which would be used as a precedent if new *invasiones* occur.

The 99.5 hectares approved in 1994 supposedly cover the entire extension of the old city. However, there have been significant discrepancies in this regard. Sofía, who is among the people considered invaders of Campo Santo by the Municipality, explains why she thinks it is a historical misunderstanding. Sofía was born and raised in the new city. A school teacher and owner of a small grocery shop, she is the daughter of a *Yungainos* couple who survived the avalanche. Her father was at his *chacra* when the earthquake began, while her mother and siblings were in another city. After they found each other in the desolated pampa left by the landslide, they began to wander in the area, looking for a safe place to settle. First, they stayed at the Pashulpampa camp, and then moved to the foothills of the Aura Hill on the southern limit of the buried city. Finally, they returned to new Yungay to establish themselves, where her father rebuilt his old business.

During those first years, Sofía's family acquired some land in Acobamba, a hill nowadays considered within Campo Santo's limits. However, before the *intangibilidad* was enacted, Acobamba was a rural area outside the city's limits, although also partially impacted by the landslide. 'The intangible area inscribed is 99.5 hectares, but the real area of the old city was about 60 hectares', Sofía explains to me. 'The area of *chacras* and houses is about 25 hectares, and the other five hectares have been used [by the same Municipality] to build a school and a greenhouse'. The 25 hectares of used land comprise part of Acobamba, some constructions in Cochahuain – the

6 Resolución N° 028–94-MPY-A. 08/07/1994. 'Aprobación del Plano Perimétrico del Terreno Declarado Intangible y Memoria Descriptiva de Ubicación y Delimitación'.

sector of Yungay neighbouring Campo Santo on the north where Sofía's minimarket is located – and some terrain in the southwest.

After the earthquake, Sofía argues, people started occupying the lands surrounding the landslide scar. Some settlements even occurred on its border and close to the limits of the old city. While some settlers seized those lands without permission, former owners also reclaimed their land rights in those areas. In other cases, new inhabitants inscribed land plots to settle there or to use the land for agriculture – permissions that the Municipality granted in the 1970s. Sofía thinks that many of the people who requested those lands worked at the Municipality back then; thus, they did not encounter any objections to settling too close to the impacted zone. As time passed, some of those who registered the lands, including families who owned land in the area before the disaster, sold them on to new owners, while those illegally occupying the lands could obtain a certificate of possession after five years of use and tax payment. But after the 1977 Resolution of *intangibilidad* and the further 1994 delimitation of Campo Santo, those lands were located within a protected area and started to be declared as illegal seizures. The *chacras* of Sofía's parents were among those lands.

Sofía clarifies that there are no contradictions between the location of Campo Santo and the lands around it nowadays. In fact, Ancash's Regional Directorate of Culture conducted a visual inspection in 2011 to determine whether the area belonging to the memorial was being used for other purposes. In its report, the agency recognises a conflict of land uses between the protected area and some agricultural lands (Dirección Regional de Cultura de Ancash 2011). However, the document acknowledges that the same Municipality has been revising Campo Santo's limits, leaving agricultural fields and other areas initially included within the memorial now outside its domain. Echoing some *Yungainos'* allegations, the Municipality provided the lands of Sofía's family and other neighbours accused of invading the site with drinking water, sanitation and energy networks over the past decades. Based on this, the Regional Directorate of Culture recommended a new delimitation of Campo Santo that considers the current land uses in its margins. But despite the results and recommendations expressed in the report, in the following years the same Municipality – that provided people with basic services – increased its attempts to recover lands that it alleges belong to Campo Santo. Consequently, it sued the people living there and sent several letters threatening eviction, which has not taken place so far.

When reading Campo Santo's historical and current documents, the two logics and temporal orientations behind the creation and delimitation of the memorial seem to conflate. Once conceived as a means of impeding people from inhabiting the landslide scar and avoiding a disaster akin to 1970, the site soon started serving as a place of remembrance and commemoration. However, the two functions never stop operating simultaneously, a situation denoted by the ambiguity of the memorial's

border. Campo Santo is a place that aims to maintain the image and memory of the old Yungay, but is also the border that demarcates a future *nonplus ultra*, a territory where the world once came to an end, and *might do again* if strict land use regulations are not applied. These two parallel operations, with their similarities and contradictions, emerge as definitions that seek to provide the site with a temporal role: a place remembering a lost past towards the future while building a safe future by keeping a disastrous past alive.

Materialising the intangible

We have described how the declaration of *intangibilidad* was an effort to protect an absence, a place that disappeared. However, when walking through Campo Santo, we face a site full of objects that call upon the vanished city and make from that vacuum a place of memory both concretely and materially. Crosses and mausoleums scattered throughout remind us of the victims claimed by the landslide. Several plaques and monoliths aim to commemorate the locations of buildings and renowned institutions such as the *Colegio Santa Inés* – where Lucho spent most of his school years. In the middle of the memorial, remainders of the old church, the remnants of a bus dragged by the landslide, an old water tank and the four old palm trees emerge as the few material remnants of the buried city left by the landslide. Finally, the re-creation of some urban elements, like the central *Plaza de Armas* with its gardens and palms in the middle of the memorial, and a reconstruction of the church's main facade located on a higher part of the site, help us to reconstruct some of the old city's places on real scales. All these objects function to produce a vivid version of the past that helps *Yungainos* keep alive the memory of their disappeared world, while giving tourists and visitors a glimpse of what was lost. However, some devices not only help reconstruct what used to lie over those green fields; they also enable us to configure that site as a limited but extensive place, allowing us to locate buildings and structures that are no longer present.

As we walk through the old *jirón* (street) Dos de Mayo, now a dirt road and one of the few accesses to the memorial that connects the reproduction of the central *plaza* with the new city, Lucho shows me with great accuracy the former location of some of the old city's landmarks. 'There was Yungay's recently inaugurated cinema'. 'Here, in the old *jirón* Arica where the bushes are, used to be my house', he tells me while I try to imagine those constructions in the now green and brown pampa. Lucho's memory of the old city and his capacity to situate old buildings and places in the current pampa surprises me. He explains that he developed this skill as a child, while working as a messenger for the telephone company, coming to know all of Yungay street by street. Before the arrival of private telephone infrastructure in Yungay, calls took

place in cabins located in the same company. Lucho's job was to travel throughout the city and inform people about the calls they would receive during the days.

Lucho used his almost photographic memory of the city plan to reproduce a detailed map of old Yungay some years following its destruction, one among quite a few efforts made by survivors to reproduce the destroyed city in the aftermath. Originally conceived as a memory device to preserve a record of Yungay's former urban layout, survivors and victims' relatives started using these self-made maps to locate their homes and construct tombs and mausoleums. It also helped to estimate the location of other main buildings, like the Santa Inés school and the police station, where commemorative monoliths and plaques have been erected. By mapping the old city, Lucho enabled *navigating* through a territory that exist only in his memories as a young messenger. This navigational function is a unique device by which to deal with the absence of the old Yungay, complementing the stories of the city's past, and tours taking place in the memorial. Lucho's map, in other words, is one among many objects that gives the intangible a concrete existence that can be materialised, explored and even walked through.

Maps can be defined as what Bruno Latour (1988) understands as immutable mobiles: objects that have the capacity of mobilising while maintaining their main components and characteristics stable and firm, even after modifying their scale or being reproduced. The goal of a map, according to Latour (1986), is not to be objective but optically consistent. It has to represent or, put differently, translate reality in an understandable way, allowing for routes and concrete locations to flourish from its symbolic systems of points, lines, polygons and frames. Lucho's map achieves this by placing on a flat piece of paper the grid used to compound Yungay's street system and small squares representing buildings and spaces that no longer exist, including *plazas*, schools, churches, sports fields and hospitals (see Figure 5). Its goal is not to guide people to existing highlights but to remind them where things once were. Through the localisation of certain elements of the old city that survived the destruction of Yungay, the map functions as a bridge between the lost city and the current wide pampa. It enables survivors and victims' families to navigate through the absence left by the avalanche, facilitating the localisation of buried houses to place commemorative elements such as plaques and crosses throughout the memorial zone. As an immutable object, the map is a device that aims to ensure the future of the site by protecting it from the passing of time. But it is an unusual navigational tool, operating as the representation of a vanished place and the vacuum it left behind.

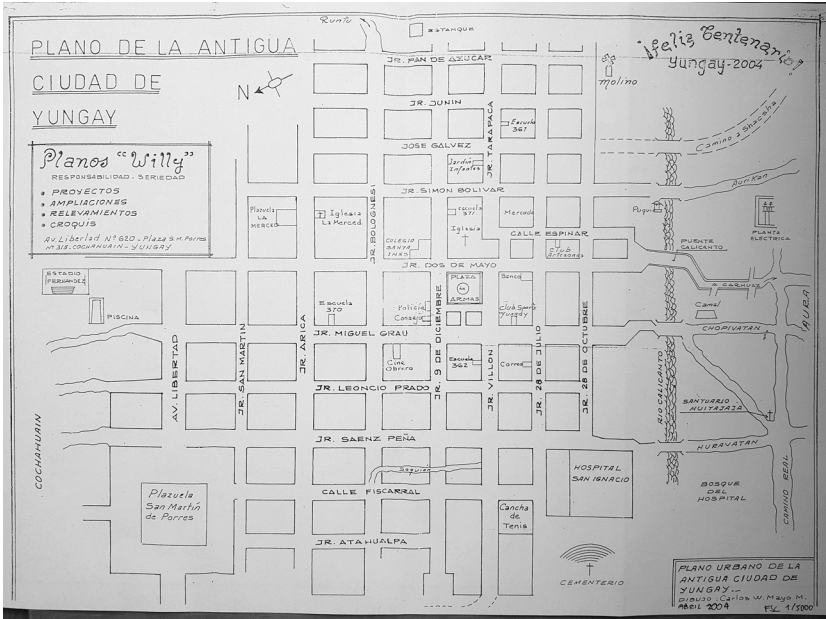


Figure 5: A reproduction of the old city’s map released for Yungay’s anniversary in 2004 (Map courtesy of Luis Cachay. Photographed by Usón, 2020)

Besides maps, photographs are another device that helps turn Campo Santo’s *intangibilidad* into a concrete, material reality that can be traced, located and arranged in space and time. During one visit to Campo Santo, I had the opportunity to meet David, a tenant of a commercial stand located at an entrance to the memorial (see Figure 6). The stall attracted my interest because, unlike the other souvenir-stuffed stands, it has no noticeable items for sale – except for some soft drinks and a few informative brochures and DVDs. Instead, the centre of attention is an exhaustive collection of high-quality images of the former old town of Yungay and the debris that the alluvial flood left in its wake.

David comes from a middle-class family that used to own several farmlands located in the surroundings of Yungay. However, the family lost most of their properties due to the consequences of the landslide and land expropriation policies bolstered by the government in subsequent years. At only four years old, David survived together with his grandmother on one of the family’s plots of land on the city outskirts. ‘The only thing I remember is the fear, the tears, that everyone cried. And some things on the street, in the house – those things more than anything else. But no more’, he tells me. All his memories of that day derive from the stories of family members; people such as his mother, whom he often witnessed weeping when lis-

tening to testimonies of survivors on the radio, or at each annual commemoration of the event.

David's photographic exhibition includes records that are extremely difficult to obtain and required real archival work to locate. David knows how valuable his collection is, and takes care of the photos with utmost dedication. In addition to the printed formats, he has all the images backed up digitally. He has used some pictures to create audio-visual material as a souvenir for tourists visiting Campo Santo. He does not receive any financial support from the Municipality or Campo Santo administrators to sustain his stand, and the profits he generates are only from the few sales of the little historical material he has. But this does not seem to concern David; his motivation transcends the monetary. His photos are not only a way of remembering the disaster in Yungay, but also of preventing the legacy of the old city from disappearing forever. 'If these photos weren't here, people would come and imagine that this must have been a small town (*pueblito*) in the mountains, with its small farms, animals. But it wasn't a small town. So I want them to see these photos here ... what is left of the city where my parents grew up and where my family died. That is something worth seeing'.



Figure 6: David at his stand, showing his photographs to visitors (Usón 2020)

For David, as for all those who were in Yungay on that 31 May, having experienced ‘the end of the world’ – the mud devouring everything in its path, giving way to days of darkness – is what makes it possible to construct a common and valid survivor’s story; a testimony that is passed from generation to generation as a result of the shared suffering. The passing on of this experience, through personal accounts and photographs, keeps the memory of the place alive and safe from, according to David, unscrupulous actors who seek to profit financially from this traumatic experience through guided tours or the sale of pamphlets with untrue stories. Maintaining the veracity of what happened through the recognition of valid sources is a fundamental task in preserving the legacy of the old city and its material disappearance. But it is also a form of ensuring the foundations on which the new Yungay should be built. ‘We have a new Yungay, new people. People who neither lived nor had family [buried in Campo Santo] and didn’t lose anyone. But there must always be respect for this, for what was here’.

For David and many other *Yungainos*, the memory of the old city has marked the creation of the new Yungay, but as a past that is no longer possible to reach. Oliver-Smith (1986) falls back on this by observing how references to the old city started to shape the new constructions ten years after the tragedy. Names such as Santa Inés (in memory of the old school) or Yungay Hermosura are still included in the city just like before the catastrophe. This homage can also be seen in places like the new *Plaza de Armas*, erected in 1986. Over the façade of the new municipal building in front of the plaza, is a large painting of the old city and the iconic Huascarán. But despite those efforts to bring the destroyed city into the present, the construction of the new city brought nothing but frustration and nostalgia to the urban survivors. Every new building, according to them, was and will always be a deficient copy of a Yungay that will never return.

The pictures spread throughout the memorial and the new city fulfil an important role in representing the past of a disappeared place, making the lost Yungay a visually accessible moment. Just like maps, photographs have the capacity for displaying another form of interaction with the past that overcomes the abrupt absence, sustaining a before-and-after that, despite the continuous changes that the territory suffered, remains stable across time (Weizman and Weizman 2014). Pictures, in this sense, are also immutable, even when they are moved and placed in new zones to provide a better comparison of the land transformations over time. As with maps, their temporal orientations are never solely towards the past. Just as Lucho’s map offers a navigational tool to protect the old city from disappearing, pictures also orient towards the future as they prevent the legacy of Yungay from vanishing forever, while they remind us about the risks of inhabiting the site of Campo Santo. They are essential for showing what lies beneath Campo Santo and why it is important to keep it as a vivid memorial.

The hinterland

During my visits to Campo Santo, I met Juan Benito Congo, a gardener at the site. As a resident of the houses located at the limits of the memorial, it was recommended that I talk with him to learn more about the legal situation that he and other dwellers of the zone currently face. A group of about 20 families, Juan Benito's included, has been accused of illegally seizing lands belonging to Campo Santo, followed by a warrant threatening them with eviction. Juan Benito and his family have lived at the site for 14 years, and they do not have the resources to find another housing alternative. Thus, they are extremely fearful of the possibility of eviction.

Originally from Encayoc, a small rural village located about ten kilometres from Campo Santo over the foothills of the Huascarán, Juan Benito is also a survivor of the 1970 landslide. At only seven years old, he was outside his home with his three siblings when the increasing ground motion began to fell trees and cause the old mudbrick houses to collapse. 'At that point, it seemed that a bomb exploded over the Huascarán's feet. Boom! From there, a huge piece [of the mountain] came out with all the mud, branches and so on'. The gigantic chunk of ice that calved from the top of the mountain and the massive debris flow that it triggered literally passed over Juan Benito and his siblings. He recalls that, miraculously, they survived in the lee of a boulder that protected them.

Encayoc was one of the first villages impacted by the landslide that buried the city of Yungay 14 kilometres downhill. However, unlike the province's capital, villages like Encayoc are rarely considered part of official narratives of the disaster. As seen in Chapter One, Yungay has been the focus of a massive output of books, poems, films and even songs that narrate the abrupt disappearance and aftermath of that model Andean city. In contrast, stories about the destruction and reconstruction of highland villages are remembered by their survivors at most – testimonies condemned to disappear in time.

After our first talk, Juan Benito offers to drive me to the new Encayoc and visit his mother's house, which they built after the avalanche and where he lived until moving to the lowlands. The route to Encayoc is beautiful, crossing over the Aira Hill separating Yungay from the Llanganuco basin – the small mountain that was considered the natural protection of the old city against landslides, as we saw in Chapter One. From the lower lands, the mountain appears very steep, which gives the impression of a high, narrow wall with scarce life above. However, as we drive along the curving inclined road, a whole new landscape emerges from higher plateaus and small valleys. *All of this disappeared. The avalanche buried them*, Juan Benito keeps repeating to me.

After driving for almost an hour from Campo Santo's limits, we arrive at the house of Juan Benito's mother, located on the outskirts of Encayoc. It is a modest structure of mudbricks, situated close to one of the best viewpoints of the Huas-

After visiting Encayoc, I am surprised by the contrast between how many books and chronicles about Yungay have been written, but how few words have been dedicated to narrating what happened in the upper hamlets. It is often said that 'the city of Yungay and the old and colonial part of Huaraz were [the earthquake's] main victims; the first buried by the landslide and the second turned into ruins and dust' (Valladares Quijano 2011, 183). However, scarce attention is paid to those forgotten villages in the upper parts of the Cordillera Blanca that suffered the same fate as those cities.

Most of the urban survivors I spoke with recognise that they were not in the first area affected by the catastrophe. It seems that the 12 kilometres between Aira Hill, the natural limit of the old Yungay, and the Huascarán are erased from the map, like a space that has been compressed. Blurring the avalanche corridor is not something testimonial, but also visual. So far, all the visual imagery that I have seen from the catastrophe refers to Yungay, focusing mainly on the vast *playa* left by the avalanche, with its few palms and some other items. The only images of the complete trail of destruction are aerial photographs taken at the time by Peru's National Aerophotography Service and the United States Geological Survey (see Figure 7). But even those images emphasise the names of cities like Yungay and Ranrahirca. The *hinterland* is portrayed as a white, dead corridor, a land without a past worth remembering nor a future to fight for.

The few sources that mention the victims from places outside the city focus their consideration around the figure of Yungay, the notorious centre of the disaster. For example, the book *Yungay en Imágenes* (Yungay in Pictures), a collection of visual material about Yungay released in 2004 for the 100th anniversary of the old Yungay, dedicates some pages to the lost villages of the highlands also destroyed by the landslide. However, its goal is to include those areas as *parts of the city* and not as independent settlements (as confirmed by the book's name). The author, Manuel Valladares Quijano (2011, 183), validates this point when he says that '[the avalanche] erased from the map the city of Yungay, its districts and *barrios* (neighbourhoods) such as Hongo, Aira, Amapampa, Nuevo Shacsha, Nuevo Ranrahirca, Huarascucho, Chuquibamba, Caya, Utcush and Tullpa'. If those were considered *barrios* or parts of the old city, why were their inhabitants who subsequently relocated to the new Yungay not considered *Yungayinos*? The reason is simple: those areas were neither officially nor symbolically located within the old city. The administrative boundary of the old Yungay ended at the foothills of Aira in the east, leaving all those villages outside its jurisdiction. The same applies to the lands on the northern limits of Campo Santo, rural areas of *chacras* located outside the city. Even if we consider other spatial configurations beyond fixed boundaries, such as formal and informal relations among settlements, those hamlets were still historically excluded from what was understood as Yungay and everything it represented. So why are they suddenly conceived of as *part* of the city?

The fact that many people migrated from the highlands to the lower areas after the landslide is by no means surprising. Juan shares with me how traumatic and difficult life was in places like Encayoc after the event. ‘There was no water to drink. I was thirsty, and my nose and mouth were swollen from the mud. Finally, a helicopter brought some help, and cleaned us up’, he explains. After receiving some support from aid organisations, survivors from Encayoc and the surroundings were left entirely alone. A significant number of survivors involuntarily migrated due to the precarity they faced in the aftermath. Those that stayed experienced unbearable conditions of isolation and institutional abandonment. ‘We stayed. We looked for wood, somebody gave us *calamina* (corrugated iron sheets), and we made our little hut. And that’s where we lived. Then we made some mudbricks, and we built our little house. That’s where we had lived with my mother and my siblings’, he tells me.

Just like Sofía, Juan Benito defends against what he considers an unjust accusation of illegally seizing land at the edge of the memorial. ‘Some people might think that I entered Campo Santo like, you know, invading, but I haven’t. Somebody sold me [the place] and I have documents to certify it. ... I bought it at the notary’s office. I have the receipts and have paid my taxes, all of it’, he explains to me as he tries to argue how unfair the current accusations of illegal seizure are. ‘I thought that from one side of the marks it was Campo Santo, but no, everything is *intangibile*’, he explains, referring to the monolithic stones that the Municipality installed in 2004 to demarcate the site. His house is located outside that demarcated area, but inside the 99.5 hectares defined in 1994. It is a true geometric mess.

Juan’s story is not an isolated case. Nearby him, also within the borders of Campo Santo, live other families with similar backgrounds and migration stories. Some are even relatives of Juan and his wife. Marta, a woman in her eighties, moved from Huashao, another village in the highlands, some years after the earthquake. ‘There was no land, no houses. That’s how we survived’, she says to me as I visit the complex of houses threatened by the eviction orders. Marta escaped from the mud after the avalanche buried her in her home. ‘The house collapsed around me. The flood brought the house down and buried everything with mud’, she explains. As surviving villagers moved to the lowlands, they faced the tragedy of family separation and the loss of their means of subsistence. Some relatives stayed in the highlands, while others moved to Lima looking for better opportunities. In Yungay, Marta received modest state subsidies that allowed her to buy her property and begin a new life, but with limited living conditions. ‘Here, there is no *chacra*, only *huerta*’⁷, she argues as I ask her if she was able to live from the land after moving in.

7 Whereas the *chacra* is conceived as a piece of land big enough to sustain family consumption and provide a small surplus to sell at markets, *huertas* are reduced house gardens used to grow just a few daily products.

Carla, another neighbour of that complex, recounts a similar experience. As the granddaughter and daughter of survivors, she came to live within the limits of Campo Santo around 15 years ago, when she was still a girl. 'Now there is plenty of work, but at that time there wasn't'. Carla recognises the facilities and options in Yungay – a lifestyle that she is not willing to relinquish. Although her grandmother sometimes contemplates moving back to the highlands, Carla does not feel the same. 'I already have my house, my family. ... Besides, the education for my daughter is better here. ... There is work for women'. She appreciates that her daughter can go to the *wawawasi* (day-care) while she goes to work. Living on the edges of Campo Santo also fills her life with a sense of peace that she would not find closer to the city centre. Carla is aware that a new avalanche coming from the Huascarán might impact the area again in the future, but she is willing to take that risk. 'We are already used to living here. If the avalanche comes again, well, it will have to take us with it', she says with a nervous smile.

Despite the ongoing disputes about Campo Santo's boundaries, Carla acknowledges the relevance of the site, even for her own history. She and her family go to its central *plaza* every year to commemorate the anniversary of the catastrophe. 'The avalanche took my father's sisters and father, all of them. So the [annual] service is also theirs. We go to *their* service'. Unlike Yungay, places like Encayoc do not have memorials or their own *campos santos* to commemorate the avalanche victims. According to Carla, since they did not receive the same support as in Yungay and people had to work harder in the *chacra* to produce their food, they did not have time to establish a memorial. Nor did they have space available for delimiting an intangible zone, since every piece of land was required for agriculture. 'If they would have seen that site as Campo Santo, as a sanctuary site, they would not have had the land. How would they have fed their children?' Consequently, survivors from places such as Encayoc are forced to remember their deceased relatives in the lowlands of Yungay's Campo Santo – a site that, despite being far from where their relatives are buried, nevertheless functions as a commemorative place for them.

Carla's arguments help to clarify the type of intangibility we face in places where villages (such as Encayoc, Yanama Chico or Poshcoq) were erased from the map. Just as in the area of the former Yungay – where the site's protection was motivated, firstly, by state efforts of zoning an area prone to future landslides and, secondly, the willingness of the population to protect the location of the buried city – the status of intangibility in the highlands also seems to be nurtured simultaneously by differing logics. According to Juan, it is a form of recognising the catastrophic consequences of the landslide in the upper lands where, just like in Yungay, entire villages were buried. *This zone is also intangible*, he tells me during our trip to Encayoc. *But nobody remembers these places*. *Intangibilidad*, under this vision, is more than a status legally conferred. It becomes an intrinsic condition of the territory, where people *also* died and survivors *also* experienced loss and trauma. Based on this view, the intangible

is not necessarily a form of protection but a form of recognition, an operation that aims to position the losses experienced in the highlands at the same levels as those in the old Yungay.

This recognition, however, requires sacrifices that rural communities were not able to make. As Carla says, officially declaring the intangibility of the highlands would have meant restricting the productive capacity of an isolated area with scarce state support. With a sanctuary like Campo Santo in the highlands, ‘how would they have fed their children?’ she asks. This question is crucial. It reveals that memory politics requires resources, materials and – notably – land to sustain the massive effort of preserving these memories across time. Moreover, it also shows the cross-roads that people face when choosing between vindicating a lost past and trying to overcome the destruction of one’s world – especially when such destruction occurs in historically invisibilised areas and where the history of other settlements overshadows its consequences.

A limited delimitation

Throughout this chapter, we have explored the history of Campo Santo, as both a cemetery and a memorial holding intangible value. It is a site that defines – or at least tries to – what elements and activities are allowed to form part of the old Yungay, while excluding all those things that do not belong there. In other words, it marks the limits of a disappeared place that needs to be protected against the fragility of memory and deprecatory actions. But which limits are those? The boundaries of the old city? Or the limits of the landslide scar? The boundaries of everything that was buried by the avalanche? Or those buried projects that are worth remembering?

Campo Santo, I argue, is a *limited delimitation* of an unrepresentable catastrophe. It enacts *the limits* of the disaster, the spatial and temporal boundaries of that object that we call the avalanche. But it does this in *limited* ways. Campo Santo is a site that spatialises a grand narrative: the place where the destruction of a model city in the Peruvian Andes occurred; a city that, despite the courageous efforts of its survivors, could not be rebuilt due to the hidden agendas of central authorities and the influx of *campesinos* that turned the new city into a failed urban project. Campo Santo is the site where the temporal arrangements commonly held by elder *Yungainos* take place. It is a temporality in which the present always looks backwards, shaped by a frustrated reconstruction that failed to reconnect with the city’s glorious past that the memorial calls upon. Campo Santo, in this sense, is where the past reasserts itself and the future is oriented towards that lost past; a place that is at the same time threatened by the very lives accused of having obstructed the emergence of the new Yungay. By reinforcing this temporal arrangement, Campo Santo ultimately creates

a limited narrative, one that excludes those rural lives that, despite being a central part of Yungay's history, are side-lined in the official memory.

A memorial like Campo Santo operates as a place where memory crystallises and becomes a concrete element of the geography (Nora 1989); a site that, according to Edward Simpson (2014), can be portrayed as a neutral device to think about an unbearable event. 'The successful memorial translates the unthinkable into the thinkable, and the event becomes accessible to others' (Simpson 2014, 256), affirms the author. Along with this translation, Campo Santo's main narrative mobilises actors, resources, devices and materialities. Thanks to the operation of maps, images and master plans, it is a story that *affects* the territory – making it hold together and connected (Fariás 2013). The absence that the memorial displays, based on the notion of *intangibilidad*, allows bringing past, present and future together in one place, maintaining the figure of a lost city across time and creating a sense of temporal continuity that the earthquake and landslide interrupted.

As seen throughout this chapter, the absence portrayed by Campo Santo is not one of emptiness or a vacuum – at least not the emptiness left by the landslide. The latter can be related to Michel Serres' (2015) blank figures – 'undetermined or underdetermined figures whose ambiguity, uncertainty, unfinished or ruined state makes visible not only catastrophic and destructive force of history but also its multiple possible futures' (Law and Hetherington 1998, 8). The non-determination of the blank figure allows for different connections and new forms of space production. It is ambiguity in its pure sense, a place that can be neither contained nor fully defined. According to Kevin Hetherington (1998, 126), a blank space is 'the open possibility of a heterogeneous multiplicity in which the dance of all things can occur without prescriptions'. This figure, we could say, is what emerged after the landslide – an extensive pampa of solitude lacking any sort of order; and that, as we saw in Chapter One, was suspended in time. This lack of order and rules explains why the subsequent roles of the former *playa* and Campo Santo were ambivalent at the beginning and still open to be shaped by different logics and interests. It also explains *Yungainos'* ambiguous behaviour towards the landslide scar – a site sought to be simultaneously inhabited and yet protected from any sort of intervention.

Whereas Kevin Hetherington (2003) refers to the blank and the absence as equitable figures, the destruction of Yungay and its further vindication through Campo Santo show us that they are not the same. The absence or, in other words, the *figural presence of absence* (Hetherington 2003, 182), is a state that is enacted and visualised through concrete strategies, materialities and devices – unlike the blank that, paraphrasing Serres, 'is non-representational and not easily articulated discursively' (Hetherington 2003, 182). Blank figures can gain a visual condition through concrete forms and strategies of representation. But in the process, they lose their underdetermination and become something tangible, graspable and defined – more than ambiguous, but less than precise. The absence of the old Yungay

is what emerged from that process. 'In making something absent, either through death or destruction, a representation of social order is apparently secured but never for all time', affirms Hetherington (2004, 161). Thanks to the mediation of the memorial, the ambiguous interrelation of presence and absence, of what is there and what is not (Bille et al. 2010), can – paradoxically – be located in space and time.

Defining an absent place that needs to be protected from unwanted activities is a form of establishing the boundaries of such an absence while determining what is allowed to coexist within it. The declaration of *intangibilidad*, under these terms, is what sought to deal with the emptiness left by the landslide, by establishing a new order that could decisively overcome the spatial ambiguity. It was an operation conceived to restrict land uses within the field, creating a protected area to commemorate the absence of the city – while also acting as a reminder of the risks of re-inhabiting the site. As Campo Caso shows us, making a place intangible was a form of placing absence in concrete but diffuse terms.

Throughout this chapter we have also seen that, while the 1977 Executive Order Law Decree was an important step in maintaining Yungay's absence across time, *Yunguinos* also agree that this single declaration was insufficient for such an endeavour. Several arrangements among actors, materialities and objects were required to maintain the buried city's presence as an object of memory. These arrangements have been oriented towards concrete operations that can be linked to what Rob Shields (2004, 26) defines as visualicity; a notion that 'highlights the condition of becoming visible'. Shields applies this concept in referring to the connection between the visible and the invisible, extending the analysis of urban spaces beyond the concrete, tangible objects that shape the landscape. As such, it is concerned with the relationship between the actual and the virtual, the tangible and the intangible, connecting the current material conditions of urban environments with the remembered past and imagined potentialities.

According to Shields and Lozowy (2015), the question of visualicity relates strongly to that of selectiveness – which elements of the world are considered reliable representations of the landscape and, simultaneously, what remains invisible or represented only peripherally. The selectiveness of what is worth representing or not in Campo Santo, as we have seen, has been sustained by different devices that give the notion of *intangibilidad* a substantial presence in space and time. Maps and photographs are fundamental elements for this endeavour. They help to make from the virtual something actual and tangible (Shields 2002) that can be seen and navigated – strategies that, according to Antze and Lambek (1996, xii), 'tend to transform the temporal into the spatial and are intensely visual'. This solid visual orientation of the *intangible* enables visually accessing what otherwise would be fluid situations (Shields 2004, 14), creating a present space that operates as a place of encounter with the past and with a projection towards the future.

Through devices such as the map Lucho drafted to remember the layout of the old city or master plans, Campo Santo has gained the limits that were not fully settled by the 1977 declaration. The performance of these cartographic products relates to what Ignacio Farías (2014) defines as cosmogrammatic operations. Based on John Tresch's (2007) work on the images of the world, cosmograms refer to visual representations of the elements composing reality and the connections among them, allowing the cosmos to be 'treated as just another thing' (Tresch 2007, 86). Inspired by Deleuze and Guattari's notion of the diagram – 'generative machines producing reality forming and transforming expression and content' (Farías 2011b, 400) – cosmograms offer unfinished, partial images of the objects that compose public space. Diagrams produce a new type of reality that is 'yet to come' and, thus, located 'prior to' history. As such, devices such as maps are not merely signs or symbolic representations of space; they are mostly an active part of its constitution and define what elements might be included within this spatial articulation and what should remain outside. They display, as the notion of the cosmogram shows, the concrete forms in which the cosmos is made tangible and graspable, even when referring to a cosmogrammatic arrangement of the past. In the case of the Campo Santo, this cosmogrammatic operation is strongly oriented towards the definition of a clear, yet ambiguous, otherness: the surroundings of the old city commonly associated with a rural world that did not belong to the original version of the city. According to Yungay survivors, the same rurality that is to blame for the failed foundation of the new Yungay is placing at risk the stability and security of the memorial through invasions and depredatory practices. As such, the rural world needs to remain outside the site.

The exclusion of the rural world from Campo Santo leads to an invisibilisation of stories and trauma from the highlands among the networks sustaining the memory of the old world once destroyed by the catastrophe. The omission of those stories in urban, hegemonic testimonies, media coverage, but also the incorporation of the *hinterland* as part of the old province's capital in the book *Yungay en Imágenes*, shows how this invisibilisation operates – sometimes as deliberate politics of exclusion, other times unintentionally by omission. Just like a museum, a memorial is an institution of recognition – a place that, according to Sharon Macdonald (2013, 4), 'recognises and affirms some identities, and omits to recognise and affirm others'. Whether voluntary or not, these omissions articulate the composition of the remembered past – 'spoken through architecture, spatial arrangements and forms of display as well as in discursive commentary', the author continues. The heritage contained in – or enacted through – memorials like Campo Santo is not only the result of material components entangled within its limits, but also governance and politics that articulates the relationship between the actors, objects and materials that makes possible the existence of the memorial in the first place. 'It is this combination of policy, practice, and philosophy that makes heritage such a powerful signifier

of the past, of inheritance, of ownership, and of identity', explains Haidy Geismar (2015, 72). Under this constellation of actors, materials and politics, everything that relates with the outside of the urban world remain in the oblivion.

The previous points leave open a crucial question open: if we argue that the absence *intangibilidad* displays needs to be enacted through concrete devices and materialities, as shown by the case of Campos Santo, how might Juan Benito's *intangibilidad* be performed in the territory? What elements give the blank, left over the rural areas of Yungay's hinterland a concrete, tangible presence? In other words, how is the absence of places like Encayoc made durable across time? At first sight, Juan Benito's intangibility appears as an inexistent concept – a chimaera that has no territorial existence. His version of the intangible is not based on concrete materialities, policies or public programmes that have been arranged to protect the destroyed pasts of places like Encayoc. However, the *intangibilidad* that Juan Benito proposes is as real as Campo Santo's. He refers to those highlands as a place where remembrance emerges as a historical demand, a recognition that all those villages and hamlets deserve. It is an intrinsic condition of the territory that cannot be denied.

In an act of resistance, Juan defies the canonical and legal understandings of the intangible and submits his own version of the term. His definition, though, is pure difference, based on the failure of state agencies and urban areas to recognise what happened in the upland parts of the region. Operating as a differential term, this version of the intangible is sustained thanks to the articulation of Campo Santo's intangibility combined with all the actors, devices and materialities operating at that site. All the monuments erected throughout the memorial zone, the crosses placed there, all the funding invested to build the Copesco Plan and all the hours spent discussing the protection of the site remind Juan Benito, a worker at the memorial, of the institutional abandonment experienced in his own home village and others, during the days after the landslide and the following decades. By reflecting on his own intrinsic condition as an otherness of the official narratives dealing with the disaster, Juan Benito re-creates the notion of the intangible and the regulatory efforts that lie behind it. However, this re-creation has little to do with perpetuating the zoning policies and land use restrictions that *intangibilidad* as a legal category displays. Instead, it creates a new ethical arrangement questioning the hegemonic positions that have dominated the politics of memory in the region, making explicit the vacuum that the state abandonment left in those areas forgotten by the official narratives of the disaster.

We might say that these two forms of *intangibilidad*, Campo Santo's articulation of the legal term and Juan Benito's appropriation of the concept, are opposed to each other and, as such, do not fit together. But what we encounter is 'a spatial tension, a continual movement between them that doesn't come to rest and cannot be centred' (Law and Hetherington 1998, 5). Juan Benito's *intangibilidad* requires the restrictions applied in the memorial to operate as a differential term. Similarly, Campo Santo's

intangible condition is sustained, as we have seen, by a strict differentiation between the image of the old Yungay versus the rural areas portrayed still as the hometowns of foreigners and invaders (and to which, from that perspective, they should return). This mutual dependency nurtures the tension that characterises memory politics operating in the region. It is via this distinction that Yungay can reclaim the title of the one and only victim of the landslide, while people like Juan Benito are left to contest the unrecognition of the highlands as affected areas – a situation to which the Campo Santo memorial contributes.

The articulation of the old Yungay in terms of *intangibilidad* reveals an interesting form of semiotic resource, one that seeks to conceal difference by absorbing it. In its expansive efforts, Yungay ends up being a *synecdoche*, a part of something that refers to the whole – an operation that allows talking about *el desastre de Yungay* (Yungay's disaster) in the first place. The power of synecdoches is not only discursive. They can transform realities, creating frontiers and articulating relations in the worlds we inhabit. Sometimes Yungay compresses the space between the Aira Hill and the Huascarán, blurring everything in-between. But in other cases, it needs the *hinterland*, the excluded. It requires those areas in order to describe the path of the landslide prior to reaching the city. In an effort to comprise all the destruction and suffering experienced during the event and the aftermath, Yungay stretches its frontiers to cover all the areas impacted by the landslide. As a synecdoche, Yungay turns into the disaster. The *hinterland* is just an anecdote.

II Huaraz, Endurances and Changes

3 The Stones of Pumacayán

A personal archive

We tend to think of stones as eternal objects; an ever-lasting materiality that can endure the consequences of time because rocks, indeed, give us an idea about the depth of the past. Their apparently immutable composition refers us to former geological eras and robust constructions made to last. Stones are a materiality that is capable of sustaining the foundations of society – at least ancient ones. But they are also *things*, entities that congregate us and, sometimes, require us to take care of them. Which stones are worth protecting and under what circumstances?

I started reflecting on these issues while visiting Javier's house in Huaraz in February 2020. Javier invited me to explore his collection of historical documentation – piles of archive materials that, as a social activist, he has managed to preserve over the years. *A piece of Huaraz's intellectual life is contained in here*, he affirms. A man in his seventies, Javier walks with a slow but firm stride. His slightly curved back reveals the passing of time over his body. He exemplifies that fascinating combination of wisdom and digression, a person who easily becomes lost in his thoughts. Javier is reserved and selective in his words, almost in a surly way, but generous when it comes to sharing knowledge and personal anecdotes.

Located in the limits of the districts La Soledad and Pedregal, two of Huaraz's neighbourhoods, Javier's house hosts the reminiscences of a city erased as a consequence of the 1970 earthquake. His father, a renowned musician and social activist from the traditional La Soledad neighbourhood, built the house in 1971 after the devastating earthquake razed the old family home to its foundations. The new construction, located at what was then the outskirts of the city before the existence of the Pedregal Neighbourhood, was an effort to keep the legacy of Huaraz's architectonic tradition alive at a moment when the former government of Juan Velasco Alvarado was pushing for urban reform aimed at rebuilding cities of the Callejón de Huaylas according to the ideals of modern planning. The old colonial adobe houses covering entire blocks were soon replaced by modest two-floor concrete properties accessible to anyone rather than only the members of the former urban elite – so argued the government of the day. Cities like Huaraz were taking the first steps toward offi-

cially opening their doors and streets to the non-white and non-mestizo population of the highlands and recognising them as equals; a process that, as we will see, was not exempt from tensions and conflicts.

Structured around a traditional square inner patio, the one-storey building of white mudbrick walls and red-tiled roof is a small temporal oasis in the middle of the dizzying urban transformation experienced after the earthquake. The house was previously a renowned hub of culture and politics; meetings, assemblies, presentations, exhibitions and even theatre plays took place there regularly. It is a time that seems to be preserved through a rather chaotic accumulation of papers and documents stored on dusty shelves, and in cardboard boxes and plastic bags. When guided by Javier, the history of a vibrant period shaped by musicians, artists and exhibitions, but also political causes and actions, appears from the disorder. His house operates as an informal documentation centre that keeps track of Huaraz's vivid cultural and political life over the last century.

One room in particular attracts my attention: a private museum dedicated to Pumacayán, one of Huaraz's most important and emblematic archaeological sites. Equally chaotic and aged by time, the room stores a diverse set of objects and devices of and about the place: a scale model of the site and its surroundings, posters with Pumacayán's information together with the words *proteger* (protect) and *salvar* (save), newspapers, printed documents and, above all, stones – many of them. Upon closer inspection, I realise that they are not just any types of stone, but what could be considered archaeological artefacts (see Figure 8). Javier proudly shows me some of his *pedras labradas* (carved stones), as he calls them: small limestone boulders with sharp edges formerly used for buildings and walls, cobble-sized anthropomorphic faces made of what seems to be granite and volcanic rock, remains of weapons and tools made of limestone. Even rocks hosting beautiful marine fossils are stored there.

When I ask Javier how he obtained those objects, he confesses that he took some from different archaeological sites, including Pumacayán, to protect them against *huaqueros*¹ (looters), illegal settlers and the government's indifference to the site. He argues that thieves and private collectors have conducted systematic illegal excavations over the years to steal remains from the site, including stone-based artefacts and ceramics. Many other archaeological remains have been removed by neighbours illegally occupying the perimeter of the site; and, during site-clearing operations, by

1 In the popular narrative, *huaqueros* are looters who remove archaeological artefacts without government permission. The term derives from the word *huaca*, a Quechua concept used to describe revered places, objects and entities – described in more detail later. See Atwood (2004) for a general history of archaeological looting in Peru; Coe (2011) for the influence of *huaqueros* in the development of the early pre-Columbian art market; and Seki (1996), Asensio (2018) and Tolosa (2020) for the historical relationship between *huaqueros* and archaeologists.

the previously mentioned government workers, who – according to Javier – cannot properly differentiate a regular stone from a *piedra labrada*. Under these conditions, he considers his collection to be a means of ensuring that the legacy of Pumacayán remains intact, even if that involves preserving its archaeological wealth somewhere else and behind closed doors. Stealing, in other words, is performed as an act of protection.



Figure 8: Carved stones with a scale model of Pumacayán behind, both part of Javier's collection

(Usón 2020)

Good intentions indeed drive Javier's actions. He and his family have worked actively for decades to preserve Pumacayán. His father founded a citizen association to defend the site, which Javier now chairs. Through this work, they aimed to enhance Pumacayán's value and ensure its deserved recognition in the region's history. The site's legacy speaks of an ancient, idealised past in different ways. It is considered an example of the greatness of pre-Hispanic cultures and their architectonic capacity, providing historical evidence of their advanced construction techniques and territorial planning. But it is also a place that calls upon the image of Huaraz's *Belle Époque*, a historical period prior to the most extreme events that befell the city – the 1941 flood and 1970 earthquake. The abandonment of the site, and illegal land seizures over subsequent years, are immediately connected with the consequences of both disasters – especially that of 1970. The fact that Pumacayán has not disap-

peared entirely as a consequence of looting and land seizure is due to the work of social organisations like his father's, Javier argues, recalling a past ethos committed to the city's heritage that, he says, now barely exists.

Pumacayán is a place that has not only endured catastrophic events, but has even been considered a protection and shelter against them. Due to its elevation and geomorphology, the site protected the southern part of the city from the 1941 flood. Moreover, its height makes it the perfect gathering area, where people improvised modest shelters following the flood and earthquake – nowadays converted into permanent houses made of adobe and *material noble*. Pumacayán is a site that combines history and disruption, both a long-gone past and an insecure present in which the permanence of its archaeological value is under constant threat.

In this scenario, stones appear to be the most appropriate objects to endure the passage of time and its consequences, even if scattered throughout different locations. However, they also seem to be the direct targets of illegal occupation, robbery and governmental indifference. What can we learn from stones in this context, and how do they allow us to reflect on the ways in which the past is produced – especially when disrupted by disasters?

While the previous chapters focused on the disruptions leading to the collapse of an urban world and its surroundings, this chapter centres on what remains after that destruction. The former chapters were concerned with discontinuity, whereas the latter is about duration. To deal with this, the present chapter explores how traces of former urban configurations can acquire a historical condition that goes beyond the notion of lived memory. As Rob Shields (2002) suggests, actualising the virtual not only requires organising a present space and time but also a historical spatiotemporal articulation that overflows the immediate arrangement of actors and materialities involved. In order to inquire into those historical arrangements, this chapter explores how the remains of a settlement can cease to be regarded merely as rubble and become instead an archaeological record, 'a heterogeneous mass of our present' (Olivier 2008; in Geissler and Lachenal 2017, 15).

To answer these questions, this chapter focuses on Pumacayán, that mound located between the neighbourhoods of La Soledad, San Francisco and Molinopampa in Huaraz, together with its relationship to the extreme events that the city of Huaraz experienced during the last century. Specifically, the chapter addresses how the site's ancient past, sharply defined by the idealisation of an old urban world as well as its indigenous heritage, clashes with urban transformations experienced after the 1941 flood and, notably, the 1970 earthquake. Building on a vast set of historical material and participant observation, I explore the entangled stories

of Pumacayán both from an historical perspective as well as through attendance at commemorations and visits to the site. By exploring the palimpsest of stories, theories and legends around this site, which emerges as an effort to grant this place historical depth, this chapter shows how a place like Pumacayán comes to blur distinctions between the urban and the rural, history and myth, civilization and barbarity. However, it also shows how, despite this varied amalgam of stories and explanations, the site would keep fulfilling a central role in the construction of fixed historical figures across time: an urban, educated class that struggles to preserve the site against foreign, illiterate *invasores*.

Within this context, stones are central elements sustaining the grand narratives produced by scholars, governmental agencies and activists. They are materials granting history with depth and robustness, despite their fluid condition as a rather malleable and dynamic element in permanent change (Edensor 2012). Stones operate as traces, remains that ‘may be overlooked or discovered, intimately relished and forgotten, turned into tokens of sociality, or made banners of conflict’ (Geissler and Lachenal 2017, 15). In this chapter, we will see that they can fulfil multiple operations – as construction materials, reminiscences of the distant past under the notion of archaeological object, or simple rubble to dispose of; and may also operate as heterogeneous beings – guardians protecting entire communities, or as victims of looting and vandalism. When present, they can shed light on past stories, regimes and social dynamics, while contesting efforts to stabilise extinct versions or urban environments when absent. ‘In the form of past human technological interventions and their environmental consequences’, Martín Fonk (2021, 4) affirms, traces allow us ‘to pay close attention to the politics and aesthetics of (in)visible and ignored subterranean dynamics’. It is this (in)visible multiplicity, together with its multiple operations and functions, that makes stone an appealing materiality to explore the endurances of time and its mark on the territory.

The huanca and the cross

Despite the central role that Pumacayán fulfils in Huaraz as one of the city’s most renowned – and contested – archaeological sites, its history is still considered an enigma. The few scientific excavations conducted at the site over the centuries have revealed some of its main architectural features and artefacts, providing certain clues to its original function. However, many of the theories developed around this place over the last century remain broad suppositions.

The first written description of the site dates from 1532, when an expedition commanded by Hernando Pizarro and Miguel Estete passed through the Callejón de Huaylas while heading south to Pachacamac, a key administrative centre of the Inca Empire and a renowned archaeological site today. Estete already talks about ‘the big

town of Guarax' (*el pueblo grande de Guarax*) commanded by the *curaca* Pumacaxinay or Pumacapillay (Alba Herrera 2017, 46). Later, in 1554, another expedition, chronicled by the soldier Pedro Cieza León, describes the existence of a 'big fort or *antigualla* (abandoned monument)' with sturdy walls of carved stone ornamented with anthropomorphic figures that, according to the local inhabitants, represent giants that inhabited those lands prior to the Inca expansion² (Gridilla 1933b). The scarce mentions of Pumacayán at the time leave several doubts about whether the Spanish conquistadors knew about the uses of the site. There are neither clear explanations nor descriptions, probably because *conquistadores* themselves had no idea of the purpose of this twelve-metre-high hill with constructions on the top and surrounded by a stone wall. Perhaps they thought it was just another native settlement, another many other sites that were to be annexed to the Spanish Crown.

With the creation of the *encomienda*³ over the area then known as Huaraspampa and the further foundation of the town of San Sebastián de Huarás, the Spanish settlers built the first Christian church, San Sebastián, close to one of Pumacayán's hillsides, around 1560, a fact that allowed historians to start making their first conjectures about the site. Building churches at the time had the double purpose of converting the indigenous population to Christianity and overshadowing local deities. That the first church in Huaraz was built so close to Pumacayán indicates, according to scholars such as Alberto Gridilla (1933a), that the site might have possessed particular relevance for natives; that perhaps it was not a simple *antigualla* or a settlement, but a place of cult and worship. What is known is that the site, like many native constructions in other cities (Álvarez-Calderón Silva-Santisteban and Sánchez García 2022), would soon be turned by the new settlers into a quarry, and its richly carved cobbles would be used for the walls and foundations of the new city's buildings – including the San Francisco church, also erected close by Pumacayán in 1689, and the Betlemita Order built in 1710 (Gamboa Velásquez 2016, 29).

Historians would continue to speculate on the relationship between the Spanish and the site. It is suggested that, despite Spanish efforts to supplant indigenous beliefs, Pumacayán continued operating as a *mochadero*⁴, a place of worship located over a former *huaca* or *wak'a* – Quechua for an other-than-human entity related to

2 Some scholars, however, doubt that this description referred to Huaraz, and instead relate it to the old settlement of Huari in Conchucos (see Wegner 2017, 30–31).

3 The *encomienda* was an early legal figure of territorial control imposed by the Spanish Crown that had as an ultimate goal to 'form the commended Indian morally and socially' (Alba Herrera 2017, 53). Although the *encomenderos* were not colonial authorities as such, they had sufficient power to control extensive areas of land and live from the tribute of the indigenous population.

4 From Quechua *muchay*: to say, kiss, or worship.

a sacred place or thing⁵. It is said that this relevance could have made the site the main target of a second period of Catholic evangelism during the seventeenth century, this time more severe and eminently repressive, known as the extirpation of idolatries (Duviols 1986; Robles Mendoza 2021). The apparent initial tolerance of certain native traditions and rituals during the early colonial period (Spalding 2016) was superseded by a punitive anti-pagan regime, predicated on the destruction of *huacakuna* and idols (Alba Herrera 2017, 85). In cases where the large scale of *mochaderos* hindered their total destruction, crosses and temples would be constructed on top of them. In Huaraz, the construction of the San Sebastian and San Francisco churches was followed by the erection of a chapel on the top of Pumacayán some time in the eighteenth century⁶, reinforcing the theory that the Spanish knew they were dealing with an important shrine.

It is also speculated that, during that time, a large cross came to replace a *huanca* located over the top of Pumacayán – the same cross that is located and worshipped on the hill today. *Huancakuna* (also spelt *wank'akuna*) – or *huancas*, as Spaniards started to call them – are monolithic stones that operated as landmarks in the Andean world. According to Carolyn Dean (2015, 213), *huancas* were ‘a particular kind of wak'a [or *huaca*] specialising in territorial possession and whose ownership was linked to sight’. *Huancas* were widely considered sacred and sentient beings, even persons, owners of the places where they exerted influence, commonly associated with the territory within sight – extending to fields, villages or even entire valleys. They also fulfilled protectionist roles and, in return, received all manner of gifts and tributes from their community, including food, coca leaves, ceramics and animals. Some *huancas* were minor, and their influence in the territory was somewhat limited to a reduced space such as a *chacra* – beings that Pierre Duviols (1979) refers to as *chakrayuq* or ‘guardian of the field’. These minor stones could have been associated with the ancestors of communities, connecting the realm of death with that of life. As Carolyn Dean (2010) suggests, stones in the Quechua tradition, like many other materialities, are trans-substantial. Thus, the petrification of humans into stones only meant a suspension of life, not its end. Other *huancas*, moreover, commonly

5 According to Tamara Bray (2015), early references to *huacas* were commonly defined in material terms, mostly as a sacred thing such as an idol or statue, or as sacred places such as oratories or shrines. The author suggests that ‘[t]he need to employ two (or more) Spanish terms in attempts to capture the meaning of ‘wak'a’ points to significant ontological differences regarding understandings of matter and materiality among Andeans and Europeans. ... The notion of wak'a-as-oratory entailed spatial fixity, while wak'a-as-idol suggests a degree of mobility. This combination of properties (e.g., simultaneous fixity and portability) within one entity does not fit easily within a conventional western ontology and seems to have been a source of confusion for early authors’ (Bray 2015, 5).

6 Although the exact year is unknown, the chapel already appeared on the first map of the city, published in 1782 (Wegner 2010).

related to more important ancestors, public figures or deities, had greater influence. This type of *huanacas*, defined by Duviols as *markayuq* or ‘owner-guardian of a village’, would have been known by people for several kilometres around, and even considered true centres of power within the ethnic nations they belonged to.

According to George Kubler (in Dean 2015, 214), the Spanish were less interested in *chakrayuqs*, which they considered simple folk traditions that did not represent a real pagan threat to the expansion of Catholicism. However, *markayuqs* were regarded differently. The main *huanacas* were usually attacked by ‘eradicators of idolatries’ (*extirpadores de idolatrías*), as they ‘were more readily comparable to Catholic patron saints’ (Dean 2015, 214), and later commonly converted into Catholic shrines. Thus, that both a chapel and a cross were placed over Pumacayán, and considering that the hill’s privileged viewpoint offered the perfect location for a ubiquitous stone guardian, suggests that it was indeed the site of a main *huanca*. Stories supporting this theory say that ceremonies would have been conducted at the site to ensure good crops and avoid extreme events like hail storms, frosts, droughts and floods. They affirm that the guardian of the hill had the capacity to control wind and water – truly a ‘god of agriculture’ (Yauri Montero 2020), some would argue. Oral traditions also claim that the punishment for native people caught by the Spanish settlers leaving offerings or gathering on the hill was severe, suggesting that they would have been forced to remain for hours under the glacial waters of the Quillcay River.

By the end of the seventeenth century, religious conflicts between the Spanish and indigenous populations seemed to subside. With the Church officially considering that ‘the Indian was already Christianised’ (Flores Galindo 2021, 82), the colonisers paused their long persecution of indigenous culture and opted instead for tolerance. They implemented the *cofradías* (confraternities), religious organisations that aimed to bring Catholicism closer to the indigenous masses in a less-violent way. This was a period of spiritual effervescence, a ‘popular Catholicism’ willing to dig deep into people’s world arrangements (Alba Herrera 2017, 96). However, far from eliminating the old deities and their influence on people’s lives, the work of the *cofradías* seemed to reinforce them. Despite the prosecution of non-Christian traditions during earlier periods, clandestine gatherings would still take place, revealing the fictive conversion of indigenous people to Christianity: a false acceptance of the Church’s doctrine in fear of their masters’ rage, concealing their uninterrupted relationship with *huacas*. Based on a more mythological approach to religion, indigenous communities would find in the *cofradías* ‘a means to anchor their collective identity’ (Alba Herrera 2017, 96), now turning the figures of Jesus Christ, saints and the holy cross into presentations – rather than simple representations – of the Andean beings.

It is during this time that the figure of El Señor de la Soledad emerges. The origins remain unknown, but the *papachito* (little father), *Auquitantanzic* (our major old father) or *Apu Yaya La Soledad* (great lord father of La Soledad) makes his entry to

Huaraz after the foundation of the *Cofradía del Santo Cristo de la Soledad*, a confraternity specially created to commemorate the ceremonies dedicated to the burial of Christ. The group built a new temple on the southern hillside of Pumacayán (the same location as the current church of La Soledad) in 1669, probably also as a form of contesting the relevance of the site as a place of worship. Some time later, a crucifix with a human representation of Christ was brought from Conchucos or Huaraz's main church, which, for reasons unknown, replaced the figure of San Sebastián and became the city's main *patrono*. Possibly due to his proximity to Pumacayán, together with the recent removal of the site's main *huanca*, El Cristo de la Soledad soon became the most venerated image among the indigenous population (Yauri Montero 2013). Followers of Pumacayán would dissimulate their *underground* practices, overlaying existing beliefs and practices onto the new Christ figure – including requests for protection against extreme events such as prolonged droughts and floods. Now covered by the figure of the *patrono*, the local population could ensure their relationship with their Andean protector, 'burying his figure under the cross' (Yauri Montero 2013, 71). El Señor de la Soledad would thereby become God, not simply a representation of such. Pumacayán's *huanca* and main stone, it is said, could find its substitute within Huaraz's society.

The transformations experienced since the installation of colonial rule would lead to new forms of relations with places and things considered as intrinsic community members by the native population. The protective role of *huacas* and *huanacas*, the ultimate example of entities 'recalcitrant to classification (and individuation) as either human or nonhuman' (De la Cadena 2019, 40), would be assigned to the new figures imposed by the Catholic order. In their efforts to eradicate what they considered heretical customs and beliefs, the Spanish regime created new forms of protective entities, embodied in the figures of the cross, saints and Christ himself. Pumacayán would be at the centre of this process – a place that would embody the cosmopolitical encounter between the *huanca* and the cross. Despite the violent imposition of a new order based on the Catholic creed, the encounter of both figures, with Pumacayán as a main setting, would lead to a creative synergy shaping the deep connection between the local population and their environment during the following centuries.

The archaeological site

The permanent extraction of stones from Pumacayán would substantially compromise the structures that pre-dated the Spanish invasion. Over time, those large walls of carved cobbles and boulders originally described by Pedro Cieza León and others would show significant damage. Meanwhile, the flourishing colonial city would

profit from its *piedras labradas*' robustness, embellishing and fortifying new walls and constructions with them.

This situation slowly started to change after Peru's Declaration of Independence in 1821. In less than a year, Peru's new government enacted Supreme Decree Nr. 82, stating that 'the monuments remaining from Peru's antiquity are property of the Nation because they belong to the glory it derives from them' (Alba Herrera 2016b, 41). The remains of ancient structures from the pre-Hispanic period would become an extremely useful source in creating a national narrative that allows bypassing the figure of Spain, to construct a common identity among Peruvians. The same strategy was followed by many of the young South American republics freed from Spanish rule, granting their recent existences as nations with historical depth (Dünne 2021) and rights to self-government (Díaz-Andreu 2008).

Nevertheless, stated intentions to protect ancient pre-Hispanic settlements do not immediately stop excavations with extractivist purposes. In Pumacayán, the first documented excavation after Peru's Independence dates from 1847, led by the prefect Domingo Casanova. Casanova's writings reveal that carved cobbles quarried and taken from a *huaca* in the town were used for the foundations of the city's new cemetery, 'adorned with a multitude of busts and other rare stone figures' (Reina Loli 1959, 18). Later, the prominent Italian-Peruvian scientist Antonio Raimondi, during his stay in Huaraz in 1873, writes about 'the *cerrito* (little hill) of Pumacayán ..., a precious remnant from the time before the conquest of Peru ..., whose deposit of stones is so large that [it] serves as a quarry to extract the stones used in the construction of Huaraz's house foundations' (Raimondi 1873, 40–41). Raimondi reveals the deteriorated state of the site at the time, when he affirms that 'nothing that appears to be man-made can be recognised. All the part that had been dug out has crumbled and collapsed' (Raimondi 1873, 41) – most probably referring to the excavation conducted by Domingo Casanova 24 years prior. Raimondi also mentions a huge square, tub-shaped boulder, one of Pumacayán's most famous remains at the time, located at the central patio of the city's hospital, confirming that some of the site's most relevant artefacts had already been extracted.

Over the years, an increasing number of voices began to demand protection of the site, calling for restrictions on excavations lacking scientific purpose. In line with the growing professionalisation of archaeology, a discipline that was taking its first steps in differentiating itself from more amateurish and economically driven archaeological ventures (Asensio 2018), the first authorised excavation, led by Leonardo Bambarén, took place in 1913. Although later criticised for putting the site at risk due to a lack of scientific rigour and for still being motivated by the pursuit of riches, Bambarén's work nonetheless heightened public interest in Pumacayán after uncovering part of the underground structures and revealing 'enormous walls that point to constructions of great proportions' (El Departamento 1913, 37). However, it was not until 1919 that the renowned Julio C. Tello, considered

the father of modern Peruvian archaeology, conducted the first fully scientific excavation at the site. Tello was the first to speak of a group of stone buildings grouped in a large, walled citadel, with truncated pyramids formed by one or more superimposed platforms and crossed by interior galleries filled with stone and mud – a type of construction that he would also find in other places in the Callejón de Huaylas and Conchucos (Burger 2009). He also discarded the common assumption at the time that Pumacayán was a military complex or *pukara*. Instead, he promoted the idea that the site was an *adoratorio*, a devotional complex comprising several interconnected temples. This last idea would find support through some elements found there in the past, such as a one-metre-wide stone monolith adorned with an anthropic figure and two catlike beings that previously formed one of the walls of Huaraz's old cemetery. The first descriptions of this stone, like Raimondi's chronicle during his stay in Huaraz, suggest that this figure, together with almost all of the 'grotesque human figures [having] their heads girded with a kind of crown that varies in shape' (Raimondi 1873, 39), were brought from Pongor, a town close to Huaraz, located in front of the Cordillera Negra. However, Tello would later suggest that those elements were indeed extracted most probably from Pumacayán. He associates this rock with the famous Obelisk of Chavín, a two-and-half-metre-high monolith made of stone adorned with 'the Feline Huari, God of Agriculture' (Tello 2009, 183), that he would find in the same year while excavating the ruins of Chavín de Huantar.

Tello's findings provided for the first time substantial facts concerning what sort of being or guardian might have inhabited Pumacayán in the past. As Chavín's main deity, Huari or Wari was considered the creator of the universe and capable of connecting the three Andean worlds – the *Hanaqpatsa*, *Kaypatsa* and *Ruripatsa*⁷. His powers include the control of flows passing through these three stages, including water and air, which would relate to the stories arguing that rituals intended to ensure a good harvest or against adverse weather events were celebrated over Pumacayán. As the god of agriculture, Huari was the god of civilization, according to Western interpretations. The connection with Huari, commonly associated with the figure of a 'big cat' or puma, would also give clues about the place's name⁸. The site's association with Huari, together with the structures found there, reinforce the beliefs of schol-

7 Literally the higher world, the earthly world and the underworld. They derive from the word *patsa* (pacha in Southern Quechua), a category defining the world in terms of space and time.

8 Different authors interpret the toponymy of the site as 'the place of the puma', 'here are pumas', 'the puma-shaped stone' (Soriano Infante 1940) and 'the place where the puma is called or worshipped' (Wegner 2010). Yauri Montero (2020), moreover, argues that the name would literally mean 'they are pumas', an expression that, according to him, might have appeared during the Inca's Capac Raymi festivities, where authorities would dress like this animal.

ars such as Tello that the site was previously a regional shrine dedicated to worship, and not a fortress as initially believed.

A second excavation, conducted by Tello in 1939, would further develop his theories concerning the site. Based on his findings in the region, Tello concludes that Chavín was the earliest recorded culture in Peru, defining its vast influence from coast to jungle. Throughout his conclusions, he demonstrates the strong interconnections between the different groups across the Peruvian territory, arguing convincingly ‘that the highlands had repeatedly influenced and dominated the cultures of the coast’ (in Burger 2009, 73). These are strong assumptions for a country ruled by an elite located in coastal cities like Lima, where Andean societies had been commonly marginalised from politics and decision-making processes. The work of scholars like Tello would operate as a form of revindicating the legacy of the highlands as the cradle of the Andean civilizations – a geographic zone of ‘cultural irradiation’ (Tello 1921, 15), as he would describe it. Similar interpretations would later be used by the increasing indigenist currents that began to take shape at the beginning of the twentieth century, also revindicating the pre-Hispanic legacy of the country and its influence in the present.

These various discoveries, together with further archaeological findings in the region, would allow the development of a broadly agreed archaeological narration of Pumacayán. The site would be considered the midpoint of a larger settlement that might have operated as a regional stronghold, ‘a centre of power’ (Yauri Montero 2020, 48), of different cultures across the centuries. The pieces found there would help to connect the place with at least three main groups of settlers, related to the cultures of Chavín between 1500 and 500 BCE, Recuay between 100 and 700 CE and Inca between 1300 and 1532 CE (Serna Lamas 2005). Authors such as Pierre Duvols (1973) even suggest that the site was also occupied by the Huaris or Waris⁹, an ethnic group from the late formative period that would have been invaded and defeated by the Yaros or Llacuas¹⁰, a ‘less civilised’ group from the highlands, in a truly *desborde popular* or popular uprising. It was the first expression in the region of the civilisation-against-barbarism vertical scheme, as Yauri Montero (2020) defines the juxtaposition of population located in the lower and higher lands; a formula that, as we saw in Chapter Two, would repeat across the centuries.

Given Pumacayán’s constant occupation over time, it would have reflected an accumulation of diverse architectural constructions, buildings and layers of sediment. Steven Wegner (2010) suggests that the original mound where the site is located

9 Although no evidence from this group has been found in Pumacayán, its presence in the Callejón de Huaylas between 800 and 900 CE has been well-established across other archaeological sites of the region, including Willkahuain close to Huaraz (Gamboa Velásquez 2016).

10 Some scholars argue that the name *llacuaz* was contemptuously introduced by the Waris – a word referring to somebody who is a liar, rude or deceitful (Robles Mendoza 2021).

must have resulted from heavy alluvial material accumulated over time and resistant to fluvial erosion. For centuries, the different settlers would have engaged in various types interventions that expanded the hill's dimensions. According to Serna Lamas (2005), archaeological findings include an initial structure of walls related to the Chavín period, *chullpas* or graves corresponding to the Recuay period and overlying constructions from the Inca period that were probably used as housing and workrooms. The composition of the soil strata suggests that previous buildings were sealed and buried through soil-based fillings, first by Recuay settlers as a form of containing the *chullpas* and later by the Incas to elevate the height of the site and build higher edifications. Another interpretation, however, suggests that the burial of earlier structures would have been a strategy adopted by Pachacutec, the head of the Incan empire at the time, to dominate the defeated population (Yauri Montero 2020). By burying the shrine under an artificial hill, the Incas were entombing Huari, Huaylas' most important entity, and placing Inti, the Sun, as the main deity of the lands over the Tahuantinsuyu's rule¹¹. This architectural burial of Huari's relevance in the region reflects that later attempted without success by the eradicators of idolatries¹².

Just like the layers of sediment and construction found in Pumacayán, scholars and intellectuals would start accumulating theories and thoughts about the site across the years – based, on the one hand, on the scarce historical references to the site and the few excavations conducted there, and on the stories and tales orally narrated on the other. From a query and former *mochadero*, Pumacayán would be turned into a place of archaeological practices that, 'due to its various stratifications', would be considered 'of greater importance than Chavín', Augusto Soriano Infante (1940, 15) affirms. However, scholars would also share a mutual diagnosis: the poor condition of the site due to long-standing state abandonment, looting and land seizures, an appraisal that would only worsen over the years. During his visit to the Callejón de Huaylas in 1938, the renowned anthropologist Wendell Bennett (1944, 12) scarcely refers to the place, saying that 'the pyramid is now badly destroyed, and we attempted no more than a cursory examination'. Later, in 1939, Augusto Soriano

11 This version, however, contrasts with other historical sources affirming that Incas commonly respected local deities and sacred places. According to Catherine Allen (2015, 37), '[e]ven in defeat, subject communities retained their wak'as, whose pronouncements voiced their interests and concerns. About once a year the Sapa Inka called all the regional wak'as together in Cusco and publicly consulted them on policy matters "in what amounted to a congress of oracular deities" (Gose 1996, 6). Gose argues that this mode of communication through the voice of the wak'a gave indirect expression to subaltern opinions and concerns, avoiding direct confrontation with the king'.

12 It is believed that the Wari's popularity among the indigenous population might even have increased with the arrival of the Spanish, as a way of breaking the shackles of Incan domination from the past years (Yauri Montero 2013, 67).

Infante conducted a brief visit to the place, mentioning the presence of several properties located on top of the hill that are putting the archaeological remains at risk. He emphasises the necessity of declaring Pumacayán a national archaeological zone while compensating ‘those who have built their properties on the slopes of the hill; preventing them, in the meantime, from widening their patios and outbuildings, opening up land for cultivation, extracting construction materials and forbidding the construction of new houses at all’ (Soriano Infante 1940, 15). During his second visit in 1939, Tello shared the same preoccupation as Soriano Infante, arguing for the necessity of creating a national system of historic parks to protect Peru’s archaeological heritage. One purpose of this second visit to the region was precisely to study the state of the ruins of Pumacayán and others close to Huaraz, in order to explore the possibility of designating them protected areas (Burger 2009, 42). This idea, however, would take more than 60 years to be concretised, likely due to the dramatic events that the city would experience in the following decades.

The flood

We are not dead culture; we are living culture with our stones! sings aloud Rima, a musician from Huaraz living in Cusco, while she plays a drum attached to a colourful band surrounding her body. Wearing a bright, vibrant pink dress with traditional Andean patterns and a hat with a ribbon showing the rainbow-like colours of Cusco’s flag, the woman in her sixties has been invited to commemorate the anniversary of the flood that struck Huaraz on 13 December 1941. The event, organised by different citizen organisations – Javier’s included – and with the support of the Municipality, is hosted every year at the Memorial of the Alluvial Stone, a small square created around a massive granite boulder left by the 1941 flood close to the Quillcay riverbed. Atop the massive rock, a five-metre-high cross covered in white and golden tiles has been erected to commemorate the almost 5,000 victims of that day¹³. On one of the boulder’s granitic walls, it is possible to read carved in the stone ‘the Municipality and the citizens remember those who fell in the alluvial catastrophe of 13 December 1941. Huaraz, 13–12–55’. It is the only memorial remembering the catastrophe, and today’s gathering, its most important commemoration, attracts no more than a dozen participants.

Once an empty field located over the landslide scar resulting from the flood, today the memorial park is entirely surrounded by diverse homes constructed from all sorts of materials. Old one- and two-storey mudbrick houses partially covered with

13 It is estimated that the event left 2,000 to 5,000 victims – from a total population of around 35,000 people – and millions in economic losses (Wegner 2014).

thick layers of white plaster contrast with the five-storey buildings of red bricks located some metres away. Initially zoned as a high-risk area where no construction should occur, the memorial was placed atop one of the many boulders left by the landslide – witnesses to the tragedy, many of which were removed and used as construction material. Houses were constructed next to the alluvial stone during the massive waves of migration that the city experienced in the second half of the twentieth century, especially after the 1970 earthquake. During a speech, Javier urges the neighbours to take care of the memorial by shouting loudly *You must protect this park!* But except for a little girl who looks on shyly from metres away, there is no sign of other residents. Notoriously abandoned today, the square and its natural monument to the victims of the flood depict a sad scenario of a place forgotten in time, a situation that our modest gathering seems not to change.

Prior to the flood, the accumulation of water in Palcacocha over preceding decades, as a direct consequence of the dramatic effects of climate change on Cordillera Blanca's ice bodies, had turned the lake into a massive body 500 metres long, 250 metres wide and 50 metres deep, with an estimated volume of 9–11 million cubic metres (Vilimek et al. 2005). The calving of the glacier generated waves large enough to overflow the lake's natural dam, a fragile moraine left by the glacier during its retreat. According to reports of the time, the collapse of the moraine released almost 80 per cent of the water accumulated in the lake (Giesecke and Lowther 1942; in Wegner 2014, 13), which flowed downstream, dragging soil, mud, vegetation and stones along the Cojup Valley. The massive debris flow reached Lake Jircacocha further down, leading to its collapse and adding another 4.8 million cubic metres of water to the flood (Vilimek et al. 2005). After impacting Huaraz, the debris flow destroyed roads, tunnels, bridges and train lines downstream along the Santa River until reaching the Pacific Ocean 200 kilometres north. According to Mark Carey (2010), the event was the most lethal *aluvión* in the country's history and possibly one of the deadliest flash floods in the modern era.

As the days passed, the causes of the event were still unclear. While some sources immediately attributed it to process of deglaciation throughout the region, others suggested a *huayco* (a flash flood caused by torrential rains) or even a volcanic eruption (El Comercio 1941a). Alternative stories emphasised the relevance of certain figures as initiating the flood itself, while pointing to protective entities and their importance in preventing major impacts upon the city. These narratives would be evident in efforts to endow the destruction with some sort of meaning, aiming to move beyond the chaotic state and disoriented daze that engulfed the city in its aftermath.

One such story, collected by Marcos Yauri Montero (2014, 199) in Huaraz some decades after the event, goes as follows:

It is said that when the waters reached Cancaryacu [a place seven kilometres north of Huaraz], the Inca who lives on Huayrajirca Hill came out enraged like a raging

bull. He rebuked the knight:

– Why do you do such things, *carajo!*

The knight of fire stopped. The Inca said to him:

– If you are really brave, let's fight to life or death.

They fought – the knight with his machete and the Inca with his spear. The Inca was defeated, and said:

– I think you have defeated me? Then let's go together.

According to Yauri Montero, some elements portrayed here are worth revisiting. Firstly, the central character of this story is a clear reference to an ancient order personified by the Inca, a historical figure that appears systematically both in oral and written traditions since the emergence of the Andean Utopia or messianism in the seventeenth century (Earls 1969; Flores Galindo 2021). It is a figure that fights against a foreign character: *el caballero*, the knight, the flood's originator personified as having a horse of fire and a machete (both elements traditionally related to colonial rule). The expression 'let's go together' (*entonces vámonos juntos*) refers to how the Inca takes the knight with him to death as he falls through the mountains, triggering the landslide that would later destroy part of Huaraz. Some adaptations of the tale state that the flood was temporarily checked in Cushuruyoc, a place in the highlands close to Huaraz where there was an *ushnu*¹⁴, described as an ancient ruin used as a house by an Inca where he hides his treasures and memories. After being briefly halted by the *ushnu*, the flood moved further downstream. In other versions, it was not a *caballero* but an *enano rojo*, a small vigorous red male figure, also related to that of the Ichic Oqlllo¹⁵, who came out from Palcacocha, leading the flood downstream after throwing the rocks to Palcacocha that triggered the flood. Riding a burning black horse and waving his machete, the destructive figure moved down through the entire Cojup Valley, flattening trees and houses and producing a deafening sound.

In other versions of the story, both the knight (or red dwarf) and the Inca, who start fighting in the highlands destroying everything in their path, are diverted by the *Niño Jesús* (Baby Jesus) when they arrive in Huaraz. Yauri Montero refers to this narration in the following terms:

14 According to Frank Meddens (2015), studies agree that these sites were platform-shaped *huacas* that were built in areas conquered by the Incas rather than at the heartland of the empire. As such, they might have been fundamental ceremonial sites to confirm the place of 'foreigners' or non-Incas within the state. As sort of landmarks, *ushnus* might have also marked the limits of ethnical territories. Thus, it is no surprise that the *ushnu* in Cushuruyoc tried to stop the flood, an external force, from entering the territory of which the site was both a part of and its guardian.

15 In the popular tradition, the Ichic Oqlllo (or small male) is a being from the *Ruripatsa* or underworld associated with tectonic forces and capable of triggering earthquakes, volcanic eruptions, floods and landslides, among other events.

As the floodwaters lapped the eastern suburbs of Huarás, through Mulinupampa and Pumacayán, *El Niño Jesús* appeared dressed all in white. Standing facing the waters, which were pouring black smoke, he energetically ordered them, waving his right hand, to turn off to the north. Thus, the heart of Huarás was saved.

The story has local variations, with some versions arguing that the Niño Jesús was on top of Pumacayán, a place that he frequented periodically to play with other children – sometimes in the company of his mother, the Virgin Mary. In others, the baby inhabited Pumacayán, close to the chapel at the top of the hill. However, common to all of these versions is the relationship between God's son and Pumacayán, and how this combination protected and saved the old part of the city from the flood.

That Pumacayán is considered a fundamental protector of the city is by no means surprising. Besides confirming the great vulnerability of cities like Huaraz to outbursts of glacial lakes in the highlands, the 1941 *aluvión* also reaffirms the relevance of places like Pumacayán for Huaraz's urban configuration. Pumacayán, as some sources argue, 'was one of the points that sheltered the most fugitives' (El Comercio 1941c, 6), providing refuge for people from the surrounding area who refused to leave the place, fearing that a similar event might happen again. In the eyes of the population, the hill was a safe zone, a robust geomorphological formation capable of resisting the onslaught of nature. Moreover, the hill managed to bifurcate the waters of the *aluvión* and limit the destruction to the new part of Huaraz, located at a much lower altitude than the older settlement. It was, in this sense, a protector of the old districts; an entity that, 'due to its location, prevented a sinisterness of greater proportions' (El Comercio 1941c, 6).

Equally unsurprising is the direct relationship between Pumacayán and the figure of Jesus. The strategic location of the site that helped to prevent a major catastrophe reinforces the central role of this site within the history of Huaraz. As mentioned previously, Pumacayán is considered the crossing point between the earlier devotion to Huari, the entity protecting inhabitants of those territories against events like floods and droughts, and Christian figures introduced by the *cofradías* – specifically, El Señor de la Soledad. Pumacayán is a *tinku*, a site that enables the synthesis of two agonistic entities – Jesus and Huari – under the figure of Huaraz's main *patrono*, the ultimate expression of the so-called Andean syncretism. By the time of the flood, the *Papachito* was an eminence among *Huaracinos* and people from the surrounding area; the protagonist of all sorts of stories in which he would appear, meandering around the outskirts of the city in abandoned places and fulfilling people's needs (Yauri Montero 2013).

In all the versions of these stories, Yauri Montero affirms, it is possible to infer a clear structure indicating the relevance of the portrayed historical figures. Confronting the flood, the Inca is always defeated by colonial rule, forced to sacrifice himself while taking his opponent with him. In other cases, the *ushnu* of Cushuruyoc

can retain the flood only briefly until the *aluvión* strays from its path and reaches the Quillcay River, where it flows until impacting Huaraz. The only figure that can truly control the destruction caused by the *aluvión* is the Niño Jesús together with Pumacayán, who diverts the destruction further north. According to the author, this is revelatory in two ways. Firstly, it shows a clear hierarchy between the Christian and Andean figures. Secondly, it implies that the urban world, with Pumacayán within this arrangement, is stronger than the rural as it is capable of containing the consequences of such a destructive event – related by the author as a ‘civilising project countering the outburst of barbarity’ (Yauri Montero 2014, 208). The stories, affirms Yauri Montero, do not contest the hegemonic domination of the colonial order over the Andean world, independent of whether we are dealing with tales from rural or urban areas. It is, above all, a reinterpretation of history through figures of the past interacting with the present to give the Inca, under the imminent collapse of his world, a last chance of revenge against invading foreign forces.

The apparent prevalence of the urban over the rural seemingly reproduced in narratives about Pumacayán is somehow contested by another type of story, particularly around the newly built high-class Centenario district in the northern part of the city that concentrated Huaraz’s richest chalets and exclusive services. Accounts of this district, which was entirely destroyed by the 1941 flood, emphasise the inability of the modern urban project to cope with that event, something associated in part with the ingenuity of *Huaracino* bourgeois society.

One of the central figures in these stories is the *Hotel de Turistas*, a massive, modern construction inaugurated only a few days before the flood. Yauri Montero (2014, 228) shares the events around this building as follows:

To this day, it is said that when the colossal mass of water advanced, many people ran to take refuge in the tourist hotel, with the idea that its solidity would not be toppled. Reality proved otherwise; according to the stories, the waters tore it from its foundations, carrying it like a toy for a short stretch, at the end of which it burst into pieces.

Different accounts of this moment usually follow a similar pattern to describe the destruction of the hotel. Godofredo Zegarra, a renowned *Huaracino* artist and survivor of the 1941 flood, tells me during an interview how tourists and residents from Centenario climbed to the top floor of the hotel, some even reaching the roof, hoping that the construction would withstand the mass of mud and water. ‘As it was made of *material noble*, everyone was confident that nothing was going to happen, that it was going to be safe. But the water was everywhere, and there were no houses around anymore. It was just alone there, like a little matchbox, and suddenly it collapsed’. The hotel is remembered as one of Huaraz’s first constructions of fine materials, made of ‘reinforced concrete in the main parts, brick in the infills, marble in

the staircases, Oregon pine in the doors and windows' (Barrionuevo 1939; in Wegner 2014, 31). It was a building emulating a traditional colonial architectural style but following modern construction standards that should have made it more resistant to extreme events. However, its robustness could not endure the force of the flood, collapsing as yet another fragile structure amid the power of nature.

The tragic impact on the Centenario district is reinforced by anecdotes that, with a touch of humour, came to lampoon Huaraz's wealthiest groups. According to Yauri Montero (2014, 213), one account that became quite popular among inhabitants in the aftermath tells the story of a wealthy lady who became trapped in the mud due to her amount of clothing. In this account, the woman returned to her house in Centenario during the flood warning, after realising that all her fur coats were inside. Portrayed as being overweight, the lady delayed whilst deciding which belongings to take with her. 'Which of my *haciendas*¹⁶ should I wear?' (*¿cuál de mis haciendas me pongo?*), she asked naïvely, before donning all of her coats simultaneously. The flood reached the house while she was inside, taking her with it downstream. The police found her in the mud and tried to pull her out, but she was stuck due to her body shape and the weight of all her wet fur coats. Eventually, they rescued the woman full of mud, looking almost like a bear. A similar story narrates the case of another woman, known among locals for being a usurer, who was also trapped inside the flood. Once people recognised her, they declined to help. Screaming for assistance, the woman promised to give her wallet full of money to whoever pulled her out of the flood. One man agreed, and told the woman to throw her wallet so she could more easily grab his hand. The lady did so, but he then refused to help. 'That's what you deserve!' exclaimed the man, before pushing her into deeper waters. During an interview, Godofredo Zegarra tells me the story of a man who escaped naked before the flood reached his house, covering his genitals only with a painting of the Sacred Heart of Jesus that he found on the way. While evacuating the flooded area, the picture rips off and leaves his genitals exposed without him noticing it. When he finally reached a safe zone, he started screaming euphorically 'He saved me!' while pointing mistakenly to his penis instead of Jesus' heart. All these accounts relativise the destruction and pain left in the city, by exposing the vulnerability of the wealthy groups of Huaraz. Affluent residents are portrayed as foolish and naïve, utterly disconnected from reality and unaware of how to react to the world's imminent collapse.

16 The *haciendas* would be a direct reference to the urban wealth accumulation based on rural dispossession. According to Yauri Montero (2014, 216), 'for her, what really matters is not the land as a heritage asset but what the city offers her as a reality of professional, commercial, social and cultural possibilities. Therefore, her luxurious and expensive coats are her "haciendas", which are worth as much or more than the land'.

It is interesting to reflect on how these stories with a notorious class component relate to the economic processes that the city was experiencing immediately before the flood. By the end of the 1930s, Huaraz was living its *Belle Époque* of economic growth and cultural flourishing. The developing *serrana* economy of the preceding decades was giving way to the emergence of a regional market and modest but robust local industry. Huaraz was a role model for the entire region, a commercial centre where people from all over the Callejón de Huaylas came to trade their goods and purchase supplies. The city had promising leather and wool industries with a well-established handicraft sector, all sustained by an emergent bourgeois middle class that owned shops and houses in the city, as well as middle-sized *chacras* in the rural areas for household consumption and trading products in the market.

This period also saw the emergence of a modest tourist industry that, as in Yungay's case, came to position Huaraz among the tourist destinations favoured by the national elite, especially the *Limeña* due to its proximity to the capital. Inspired by the early work of scholars like Julio C. Tello and the first scientific and mountain excursions to the Cordillera Blanca (Carey 2012; Carey, Garrard, et al. 2016), the urban bourgeoisie was eager to know more about the country's pre-Hispanic past and unique mountain landscapes – 'the Peruvian Switzerland', as the Callejón de Huaylas would become known during those years. Improved infrastructure, connectivity and services opened the region to tourism, which required better quality accommodation and facilities from cities like Huaraz. It is during these years that the famous *Hotel de Turistas* was built, 'lodg[ing] the numerous people who visited the region' (El Comercio 1941b, 2), and would become the ultimate expression of this new wealthy bourgeois class.

Meanwhile, the majority of the population, composed mostly of working-class *mestizos* and indigenous people, experienced the incipient transition from a feudal-like system of *haciendas* to a labour-based capitalist market; a transformation that, as in many other parts of Latin America, would lead to a precarious and exploitative wage-earning system. These economic transformations fostered profound changes in political and cultural domains. According to Yauri Montero (2013), the pivotal place of Huaraz in the region, together with the social problems and inequalities so common at the time, pushed for the creation of several organisations led by students, workers and artisans. Associations like Vesperal, La Defensa and Union Femenina published newspapers and magazines to spread ideas linked to literary modernism, vanguardism and indigenism. It was a time of popular creation and revindication of social demands, influenced by national movements and Marxist intellectuals like José Carlos Mariátegui (Alba Herrera 2016a), but also by recent political events in the region, including the indigenous rebellion commanded by

Pedro Pablo Atusparia and Pablo Cochachin in 1885 (Alba Herrera 2011; 2012) and the *Aprista* Revolution in 1932¹⁷.

Considering such a context of political effervescence, it is to be expected that popular classes would use the destruction of Huaraz's most prosperous neighbourhood (mistakenly assumed to be a safe area) as an opportunity to humiliate wealthier sectors of the population. Unlike the stories of the flood's origins, in which the urban world succeeded in controlling the 'barbaric outburst', tales about the consequences of the *aluvión* in the city call upon a subjugation of the modern urban world by the natural forces of the Andes. It is the ultimate expression of an ingenuous modernity amid the destructive harshness of nature.

In this scenario, Pumacayán would remain as the ultimate place of salvation and protection. But, unlike Yauri Montero (2014) claims, this would not be granted by its allegedly inherent urban condition – a superiority of the urban world in dealing with barbaric forces. The strength of Pumacayán would result from an agonistic synthesis of historical sediments accumulated over time – like the different constructions placed upon the site over the centuries. Its protection against flooding would be combined with the enigmas buried beneath the soil layers, thereby creating a mythical site of both safety and historical depth. Pumacayán, in other words, would become a site of legend, a place that escapes a single, coherent and plausible construction of the past. It became a place of mystery and admiration, the ultimate example of the pre-Hispanic prevalence sustained precisely by the relationship of the site to the surrounding urban population. As such, the site was not an entirely urban figure, but was not totally estranged from the city's operations and logic. It was the perfect setting for building an urban indigenist identity – a romanticisation of the past, sustained by narratives of a national project – that of the Andean Utopia and political engagement.

¡Salvemos Pumacayán!

One day after the commemoration of the 1941 flood, I visited Pumacayán with Javier and other members of his organisation. Javier is willing to share with us the history of the site, as well as the challenges and dangers currently threatening its protection and preservation.

17 The *Aprista* Revolution was a popular uprising commanded mostly by members of the APRA (Popular Revolutionary American Alliance) Peruvian Party founded by Víctor Raúl Haya de la Torre in 1924. It was part of a national insurgency against the authoritarian government of Luis Miguel Sánchez Cerro. This demanded guarantees on full exercise of political and civil freedoms and called for new democratic elections. The uprising, together with similar rebellions in Trujillo and Huari, resulted in thousands of political deaths and led to the banning of the APRA in the country until 1945. See Alba Herrera (2006).

As we gather in front of the mound, Javier starts grumbling while he takes some pictures of an intervention that the Municipality is making at the site. *Concrete and steel are not the right materials. It should have been made of stone!*, he says while pointing to the gate that is being built at the main entrance (see Figure 9). The project aims to renovate the site by creating a touristic circuit with informative signs, clear walking paths and proper enclosure of the area. But despite the improvements that the project could make for the site, Javier and other activists advocating for the defence of Pumacayán are still dissatisfied. The construction does not follow a traditional style, and the main issues affecting the site are still not being tackled.

As we reach the highest part of the hill, we gain a clearer picture of the site's condition. Just as advocates of Pumacayán keep telling me, the site looks very abandoned. The top of the hill is almost an empty field, a large green area covered by grass with piles of rocks and occasional piles of garbage. *It's the Western rubbish*, exclaims Javier, the upper stratum of several layers of history buried under the soil on which we are walking. The scarce infographic material gives little information on the site's history. The only visible notorious structure is the chapel from El Señor de Pumacayán, that little shrine built in the eighteenth century upon the hill to reinforce the presence of the Catholic Church. Besides that, only some concrete foundations of former houses can be seen in the area – buildings that were evicted and demolished some years ago, Javier explains. The entire area lacks any trace of ancient ruins or anything similar. 'For the untrained eye, there is not much to see except for a large Ministerio de Cultura sign and some ruined stone walls', writes the US-based archaeologist George Lau (2016, 194–95) after visiting the site. I cannot but agree with that claim: if it were not for Javier, and the modest dirt path lined across the site with white-painted stones, I would have never suspected that we are at an archaeological centre.

In addition to the inadequate state intervention at the site, Javier is extremely angry about what for him is Pumacayán's real problem: the houses that occupy the foothills of the archaeological site – which he blames for the ubiquitous litter. He explains that the *invasiones* started during the 1970s as a temporary housing solution for survivors of the 1970 earthquake. However, those interim structures were never removed, and over time became established dwellings for many people. Although Javier recognises that some evictions have taken place (at those houses whose remains can still be seen at the top of the hill), there are still several houses on the foothills that need to be removed.

As mentioned, the occupation of Pumacayán was already thematised by people like Julio C. Tello and Augusto Soriano Infante in the late 1930s. The abandoned state of the site mentioned by those scholars would only worsen after the 1941 flood, when the authorities' priorities were focused on the recovery of the city. The flood came to jeopardise the prosperity accumulated by the city over the preceding decades. In the words of *El Comercio* (1941a, 2) at the time, '[f]ate has stopped the development of the

promising plan of urban improvements in Huaraz and once again the waters fulfil a destructive action in our territory'. However, it was also an impulse to implement different infrastructural transformations that would lead to profound changes in the city's dynamics.



Figure 9: Pumacayán's main entrance of concrete and steel (Usón 2020)

During those years, Pumacayán became fundamental to reinvigorating the city's ancient history. Associations such as the Unión Progreso Soledad coordinated community clean-up workdays at the site, together with archaeological talks and discussions to reinforce the commitment to the city's archaeological heritage and its relevance for the articulation of a contemporary regional identity. Moreover, discourses claiming to protect the site reaffirmed old wake-up calls made by archaeologists warning about the dramatic consequences of permitting housing in the zone. The occupation of the hill by irregular housing in preceding decades only increased in the aftermath, as residents from surrounding neighbourhoods impacted by the *aluvión* arrived at the site and constructed improvised shelters. Over time, those temporary constructions became permanent homes of mudbricks, a situation that would escalate with the increasing migration of *campesino* families to the city in the following years (Gamboa Velásquez 2016). Driven by intentions of protecting Pumacayán's legacy as a central exponent of the region's archaeological heritage, social organi-

sations positioned themselves against irregular housing and promoted responsible uses of the land surrounding the site.

However, things changed abruptly in 1970.

The 1970 earthquake had dramatic consequences for Huaraz, razing the city to the ground. According to Barbara Bode (2001, 30), '[d]estruction of Huaraz's urban centre was virtually total. ... Half a billion cubic feet of adobe bricks buried the *casco urbano* and half of its population of 20,000. Another 10,000 died in the rest of Huaraz [province]. Over 90 per cent of the structures in the centre collapsed'. The famous two-storey colonial houses made of mudbrick became death traps for *Huaracinos* who, while trying to escape through the narrow cobblestone streets of the city, were hit by the falling buildings. Books compiling the written testimonies of survivors provide numerous accounts of people who remained under the debris of the houses for days before being rescued, including the famous *Huaracino* writer Marcos Yauri Montero (1971) and the artist Godofredo Zegarra (Pajuelo Prieto 2002). Most of the trapped residents, however, did not survive the weight of the rubble. Huaraz, the Department's capital, was devastated.

As in other moments in Peru's history (Walker 2008; Álvarez-Calderón Silva-Santisteban and Sánchez García 2022; Uribe Chinen 2023), many families moved temporarily to public squares and archaeological sites and constructed improvised shelters to survive the cold nights of the *sierra*. Pumacayán was one of these sites, a place considered very safe from the earthquake's aftershocks. Just as in 1941, the hill became a congregation point; an old protector providing *Huaracinos* with shelter amid the awful destruction. Rather than temporary solutions intended for just the first days of the aftermath, some families remained at the site, turning their huts into more stable houses of mudbrick and *material noble* over time – the much-reviled *invasores* about whom Javier complains.

In addition to the urgent need for housing following the earthquake, the occupation of the site over the past decades can be also explained by the notorious state of institutional abandonment that Pumacayán experienced in the following decades. In the years after the earthquake, the former impulses to defend the place were in apparent retreat, with public opinion and social organisations focused on the ongoing consequences of the disaster. The population was dealing with the slow reconstruction of a city completely destroyed by what they considered a total lack of institutional competence to deal with the situation. Furthermore, the creation of Ancash's first public university in Huaraz, an historical demand from *Huaracinos* that had led to massive protests in the past – especially in 1968 when violent confrontations with police ended in dozens of deaths and several injured (Yauri Montero 2021), kept social organisations and activists busy with that endeavour until the founding of the Universidad Nacional Santiago Antúnez de Mayolo in 1977.

Things in Pumacayán slowly started changing in the following decade, with the declaration of the site as a zone of the nation's cultural heritage in 2003. The 1.74

hectares of the site, with a perimeter of 579,917 linear metres, was declared a conservation zone of high priority (INC 2003, 1). This new declaration triggered a whole new set of works and improvements to the site (Andina 2019), including the construction of the entrance gate that Javier openly rejects. Most importantly, it gave the Municipality greater capacity to carry out evictions and remove houses built in what was defined as the official site extension, as communicated to neighbours in the same year of the declaration. Particularly relevant are the indications that these evictions gave to the population and authorities, who saw the eradication and further demolition of *invasores'* houses as an opportunity 'to not only recover the area but also give greater economic movement to the city, because the recovery of the archaeological centre will allow ... to set up a tourist development project' (Huaraz Noticias 2016). Indeed, the recovery of Pumacayán and its heritage would bring together old hopes of economic development and prosperity, expectancies sustained on the romanticised image of the idyllic *serrana* city that disappeared – in part due to the 1941 flood, and the remainder due to its destruction in 1970 – which, just like Yungay, made tourism the only opportunity for emerging from its ruins.

The apparent visibility that Pumacayán gained during these years did not eliminate the controversies around the site. As my walk with Javier showed me, advocates of Huaraz's heritage are still dissatisfied with the interventions made at the site, emphasising how little the government is still doing to eradicate completely the people located within the perimeter of the archaeological site while nevertheless pushing to fulfil more ambitious preservation strategies. Like many other archaeological sites in Peru, Pumacayán is a reflection of ancient history, the permanence of which is threatened by (rural and poor) *invasores*. It operates as a site perpetuating two simultaneous temporal constructions: a pessimistic view of the present, sustained by a racist denial of the country's contemporaneity, versus a romanticisation of the (ancient) past nurtured by the idea of the Andean Utopia towards the future. The risk of a further '*desborde*' (political uprising), a fear that has occupied Peruvian urban elites since the indigenous uprisings of Juan Santos Atahualpa and Tupac Amaru II in the eighteenth century, is embodied in the shattered remains of Pumacayán's ancient walls and constructions. The heroic ancient Incas differ from the contemporary *indios* threatening the continuity of Huaraz's cultural and archaeological heritage (Méndez 2000). The new rural migrants would, according to *Huarcinos*, achieve what the other *outburst* (i.e., that from the highland glacial lakes) did not achieve in the past: to bury Pumacayán, and the heart of the old city, along its path.

Scattered stones, continuous past

During my visit to Javier's house, the traditional construction located between La Soledad and Pedregal neighbourhoods, he shows me some cardboard boxes that contain what he defines as a mobile museum (*museo itinerante*) dedicated to Pumacayán. The boxes are full of plastic bags containing informative posters, photos and papers detailing working schedules of past activities, newspaper articles and a massive picture of the site taken in 1970 after the earthquake. But mostly, a significant proportion of the documents are drawings and paintings made by children depicting the site and its main features. One portrays Pumacayán as a living being, weeping over the abandonment it has suffered. On the sides, handwritten phrases from a child read, 'Little Pumacayán, don't cry. You are not alone anymore' and 'Your people have become aware. You will not be captive to the illegal invaders anymore'. Javier explains that these illustrations are the result of exhibitions that he and other members of his organisation organised at schools and cultural centres. He shows me pictures of himself and the museum in different settings, surrounded by children and adults admiring various types of artefacts, including many of the stones he keeps at home. Javier explains to me that they are part of the activities that he and his association have organised to raise awareness of the site and the dangers threatening its permanence in time, including land seizures. The work with younger generations is, in a way, how activists like Javier ensure the creation of new portraits fostering Huaraz's archaeological heritage towards the future.

The history of the social organisations fighting to protect Pumacayán is the story of Javier and his family. It is the story of people like him and other *Huaracinos* who, fearing for the legacy of their architectural heritage, organised themselves over the years to demand better conservation plans to protect their identity. Those stories are tightly intertwined with the efforts of scholars like Julio C. Tello working on the site over a period of decades, producing the necessary volume of evidence to ensure what Raul Asensio (2018) defines as the patrimonial pact in the country: all those practices and discourses, configuring the way in which archaeological remains are made an intrinsic part of Peruvian national identity. They are also connected with the labour of governmental agencies, which, at some moments in time, have worked hand in hand with those scholars and citizens to enhance the patrimonial value of the site, while at other times also being blamed for the site's poor condition. Citizen stories are also connected with the country's political context across the years, defining how much work can be realised around the site. Above all, stories of archaeological activism are deeply connected with the social transformations experienced in the region over time, especially triggered by extreme events like the 1941 flood and 1970 earthquake and the dramatic consequences of those events for the population. Disasters in Huaraz have been moments of loss, suffering and frustration, but also instances of political impulse and transformation – temporal arrangements that have

justified strong urban interventions and the rise of protectionist efforts aiming to recover the city's idealised past.

To conceive of Pumacayán as an archaeological centre is in any case an innocent endeavour. As Gastón Gordillo (2014) suggests, the distinction between archaeological ruins and rubble is sustained by elitist definitions of what societal reminiscences are worth protecting and which are simple waste. Whereas the former are material relics from the past turned into 'unified objects that elite sensibilities often treat as a fetish that ought not to be disturbed' (Gordillo 2014, 6), the latter are remnants of modes of existence that are not socially valued, and hence deemed unworthy of either short-term maintenance or preservation over time. Instead of asking what are the intrinsic conditions that produce ruins in society, the author equates ruins with other non-fetishised remains, in order to understand what turns things into rubble – a concept that, while de-glamourising the notion of valued ruins, also reveals the material sedimentation of destruction around wreckage. Inspired by the work of Anne Stoler, Gordillo proposes shifting the focus on ruins to the notion of ruination: a process that reveals how colonial rule is a still-ongoing imperial process that 'bring[s] ruin upon' (Stoler 2008, 195). As a process, ruination evokes the active forces of destruction behind imperial orders. It is the ultimate fetishisation of the lashes imposed by the same colonial violence leading to that devastation in the first place. 'Rubble', in other words, 'is evidence of destruction' (Gordillo 2014, 261), the author exclaims, and ruination its recognition.

These reflections indeed strongly resonate with the case of Pumacayán. 'What makes ruins "authentic inventions of modernity" is that they are "the copy of an original that never existed"', Gordillo (2014, 9) affirms. According to this view, a site like Pumacayán is the result of a reified past bounded in a perimeter that hides 'constellations of rubble created by ongoing forms of disruption' (Gordillo 2014, 9). However, this understanding of the operational capacity of ruins as modern devices implicitly suggests that ruins portray a false version of the past while assuming that there is an original, 'real' version that can be reached – although not through the inventions of modernity, at least. If we assume that all versions of the past are an actual creation of it, then it is useless to reaffirm the invented condition of the modern, reified past. Rather, such an emphasis might only overshadow the productions that emerge from those created schemas. Focusing primarily on the rupture left by schemes of domination, Gordillo misses exploring what is valued when ruins are produced; what remains as an object of heritage after the imperial destruction. He misses the fact that friction, collapse and disintegration to be found in rubble can also lead to the creation of values and meaning. 'The pure multiplicity of rubble is the void that haunts modernity', Gordillo (2014, 9) affirms. However, as we have seen in the previous chapter, even those contested representations of the void, turned into active absences built upon an ecology of materialities and practices, have positive expressions that escape the simple emptiness left by destruction. Absence creates a

sense of belonging and identity, even when those feelings are sustained by practices of exclusion and the enactment of a conflictive alterity portraying *invasores* from the highlands as a threatening outburst. Time, under these terms, is articulated by those absences, even if they are produced by trajectories of destruction that seem to break with time in the first place.

The case of Pumacayán shows us how reified rests turned into archaeological remains are sometimes produced by the same people inhabiting the surroundings of ancient ruins. Whether influenced by major national narratives or not, local inhabitants can have a major role in articulating the remains of an ancient past that needs to be recovered and protected. But in this process, they do not operate alone. Besides archaeologists and state agencies (and even the settlers around and beyond the hill accused of land seizure), stones are also central elements in this. Rather than simple fetishised objects reflecting social expectancies, values and frustrations, stones are mediators producing means and values (Latour 1991). They have the capacity to materialise the quest for endurance because they are meant to last over time. As seen in this chapter, stones in Pumacayán have portrayed this apparent durability in multiple forms – as sacred beings, guardians of entire towns and valleys and as eternal entities across generations. They were carefully carved to make walls and other structures in pre-Hispanic times, later looted by Spanish colonists for their churches and buildings of colonial Huaraz. Due to their durability, they have operated as archaeological artefacts that connect us directly to distant epochs and social regimes. As such, they can be objects of wonder and collection, but also drivers of a national identity that must be preserved and protected against foreigners and those who are insensitive or uneducated. Stones can be educational devices performing a civilisatory role, just like Javier's *museo itinerante* suggests. Their collection can be thought of as an apparatus that sustains efforts of story-telling (Bal 1997). When collected for private archives or exhibitions, stones take part in the narrative systems that help to create diverse versions of the past – whether historical records about the archaeological traces of Pumacayán, popular stories about the flood and its consequences for the city or just accounts about the threat that *invasiones* entail. They enhance the constructions of diverse texts, sometimes following similar stories and lessons, sometimes offering different combinations of elements and events.

All these functions operate simultaneously – not because of values reflected by stones, but because of their apparently ever-lasting materiality. 'Materials are not in time; they are the stuff of time itself', Tim Ingold (2012, 439) recalls. Stones, in this sense, are a metaphor for endurance, but they are more than symbolic '*as ifs*'. They sustain metaphors because they contain time and mark its passing as the geological formations they are (Jarman 2023a). They have the capacity to endure social regimes requiring those metaphors in the first place. Stones operate as a controlled absence of humans and non-humans left across time (Edensor 2012). Although in permanent transformation, stones create a long-standing narration of the past that

gives a sense of the changes and continuities of the urban and the pre-urban – a materiality that enables us to recognise ‘the multiple temporalities inscribed in the surfaces of the city’ (Crang 2001; in Edensor 2012, 450). If we agree with Christopher Tilley (2007, 17) that ‘[a]ll materials have their properties which may be described but only some of these materials and their properties are significant to people’, then we can also understand why the emptiness left by stones when they disappear is so dramatic. It is not only a material component that is gone but also their social lives, a part of history inscribed on them that fade away.

The fact that the origins of both the stones from Pumacayán and the site itself are a mystery makes this site even more appealing to a grand narrative of an ancient past. The scarce archaeological information about the site makes it a source of speculation that combines all sorts of tales and narratives. Inquiries about its origins and permanence over time create a palimpsest of stories and explanations about the power of the place, suggesting a protective role that the hill has fulfilled to keep part of the city safe. These stories, sometimes based on mythical figures, sometimes including historical characters, operate simultaneously with narratives that relate to what Steve Woolgar and Geoff Cooper (1999, 439) define as urban legends: ‘Familiar-sounding stories, told and retold, often involving bizarre, horrifying or embarrassing incidents which are said to have happened to “a friend of a friend”’. Tales about rich ladies being stuck in the mud, or wealthy men running naked from the flood, operate as moral narratives on the consequences of violating established boundaries. The destruction of the city’s wealthiest district, together with the histories around it, reminds us of the fragility of the urban world – a supposedly robust arrangement that is conceived to last – as a result of a naïve modernity disrespectful of the forces of nature. ‘The resistance of the *ushmus*, the intervention of the Niño Jesús, the fight between knight and Inca, were no use: Disorder won; destruction, crisis and death prevailed. Things changed: the image of the city, the mentality of the people’, laments Yauri Montero (2014, 217) based on the consequence of the urban defeat of barbaric outbursts.

The endurance of Pumacayán even after extreme events like floods and earthquakes, in this sense, is not an urban victory against an unruled, savage environment but the disarticulation of the urban boundaries and their encroachment upon the site. Pumacayán might be located in what nowadays is considered the modern Huaraz, but its influence surpasses that space. It is a site that transgresses the historical-mythical dichotomy because its own permanence across time requires historical plausibility and implausibility simultaneously – a cohabitation that, as Marisol de la Cadena (2015, 57) reminds us, does not cancel eventfulness. ‘Though radically different from and thus excessive to history, [implausibility] coexist with it and even makes it possible’, the author affirms. In Pumacayán interact both evidence and speculation, the work of archaeologists and scholars that are as speculative as the stories told by citizens and survivors are factually accurate. In

practice, there are no hierarchical distinctions: everything is used to connect the site with ancient times. Far from suppressing them, stories around Pumacayán reinforce the cohabitation of history and myth as two valid forms of creating the past, especially amid the liminal times created by disasters. The same can be said about the urban–rural distinction: Pumacayán is not the expression of one of them but an agonistic synthesis, a *tinku*, that overcomes both. It is a place that repels the barbaric forces of the Andes while allowing the destruction of the city’s most civilised, modern district. The site is the city’s protector but also complicit in the destruction of its civilisatory endeavours.

Whereas some of these stories deal with Pumacayán as an ancient guardian, a true flood mitigation device protecting the place against the lashes of external forces, others show us what occurred in the aftermath of extreme events. This small but robust hill that managed to resist floods and earthquakes would later be turned into an endangered place – one of Huaraz’s last archaeological sites, from which remains are under constant threat of disappearing. It is the victim of unscrupulous individuals invading the site, raising concerns among authorities, scholars and activists calling for its protection. What nature could not destroy would now be endangered by *invasores*: foreigners of unknown origin – initially associated with *campesinos* and *indios* – who are unwilling and incapable of appreciating the real value of the site. Under this scenario, an ever-smaller urban, educated class would do all at hand to avoid this destruction, but without success. The lack of political support, together with wicked intentions behind the site, renders its destruction an almost inevitable outcome.

The perpetuation of these discourses over time shows us an interesting operation of Pumacayán. Despite being a place where the boundaries between rural and urban seem to blur, it is also a site that sustains the construction of historical figures that refuse to disappear. The invading *indio*, that outburst coming from the highlands, would maintain its presence in the city, putting at risk the civilisatory project – just like in other moments of history. The contemporary rurality would be separated from the historical Inca and turned into an undesired figure, evidencing the ‘cancellation of the old Andean order and the emergence of new, unsuspected realities’ (Cornejo Polar 1981; in Aubès 2021, 132). This paradox is the surprising thing about foreign bodies in Huaraz: whereas a constant figure throughout history, the rural is always associated with a dramatic transformation; the loss of ‘a world that will never be again what it was’ together with ‘the insecurity and bewilderment caused by a new reality that is not always understandable’ (Cornejo Polar 1981; in Aubès 2021, 132). It is a figure that would permanently endanger the urban project, threatening its foundations and its possibility to remain in time.

4 Materialising Change: The Reconstruction of Huaraz

Walking in the surroundings of Pumacayán, I met Rogelio, one of the neighbours who, according to Javier and other advocates of the archaeological site, has been invading its foothills in the years since the earthquake. Now in his mid-fifties, he has lived in the lower part of Pumacayán's foothills his entire life, even before that event. He was born there, in the same house where he currently lives. Or almost the same one. Rogelio changed his old one-storey adobe home into a three-floor construction made of *material noble* – a combination of concrete and clay brick walls – *built with anti-seismic techniques*, he exclaims proudly.

Rogelio's father built the original mudbrick house more than 70 years ago, after moving from Mancos and buying that piece of land belonging to a large hacienda on the then-outskirts of the city. He was one of the many outsiders who migrated to Huaraz after the flood to work in the emerging tanning and leather industry. This wave of new residents settled in the area, expanding the city's borders past Pumacayán.

Rogelio decided to change the original house's construction some years ago after one of the main columns supporting the ceiling collapsed at night. 'I went out, desperate and crying, to look for sticks in the street and ask for help because the roof was falling on me'. He became heavily indebted to finance the construction, but thinks it was for the best. The new house has brought him stability and a safe place to live. With the extra space, Rogelio also opened a small shop, where he sells groceries to his neighbours. That is why he is unwilling to leave the place, despite having been threatened with eviction several times by authorities and being informed about a future relocation that has still not happened. 'As a *dueño* [owner], do you think I'll accept being dumped out? I'm going to leave when they pay me a fair price for my house! With that, I'll leave and buy something somewhere else', he exclaims.

My talk with Rogelio reveals some of the issues that a majority of *Huaracinos* have experienced in the last decades. The changes in building materials, threats of relocation and the recognition (or not) of land titles and building rights have been central aspects defining the urban reconfiguration of Huaraz – especially after the 1970 earthquake. The efforts of Juan Velasco Alvarado's government to create a role-model city from the rubble left by the disaster would go on to clash with several obsta-

cles: an old urban society reluctant to transform their old colonial city into a modern project, as well as massive migration that made any attempt to guarantee housing to the whole spectrum of the population almost impossible to achieve. Land seizures would become a common practice, as would threats of eviction. With time, Huaraz would turn into the *cosmopolitan* project that people refer to today: a city comprising diverse migratory groups from different parts of Peru, and based on new forms of construction that appeared throughout the years. The reconfiguration of the urban area would bring conflicts and frustrations, but also new ways of cohabiting in the city.

Furthermore, the transformations experienced in this urban area would also lead to new forms of coping with the extreme events threatening Huaraz's *zona roja* (red zone), an important area of the city exposed to the possibility of a sudden glacial lake outburst flood – as in 1941. Despite the zoning efforts of CRYRZA and other state agencies to prevent the area affected by the landslide from being resettled, the dramatic housing deficit experienced by the city for decades after the earthquake would result in a continual urban expansion across these affected areas. Significant numbers of families arrived seeking housing and jobs, and would seize any plot they could find. Soon, land close to the Quillcay River – the part of Huaraz most exposed to an imminent GLOF from the lakes of the Cordillera Blanca – would experience rapid proliferation of new construction. It would begin with any material that inhabitants could find, which would then lead to mudbricks and more desirable materials like concrete and clay bricks.

Just like stones and adobe, *materiales nobles* would become protagonists of the reassembly of cities like Huaraz, and a pivotal material of the urban ecologies in the Andes. Like stones, concrete and clay bricks would aspire to withstand the test of time, capable of enduring extreme events. The earthly conditions of clay and concrete would place these materials at an interesting midpoint between stone and mudbricks. They might not have the same ancient connotation as the former, but they would be considered more resistant and stable than the latter – at least against extreme events like earthquakes. However, they would also be regarded as non-traditional materials and, thus, despised by groups of the population calling for a re-establishment of the *Huacacina* architectural tradition. The urban transformations inaugurated by the use of this noble materiality would become a constant source of dispute and controversy, but also one of the few strategies capable of ensuring a more stable urban future for a large part of the population.

This chapter analyses the material transformations experienced in Huaraz in the past decades, especially as a consequence of the 1970 earthquake. Building on interviews conducted with elderly *Huacacinos* survivors of the earthquake and the new inhabitants whose families arrived from other areas after the events, the chapter aims to present the temporal configurations that urban changes have produced in cities like Huaraz. By analysing the relationships between neighbours living on the

banks of the Quillcay River, the chapter explores how security can be enacted under highly uncertain conditions. Moving beyond critical (Foucault 2009) and individual-centred (Giddens 1991a) approaches to security, it concludes by reflecting on how the diverse alliances that people create with different materialities can lead to heterogeneous understandings of what it means to be secure. Certain expressions of risk denialism observed in the exposed area are not the result of ignorance or a lack of information. Instead, they are strategies to create alternative forms of security – a stability that relates not only to avoiding the consequences of a possible flood, but also to the possibility of articulating a liveable future in a highly unstable and precarious urban reality.

Strangers in their own city

As we saw in the previous chapter, Huaraz is a city that has experienced radical transformations over the past decades. The destruction left by the events of 1941 and, most notably, 1970 was followed by urbanistic efforts to create a city based on modern standards of planning, justice and equity. But it also led to fierce disputes with survivors over what they considered the loss of their old, idyllic *serrana* city.

The urban transformation that Juan Velasco Alvarado's government wanted to implement after the 1970 earthquake considered both the redistribution of urban land tenures and the redesign of urban areas based on ambitious zoning efforts. Centrally planned *unidades vecinales* (neighbourhood units) came to replace the traditional *barrios* (neighbourhoods), aiming to establish a more efficient division of the city and contest the racist and class-based exclusionary policies prevalent in the traditional Andes (Bode 2001). With the *unidades vecinales* legally established, the governmental agencies CRYRZA and ORDEZA in charge of the reconstruction hoped for a well-organised and controlled expansion of urban settlements in order to avoid further unregulated urban sprawl in areas highly exposed to extreme events (Carey 2010).

But despite the enormous efforts mobilised by regional and national authorities to put the ambitious plan into practice, the reconstruction of cities like Huaraz was difficult and highly contested. In just a few years, the city experienced dramatic changes: the formerly narrow cobblestone streets were replaced by wide, paved avenues to avoid the lethal consequences of building collapses during a future earthquake. Moreover, the massive construction of two-storey concrete houses structured around the *unidades vecinales* brought new airs of urban equity to an Andean world shaped by centuries of racial and cultural discrimination. Yet the new *unidades* did not express the same sense of belonging and identity as the *barrios*, and were rejected by Huaraz's traditional population from the start. As one of the survivors said at the time, “barrio” means people who have the same ideals, the same habits and activi-

ties. “Neighborhood units” are simply blocks of houses’ (Bode 2001, 217–18). On top of that, the project had insufficient capacity to relocate the many people in need, which led to a substantial housing deficit that dragged on for several years.

By the mid-1980s, a considerable part of the population still could not count on stable housing, resulting in a residential shortage that remains difficult to address even today. Fifteen years after the earthquake, the precarious living conditions of many people in Huaraz showed that the government’s reconstruction plan, albeit ambitious and well-intentioned, did not achieve its primary goal of turning Huaraz into a model city of social equity and progress. Associations including the Committee for the Defence of the Interests of the Victims of 1970 (*Comité de Defensa de los Intereses de los Damnificados de 1970*, CODEID), a social organisation founded in response to the slow progress of housing allocation for the victims of the earthquake, made CRYRZA and ORDEZA as the agencies in charge of the reconstruction responsible of this situation, emphasising how their poor performance ‘generated, with a delayed effect, a wave of invasions and violent actions of which consequences are difficult to control and predict’ (CODEID 1985, 1). The association already emphasised at the time the necessity of legal reforms to ensure urgent measures such as ‘property titles clearance, expropriation payments, valuations of adjudicated properties, value reversals, completion of the adjudication process, etcetera’ (CODEID 1985, 2). In other words, a way of accessing housing by fair means was desperately needed.

The massive migration from rural areas to Huaraz after the earthquake led to unregulated urban expansion that the authorities could not control. According to Ricardo Villanueva Ramírez (2021), the city already had an urban area of 340 hectares by 1977, which was twice as large as in 1962 and three times more than in 1948. The urban trend that started during that decade maintained its course: by 2018, the city had an area of 775 hectares – six times bigger than in 1948 – which only strengthened the urban patterns from the previous decades. This massive expansion took place mainly in the northern part of the city, connecting the districts of Huaraz, Independencia and a small part of Jangas further north. The number of inhabitants also increased over the years: today, the city has a population of about 150,000, which is five to six times larger than in 1970. The number of dwellings, moreover, tripled during the same period with more than 48,000 houses to be found in Huaraz nowadays (Branca and Haller 2021).

Until the early 1960s, the area close to Quillcay’s riverbank was mostly uninhabited. According to Villanueva Ramírez (2021), only nine per cent of the 1941 landslide scar showed signs of construction. The massive boulders left by the outburst flood served as a constant reminder to residents about the potentially fatal consequences of living so close to the river. In the first years after the earthquake, the city’s expansion into vulnerable areas seemed to be under control. In 1971, CRYRZA defined a strict zoning restriction following the extent of the 1941 flood. The *unidades vecinales* would relocate survivors and new inhabitants from areas close to the Quillcay river-

banks to Huaraz's historical centre in the southern part of the city, as far as possible from the high-risk areas. But this plan soon unravelled.

Rapid urban expansion took hold wherever it could, even in areas highly exposed to outburst floods. The vertical configuration of Huaraz around a steep geography and several altitudinal floors (Branca and Haller 2021) made it very difficult for new arrivals to find free land in the lower areas close to services and jobs. The scarce access to central land plots, together with the poor implementation of the restrictions defined in CRYRZA's master plan, led to large-scale occupation of the areas swept away by the 1941 landslide. The zoning plan was also contested by the *Huaracinos*, who saw these limitations as an effort by Juan Velasco Alvarado's revolutionary project to eliminate their historical privileges and bury the colonial city for good (Bode 2001; Carey 2010). By the end of the 1970s, one-third of the landslide scar was occupied by new construction. Juan Velasco Alvarado's dream of creating a Peruvian model city from the ashes of the earthquake's destruction ended in jeopardy, undermined by Huaraz's unregulated and explosive urban expansion.

Today, the urban sprawl covers two-thirds of the area affected by the 1941 landslide, a full 12 per cent of Huaraz's urban land use (Villanueva Ramírez 2021). Every day, 15,000 to 20,000 residents plus a constant mass of people transit across that busy area. What began out of necessity for new migratory groups soon turned into a natural and permanent expansion of the city. The exposed area nowadays includes other types of construction, including commerce, services, restaurants and non-residential buildings. Even governmental offices involved in emergency management are located there today. COER's headquarters, where all the first aid equipment for the region is stored, is one such example. A fundamental part of city life takes place in the *zona roja*, and changing that reality would require a massive relocation of thousands of people and commercial buildings – a challenge that no politician or administration at any level is willing to deal with.

The drastic urban changes experienced in Huaraz in the last 50 years brought not only new migratory groups to the city but also new construction materials and techniques. Besides the radical urbanistic changes that Velasco Alvarado aimed to introduce by replacing the massive colonial-style mudbrick houses and their interior patios with more compact, concrete family units, other types of constructions also started to appear. New multi-storey red brick buildings, pejoratively called 'coastal constructions' (*construcciones costeñas*) by elderly *Huaracinos* as a direct reference to the type of buildings commonly found in popular neighbourhoods of coastal cities like Lima, also broke with the architectural tradition of the region. The use of the famous *materiales nobles* – as in Rogelio's case – was, according to many *Huaracinos*, a direct consequence of the arrival of these new inhabitants, especially those coming from the coast. This transformation inaugurated the city's cosmopolitan condition, turning it into a place where, as we saw at the beginning of this book, diverse migratory groups would cohabitate in what survivors and elderly *Huaracinos* considered a

chaotic mishmash of cultural expressions and architectural styles. Visiting the city ten years after the earthquake, Barbara Bode (2001, 448–51) describes the nostalgia that enveloped her when finding that ‘the concrete city finally took shape’; a city where ‘lights burned dimly from lampposts’ and ‘rock-and-roll music on transistors ... bombarded the night. ... Only when looking up to the same breathless Cordillera Blanca did time appear to have stood still’, the author recalls.

These days, *Huaracinos* affirm that the city is facing a cultural crisis, a loss of identity initiated by the urban transformations following the 1970 earthquake. The changes that Barbara Bode sees in the new chaotic, ‘modern’ city (Bode 2001, 447) betray every element that made the old Huaraz so unique, and her views are shared by the local population. Survivors feel like ‘strangers in their own city’ (*extraños en su propia ciudad*)¹, victims of the ‘social disaster’ (Oliver-Smith 1986) that began after the earthquake and permanently transformed their hometown, with no chance of changing it back.

However, these shifts do not just relate to the goal of creating a modern Huaraz. They are also allegedly linked to social and economic stagnation due to the types of settlers arriving in urban areas after the disaster – an ‘excess of rurality’ that, according to old *Huaracinos*, jeopardised the reconstruction of the city. As Javier León León (2016, 48–49) suggests regarding the case of the new Yungay:

Many of the inhabitants of the new city, those who came from the countryside, do not manage, nor do they try, to adapt to city life ... and continue with their *campesino* customs, occupying the public road as part of their property, where they raise their dogs, sheep, pigs, chickens, etcetera. They throw rubbish, deposit their materials and firewood on the pavement, at the door of their houses, without caring about the bad appearance ..., while their children, who are being born in this city, continue with the habits of their parents as if this way of life were natural.

Subaltern groups, especially those coming from rural areas, came to be portrayed by urban ruling groups as a threat to the stability of the city and its cultural legacy, responsible for the current ‘lack of jobs, rising living costs and housing shortages’ (Schreiber Rodríguez and Neyra Rojas 2009). The ‘barbaric outburst’ that Yauri Montero defines as a common driving force in the Callejón de Huaylas was personified – again – under the figure of the rural migrant. Just like during the Atusparia rebellion in 1885, where rioters came down from the mountains to Huaraz ‘like an avalanche’ (Thurner 1997, 71), people from rural areas were once again associated with the forces of nature, a ‘popular outburst’ coming from the countryside to the city (Matos Mar 2004; in Rasmussen 2015, 20).

1 Testimony from a survivor, in the documentary *Huaraz en el Tiempo* (Huaraz Across Time), directed by Juan Manuel Quirós Romero (2018).

Despite the reluctance of the older *Huaracinos* to accept Huaraz's fate, a new city would emerge, bearing with it the traces of its past. The heterogeneous realities that the new urban space articulated would lead to novel practices and materialities for cohabitation, even in zones threatened by the same hazards that destroyed the city in the past. The new inhabitants, forced in many cases to live in areas exposed to outburst floods and under precarious conditions, would go on to become one of the many protagonists defining what Huaraz is today – a cosmopolitan city, the chaotic yet vivid capital of Ancash. They would play a part in the complex society configuring the new Huaraz, even if they do not conform with elder *Huaracinos*' notions defining *proper* inhabitants of the city.

What is it like to be part of the new city under conditions of exclusion, precarity and risk exposure? How do people living in areas exposed to a possible glacial lake outburst flood manage to develop different forms of inhabiting the urban space? And what type of temporalities emerge from those urban projects?

Living with the river

The sound of the rushing water is a constant in the room. One forgets about it occasionally, internalising it, making it part of the environment without questioning it too much. But it returns at some point. It is a gentle – or rather threatening – reminder that the river, the famous Quillcay River, is only a couple of metres away. It's right there, where the room ends. Far from the calm hum of a peaceful water source, Quillcay's is a permanent roar, a continuous huuuusshhh – or perhaps fffhshhh, gggghhhh or jjjjhhhh? – that reverberates deeply across the room. It is low enough to produce a slight vibration but high enough to distinctly sound like something is flowing. Constantly. Non-stop.

The room we are in, a neighbourhood community centre, does not help to reduce the anxiety caused by the noise. It is a 20-square-metre space with no windows, only a heavy metal gate that leads to the street opposite the river. The lack of a window onto the river makes the water's noise even more chilling. It is perceived as a present threat that cannot be seen, only heard. The feeling of disorientation clashes with the purpose of the shared space, where locals come to celebrate social events, including birthdays, religious festivities and funerals. The neighbourhood's *patrono*, El Señor de los Milagros, is located there, visited by the residents who light candles for him. It is a newly built room made of clay bricks, which seeks to unite the community and provide a safe space for gathering and support. Perhaps the lack of windows hopes to achieve precisely that. Separating the room from the river helps to add some distance between it and the threatening presence – at least visually. The sound of the rushing water remains, though.

‘The last time the river rose, it was so strong that the houses were shaking’, Catalina Nuñez states, with a worried but halfway resigned voice. When the river grows and carries more material than usual, you can feel the boulders hitting the concrete wall behind the houses, she explains – a protective barrier built right in front of the river to prevent the water from eroding the soil (see Figure 10). It is the only infrastructure the neighbourhood has these days to cope with the river’s force, and it reduces the chance that the ground beneath their feet will suddenly collapse. A major flood, however, would erase the whole settlement in a matter of seconds.

Catalina is the president of the *junta de vecinos* (neighbourhood committee) of El Señor de los Milagros, a complex of a dozen houses located just over Quillcay’s southern riverbank in the centre of Huaraz. The settlement is the result of a land occupation that took place in October 1988 – the same month as celebrations for the neighbourhood’s namesake, El Señor de los Milagros. The occupation began when Catalina’s relatives arrived along with others at the riverbank in the middle of the night to build their houses; it was the only free plot of land they could find in the city centre. ‘My uncle used to tell me that a lady he bought food from on the bridge always mentioned that business was very bad and she could barely pay for her room. So he tried to bring together people like that, those without money’, Catalina explains.



Figure 10: Señor de los Milagros neighbourhood on the southern bank of the Quillcay River (Usón 2022)

Originally from Pira, a small village about 50 kilometres from Huaraz in the Cordillera Negra, Catalina's family moved to the city in 1970 due to the devastation of the earthquake in their hometown. There was no work in the village, and her family's house was destroyed. Catalina's grandparents came with their children – Catalina's mother, her aunt Manuela and her uncle Damián – looking for work anywhere. Her grandfather found sporadic jobs as a builder, making mudbricks that were later used to rebuild the houses destroyed by the earthquake. During those first years, they lived in small huts that they built with *materiales a mano*. Later, they started renting a small room for the whole family.

After years of living in overcrowded conditions, the adult Damián and his sister Manuela, along with seven other families, decided to occupy the south side of River Quillcay – an unsettled strip of land approximately ten metres wide by 100 metres long. There, they improvised housing with the scarce *materiales a mano* they found: corrugated iron sheets, wooden sticks, tree branches for the roof and several blankets to cover the bare soil. All available materials were used to protect themselves from the cold and the first rains of the season. The takeover, or *invasión* as Catalina defines it, was not the first settlement in the area. In the aftermath of the 1970 earthquake, several families had arrived at the riverbank to construct modest houses, just like Catalina's family did 20 years later. By the time her family arrived, those first settlements had already become a proper neighbourhood of mudbrick houses, and the lands that the new settlers occupied had been used as parking slots and a pigpen. Manuela, Catalina's aunt, remembers how difficult the relationship was initially with those first settlers, who probably felt threatened by the loss of extra space to the new *invasión*. 'On the third day, they poured hot water and uric acid on us. They threw a stick of firewood on my mother's head', she says. But the newly arrived families resisted and brought new members to increase their own numbers. It was a rough beginning for a settlement that, nevertheless, endures to this day.

Forty-seven people now live in El Señor de los Milagros. There used to be more, but some have passed away and their children – now adults – have moved to find greater stability in other cities. Some of the houses are empty and there is pressure from other families to occupy them. Housing is scarce in Huaraz's central areas, and a place like El Señor de los Milagros is one of the few that many families can afford. Since the land they occupy belongs to the state, residents do not pay rent. When a new family moves in, they only have to pay a certain amount to the old tenants based on the construction material of the house. They also pay a small membership fee to the *junta de vecino*, which is used to cover the association's expenses or to build common areas, like the community venue where Catalina, her aunt Manuela and I are gathered. If a neighbour is sick or passes away, the community members must pay an additional amount to help that family with associated expenses. Living in the neighbourhood, in this sense, is not only a good option to save money on rent. It is

also a way of ensuring that, in case of an accident, one can count on the support of a caring community. But all this comes with big risks.

The border of Huaraz's Quillcay River is the part of the city most exposed to floods from the Cordillera Blanca. The river is the confluence of streams originating from three different lakes threatening Huaraz: Palcacocha, Chuchillacocha and Tullpacocha. Any outburst in those lakes could be severe enough to sweep El Señor de los Milagros away. Even smaller events, like increased run-off due to heavy rain, can pose a threat due to the amount of material the river may carry. Piles of boulders and tree branches are commonly spotted along the riverbank after the stream rises, threatening to erode the protective wall reinforcing the soil beneath the houses.

Catalina and all her neighbours are aware of this situation. 'We know it's risky to live by the river, we know. But we have nowhere to go', she argues. They do not have the means to rent a house or buy a property in another part of the city. Although the Municipality has mentioned several times the possibility of relocating them to a safer area, there has been no serious initiative so far. 'Since I can remember, I have always heard them talk about relocation, but to this day it has not happened. Not even the mayor can say that this has to be done, nothing', she explains. They have also received eviction threats several times, but she and the neighbours know that the Municipality cannot throw them out without offering them alternative housing. 'They have always wanted to get us out, but ... we are recognised. We have a kind of recognition ... an identity document that recognises us. That's what [the previous presidents] have left me. And thanks to that, we defend ourselves whenever they come'. The document Catalina refers to is the record they received when her uncle and other neighbours registered the settlement as a neighbourhood organisation one year after the takeover. It is their 'birth certificate', Manuela mentions, laughing – the only guarantee they have of not being kicked out until they receive a definitive housing solution somewhere else. However, the fear of being evicted is always present.

Despite the Municipality's reluctance to offer tangible alternatives, the neighbours of El Señor de los Milagros have received some support from the state. A few years after they settled on the riverbank, they convinced the central government to install the retaining wall protecting the soil from the river stream. According to Manuela,

It was during Fujimori, that time. They came and said, well, you have been lucky; the wall is going to be from here where you live to the last house, that's all, that's it. A blessing from God came for this wall to be built. Concrete, iron, workers came, engineers came, tractors came, everything. And thank God they put them there. Otherwise, what would have happened to us? Because every time it rained, the more the river came. It washed away the trees, the stones, everything.



Figure 11: Inside El Señor de la Soledad neighbourhood
(Usón 2022)

There was no public policy of reinforcing the riverbank at the time, so the wall came to be seen as ‘a blessing from God’, an extra hand the government lent to El Señor de los Milagros and its neighbours. This was a common strategy of Alberto Fujimori’s dictatorship during those years – an authoritarian, neoliberal regime that provided direct support to local residents from a central level, seeking to foster the idea of a government *with the feet on the ground* (Rasmussen 2017). It was a territorial approach that aimed to erode the legitimacy of local governments and gather the state’s power while reinforcing a clientelist condition between the state and the population (Tanaka and Trivelli 2002; Remy 2005). To make anything happen, a connection with central governmental officers was necessary.

By reinforcing the exact boundaries (no more or less) of the settlement at the time, the government prevented further occupations from popping up along the river. However, it did not restrict residents from expanding their current construc-

tion closer to the river's edge. As Catalina put it, 'once they'd put up [the wall], many people started building their houses. It was as if they'd said, "You can [build] here"'. After the wall was installed, a whole new row of houses was built between the river and the initial constructions (see Figure 11). This new area was possible because of the stability offered by the concrete barrier. The wall, in this sense, gave residents two forms of security: it expanded the piece of land available for housing by preventing the water from eroding the riverbank, and it gave the impression that the government was allowing them to stay there – a sort of informal regularisation that residents used to their benefit. The wall, combined with the title recognising their neighbouring association, were the small signs the neighbours counted on to feel that their settlement was not entirely illegal, after all.

With time, other things would give residents the feeling that theirs was a stable, although temporal, residential alternative. Perhaps one of the most important events was having access to basic services like water and energy. '[At the beginning] we had no electricity, no water, we drank from the river and used candles. And they didn't want to give us [utilities] either. ... A good time must have passed, about four, five years or more, just recently', explains Manuela. Just like the construction of the wall, residents like Catalina and Manuela see access to basic services as a sort of favour the companies did for them. As Catalina puts it, the water company CEDAPAL 'helped them out' (*nos ayudó*), even though it initially refused because the residents lacked property deeds. The new network gave every household access to clean water 24 hours a day. It is, however, far from a complete solution. The settlement currently lacks sewage connections for every house. Only two formal bathrooms have been installed in the front. The rest of the constructions have improvised bathrooms connected to pipes leading to the river. A similar situation occurs with electricity. The 19 families living in the neighbourhood are 'hung up' (*colgadas*) to one single electricity meter, as Figure 11 shows. The multiple cable connections distributed along the houses often overload the grid. It is quite common for the lights to go out in the evening when energy consumption increases. It is also a very dangerous solution that causes overheating and could therefore quickly start a fire. But for the residents, this is not a final answer either. 'It's just for a time; it's not definitive', explains Manuela.

Waiting – and building in the meantime

Although they constantly portray their situation as a temporary solution, something 'not definitive', as Manuela puts it, people at El Señor de los Milagros have turned their neighbourhood into something more than a transitory settlement. They have lived there for more than three decades already; many residents were born there.

Despite the possibility of being relocated at any moment, neighbours of El Señor de los Milagros have done everything they can to create a more stable living condition.

One of the most obvious signs of this, which stands in stark contrast to the provisional condition of the occupation, is their investment in better building materials. The improvised huts of *materiales a mano* built during the early days of the *invasión* were soon replaced by modest one-storey mudbrick houses. With time, and as long as their economic situation allowed it, some families started replacing the old mudbrick walls with *material noble*: a combination of red clay bricks and concrete.

The advantages of *material noble* are shared among neighbours in the area. Despite being worse insulators against the cold, brick walls are considerably slimmer than mudbricks, thereby encroaching less on the interior space. Besides, adobe constructions are seen as rural buildings, *rústicos* (rustic), whereas houses of red bricks are considered to have a higher status. When asked why she changed from adobe to clay bricks, Bianca, a neighbour from El Señor de los Milagros, tells me, ‘mainly to make it more presentable and to make it look like a better place’. Most of the neighbours also mention the security that bricks provide compared to adobe. ‘We wanted to make it a bit stronger, so it could last over time’, remarks Jeyson, another neighbour from a nearby area, whose family changed to clay bricks. Despite the fact that almost none of the houses built with this material have seismic retrofitting like reinforced columns or cross-braces, people believe that a house made of clay bricks is more likely to withstand seismic tremors.

But perhaps the main argument for building with *material noble* is the capacity to expand the house vertically. Unlike adobe, combining clay bricks and concrete allows buildings to have several storeys. Some *Huaracino* homes are even five storeys high. The motive for this vertical expansion is mostly family. Many householders see the construction of an additional storey as the capacity to offer their children a place to live. This is what Bianca tells me when asked about this topic:

- And do you intend to continue building?
- Of course, later.
- So, you still have the columns [of the house] open.
- yes, still, to keep on increasing (*para seguir aumentando*).
- And why would you like to have more floors?
- So that my children, all four if possible, can live there in the future. So that the family can stay together.

‘Leaving the columns open’ (*dejar las columnas abiertas* or *al aire*) is a common construction strategy in the Andes and almost every popular neighbourhood in Peru. It means leaving the roof of the house unfinished and the structural columns, with the steel rebars sticking out of the concrete, ready to build the next floor once the family has saved enough money. This building strategy gives the impression that

houses in cities like Huaraz are never fully finished, always under construction – one of the reasons why upper-middle-class *Huaracinos* consider the city an urbanistic mess. Although a common explanation for this phenomenon is related to housing taxes, which allegedly increase when a house is ‘finished’, the reasons for keeping the columns visible are due to more than just fiscal relief. Only when there is enough space to provide housing for all the children, or when families realise that they do not need more space as their children begin to move out – and then only if they have the money – do they close the columns and build a permanent roof. In most cases, however, the upper floor is left as an open space covered by provisional polycarbonate sheets, providing sufficient light and protection against the rain to build storage areas, laundry rooms, kitchens or even a space to keep dogs or breed birds, rabbits or guinea pigs. It is a construction strategy that connects to the rural origins of many Huaracino families by providing an outdoor space, compensating for the lack of gardens or internal patios in urban housing.

According to Elżbieta Jodłowska and Mirosław Mąka (2019), whereas clay bricks can be found in nearly every Peruvian city, the use of this material in Huaraz is exceptional. They relate its ubiquity to a mimetic strategy that aims to emulate the façades of wealthier houses and structures shown in the media. It is, however, a new form of mimesis, one that seeks to deal with what the authors and people in Huaraz in general define as the cosmopolitan model inaugurated after the earthquake. As the authors remark, ‘the old Huaraz, *criolla* and *mestiza*, was a white city, built of adobe blocks plastered in white. What identity, then, does the brick city of Huaraz represent? It undoubtedly represents the heterogeneous group of inhabitants who arrived from Lima and other Peruvian cities and foreigners with no roots in this city’ (Jodłowska and Mąka 2019, 653). The same status that the material provides, the authors continue, leads inhabitants to leave the red brick uncovered, without plastering or painting it, to show the prestige of moving to a more stable materiality – ‘the basic element copied from the cosmopolitan model’. Replacing the rustic tradition of the adobe with the industrial origin of the brick means, in a way, leaving the earthly state of the rural and the indigenous (Orlove 1998). It is a form of overcoming a rurality inherited from parents and grandparents – while keeping some of its elements, like the open areas on the roof. ‘It does not matter if the construction work is not undertaken again for years – or ever. What matters is to expose this sign of dynamic openness for the future of its owner’ (Jodłowska and Mąka 2019, 651), the authors suggest. Leaving the columns open, in this sense, gives a clear message to neighbours and family, affirming the intention to keep building. A roof would only close that option and fix the status of the house to the current number of storeys.

Despite the clear preference of urban inhabitants for clay bricks over adobe, not everyone in El Señor de los Milagros is considering switching materials. As Manuela puts it, ‘I don’t know if we will be here for good, if we will stay, or if some government will come in, if some mayor will take us out. I don’t know, that’s the truth. That’s

why some people don't build [with *material noble*]. Perhaps they also say it's badly spent (*mal gastado*). She and Catalina would like to keep expanding their houses and have enough space for their children and their families, but they are also concerned about the consequences of such a decision. Building with *material noble* is a significant cost that families only consider if they think they can afford it – when they have the money or, alternatively, when they are confident that they will be able to pay off a loan from a relative or bank in the long term. Building a new house in a neighbourhood that can disappear at any minute – whether through a government eviction or flooding – is a risky choice that not everyone is willing to make.

The materialities of El Señor de los Milagros show that different temporal rhythms cohabit there. On the one hand, neighbours know that every intervention, whether provided by the electric and sanitary companies or implemented themselves in the houses they are inhabiting, are temporary solutions for a settlement that might soon be removed – even though they have been there for more than 30 years. Thus, neighbours of this settlement live in an ongoing temporary state: their neighbourhood, although partially recognised, should not be inhabited due to its risks. On the other hand, this form of impermanence has been a constant part of residents' lives. Catalina has spent most of her life there after her family decided to take over the site when she was aged eight. Others were born there, and living in that settlement is the only reality they know. Even knowing they might need to leave at any minute, they have created a life there, next to the river.

This form of longstanding provisional life can be related to the notion of liminality that studies on migration – and especially about the lives of those in refugee camps and of asylum seekers – have promoted (Andrews and Roberts 2012; Thomassen 2016; O'Reilly 2018; Grimaldi 2019). Studies in this regard define the liminal condition as a form of in-betweenness that marks a before-and-after, a betwixt and between (Turner 1967), a transitional state hoping to be trespassed and overcome. The fundamental operation of the liminal is the transit itself rather than what is built and created along the way.

Yet, what the provisional condition of residents in El Señor de los Milagros shows is less about a transition to something else than about a form of obduracy created during that temporary stage. People living in El Señor de los Milagros are not transitioning through a sort of threshold; they are creating a temporal existence on their own terms, in the margins. Living at the edge of the river is not a movement to somewhere better – it never was. People moving to that part of the city were aware of the dangers that the location could bring. The decision, however, was the result of necessity and a lack of other housing possibilities. Remaining there is the fruit of despair, mixed with a shred of hope that relocation to a better place, after 30 years, will happen.

Similar to the suspended time *Yungainos* had to live through after the earthquake and avalanche completely destroyed their hometown, the lives of people in El Señor

de los Milagros are structured around expectation. Life for people living at the margin of the river, however, is not suspended; it has kept flowing as usual. They have not needed to overcome an exceptional situation – their disaster lies in the future. This disposition towards the future as something that needs to be waited for – what Javier Auyero (2012) defines as the politics of waiting – deeply shapes the lives in the peripheries. ‘Waiting appears to be “in the order of things” for the poor. It is something normal, expected and inevitable. They are disposed to recognise that they have to wait and thus to submit to it, because that is precisely what they are regularly exposed to’, the author affirms (Auyero 2012, 14–15). To have access to a safe dwelling in a country where housing politics are almost non-existent is a permanent exercise of stasis, expectation, disappointment and frustration. To wait is to hope for a better future for their children, a place they can inherit when the parents are gone. But it is also to build a life in the meantime; the construction of more stable houses that, due to the uncertainties of the future, may disappear at any moment.

Displacing the risk

Although the current scenario is not very promising for the families of El Señor de los Milagros, Catalina is not a fatalist. Instead of losing herself in anguish that a flood could destroy her and her neighbours’ homes at any moment, she has actively worked to make living with the risk of a flood as bearable as possible.

As the president of her *junta de vecino*, Catalina has tried to prepare her neighbours as much as possible in case a flood alarm occurs. She affirms that nobody from the Municipality came to offer them talks or training about what to do in case of flooding. However, she has managed to contact people from other state agencies to organise educational events. These activities have comprised two workshops – one where they were told what to do and where to go in the case of a GLOF, and a second one in November 2021 where they were shown a 3D computational model of Palcacocha, Huaraz’s most famous, and most threatening, lake. As a neighbourhood, they have also carried out evacuation drills, practising with older adults to gauge the pace at which they would need to evacuate so that everyone could reach the safe zone before an event impacts the city. ‘We did it as if it were for real. We even did it with wounded people, with everything’, she remarks excitedly and proudly.

Catalina’s commitment to emergency preparedness and response is inspiring. She wants to keep organising talks and workshops – she even asks me if I can give her the contact information of the authorities I have talked with, so she can keep requesting support. She is also aware of the risks of being in charge of evacuating the neighbourhood, but she takes it as a real engagement to her community. ‘That’s how it is when you are part of something; that’s what you have to do. I have to support the neighbours’. It is a model stance not only due to her strong personal commitment

but also in the face of high levels of unpreparedness and risk denialism observed in the areas surrounding El Señor de los Milagros.

While interviewing people living in areas at risk of flooding in Huaraz, I talked with a couple sitting on Gamarra Avenue – one of Huaraz’s main streets, near El Señor de los Milagros and very close to the river. The man, in his sixties, confidently told me that they were not the proper people to talk to about flood risks because they lived in another area. When I asked where exactly, he answered that it was 50 metres south of where we were currently sitting, on the same large avenue. He added that the location of his house was a safe area because it was an *urbanización* (a legally recognised neighbourhood) and not an *invasión*. However, all current flood models set the limits of a possible event much farther south than his residence. Furthermore, his house is located within the area destroyed by the 1941 flood. Despite these facts, the legal recognition of his neighbourhood gave him sufficient confidence to think that his part of the city was safe from any danger.

After that encounter, I realised that believing in this form of security is far from an isolated case. For many people, living in a legally constituted area – an *urbanización* – guarantees security that their houses will not be impacted by a disaster such as a flood. What *urbanización* entails, however, varies considerably depending on with whom one speaks. For some people, *urbanización* indeed refers to a legally constituted neighbourhood with a clear recognition of land titles and construction certificates. However, for other people, *urbanización* implies regularised access to utilities like water, sanitation and electricity. The same occurs with other types of infrastructure, such as paved streets and the creation of riverside parks. Bianca, the neighbour from El Señor de los Milagros, believes that the other side of the Quillcay River – the north part – is less dangerous ‘because the houses are not attached to the edge. That is why there is a park. So, the relocation would be only for those houses next to the river’. Just like basic services, elements like parks give citizens the feeling that the territory is more inhabitable and, therefore, more stable and secure. The place is provided with a sense of permanence that intersects with discourses of durability while reducing the feeling of instability. The urban becomes permanent and overcomes a temporary condition, like the insecurity that *invasiones* can produce.

Besides legality and the presence of urban infrastructure, the exact location of the houses also plays a fundamental role in defining the levels of security people feel. In front of El Señor de los Milagros, on the other side of the street parallel to the river, is the Malecón Sur neighbourhood. Just like Manuela and Catalina’s parents, many people living there arrived in the neighbourhood as children when their parents moved from the countryside to Huaraz looking for better opportunities. People have been living in the same houses where they grew up, sharing it with their siblings and building additional storeys to accommodate new family members. However, unlike in El Señor de los Milagros, the neighbours there tend to present a fairly ambiguous relationship with the flood risk. Although they are aware that their area

is within the *zona roja*, they are confident that a flood would not impact their houses. During an informal conversation, Roberto, one of the neighbours living in front of El Señor de los Milagros, tells me that his house is not a problem because it is 30 metres from the riverbank, unlike the houses located directly on the edge. He sees El Señor de los Milagros as the truly threatened area, the settlement that would be washed away if a flood occurred. But he feels that his house is fine; that the first row of houses at the river's edge protects it. Thus, relocation is completely out of the question for him. Nicanor, a man in his sixties who has lived in the neighbourhood for several decades, feels the same. He is confident that the approximately 50 metres separating his house from the river, and the two rows of houses in between, would impede any flood from reaching his home. He feels protected by those structures, even though his house is located within the area impacted in 1941. For him, relocation is similarly unthinkable.

This form of displacing the flood risks in the area has been a central difficulty in creating an effective response culture amid flooding. The same residents know they are not sufficiently prepared, should an event occur. Américo, a neighbour from El Malecón Sur, is more aware of the risks that living in that area entails, but he considers himself highly unprepared to deal with an emergency – something that he relates to a generalised lack of interest among the population. 'Sometimes authorities do an earthquake and flood drill, and nobody goes out. Everyone is happy in their homes; people are like, sure, whatever. But when it happens, that's when you see how you will react, what you should do', he affirms. The residents do not even know what to expect from the government in such a situation – an uncertainty that is combined with strong feelings of mistrust toward authorities. In the words of Elena, another neighbour from El Malecón Sur, 'there is no help, no help at all from the government. They put everything in their pockets and forget about the rest'.

It is difficult to estimate 'how well prepared' people living close to the Quillcay River in Huaraz truly are. Although several programmes and initiatives in Huaraz have tried to develop a preparedness culture among the population, as we will see in the following chapters, there are no quantitative studies of risk perception and preparedness for the area, no numbers about which neighbourhoods are more and less aware of the threat or how to react amidst an emergency. It is also very difficult to make such an estimation, because the area close to the river is one of the busiest commercial zones in the city – markets, shops and offices are disseminated throughout the *zona roja*. Consequently, the daily flows of people coming from other places in the city are very high, making any assessment of preparedness very challenging.

Many residents say that the Municipality has spoken directly with them to explain what to do in an emergency. Some say they have participated in workshops and talks, while others argue that they have received visual information such as maps or flyers. Despite that information, there are substantial differences in how people define secure areas. Some are based on the limits prescribed by a municipal flood haz-

ard map. Others, as we saw, take into consideration the legality of the sites on which they live. Access to water or energy defines the security of those zones, as does having buildings between their houses and the river. Urban materials, in this sense, can produce diverse forms of security that interact with each other.

People living directly at or close to the riverbank, especially those who lack property deeds or construction certificates, tell me that they are completely willing to be relocated. Many would do it privately, but lack the resources to buy a new house or plot of land. Some are already saving money, planning to leave the area as soon as possible. Most would like to remain in Huaraz and close to the city centre, in order to still have access to jobs and services. But they are also willing to move to other areas on the city's outskirts if the government offers that option. They know, really and truly, how dangerous it is to live where they do. But they do not have the means to change that reality.

Just as in contexts of extreme environmental pollution (Auyero and Swistun 2009), the fear of being evicted without a tangible relocation solution can be even more alarming than the fact of living with an existential threat. In this sense, visions of safety and stability in precarious living scenarios are necessarily entangled with the insecurities that this precarity brings. In this context, any form of stability is welcome, even when people like Catalina and Manuela know it is just 'temporary'. They want a secure future, but security means more than protection against floods. It means a legally recognised place they can leave to their children. 'The only thing we want here is for them to give us security. To be told to stay or to go, but with a title, so that as a mother, I can think for my children. Because one is not eternal, and [I want to] leave something for them', declares María Jesús. They want to live in a safe area to create a stable future in spite of the precarity they face. Their concern is understandable: How to make life projects supported by precarious materialities robust enough to endure time?

Materialising security

Throughout this chapter, we have seen how the project to create model cities from the debris of the earthquake, pushed forward by the revolutionary government of Juan Velasco Alvarado, was soon put at stake. The reluctance of original *Huaracinos* to accept the urban transformations promoted by agencies like CRYRZA and ORDEZA led to constant friction between the government and citizens, eroding any support that officials could lend in cities like Huaraz. Furthermore, the explosive migration experienced in urban areas as a consequence of the earthquake in rural zones hindered the possibility of allocating housing to all the new urban residents. Looking for housing solutions, new inhabitants slowly occupied areas close to the Quillcay River that are still zoned as unsuitable for dwelling. Huaraz experienced consistent urban

expansion throughout the 1941 landslide scar, shattering the dream of creating a city based on modern urbanistic standards along the way.

Construction materials played a fundamental role in this process of urban transformation. Elements like concrete and clay bricks led to new forms of encounters, *tinkus* that perpetuated the figurations taking part in the arrangement of cities like Huaraz. Fearing that the new architectural styles would forever erase the possibility of getting their old city back, the urban *Huaracina* elite energetically rejected the new urban materialities brought by the reconstruction: the government's solution of compact concrete houses, and the *materiales nobles*, which a large part of the population used as an alternative. Materials like concrete and clay bricks continue to be sources of dispute and conflict, but they are also one of the few affordable solutions the population can count on to create a semblance of security in a highly precarious and uncertain environment.

The case of Huaraz is an interesting example of security production that contrasts with classical definitions of the term in the social sciences: the idea of security as a governmental practice of control, and the understanding of it as an ontological, or individual, impulse. According to Michel Foucault (2009), security is one governmental operation that, unlike sovereignty and its orientation towards the territory, or discipline and its orientation towards individual bodies, is oriented towards the population as a whole. The population needs to be secured – secured against itself and internal enemies, but also against external threats like foreign invaders, earthquakes or floods. Producing security, according to Foucault, requires diverse forms of control: practices that aim to produce secured spaces, treat the aleatory condition of uncontrollable events and create standards of accepted normalisation. All these practices are strategies the governmental apparatus applies to deal with the multiplicity that population entails. They are forms of shaping the very notion of population – a heterogenous social group that, despite its differences, can be grouped and quantified *from above* by statistic-driven experts (Desrosières 2002). 'As an artifact of a particular way of counting', Michelle Murphy (2018, 103) suggests, population 'bundles up bodies into a single tally, creating distance and abstraction for a managerial gaze that is then poised to ask, "What should be done about *them*?"' It is a formulation that allows the anonymisation of lives into deletable data points'. Security, under these terms, is a form of dealing with the management of the massive, anonymous construction that population entails, putting into concrete practices the compelling impulse to define the standards required to keep society as a safe – or rather salvable – arrangement.

In its ontological sense, security presents a quite different understanding. According to Antony Giddens (1991a; 1991b), ontological security is an individual, inherently psychological, response to the incommensurability that reality involves. 'Ontological security has to do with "being" or, in the terms of phenomenology, "being-in-the-world"'. But it is an emotional, rather than a cognitive, phenomenon, and it is

rooted in the unconscious', states the author (Giddens 1991b, 92). The confidence that ontological security provides is the capacity to feel a continuous self-identity when dealing with the constancy of socio-material environments and the actions taking place in those surroundings. Security, in this sense, is what allows individuals to rely on persons and things, creating a direct relation with the notion of trust. To feel secure, we need to trust in the other. Risk denialism, under these terms, is not a form of ignorance but a strategy to cope with environments without feeling exposed and lost amid the ambivalences and uncertainties that the world may present.

What the case of Huaraz – and its heterogeneous practices and materialities to create safe and secure environments – shows is that there is always a combination of both impulses – ontological and societal – when it comes to security. Security is more than governmental attempts at control and normalisation. It is also more than individual attitudes driven by emotional responses to the environment. Security entails diagrammatic arrangements, normative approaches delimitating what is secure – like the zoning restrictions imposed by CRYRZA to avoid urban expansion into the 1941 landslide scar. But it also implies machinic assemblages, the socio-material relations that people forge with their direct environments – connection to basic services like water and electricity, together with the alleged protection that houses closer to the river may provide to buildings located behind them. The relationship between residents and materials such as concrete and bricks creates alliances to cope with precarious uncertainty, sometimes mediated by the state, sometimes emerging organically. There are evident tensions between what is enounced as secure and how security is actually enacted. The flood hazard zones defined by CRYRZA were soon crowded with families constructing new places to live. In many cases, people living in the *zona roja* hold contradictory positions about the security of living in those areas. But rather than ignorant or uninformed behaviour, what these tensions between enunciated versus materialised security reveal are the possible strategies employed to cope with the dramatic consequences that life in a highly threatening environment could bring.

Similar to the findings of other studies on risk misinformation and misunderstandings – whether referring to pollution and technological disasters (Petryna 2002; Vaughan 2004; Auyero and Swistun 2009) or to climate change (Norgaard 2011) – denying risk is neither an irrational phenomenon, nor an individual one. It does not necessarily have to do with a lack of information or preparedness. As Kari Marie Norgaard (2011) suggests, denial is mixed with worried emotions of security loss and helplessness, feelings that can lead to articulating security through other means. Those feelings connect with practices and materialities aiming to control those emotions. Finding stability by building four-storey houses to show how prepared a family is to face the future is a clear example of this. The security that materials like clay bricks provide might not be enough to resist the onslaughts of a flood, but it can certainly create a stable future – at least in the short term.

Similarly, having property titles or construction certificates does not necessarily make a house more secure than others against a flood. However, it creates a clear distinction among residents: their situation is stable, unlike an *invasion* of the river's edge.

The cases highlighted in this chapter show that several temporal arrangements coexist in the practices and materialities aiming to produce a sense of security in Huaraz. As neighbours from El Señor de los Milagros show, looking for security implies breaking up with the provisional status that characterises their settlement. Security requires surfing the unstable conditions that temporariness produces. By fortifying the soil separating their houses from the riverbank, changing the materialities of their homes, or having access to basic services, residents living at the river's edge can build a feeling of stability that the location of their homes cannot ensure. The provisional condition of their houses is briefly paused by the material solidity that elements like concrete and clay bricks provide. Those elements do not reduce the risk of a major flood coming from one of the three lakes into Huaraz, but at least they provide residents with legal recognition that can be used to minimally secure their living.

These precarious temporalities of waiting and stability, however, often clash with the temporal constructions that accompany the visions of the traditional and modern city. The idea of the modern Huaraz, a city designed to cope with the danger inherent to the Andean environment, strongly contrasts with the actual city, the cosmopolitan one, which is highly exposed to a possible outburst flood from one of the three lakes threatening it. But the materials used in neighbourhoods like El Señor de los Milagros also strongly clash with another city, the old colonial one destroyed by the earthquake, the one that lives in the memory of survivors. These three cities – the old, the modern and the cosmopolitan – are three visions in constant tension, fed by the memories of an urban elite incapable of letting their old city go, and also the improvised forms of inhabiting an urban space that new *Huaracinos* had to develop.

III The Lakes, Control and Resistance

5 Mistrusting the Alarm

Rage against the machine

It was April 2016; the rainy season was coming to an end in the Callejón de Huaylas, except for a period of occasional showers. Since the expected onset of precipitation in November, rain had been almost non-existent at a time of year when downpours could usually leave one entirely drenched in a matter of seconds. The situation was troubling highland farmers that make their living from seasonal crops, who were facing meagre harvests from the *campaña grande* (main sowing campaign)¹ as a consequence of dry soils. Authorities were equally worried at this point; the lack of rain increases people's vulnerability in the highlands exponentially, making them more dependent on state support and more prone to draw on last-ditch measures to sidestep the dramatic consequences of drought. *Campesinos* were starting to become desperate, and things were getting tense.

During one of those dry days at the end of the month, people in Carhuaz raised awareness about an attack against an early warning system's monitoring station. Voices were alerting others about a group of vandals that had stolen the video cameras from the devices installed next to Lake 513. Although some people first related the attack to an ordinary robbery (Fraser 2017), rumours later affirmed that people in the Cordillera Blanca were associating those video cameras with the drought; a sort of foreign machine that was blocking the expected rainfall. Whereas the attack did not cause major damage to the entire system, it showed for the first time that the early warning system was a real source of conflict in the area.

As no rain fell during the new harvest season, the troubles continued. In late November 2016, *comuneros* (members of *campesino* communities) gathered in Shonquil Pampa, a meadow located in the foothills of Hualcán Mountain, motivated by the government's intent to repair the mistrusted early warning system. Rumours indicated that the angry mass of people had been *chacchando* (chewing coca leaves)

1 In the Callejón de Huaylas, sowing season is divided in two main periods: a main campaign in October (in time for the wet season), from which products are harvested in the following months, and a *campaña chica* (small campaign) in April – at the beginning of the dry season – sustained fundamentally by irrigation infrastructure.

and drinking in the meadow since dawn, following intense hours of discussion and deliberation during the preceding days. Armed with sticks and tools, attendees dismantled and removed all the system's stations, including the monitoring station located in Shonquil Pampa and the repeater station downstream. It was a clear message to the local and regional authorities, who came to the place this time and witnessed the congregation – only to later be expelled from the site. But mostly, it was a very effective mitigation measure. Some days after the attack, it started to rain again, just in time for the crop season. Order was restored, and farmers were pleased.

Because of its consequences, this incident was used to revive old divisions that have long shaped the Andes. It was the struggle of an urban world in the lowlands seeking progress and modernisation that has been constantly threatened by a barbaric and uneducated population from the highlands. The destruction of the SAT in Lake 513 was considered a huge defeat for science and its efforts to overcome what are considered superstitious understandings of the environment. But at the same time, it was the resistance of highland communities seeking to preserve their traditional forms of living against what they perceive as foreign forces threatening their modes of existence. Lowlanders were angry and scared, arguing that the destruction of the SAT, driven by ignorance, was a direct threat to their lives, should an outburst flood reach Carhuaz. Highlanders, on the other side, were angry and felt their sovereignty was threatened by machines that, driven by greed and private interests, were putting their environment at risk. A new contentious encounter was taking place, an onto-epistemic fight between two different cosmovisions – or the figurations of them, at least.

This chapter explores the tensions and friction produced by the installation of the early warning system at Lake 513, and offers a general account of flood risk management in Ancash and the reasons for installing early warning systems in Huaraz and Carhuaz to monitor threatening mountain lakes. Rather than a deep exploration of the politics of scientific knowledge production in the Cordillera Blanca, a topic brilliantly explored by Mark Carey (2010), this chapter analyses the chronopolitics (Wallis 1970), the politics of time production, around efforts to create a safe future for the Andean cities of Ancash. Throughout this chapter, we will see how efforts to develop controlled temporalities in the mountain lakes of the Cordillera Blanca have emerged mainly from the catastrophic consequences of different events throughout the region's history. It is the story of how a national project, supported by an emergent field of glaciology and driven by a techno-scientific ethos of modernisation and development, 'expanded its control over one of the last Andean frontiers, the glaciated peaks' (Carey 2010, 156).

Yet, the chapter also offers an exploration of the contestations that those interventions have elicited. By further exploring conflicting accounts of the sabotage, this chapter reflects on the multiplicity of actors and elements involved in the explana-

tions of the attacks on the SAT. We will see how the highland's own otherness – the *gringos* and mining projects – was also fundamental to understanding the mistrust of those foreign machines. Just like *pishtacos* and *Chilenos*, other historical figures related to problematic otherness in the highlands that we will explore in this chapter, *gringos* would be a fundamental figure embodying centuries of colonial violence and extractivist relations with the lands.

Controlling time in the mountains

'Creation of an early warning service for flood risk in the population of the Quillcay sub-basin' reads a banner located at the beginning of the entrance towards Palcacocha, announcing what one can expect to find at the end of that dirt road. Next to it, a fence secured with a steel lock. The fence, Roberto explains to me, was installed by the *Comunidad Campesina* Tupac Amaru II as a way of protecting their common lands covering all the Cojup Valley from that point until reaching Palcacocha, which is around 11 kilometres away in the Cordillera Blanca. It is a measure that has not been without controversy. While the *comunidad* has owned those lands for over 100 years, as they personally explained to me during one interview, the foothills of the Cordillera Blanca above 4,000 metres elevation are now under the control of the Huascarán National Park, the state agency responsible for ensuring the protection of the area and free access for visitors to the park. The fence, Roberto affirms, is a strategy by the *comuneros* to claim sovereignty of those lands *vis-à-vis* the National Park's efforts to safeguard the mountain ecosystem. Moreover, it has been a significant impediment for those installing the early warning system close to the lake, who on several occasions have faced the *comuneros* restricting their free transit along the road.

*Inge*² Roberto and I spoke a few days previously to arrange a visit to Lake Palcacocha and see some of the engineering projects he has been conducting in the area over the past years. A member of the Natural Resources Management Office of Ancash's Regional Government (GORE), Roberto supervises the mitigation works to prepare the Quillcay Basin against an outburst flood that could impact Huaraz as it did in 1941. He knows better than anybody the process of flood risk management in Huaraz and the surroundings – all the technical details, but also all the struggles and conflicts.

The mitigation work in Palcacocha, Roberto explains to me, seeks to replace the drainage system existing at the time dating from the 1970s. Besides two walls to retain the lake water, authorities at the time dug an evacuation tunnel large enough to

2 *Inge* is a common term used to refer to engineers working in public agencies in Peru. It comes from *ingeniero* (engineer) and denotes clear recognition of status.

drain a reasonable amount of water from the lake. However, the rapid glacial retreat during recent decades increased the lake volume 44 times, from 500 cubic metres to 17 million, a water body now large enough to produce an event several times bigger than in 1941. Under this new scenario, the GORE aims to install temporary draining syphons to later expand the evacuation tunnel and ensure appropriate draining capacity of the lake.

Despite the urgency of the project, the work has been progressing slowly – much too slowly – something that Roberto attributes to the Regional Government's poor planning. As the supervising site engineer, Roberto had to start the work from scratch. He found hundreds of drainage tubes left by the Regional Government at the end of the public road – the same location as the *comunidad* fence – waiting to be transported over the valley to the lake and installed in order to reduce the water level. 'Before this road existed, there was only a bridle path, a very narrow road', he clarifies, so the transportation of the pipes to the lake had to be done by hand. The dirt road came afterwards, in 2017, to facilitate the monitoring work conducted in the lake. But even with that new road, only the syphons have been installed. The expansion of the draining tunnel is still pending, and with no signs of beginning in the short term.

Roberto affirms that the relationship with the *Comunidad* Tupac Amaru II has not been easy either. Since the beginning, they had full control over whom to hire for the work of carrying the pipes. That was the initial agreement in line with their position as historical owners of those lands. Yet, whereas initially only members of the community were involved in the work, over time they started hiring external workers from nearby villages like Uncush or Llupa, as they did not have enough people to carry out their duties. '[*Comuneros*] didn't want to work because most of them are in the city. They have their businesses there or they have other jobs. There are only a few *comuneros* that work on the land, not so many', Roberto affirms. However, with time, not even the replacement *comuneros* hired wanted to do the job. According to Roberto, they were asking for improved working conditions, like eight-hour shifts and free weekends – things that, according to him, could not be provided due to the reduced budget he had.

While *in*ge Roberto and I walk through that long, thin mountain valley, we come across a group of three men doing some cleaning of the road. Roberto explains to me that they are from the *Comunidad* Tupac Amaru II in charge of controlling the access to the lake. They are also currently responsible for monitoring the drainage infrastructure and ensuring that the water canals around the road are clean and ready to receive the seasonal rain. The engineer introduces us while he highlights the importance of their work for the protection of the entire population of Huaraz. The *comuneros*, moreover, explain to me that they, the engineer included, have very little institutional support, and quite often they have to pay from their own pocket the fuel needed to constantly run the syphon motors responsible for draining the

lake. Roberto says that many people linked to the management of the early warning system and the mitigation infrastructure do not give the *comunidad's* work the recognition it deserves, that they are real heroes, and that authorities simply do not really know how things work in the Cordillera. *When the father abandons you, it's not easy to carry out something*, remarks the engineer, referring to the lack of state support they receive.

I can relate to the frustration Roberto feels when dealing with the institutionality of flood risk management in Huaraz and the Callejón de Huaylas in general. He affirms that he has to deal with many instances of corruption and bad labour practices. The institutions look nice on the outside, but inside it's all rotten, he tells me wearily. The blame, he says, lies in state corruption and the permanent rotation of authorities after each election. However, the ambivalent relationship he seems to have with the *comunidad campesina* is something that surprises me. He does not hide his strong criticisms of the organisation, even accusing it of being a fictitious, corrupt entity looking only for soft jobs and private profit. Yet, he also recognises the important work that *comuneros* conduct, and their heroic work as protectors of downstream cities like Huaraz. They are part of a fundamental network to safeguard the region against extreme outburst floods. It is a mixed image that, as we will see, is not unique to that case but something defined by the complex relationship between the lowlands and the highlands, concerning policies for managing flood risk.

According to Mark Carey (2010), the origins of the flood risk management system in Ancash can be traced to the first disasters experienced in the region during the twentieth century. As we saw in previous chapters, the 1941 flood over Huaraz put into question the progress of previous decades and the feeling of human control over nature – a feeling that, as Amitav Ghosh (2017, 22) affirms, appeared to be behind a modern ethos assuming, 'in both fiction and geology, that Nature was moderate and orderly'. The 1941 flood was the first incident that directly struck the regional centre of power and administration of the Callejón since the republic was declared³, raising the alarms about the latent risk of outburst floods threatening urban areas in the region. However, another two events would need to take place for the government to react to the urgency of further outburst floods: a flood in 1945 that buried part of

3 The 1941 event was not the first extreme flood that struck the region in the past. During those years, there was knowledge of the event in 1725 that buried the old city of Ancash and killed almost its entire population. Moreover, several minor related events had occurred in the region since the end of the 19th century as a direct consequence of climate change. However, all of them impacted towns and hamlets at a reduced scale and outside the main urban settlements.

Chavín and left thousands of victims, and another one in 1950 originating from Los Cedros Creek that destroyed the almost finished Cañón del Pato hydroelectric plant, a strategic power station intended to foster industrialisation in the coastal cities of Lima and Chimbote. These events revealed the vulnerability of water management infrastructure to the threatening forces of nature and, consequently, the fragility of the modernist project in those latitudes.

Challenges around outburst floods were first addressed with the creation of a new institutionality aiming to deal with the scientific knowledge so essential to understanding those events, while also creating the infrastructure required to mitigate such threats. In 1951, President Manuel Odría launched the Commission for Lakes Control of the Cordillera Blanca, or *Comisión de Lagunas* – Lakes Commission. The agency was integrated into the Santa Corporation, a state-funded agency created in 1943 aiming, as the law behind its creation affirms, to ‘develop and exploit the mineral and industrial resources that come directly and indirectly from the Santa River region and its tributaries’ (Carey 2010, 71). The Lakes Commission was conceived as the first national entity in charge of systematically studying the glacial lakes of the Cordillera Blanca, commanded to create an exhaustive inventory of the glacial lakes and an until-then non-existent classification system to define those water bodies that were dangerous and unstable. Based on aerial photography taken all over the Cordillera, the commission developed the first lists of water bodies based on scientific standards, including numerical designations for most of the elements found. Adopted names such as Lake 69, Glacier 513a and its ensuing Lake 513 remain the common means of referring to water bodies, thereby keeping their numerical record as a sort of proof of their recently discovered existence. With time, and as scientists gained access to the different areas of the Cordillera Blanca, records would also start including Spanish adaptations of traditional Quechua names: toponymies such as lakes Chinancocha and Orconcocha (from Quechua *china* and *urku*, female and male, and *qocha*, lake) or the same Palcacocha (from Quechua *pallqa*, bifurcated) that are preserved until now.

Over the decades, the emerging flood risk management system, headed by the Lakes Commission, would help usher in an increasingly efficient – but also more bureaucratic and sometimes highly centralised – apparatus for assessment of and intervention in the lakes. The work of glaciologists and geographers would be combined with the expertise of engineers and architects to develop evermore exhaustive lake registries and world-leading engineering works, such as that at Lake 513, to deal with the threats from reservoirs. This network of national and international scholars and engineers was not only a way of supporting and contrasting cutting-edge theories developed in other latitudes. It was also a strategy for consolidating a unique project, a nation-state agenda and all its implications for controlling the territory, its forces and its resources. A purposeful combination of science and technological intervention, the work of the commission would put in evidence the strong eco-

nomicist orientation behind flood risk management state efforts. Controlling and managing the lakes was, above all, a productive concern; a form of regulating the water outflows to produce hydroelectricity for the coastal cities while managing the risk of lake outbursts.

In this effort, however, scientists and engineers were not operating alone. As Carey points out, highland peoples would also be fundamental actors in developing glaciological knowledge and constructing mitigation infrastructure. Colloquially known as *laguneros* (literally lagooners), locals living in villages and hamlets close to the lakes would share their knowledge of their surroundings with researchers, supporting them with facts about the occurrence of certain events and their understanding of local dynamics. Moreover, they would provide the necessary workforce for the construction of draining canals and dykes to reinforce the weak morainic walls containing glacier meltwater.

The introduction of labour-based work in those parts of the Andes would help to install a form of time and temporal rhythm so far only existing in the lowlands of the Callejón de Huaylas. *Laguneros* would become the main workforce for any task related to the management of the glacial lakes: from monitoring and informing about the occurrence of outburst floods to working on engineer interventions. The *Comisión de Lagunas*, in this sense, would be conceived as a civilisatory entity introducing and promoting a modern life-rhythm regulated by the standards of the salaried work, Carey affirms. It was a contractual relationship that, nevertheless, would also generate friction between the parts. While public officers would constantly complain about the unpunctuality and unseriousness of local workers in fulfilling their jobs, the latter would constantly demand basic improvements to their highly precarious working conditions, and accuse the commission of failing to make payments and violating initial working agreements. Moreover, balancing their tasks as *laguneros* and their duties at their *chacras* to take care of crops and animals would be a constant challenge for *laguneros*, even nowadays.

Despite the latent conflicts between *laguneros* and risk mitigation agencies, engineering works would bring several benefits to the higher areas of the Callejón de Huaylas. An important part of the engineering interventions would lead to the construction of roads and byways such as the one heading to Palcacocha, connecting urban areas with places of the Cordillera Blanca that, until then, had been untouched by the Peruvian state. According to Carey, the work in the highlands brought for the very first time direct connectivity to small hamlets and mountain communities that had been historically marginalised from the national project of economic progress and development. Furthermore, this new infrastructure would enhance tourism at a greater scale – a niche that, as mentioned in previous chapters, would also profit from the increasing expeditions of scientists and their outstanding visual registers of the mountain landscapes. As part of the Santa Corporation, the Lakes Commission was fulfilling its role in promoting economic development in the region

by “open[ing] up” the Cordillera Blanca and broad[ening] interaction between local communities and outsiders’ (Carey 2010, 111). It was a virtuous circle of economic growth that shaped and reinforced the relationship between the low- and highlands – at least to the eyes of authorities.

The flood risk management system would keep mutating according to the country’s political scenario and based on the extreme events impacting the nation. As a response to the 1970 earthquake and avalanche, the government inaugurated the National System of Civil Defence (*Sistema Nacional de Defensa Civil*, SIDECI) within the Defence Ministry, nurturing narratives relating extreme climatic and seismic events with situations threatening the country’s internal security. Efforts in this regard would combine military-based strategic thinking with techno-scientific approaches for civic preparedness amid extreme events, in tune with Velasco Alvarado’s own military background and the Cold War scenario at an international level (Davis 2007; Masco 2014; Stehrenberger 2017). Moreover, the dramatic consequences of the *El Niño*-Southern Oscillation in the north of the country, first in 1999 and then in 2009–2010, would lead to a strong reformulation of Peru’s risk management system. Inspired by the advice of the Hyogo Framework for Action 2005–2015 developed during the Second World Conference on Disaster Risk Reduction (UN/ISDR 2005), the Peruvian government enacted Law Nr. 29.664 in 2011 to create the National System for Disaster Risk Management (SINAGERD), an integral scheme defining three main lines of work: preparedness, response and recovery – officially defined as prospective, reactive and corrective management levels (PLANAGERD 2014). From that point on, the system to cope with extreme events such as floods and earthquakes would be split into two central institutions: a responsive dimension commanded by the Institute of Civil Defence (INDECI, former SIDECI) and a preventive one under the National Centre for Disaster Risk Assessment, Prevention and Reduction (CENEPRED) – also under the umbrella of the Defence Ministry. The work of both agencies would lead to the coordination of the country’s Emergency Operation Centres at all levels: national (COEN), regional (COER) and local (COEL) – agencies created through Ministerial Resolution Nr. 059 in 2015. It would also include coordination with state agencies in charge of building mitigation infrastructures, such as local and regional governments, the National Water Authority (*Autoridad Nacional del Agua*, ANA) and agencies from the Ministry of Development and Public Works.

The various institutional transformations and interests in glacial lakes and water resources would lead to the creation of a risk culture in the mountain cities of the Callejón de Huaylas. The population would be increasingly aware of the dangers they were facing, requiring more interventions in lakes and creeks. The engineering works would be a pivotal means of controlling the water flows from mountain lakes and developing different forms of dams and walls to contain possible outbursts. These interventions would also introduce new rhythms and lifestyles to the higher

parts of the Cordillera Blanca, facilitating the connection of these zones with the urban areas in the lower lands through new roads. However, this would also lead to divergent positions, and therefore some disagreement and discord, concerning the management and control of glacial lakes. *Laguneros* would find it difficult to keep up with the schedules of their precarious work, as required by state agencies, while struggling to make their new tasks compatible with their traditional duties. Moreover, the increasing arrival of new actors in the Cordillera Blanca would slowly generate different types of conflicts, which, as we will see, have escalated in accordance with the further political changes in the region and at the national level.

Glaciers as a project

Hidden on the upper floor of Huaraz's Provincial Municipality building, in front of the city's *Plaza de Armas*, connected by some exterior hallways that give the feeling of being in front of a secret – or maybe forgotten? – area, lies the central monitoring station of Huaraz's early warning system; a video-surveillance centre – as presented to us – overseeing the state of the mountain lakes located above the city. The office, of around 20 square metres, appears brand-new, furnished with several wooden desks and office chairs, most of them empty and showing no sign of having been used. A recently installed kitchen area in one corner retains plastic wrap still covering its few tools. It is an office that, despite being operational for almost a year, still gives the impression of awaiting the arrival of a large contingent of workers.

Amador shows us the room; excited, eager – proud, like a father bragging about his child. Perhaps because he considers the SAT as his own child. *It's like my own child!* he exclaims, finally. As a member of one of the municipal associations involved in the project, Amador has been a leading proponent of installing the SAT in his hometown. However, it is a project that has meant sweat and tears for him. Many Huaraz officials were – and remain – sceptical about the necessity of the SAT, arguing that Palcacocha does not present a severe risk of outburst. Such comments have caused Amador several fights during municipal meetings; many moments when he thought the battle for the SAT was lost. But after years of knocking on doors, finding allies and placing the necessity of the early warning system on the public agenda, he succeeded. The system is there, right in front of us. Or part of it, at least.

The SAT is a combination of several technological instruments operating simultaneously to ensure what experts define as redundancy: an excess of information channels to ensure that, if one or two of them fail, there will always be another operational channel to provide warning of an extreme event. It is a form of redundancy that also includes people, despite efforts to minimise the system's dependency on human labour. Besides the four guards working individual shifts day and night at the monitoring station in Huaraz to inform authorities about any significant anomaly

at the lakes, those such as Palcacocha are still watched by *laguneros* day and night. Whereas the presence of *laguneros* has decreased considerably nowadays, the Regional Government still maintains its contractual relationship with some of them. Workers toil for long shifts of 15 days, often alone, in the solitude of Palcacocha, facing very precarious working conditions. *Laguneros* are required to fulfil strict monitoring tasks, radioing reports every two hours, even at night, to the COER and the Municipality's monitory station. Because machines can fail, and the flood risk management system requires *laguneros* in case that happens, life rhythms are still shaped by the necessity of controlling time at the highest peaks of the Cordillera Blanca.

Whereas various devices and objects – computer screens, laptops, printers, telephones, radio transmitters and documents – are present at some desks in the half-empty SAT office, one area appears to be the centre of the whole station, the focal point to which Manuel, the guard on duty that day, directs his attention: the four main computer screens (see Figure 12). The screens offer a window onto another reality, only upstaged by the two *real* windows and the natural light they provide.



Figure 12: SAT's main monitoring station in Huaraz's Municipality (Usón 2022)

The two upper monitors show data from Palcacocha's most exceptional instruments: the accelerometer and the radar. On the upper-left screen, three graphs sum-

marise data from the accelerometer, located at a high point on the moraine containing the glacial lake and registering vibrations from the water and surroundings. Should a large piece of the glacier fall into Palcacocha, the accelerometer would relay the resulting vibrations, in real-time, as a spike on the graph. The upper-right screen graphs the current water level in Palcacocha, as provided by the radar sensor. Located at the edge of the lake, the radar bounces radio waves off the lake's surface, using the echo to estimate changes in the water volume or surface characteristics. Like the accelerometer, the radar also provides real-time data about the lake.

The lower-left screen shows real-time image of lakes Palcacocha, Cuchillacocha and Tullpacocha, each identified as presenting a risk of outburst events. However, the early warning system – including the accelerometer and radar components – is currently only fully operational for Palcacocha, Huaraz's most infamous source of flood risk. Further monitoring systems for Cuchillacocha and Tullpacocha are planned. In the meantime, the cameras offer a panoramic view of the three lakes, and can be easily controlled from the surveillance centre where we are located. It is a useful visual resource to create a sense of control through direct observation.

Finally, the lower-right screen shows general meteorological and barometric data from Palcacocha: the lake's water volume and level (both estimated by the radar at its edge), outflow (measured by a flow meter at the discharge point of the downstream drainage syphons), wind speed and direction, precipitation levels, ambient humidity and temperature – all of them captured from a weather station attached to the same antenna pylon as the video camera. All of the system's data-feeds appear to be functioning, except that for the lake's total volume. According to the SAT radar estimates, the current water volume is around 15.8 million cubic metres, whereas a barometric system installed in the lake by other agencies indicates more than 16 million – almost half a million cubic metres more. Manuel indicates that, due to this variance, the volume data provided by the SAT may be replaced by that from the barometric system.

Cross-checks between the monitoring system and other instruments do not end there. Located on the left of the main desk, below the main screens, is another computer, smaller in size and less obvious. It shows data and images similar to those on the main screens, but relayed from a station at Rajucolta lake, located south of the other three neighbouring water bodies. Rajucolta presents a risk of outburst that could impact Macashca, a small locality in the south of Huaraz. This small computer provides data types similar to those for Palcacocha (i.e., water level and volume, a live panoramic view of the lake, meteorological information) but also from additional instruments, such as an image indicating whether or not the flood alarm is on. This early warning system, donated to the Municipality by the company Orazul Energy tasked with managing the lake, promises to be an alternative to the complex network of devices installed in Palcacocha. It operates through a buoy located in the water, which turns out to be a simpler system than the SAT's combination of

accelerometer and radar. It also consumes considerably less energy, making it less susceptible to power interruptions.

The apparent technical disadvantages of the SAT compared with other devices have been a source of criticism not only among authorities in the region but also among the general public. After the SAT became fully operational, the Regional Government and the agencies behind the project prepared the first alarm test in Huaraz by December 2020. Yet this first simulation was highly controversial. Despite official efforts to inform the population about this initial test, an important part of the city was completely unaware of it, causing panic among residents who heard the deafening alarm sirens all over the city without knowing what was happening. Learning from the panic caused by the first test, the authorities lowered the volume of the sirens prior to a second simulation in May 2021. The result was an alarm that almost nobody could hear. Hence, from initially producing fear and panic, the early warning system went on to disappoint people. In the following months, the equipment suffered power interruptions due to snow accumulation on its solar panels, leading to a generalised verdict among *Huaracinos*: the SAT wasn't working. It was deemed a useless system, a waste of money or, worse, an excuse used by authorities to misappropriate funding. Consequently, alternative solutions were introduced, such as the early warning system installed in Lake Rajucolta, creating permanent tension and ongoing debates among agencies, concerning which system is the most efficient and responsive to outburst floods.

The history of the SAT implementation in Palcacocha relates strongly to dramatic transformations of the Peruvian risk management system experienced in the 1990s. The successful consolidation of a robust risk management system in the Cordillera Blanca in previous decades would be deeply jeopardised by the radical neoliberal agenda of Alberto Fujimori, imposing strong budgetary and administrative cuts and privatisation processes. Once an iconic agency for the study and control of mountain lakes in the region, the Lake Commission suffered the dramatic consequences of the new political orientations, which aimed to minimise the presence of the state's administrative apparatus in the Cordillera Blanca. The Commission became the Unit of Glaciology and Hydrological Resources (*Unidad de Glaciología y Recursos Hídricos*, or UGRH), administered by the privatised energy company Electroperú, and suffered both substantial budget cuts during those years, and the relegation of flood risk management plans and programmes to a secondary issue for the public agenda. As UGRH, the agency would no longer oversee construction of mitigation infrastructure, instead focussing exclusively on monitoring, registering and assessing glaciers and mountain lakes nationwide.

The population's concern about lake outbursts in the region would arise again in the 2000s, following flood alarms in different parts of the region. One involved a major flood event in April 2010 that concerned Carhuaz and its surroundings, when a rock-ice avalanche from the top of the Hualcán Mountain fell into Lake 513 and triggered a tsunami-like wave large enough to overtop the 20-metre freeboards of the moraine dyke (Schneider et al. 2014). The outburst produced a debris flow that ran downstream along the Chucchún River, 513's central outflow, until reaching the city of Carhuaz, resulting in minor street-flooding. The event caused no fatalities and did not represent a serious threat to the town, but did significantly damage infrastructure along its path, including roads, bridges, properties and a water treatment facility, and flooded an area of more than 500 square kilometres (Carey et al. 2012; Vilímek et al. 2015). Defined as a cascade of mass movement processes, experts concluded that such an outburst flood could re-occur at greater magnitude, given the geomorphology of the zone and Hualcán's unstable slope immediately above Lake 513 (Schneider et al. 2014).

Perhaps one of the most important political effects of the 2010 was to set the scene for the creation of the National Institute for Glaciology and Mountain Ecosystems (*Instituto Nacional de Investigación en Glaciares y Ecosistemas de Montaña*, INAIGEM) in 2014, a new agency in charge of studying glaciers and assessing the state of glacial lakes at a national level. According to glaciologist and mountaineer Benjamín Morales, who had a leading role in the creation of INAIGEM and was appointed as its first director, the creation of the institute was also strongly influenced by the political scenario at the time. In 2014, Peru hosted the twentieth Conference of the Parties (COP20) in Lima as part of the United Nations Framework Convention on Climate Change (UNFCCC). The then-government of Ollanta Humala used the context to promote a public image of a nation engaged with climate change. Figures like Morales would use that opportunity to champion the need for a research institution exclusively for assessing glaciers, leveraging the imminent threat revealed by the 2010 flood. 'They took away the issue of security or prevention and put in mountain ecosystems ..., a contribution to the environment, climate change, etcetera. [Humala] announced the creation of this institute that had everything to do with the environment and climate change', Morales affirms. It was an apparent win-win scenario – a form of engaging with current debates worldwide about climate change and biodiversity without compromising the need to seriously address flood risk and threats associated with glacial retreat.

The creation of the INAIGEM, however, would not be without controversy. UGRH would continue operating as a unit in charge of assessing the condition of glacial lakes in the Cordillera Blanca⁴. This apparent overlap of responsibilities

4 Efforts to merge both agencies were proposed since the creation of INAIGEM. However, UGRH's unwillingness to consider this matter seemed to make any institutional fusion rather

would lead to friction and tense discussions between these agencies. It would even lead to the duplication of work and studies, such as a glacial register developed independently by both agencies (UGRH 2014; INAIGEM 2018) and flood hazard maps for cities like Huaraz. With both having a strong orientation towards research, the two agencies would prioritise their own outcomes and question the approaches and methodological decisions of the other. Furthermore, neither INAIGEM, UGRH, nor any other state agency would agree to take on the responsibility of overseeing the construction of new dams or embankments. ‘Nobody wants to take risks because ... if there is a flood, then they are afraid that they, the ministry in charge of it, would be held responsible’, Benjamín Morales tells me. With no national agency officially in charge of reinforcing the dykes and walls retaining glacial lakes, Ancash’s regional and local governments, supported by private companies appointed through tendering procedures, would be officially responsible for conducting engineer interventions for glacial lake security in a rather precarious manner, as our walk with Roberto showed.

Besides having a clear influence on state agencies, the 2010 flood would also promote the articulation of projects and working strategies from non-governmental and international agencies. In 2008, the Swiss Agency for Development and Cooperation (COSUDE in Spanish), which has worked on poverty reduction in Peru for more than 60 years, selected climate change adaptability as a priority issue for its work on a global scale. One of the leading programmes defined for Peru was oriented around climate change adaptation plans, specifically concerning glacial retreat. This strategy would converge in *Proyecto Glaciares*, an initiative launched in 2011 that aimed to identify concrete measures to deal with glacial-based risks while fostering the development of local and regional capacities to cope with them. Supported by members of Zurich University, COSUDE would lead a series of training curricula, including workshops, conferences and even a Master’s-level degree programme in climate change at the University of Cusco. Moreover, the project would develop a full plan of flood risk preparedness for the city of Carhuaz, including talks and workshops, the creation of a flood hazard map and, particularly relevant for this chapter, the installation of an early warning system, the first of its kind in the country.

The early warning systems came to introduce a new form of temporality in the region. Lake monitoring was one of several operations that introduced clock-based time to the Cordillera Blanca; a system regulating the working rhythms in the mountains, and requiring participating *laguneros* to send regular reports on the state of

improbable. This appeared to start changing by the end of my last visit to Huaraz in February 2022, when negotiations finally started seeing positive results for making UGRH, together with all its team, part of INAIGEM. Progress on this matter, though, would be quite limited during the following months.

lakes like Palcacocha at specific moments of the day. Yet, previous human-based surveillance strategies, based on long-range radio communication systems connecting mountain lakes with cities like Huaraz, were considered a simple complement to the real mitigation works: the conduction of infrastructural interventions like dams and retaining walls. The reason for this, as we saw, was the authorities' strong mistrust of *laguneros* and their working times. The SAT inaugurated an augmented monitoring system to warn cities downstream of possible flash floods, aiming to reduce the limitations of previous human-based monitoring efforts. The unreliability of *laguneros* and their irregular shifts was now replaced by a semi-automatic warning system operating day and night with real-time data transmission. Early warning systems, in this sense, introduced a new form of preparedness, so far non-existent in the Callejón, rendering the monitoring efforts a central component in the control of mountain lakes – rather than a simple complement to mitigation infrastructure.

Proyecto Glaciares operated as a true hub where different agencies and organisations would come together to successfully implement the early warning system. The technical assessment and installation of the SAT for Carhuaz and the surroundings was delegated to a team from Zurich University in cooperation with other Swiss agencies, including private companies and research associations. Commanded by the glaciologist Christian Huggel, the research group would install five stations distributed along the Chucchún River, including the monitoring station near Lake 513 and a second station placed at Shonquil Pampa. Besides COSUDE and Zurich University, another key organisation for *Proyecto Glaciares* would be Peru's office of the Cooperative for Assistance and Relief Everywhere (CARE Peru), a non-profit international humanitarian agency based in Switzerland, working on the delivery of emergency aid and the execution of international development projects. Due to its strong experience in the field as a project executor, CARE Peru would lead the direct coordination and execution of the project's territorial incidence component, which, in addition to installing the SAT at Lake 513, would include an awareness programme to sensitise the population to issues of climate change and glacial-based disasters. Additionally, it would consider a training programme for institutions involved in disaster risk management at regional and local levels, working closely with municipalities, emergency offices, schools and health centres on the matter. Based on modelling results from the Zurich University team (Schneider et al. 2014) and the support of state agencies like INDECI, CARE Peru would also elaborate a flood hazard map for Carhuaz, which would be placed in several parts of the city, including the municipal centre, public spaces and shops.

CARE Peru's work in the zone also included a series of socioeconomic development measures, with a strong emphasis on the areas surrounding Hualcán and, notably, Shonquil Pampa due to its strategic position. Given its vast area (approximately five linear kilometres) of flat terrain with lack of slope, Shonquil is considered a buffer zone against possible floods, in which floodwater slows and deposits

part of its sediment load – the perfect place to situate one of the SAT’s monitoring stations. A zone of vital importance for the economic activities of grazing associations, Shonquil Pampa represented the perfect case where *Proyecto Glaciares* would be able to put into practice the classic economic assumption that risk scenarios can also bring ‘new opportunities’. Convinced of the relevance of including the local population in the development of the project, the agency analysed the type of productive activities present in these areas with the goal of accompanying risk management measures with economic development programmes, including livestock management training and funds for improving irrigation and grazing infrastructure. The approach aimed to create a sense of reimbursement in the zone, with the implementation of *Proyecto Glaciares* providing direct benefits for the local population.

During the first years, the project team made great efforts to create links with local actors and to inform them of the dangers of a flood from Lake 513. However, members of the project recognise that this had limitations and that the main emphasis was on mitigating the consequences of a possible flood, especially in the lower areas. The coordinating team also points out that there was a lack of greater involvement with the grazing communities in the Shonquil area about the purpose of the SAT, with whom there were only partial discussions of the equipment’s goals and operation. According to Fiorella Miñan of CARE Peru, and part of *Proyecto Glaciares* at the time:

when the SAT was implemented, there were also training and workshops with the population. We basically worked in the alluvial area [in the lowlands, where Carhuaz is located], in the most dangerous zone. But we didn’t work too much with the areas close [to the lake] because we didn’t have enough time or budget. ... What we did initially was develop a communication strategy for the population in the communities. But perhaps within the same population there were different nuances. So, perhaps it would have been important to reach that level of specificity.

Despite those limitations, members of the *Proyecto Glaciares* were satisfied. Residents from Carhuaz acknowledged the efforts of CARE, COSUDE and Zurich University, welcoming them with gifts and organising open celebrations. Although some project members started hearing certain rumours about highland residents being unhappy with the equipment close to the lake and in Shonquil Pampa, they did not pay too much attention. Some sources even affirm that a local leader officially requested Carhuaz’s mayor to remove the equipment in February 2016, but no action was taken (Fraser 2017). ‘It seemed like everything was fine, and suddenly we got some comments that people weren’t comfortable with the early warning system. It was 2016; they were saying that the early warning...we were in a drought, and it didn’t help them. But during the inauguration there were a lot of people very grateful. It was a bit weird’, affirms Jocelyn Ostolaza, a director of COSUDE in charge of *Proyecto*

Glaciares. Nevertheless, the various agencies were convinced that their work and interventions were successful and highly welcomed, at least in the lowlands. It had to be the right thing, they thought. After all, it was a system aiming to protect the population. Why would not they be happy?

Who destroyed the SAT? Fuenteovejuna did it

Some holes filled with concrete and wooden sticks are all that is left of the Lake 513 monitoring station. If Mauro were not there to show me the site, I would have never guessed it was previously the location of high-tech equipment capable of measuring changes in the lake. The station at Lake 513 was one of four units comprising Carhuaz's early warning system. The station's instruments (similarly to Palcacocha: an accelerometer to measure changes in speed and/or direction of the water surface, video and photographic cameras, an antenna and data logger) were all placed in a perimeter no larger than a couple of square metres and on a five-metre pole. At the time of my visit, just a few parts of the perimeter fence remained. Camouflaged between the green soil and the characteristic Andean *ichu* (feathergrass), those traces say little about those conflictive instruments installed more than five years previously. The rest of the equipment is all gone.

Mauro looks at the site in silence, resigned to the fact that a project like that will probably never take place again. As a former official of the Carhuaz Provincial Municipality, he took part in most of the conversations and negotiations with the different agencies and groups involved in the installation of the system – including Shonquil Pampa's Herd Association, which many in Carhuaz consider responsible for attacking the stations. Even though he affirms that people in the area have already started to change their opinion of the early warning system, and to reconsider the idea that the sensors formerly installed there influenced the region's lack of rain, he believes that the time for such equipment has already passed. Voices against the instruments are still very powerful. It is a lost battle, he thinks, an opportunity that the region wasted for what he considers a huge misunderstanding resulting from lack of education and poor communication.

Besides viewing the former site of the destroyed monitoring station, I found myself at Lake 513 together with Mauro to see the engineering works installed over past decades to reduce the risk of an outburst flood: a first installation of two syphons in the late 1980s that increased the freeboard of the bedrock dam from one to nine metres, and a second more permanent solution consisting of a 150-metre-long tunnel beneath the bedrock, which lowered the water level another 20 metres (Reynolds et al. 1998). Compared with Palcacocha, Lake 513 is notoriously inaccessible, being locating in a remote area of the Cordillera Blanca at more than 4,000 metres elevation. The route from Shonquil Pampa (see Figure 13), the last access point for vehicles, in-

volves a four-hour hike along a very steep path over slippery rock walls. Engineers and workers at the time had to carry all the working equipment with the help of pack animals. It was a massive logistical effort that, nevertheless, paid off well. If it were not for the drainage system, the flood events of the following decades, including the 2010 outburst flood, would have been considerably worse. It is an intervention that is still remembered as an engineering masterpiece, part of that nostalgic legacy of a strong institutional apparatus created to cope with the threat of uncontrolled flooding from the Cordillera Blanca.

It is intriguing how differently the local population reacted to the two risk reduction strategies implemented for the lake – the construction of drainage tunnels versus installation of the early warning system. According to Mauro, the engineering interventions were valued and appreciated by the population all over the Shucshún River Basin, the same river that threatens to overflow with every outburst flood at Lake 513. It was a collective effort to drain the lake, an intervention that counted on the help of upland towns – including the Shonquil Pampa Herd Association. However, the early warning system was different. The transversal support that engineering interventions enjoyed in the past seemed to vanish when referring to the SAT equipment. Although apparently accepted at the beginning, the SAT came to divide the population over time. Its operation, as we have seen in this chapter, was a response to decades of flood risk management in the region, and was influenced by the country's changing political scenarios. From a mitigation-based approach founded on the notion of civil defence, the country would inaugurate a full agenda of risk preparedness and prevention, employing devices like the early warning system as central to the temporal control of emergencies. But they would also generate all sorts of reactions within their direct surroundings, leading to the ultimate destruction of all the stations.

The destruction of the SAT was neither the first nor last act of sabotage targeting scientific equipment in the region. In the 1990s, a similar case to that at Lake 513 occurred nearby, at Lake Auquiscocha. According to Mark Carey (2010), the community from Shilla, a nearby village and part of the Carhuaz Province, destroyed a pluviometric station installed close to the lake and violently expelled the group of glaciologists in charge of the project. The community, Carey explains, gave similar reasons to those in the case of Lake 513: blaming the station for a drought. Long before the attack, the local population already suspected that Auquiscocha was a 'difficult' lake, that it was *encantada* (enchanted), and that any intervention there could trigger its anger and cause its collapse (Stein 1961; Carey 2010). Similar attacks took place in 2019 when an expedition to the Huascarán, commanded by the famous US

glaciologist Lonnie Thomson in cooperation with INAIGEM, was blocked by a local community at the foothills of the mountain who confiscated their equipment and forced the group to leave (Usón and Jasper 2025). In all of these cases, similar reasons were given: foreign devices used for wicked intentions were considered an imminent threat to the community's security.



Figure 13: Remains of the early warning system station in Shonquil Pampa. In the background, Hualcán Mountain, where Lake 513 is located (Usón 2019)

The strong veil of secrecy around the destruction of the Lake 513 SAT makes it very difficult to find first-hand accounts about what happened that day. During my visits to the Carhuaz Province highlands, I did not find anyone who would openly admit to having taken part in the attacks – and with good reason, since responsibility for this criminal act carries legal consequences. The few people I spoke with who affirmed having witnessed the mass of people gathered at Shonquil Pampa were reluctant to provide many details, only specifying that it was a large crowd from diverse localities. According to Miguel Peñaranda, an officer from the Provincial Municipality of Carhuaz who closely followed the whole conflict, it is very difficult to open a legal investigation under those circumstances, because the same members of the *comunidades* protect each other. He associates the situation with Lopez de Vega's historical masterwork of the Spanish theatre, *Fuenteovejuna*, which portrays the murder of commander Fernán Gómez de Guzmán at the hands of inhabitants

of Fuenteovejuna following years of mistreatment and abuse. When a magistrate assigned to identify the culprits interrogates the villagers, they all simply respond: 'Fuenteovejuna did it'. 'It's just like in the play, right? We all did it', Miguel tells me. In this case, however, not everyone participated in the events at Lake 513. It was the *comuneros*. But from which *comunidad*?

At this point, accounts start to diverge. Whereas some people associate the first attack with an attempt to steal the equipment and make some profit from it, others say that it was a politically driven action. The latter versions affirm that events began with an earlier conflict, between people from Hualcán and its surroundings versus those of Carhuaz, concerning a drinking water project inaugurated during Ollanta Humala's presidential administration around 2014. Carhuaz was facing a severe water shortage at the time that demanded new water catchment infrastructure in the higher lands. The new catchment points, however, meant a reduction in the amount of water available for irrigation in the upland areas, a cost that the people from Hualcán and the surroundings had to bear without any compensation. In addition, the project required the installation of several kilometres of pipelines on communal and private lands, which was also carried out also without any indemnification. Some people believe that Hualcán's former mayor used this situation for political purposes to demand more resources for his community from the provincial Municipality in Carhuaz. Rumours accuse him of inciting the population to cut off water supplies to Carhuaz if they were not compensated for the interventions made. Furthermore, it is rumoured that he encouraged others to destroy the recently installed early warning system as a way of generating pressure – an accusation that has never been confirmed. This version of the story suggests that although the former mayor's administration ended some weeks before the first attack on the monitoring station, his influence would have still been sufficient to incite the destruction. For unknown reasons, the early warning system came to be associated by some with the drought affecting the region, which would have elicited the second attack in November.

Other versions, however, affirm that rumours about the SAT's link to the drought originated from other *comunidades*, not from Shonquil Pampa vicinities, let alone Hualcán – but from farther away. Miguel Peñaranda from the Provincial Municipality of Carhuaz suggests this, affirming that people from Hualcán had nothing to do with the destruction. 'The whole area of Huaypán, I don't remember the names of the communities right now, but it is the area that belongs to Yungay Province, all of them crossed over and arrived here', he affirms, referring mostly to villages located to the north and outside Carhuaz's jurisdiction.

Nicolás Peje, Hualcán's current mayor and one of the few people I spoke with who admits witnessing the attack, argues the same. As somebody who went to Shonquil Pampa with other authorities during the second attack, attempting to dissuade people from destroying the equipment, he says that most of the participants were from

other places. Nicolás suggests that members of *comunidades* from several surrounding towns, including Runtu, Pariacaca and Musho, gathered at Carhuaz's stadium the previous day to discuss the actions to be taken against the equipment at Lake 513. He recalls widespread rumours throughout the Callejón de Huaylas, claiming that the monitoring equipment was preventing rainfall, a situation that the *comunidades* from both the Cordillera Blanca and Negra determined to resolve. 'From Hualcán we went up to about seven people to see what was going on. But more came from other *comunidades*, because *comuneros* are obliged to if the *comunidad* says so. They draw up an act, and whoever doesn't obey pays a fine'. Just as people from Carhuaz blame Hualcán – the faraway village in the highlands of Carhuaz, for the destruction of the stations – Nicolás seems to do the same with other areas, other *comunidades*. The problem, he affirms, comes from somewhere else, not from his people.

No matter which version of the story we consider, *comuneros* are always held responsible – an anonymous mass from distant villages attacking the instruments while under the effects of alcohol and coca. Whether guided by superstition or political motives, arguments around the destruction always involve themes of ignorance, desperation and manipulation. The amorphous mass that *comuneros* comprise represents a form of alterity that is even invoked by local residents from Hualcán. Just like the so-called *indio* or the indigenous in the past, the figure of the *comunero* embodies that responsibility, independent of context or motivation. Once again, the highlands entail, as in other moments of history, a barbaric space that supposedly only education and the civilising ethos of urban life can remedy.

The gringo menace

We are almost ready to leave! screams Nicolás Peje, Hualcán Town's mayor, to the group of people waiting in the municipal SUV – me included. He and other officers are putting the last touches to some wooden signs that his administration wants to install in Shonquil Pampa together with the Provincial Municipality of Carhuaz, the administrative unit to which Hualcán – and the city of Carhuaz itself – belong. The signs were a donation from the Peace Corps, a US agency with presence in the region, as part of an integrated project for tourism and reforestation that they wanted to conduct in the zone. Framed within its agenda for rural and sustainable development, the agency committed to donate 3,000 pines to Shonquil Pampa Herd Association for reforestation purposes. In return, it was agreed with the association's directory, with Carhuaz Municipality working as mediator, that the community would allow and support the installation of the signs Nicolás is completing preparations for a tourist trail along the Cordillera Blanca.

Despite its threatening condition, Lake 513 and its surroundings offer an astonishing mountain landscape of idyllic beauty, which, in the eyes of the Municipality,

has a strong tourist potential. Mauro from the Carhuaz Province Municipality, one of its main promoters also present that day, sees in the tourist trail an opportunity to expand Carhuaz Province's tourist sector, which is modest compared with other locations in the Cordillera Blanca. His idea is to connect the trail – involving Lake 513 and its neighbouring Lakes Cochca and Auquiscocha – to a major circuit of local amenities. The project, however, does not seem to have the same positive perception among local residents.

As we arrive in Shonquil Pampa with the signs in the SUV, we find the entire Herd Association gathered in the sector: about forty people, mostly men aged between 25 and 60. Members of the association seem upset. They have been waiting for hours to talk to the municipal authorities. As soon as we approach the group, some of them start asking Mauro, Carhuaz's officer and the project's visible head, about the alleged agreement between the Municipality and the association regarding the tourist signs. Association members intervene very angrily, arguing that this agreement was never discussed with the entire association and that they were unaware of the signs. They also seem to doubt the intentions of both the Municipality and the Peace Corps. Mauro and other municipal members are repeatedly asked *Why do you really want to install these signs?*

After minutes of intense discussion between both sides, in which Mauro and Nicolás try to insist calmly that the signs have a touristic purpose, the main suspicion is revealed: they believe that the Peace Corps is receiving money from CARE Peru in what they interpret as an effort to re-install *esas cosas* (those things). *If the people don't want the equipment, it won't be installed!* exclaimed one Association member. *The meeting was in the Municipality and without the association!* exclaims another. Mauro insists on defending the tourist route to the lake, explaining that it has nothing to do with the early warning system. His explanations, however, do not convince the Association members, who continue to question the presence of foreigners, including myself, in the area. *The gringos are coming in from all sides, now we are already fighting!* says one.

The mood of the gathering, which slowly turned into a local assembly, remains volatile. One of the attendees affirms that things are happening and that the landscape is changing. He mentions the changes in places like Pastoruri, one of the most famous glaciers in the Cordillera Blanca, visited by thousands of tourists every year. He claims that the landscape there used to be beautiful, but is now all ruined because *gringos* have moved in. He also says that machines of all kinds were being introduced. *Culture brings these problems. Gringos destroy everything!* he finally adds.

The air of mistrust is widespread. Some continue to link all this to the early warning system, destroyed and dismantled some years ago. Another person refers to *pluviómetros*, rain gauges that have been installed there and in other parts of the valley, whose purpose he claims – attributed to information he had seen on the Internet – is to *reduce* rainfall. That is their main function, he affirms, as the *pluvio* in their name suggests. It could be for preventing floods, or for mining purposes, who knows?

Rainfall was apparently a problem for the *gringos*, and so their machines were there to stop it.

The scene I witnessed in Shonquil Pampa reveals a fundamental issue around the SAT case: the definition of an external figure – in this case the *gringo* – as primarily responsible not only for the drought affecting the grazing lands and its surroundings, but for almost every environmental problem faced by the region now and in the past.

Historically, the figure of the *gringo*, like other figures, has come to define a controversial otherness in the Andes. Related in some cases to a benevolent figure, especially when connected with aid agencies, NGOs and other philanthropic organisations, the *gringo* has also personified the upheaval initiated by the colonial world more than 500 years ago. The figure of the *gringo* can be related to the *pishtaco*, another historical figure that, as Mirosław Mańka and Elżbieta Jodłowska (2019) suggest, is a direct conceptualisation and visualisation of the trauma experienced under the *conquista*, itself a disaster for the native population. This syncretic figure emerges as a thematisation of the massive extraction of resources from the colonised lands, a process that the local population embodied in this mythical figure. According to local stories, the *pishtaco* is a foreign-looking person that steals the fat (*grasa*, *wira* in Quechua) of the indigenous inhabitants, an element that is considered a sacred substance in the Andean world as it carries the essence of life⁵. The *pishtaco* extracts the fat of living people not for his own consumption but for the reinforcement of technological equipment. ‘The fat’, Mańka and Jodłowska (2019, 134) affirms, ‘goes to the cities of the Pacific Coast, to their churches and convents, to the mines, factories and enterprises. From there it is shipped further – to Spain and the United States, or it is used by the Peruvian government in its international transactions’. The authors even suggest that there is the belief that the fat was commonly used to reinforce and refine the oldest church bells in the country, which is why they have the best sound. Just like minerals from the mountains, the extraction of the fat fulfils a commercial and productive purpose. It is the same substance of the native body that is used for colonial endeavours.

Throughout history, the appearance of the *pishtaco* has undergone several changes. He has been associated with the figure of monks and priests, the *hacendado*

5 It is no coincidence that one of the main figures of the Andean world is Wiracocha, the creator of the *runakuna*, which literally means ‘fat of the lake’. The name refers to one of the main foundational myths of the Quechua and Aymara worlds, in which Wiracocha emerges from the foam of the water of Lake Titikaka. Wira, Quechua for both fat and foam, comes to personify that moment when life is created.

(landowner), soldiers, doctors or any other foreign figure in the eyes of the Quechua population. According to Anthony Oliver-Smith (1986, 19), at the time he was conducting fieldwork in the Callejón de Huaylas, the *pishtaco* was portrayed as ‘a large man, white or mestizo, who wears a leather jacket, boots, and a broad-brimmed hat’⁶. He has even been related to the figure of the *Chileno* (Chilean) due to the Confederation War of 1836–1839 involving Peru. During that conflict, the Chilean army, supporting the counter-revolutionary army of General Agustín Gamarra against the forces of the Peru–Bolivian Confederation, advanced throughout the country until reaching the Department of Huaylas, now Ancash. There, they fought the Battle of Yungay, close to the town of the same name, defeating Peru–Bolivian Confederation forces and ending the war. The Chilean forces are remembered as a bloodthirsty army, supporters of a traitor like Gamarra and perpetrators of the most terrible war crimes in the region (Villanueva Torrealba 2019). Later, during the Pacific War of 1886–1889, again involving Peru and Bolivia against Chile, the figure of the external Chilean enemy was strengthened, further feeding the notion of an evil force threatening Peru’s national sovereignty. Nowadays, Chileans are often portrayed as rich, arrogant foreigners who come to the region to open all sorts of businesses – from blueberries harvested for exportation to pharmacy chains and retail shops. Being originally from Chile, I was confronted with these stories several times in the region, as a sort of recrimination about the past actions of my fellow *Chilenos*, to which I responded apologetically and with quite some embarrassment.

Representing a continuity with the figures of the *pishtaco* and *Chileno*, Marcos Yauri Montero (2014) suggests that the *gringo* has become the most prominent stranger denoting a threatening otherness, following the expansion of mining in the region during the past decades, especially during the 1990s. The *gringo*, Yauri affirms, would have assumed this predominance due to the ‘presence of multinational capital investment in mining and the consequent ecological disruption, and the environmental, cultural and other social pollution’ (Yauri Montero 2014, 30). The neoliberal agenda pushed by Alberto Fujimori in the 1990s promoted an investor-friendly characterised by weak environmental regulation, reduced tax burden and disarticulation of indigenous land tenures. Fujimori aimed to reverse the paucity of international investment in recent decades, attributed both to expropriation policies fostered by Velasco Alvarado’s political agenda and the climate of violence

6 Oliver-Smith also tells as an anecdote about how he was commonly related to the *pishtaco* during his first visit to the Callejón de Huaylas. Before his fieldwork in the aftermath of the earthquake in 1970, he spent the summer of 1966 in the Cornell-Peru field school studying the oral stories of this mythical figure. ‘My research topic nearly got me stoned out of one peasant community so distant that few outsiders had ever ventured there, and my questions evoked unbridled hilarity among sophisticated townfolk. They would literally double up with laughter at the thought of this green gringo, who certainly looked like a *pishtaco*, sauntering into Indian peasant villages to ask them questions about *pishtacos*’ (Oliver-Smith 1986, 19).

triggered by the internal war against the Shining Path revolutionary group (Salas Carreño 2008). The Fujimora administration would oversee massive expansion of mining projects nationwide, which exponentially increased territorial conflicts due to environmental degradation and the expansion of mining activities into areas formerly used for agriculture and farming (Li 2015).

Ancash was no exception to this trend. Since the end of the 1990s, the expansion of Antamina and Barrick Gold, the two main mining conglomerates with a presence in the region, extracting copper, zinc and gold, produced a considerable injection of capital but also intensified territorial conflicts. According to Peru's Ombudsman Office (Defensoría del Pueblo 2013), 15 of the 30 social conflicts registered in the Ancash Department in 2013 were related to mining. By 2021, such cases decreased to 16, but half of all the regional conflicts were still related to mining operations (Defensoría del Pueblo 2021). Whereas some people refer to these conflicts as, firstly, a sort of scapegoat for all the region's problems, and, secondly, a means by which local communities are able to profit from their mining neighbours, it nevertheless shows that mining is an active figure in the region, a source of tension that mobilises and concerns people. Claims that linked the early warning system with mining activity would, in this regard, would have reflected the climate of mistrust surrounding companies like Antamina and Barrick.

Mega-mining projects have multiple territorial impacts, radically transforming their surroundings and causing environmental degradation, yet typically bring scarce benefits to local communities in the region. According to Guillermo Salas Carreño (2008), companies like Antamina have constantly projected the image of a new type of mining in the country, operating under modern standards – in direct opposition to the 'traditional' mining – and have expressed concern about the territories in which they operate. Yet, unlike traditional mining, which used to create strong dependencies amongst the direct communities as spaces of precarious work and around which various services are arranged, projects like Antamina in Conchucos, the largest mining investment in Peru's history, have operated as closed environments, enterprises with scarce labour interaction with the neighbouring communities. Mega mining companies like this normally bring their own qualified workers from other areas, and make little use of local labour for their activities. Despite the massive flow of resources that these consortia represent for provincial and local municipalities in Ancash, and despite the diverse works of so-called corporate social responsibility they claim to promote and develop in neighbouring areas, the resulting regional profits scarcely benefit immediate populations. According to Salas Carreño (2008), Antamina's corporate social responsibility measures were of the highest standards for the time the mine was open. Yet, the company based the negotiation processes with the communities for the land on major promises that were hardly achieved. The company's promises of strong economic development were impossible to fulfil over time, due in large part to the great secrecy with

which it operated the site. This situation, along with other mining conflicts in the region, would only strengthen local notions of external actors sucking up resources from the land without recompense. Mining conglomerates are hence themselves a foreign figure, a *pishtaco*, whose activities threaten the welfare of the land and its population.

Given the presence of these foreign figures in the highlands, it is no surprise that *comuneros* in Shonquil Pampa referred to any technical intervention in the Cordillera Blanca as an external threat. Devices like the early warning system or meteorological stations came to operate as a continuation of the colonial regimes reproduced by *pishtacos*, *Chilenos* and *gringos*. The monitoring stations embodied centuries of extractivist politics and colonial relations with the lands. Those supposedly benign and even beneficial scientific instruments would instead become associated with an otherness interrupting the seasonal rhythms – and thus the amount of rain – in the mountains, threatening local livelihoods as other figures had in the past.

Resisting foreign forms of temporal control

In this chapter, we have seen how the management of mountain lakes in the Callejón de Huaylas has been a long-standing effort involving institutional arrangements, engineering works, programmes, preventive plans, training and education. Since the first deadly event that struck Huaraz in 1941, projects to reduce the risk of outburst floods in the Cordillera Blanca have increased over decades, inaugurating a full institutionality aiming to protect cities and villages of the Callejón against extreme events. Supported by scientists, engineers and a local population conditioned to the rhythms of shift-work, state agencies would be in charge of classifying water bodies in the Cordillera Blanca while developing engineering solutions to cope with the possible collapse of unstable lakes. In doing so, they would develop diverse forms of temporal control in the highlands, both for water bodies requiring infrastructural interventions and also the subjects around them. The local *laguneros* populations working at the lakes had to be trained in the concepts of working time – the timing of shifts, maintaining fixed working hours and regularity, even in precarious conditions.

The installation of the SAT, moreover, came to define a new form of temporality for the highlands, relying on preparedness instead of mitigating threats. Preparedness, as Andrew Lakoff and Stephen Collier (2010) affirm, does not aim to prevent an extreme event from occurring but rather assumes that it will happen. Instead of seeking to control the outflow of lakes threatening cities downstream, technologies of preparedness such as the early warning system would operate more as a sentinel device (Lakoff and Keck 2013), warning about a threat without estimating the probability of that event beforehand. This sentinel aimed to provide the exposed popu-

lation in Carhuaz sufficient time to escape to safer areas, increasing the warning period from ten minutes (under the human-based communication system) to 30. Complemented through educational programmes and activities, the early warning system operates as a form of *gaining time*, of expanding the chances of surviving a deadly event by removing the previous flood warning system's main problem: human fallibility.

As Adams et al. (2009) affirm, anticipation is a method of controlled speculation, but also a moral impulse, an epistemic orientation towards the future, pursuing a will to look ahead. As a technology of anticipatory action, the early warning system creates a future based not only on prevention but also on a techno-scientific regime. Its installation obeys the production of a future that can be managed and anticipated. The destruction of the monitoring stations, in this sense, is related not only to a failure to properly inform the population of its advantages, but mostly to the failure of a governmental project in its Foucaultian sense: a project incapable of controlling subjects. 'We warn that flood safety for the city of Carhuaz now depends solely on *human vigilance*. ... The estimated evacuation times will be considerably reduced from 30 to ten minutes, as there is no technological component to support the alert and alarm', reads the press release from the directive of *Proyecto Glaciares* (2016, own emphasis) following the destruction of the SAT. The attack was not only the destruction of technological instruments; it was, above all, the disarticulation of a foreign form of controlling the future – even one intended to provide more time for people to escape disasters.

Systems like the SAT relate to what Christian Licoppe (2010) defines as notification devices capable of creating interruptions. Such notifications interrupt in order to warn of an exceptional situation – specifically, an anomalous event at the lake under observation. However, the interruption capacity of the system is, interestingly, twofold. For the scientific community, urban population and regional authorities it is a controlled and concrete interruption that warns of a possible danger, whereas for the highland communities it is a conflictive intervention that interrupts the normal rhythms of the land. The presence of the early warning system in the uplands causes irritation, a feeling of out-of-place that in some cases relates to a threat to grazing and agriculture from lack of rain, and in others to foreign practices such as mining expansion. The device loses its warning quality and assumes a hazardous role, embodying the very threat that it aims to avoid in the first place.

The Lake 513 case, together with other instances of violence against meteorological stations and scientific teams, reveals interesting situations of boundary violations that are not so different from the outburst invoked by lowlanders in other times – as seen in previous chapters. As Ben Orlove (1991) suggests, the intrinsic fear of *mestizo* population in urban areas can be referred to the dread of being sieged and 'surrounded' – a relatable feeling similar to that of being 'overflowed' by a uncontrollable mass – whereas the inherent fear among highland villagers has been that

of invasion by other types of external agents. In Shonquil Pampa, foreign machines putting at risk their environments are associated with *gringos* – whether tourists or authorities from international agencies – and mining activities. Both are portrayed as external forces strong enough to impact the land to the point of destabilising water cycles: an outburst that originates not from the highlands but instead from lower altitudes.

In tune with Marisol de la Cadena's (2021) practice of 'not knowing', we can affirm that the destruction of the instruments was *not only* the result of another cosmopolitical order, political opportunism or conflicts between different towns. Neither was it simply the act of angry *comuneros*, nor a symptom of generalised mistrust of authorities due to longstanding corruption in the region, or the consequences of a particular drought that year. It was all that and more. However, in contrast to De la Cadena, in this case we are not dealing with a concrete interlocutor with whom we can determine our limited understanding of the case – our equivocations that we attempt to keep under control (Viveiros de Castro 2004). There is nobody willing to publicly recognise the reasons behind the attack. Everybody and nobody seem to know who destroyed the equipment and for what reasons. Everybody seems to know it was the *comuneros*. But nobody knows (or else they are unwilling to say) specifically whom.

The destruction of the equipment, in this sense, plays an interesting role as part of an ecology of figurations. The attack itself becomes an event that, in the absence of straightforward explanations, produces and re-produces archetypical explanations in the first place. Such an event is excess in the purest sense: 'That which is (as in exists, avoiding the term exist!) outside the limit of what considers itself everything, and therefore is not (as it does not exist!) within it' (De la Cadena 2021, 248). The action itself does not respond to a project of society but to its limit and frontiers. It is at the destruction, and not at a – symbolically or materially produced – community where the boundaries of different projects of society – e.g., an ideal citizenship aware of the dangers of a flood, or *comunidades campesinas* seeking to maintain their autonomy from the nation-state apparatus – are placed. These figurations aim to give a single explanation to a situation in which numerous versions of the event seem to coexist – something that, according to John Law (2004), also happens when forensic analysis must derive solid explanations of open-ended incidents. The act of destruction becomes a form of validating figurations that operate in the realm of society, limiting its understanding to within those boundaries.

The early warning system, as seen in this chapter, operates as a *tinku*, a place where diverse positions collide. In this multiplicity, it is a device that can be related to a boundary object, sufficiently malleable to adapt to local understandings yet robust enough to maintain a shared identity despite its plasticity (Star and Griesemer 1989). Interestingly, its robustness relies not necessarily on its performance or operability – after all, the differences that the early warning system created were so strong that

they ultimately led to its destruction. Its robustness relied precisely on the figures that are capable of mobilising: Lowlands and highlands, civilisation and savagery, progress and abandonment.

This case also shows us how politics of time-control, which risk management systems aim to foster, are sometimes strongly contested by other realities. Yet, those conflicts are not inconspicuous. They can mobilise strong changes in political agendas and programmes, even leading us to redefine the real urgencies in the territory. Rather than places subjugated to the urban as the quintessential space for political definitions (Brenner 2013), rural areas, the other-than-urbans, are also spaces of political proliferation and influence. In the following chapter, we will see how the interaction between these two apparently antagonist worlds, the urban and rural, can lead to novel forms of facing the challenges that outburst flood risk brings – interactions that will allow the articulation of diverse forms of anticipatory strategies for security production.

6 Coping with Abandonment: On Lakes, Pagos and Crosses

In the previous chapter, we saw how governmental attempts to create a culture of risk preparedness and, thus, strategies of time control have led to different forms of resistance and confrontations. We saw how, in a scenario of deep institutional mistrust, fed by the arrival of foreign operations in the region, some voices have questioned the validity of devices such as the early warning system. The precarious situation of many families and neighbourhoods in the region, as we saw in Chapter Four, is accompanied by a climate of mistrust that has helped perpetuate conflict in the zone, creating a categorical rupture between the rural highland population and that of the lower urban zones. The massive efforts conducted by local governments seem to be eclipsed by those historical divisions, raising doubts about the capacity of authorities to deal with the challenges that outburst floods entail.

But are these the only security-building practices currently in place? If there is a widespread mistrust in the measures proposed by the government, how do citizens manage to produce an everyday reality despite the catastrophic consequences that an outburst flood might entail? How, in other words, do they cope with the uncertainties that lie ahead?

This chapter explores the multifaceted ways in which security is produced in areas exposed to various hazards. While the state has initiated crucial – yet contested – strategies of time control and risk management as means to ensure safe environments, they are not the only practices aiming to cope with the threatening forces of the Cordillera Blanca. Often driven by the dramatic consequence of state absence in rural areas, the population has developed other methods for the imminent possibility of floods, droughts and frost. Strategies for dealing with the unruliness of mountain lakes and the unpredictability of climatic events would consider actions beyond science-based approaches promoted by governmental agencies, including forms of communication to engage directly with earth-beings cohabiting the mountain lands. Even the same modernist efforts promoting rational control and management of the highlands appear, ultimately, to be sustained by actions beyond the scientific realm. This complex entanglement of practices reveals, in the words of Hannah Knox (2020, 19), the ‘extensive relations that continually worked

to destabilise conventional methods of accounting and that crossed settled institutional boundaries in awkward and often controversial ways'. This chapter delves into the complex entanglement of practices that coexist with institutional efforts, revealing the unexpected alliances forged to keep lakes calm and the population safe.

In a first part, we will explore how the state abandonment experienced by the population in rural areas of the Cordillera Blanca, together with historic and ongoing cases of funding misuse and corruption that further eroded trust in public institutions, incited a search for support through other types of strategies to cope with extreme events. Events like droughts, hail and frost, or even the control of mountain lakes to avoid outburst floods, would be managed through *pagos*, an ancient form of relating with earth-beings. These practices, however, are not only applied by rural actors. Engineers and municipal workers would also call upon them to keep lakes calm and ensure that technological instruments such as syphons and water pumps could operate adequately.

Later, we will see that *pagos* are complemented by other security devices. Specifically, the figure of the cross would emerge as a fundamental entity ensuring the safety of the population and the protection of crops and lands throughout the year – a safeguard that, in order to function, would require massive organisation and mobilisation. Crosses would be carried from the highest points of the mountains to the lower lands of Huaraz, to receive new dressings and benediction in a celebration lasting an entire week. We will conclude by reflecting on how these efforts, which seem to be partially recognised by the Catholic Church, allow us to talk about an alternative form of encounter, in which the indissoluble union that the *tinku* promotes is replaced by a gathering in which the multiple versions of the cross tolerate each other diplomatically. This coexistence, I will conclude, can be related more to the notion of *topay*: an encounter that maintains the integrity of entities gathered together.

The absent state

Irrespective of the differing reasons behind the sabotage of the early warning system, explored in the previous chapter, most accounts agree on one point: far from simple vandalism, it was an act driven instead by desperation. The situation of extreme water stress, exacerbated by the figure of an absent state unwilling to provide concrete solutions, would have led people to look for any possible solution to mitigate the drought, even finding the most unexpected connections between foreign machines and the lack of rain.

As in other parts of the Callejón de Huaylas (Rasmussen 2017), feelings of abandonment are a strong driver shaping the relationship between rural actors and the

state. Nicolás Peje, Hualcán's mayor, explains to me the constant feeling of neglect that he and his neighbours experience, with the following anecdote:

When I took office at the beginning of 2016, a frost hit everything in the highlands. To face the frost, we called engineers from the agricultural state agencies. ... A register was drawn up and sent to the Ministry of Agriculture, but it came to nothing in the end. So, here people have become accustomed to it. We no longer trust that the State will provide support. ... I hear a lot that people are doing what they can with the means at hand, on their own. When there is frost, we have to turn [the soils] around to be able to produce something, to be able to sustain our economy.

By 'turning the soils around' (*voltrear la tierra*), Nicolás refers to tilling the harvested topsoil, thereby burying frost-damaged crops and bringing fresh soil to the surface, into which crops are re-sown. It is a desperate measure, since the chances of obtaining a good harvest late in the season are rather low. This action, known as the 'aftermath' in English – the same word used for the post-disaster recovery phase – recalls the frantic moments that survivors experience after an extreme event (like a flood or earthquake) impacts their community. As in those cases, the disaster cannot be explained solely as an uncontrollable force of nature; it encompasses the loss of livelihoods, the lack of state support and the desperate responses – the 'aftermath in the aftermath' – leading to the materialisation of the catastrophe.

Nicolás knows what it is to suffer the consequences of extreme events amid scarce state support. Coming from a poor *campesino* family from Hualcán, his parents lost all their crops during an outburst flood from Lake 513 in 1991. He was only five years old when the flood struck at night, destroying everything in its path. Nicolás remembers how the deafening sound of the mass of water, mud and rocks warned them to flee to higher ground. Although the event did not reach their house, it did sweep away their animals and destroy their maize crops, his family's primary source of income.

Having limited saving capacity, the family counted on that lost production to fund school supplies for Nicolás and his siblings. After the flood, they had no means of covering those expenses. Desperate, his parents were forced to start a new business, leaving behind their work at the *chacra*. 'They used to grow, harvest and sell. When [the flood] happened, they started a meat business, a butcher's shop. It's incredible how disasters make you change. When something breaks your livelihood and takes it away, you look for another one', he remarks. That change in his own world is similar to the dramatic transformations that people from cities like Yungay and Huaraz suffered after the 1970 events – transformations that, according to survivors of the event, turned their world upside down. Just like in the aftermath.

Feelings of state abandonment are commonly linked to a strong mistrust of authorities' uses of public funding. The feeling that authorities routinely misused pub-

lic funds, unfortunately, anything but surprising in Peru. The country's history has been marked by cases of corruption since the establishment of the Republic – paraphrasing Alfonso Quiroz (2016), a paradoxically intrinsic part of the Peruvian state. The diverse illegal practices that corruption entails – including bribery, embezzlement and misappropriation of funds, intentional misapplication of programmes and policies, and electoral fraud, among others – are part of the daily operations of a considerable part of the state apparatus. When corruption becomes a fundamental dimension of state functions, it restricts the state's own capacity to act in accordance with its goals and programmes. It is an invisible yet pivotal dimension of the public sector that has dramatic consequences at a territorial level.

Corruption has been particularly controversial in Ancash's recent history. The *Ancashino* author Julio Villanueva Sotomayor (2015, 16) refers to corruption as a 'vast layer of social mud' (*una enorme capa de lodo social*) covering every department, evidenced by several scandals that have *flooded* local and national media. Ancash has the unfortunate record of having four regional governors prosecuted for corruption almost consecutively in the past ten years. The most emblematic is César 'La Bestia' (The Beast) Álvarez Aguilar, governor of the department between 2007 and 2014 and articulator of a massive corruption network. Álvarez was sentenced to 14 years imprisonment in 2014 after being convicted of several corruption scandals during his administration, including diverting funds from the Regional Government to buy a regional TV channel and bribing journalists for political purposes. His administration was also involved in the first public case of the Odebrecht Scandal in Peru, Latin America's biggest network of corruption commanded by the Brazilian conglomerate Odebrecht. The company distributed millions of dollars to politicians, executives and former officials in 12 different countries in return for political favours, mostly related to the allocation of large-scale infrastructure projects. Álvarez was accused of bribery after receiving money from Odebrecht for the construction of the Carhuaz–Chacas–San Luis highway connecting the Callejón de Huaylas with Conchucos, a project that was used by the company to divert a massive amount of state funds on their behalf. He was later sentenced to 35 years imprisonment for running *La Centralita*, a clandestine headquarters from where he coordinated the diversion of public funding and even a criminal organisation to murder state officers exposing his criminal activities. It was an extensive clandestine network that included high-ranking members of the judicial, legislative and executive branches, local political operators and even hired assassins.

After Álvarez, three more well-known cases of corruption emerged involving Ancash's Regional Government. Waldo Ríos Salcedo, governor of Ancash from 2015 to 2016, was sentenced to five years for collusion and fraud related to public infrastructure works during his administration as Huaraz provincial mayor in 1999. He was also accused of voter inducement by offering a monthly income of 500 Soles (about USD 100) per family during his campaign for governor in 2014, a promise that he

never fulfilled. Manuel Rosales Turriate, Ríos' legal spokesperson, openly admitted on a TV show the same year that the promise was a strategy to attract voters, affirming that 'the politician is like a lover; he doesn't tell the truth to get what he wants' (El Comercio 2014). Enrique 'The Chef' Vargas Barrenchea, Ancash's vice-governor who replaced Ríos after his removal from office, was sentenced to five years after lying about his academic qualifications. In his *curriculum vitae* submitted to the National Jury of Elections, Vargas Barrenchea claimed to have a certificate of studies in gastronomy from a Chilean institute, but never completed the course. Lastly, Juan Carlos Morillo Ulloa, governor from 2019 to 2020, was sentenced to nine months for collusion in the construction of a special module for treating patients diagnosed with COVID-19 at a regional hospital in Nuevo Chimbote.

By 2020, Ancash was the department with the highest number of corruption cases nationwide, which included more than 70 cases related to the COVID-19 pandemic response (La República, 2020). More than 400 allegations of corruption have been raised as a result of Álvarez's network alone, a long list of accusations that involves regional and national judges, deputies, prosecutors, municipal officials and police officers. People in Ancash used to tell me, embarrassed, that it is known nationally as Peru's most corrupt region. No wonder, then, that Villanueva Sotomayor (2015, 16) has catalogued corruption as a truly cataclysm in Ancash; an 'obscure brown stain' as a consequence of 'the vile behaviour of a criminal network and the complicit or pusillanimous attitude of the departmental and national authorities', comparable to the dramatic landslide that took the lives of *Yungainos* in 1970.

As for any other working area of the public sector, corruption allegations have had enormous repercussions for the development of risk management efforts in the region. Early warning systems, such as those at lakes Palcacocha and 513, have not been exempt from this general impression. Many people consider SATs useless devices aiming to warn about an event that most likely will not happen. Members of the *Comunidad Campesina* Tupac Amaru II, for example, believe that the whole installation of the early warning system in Palcacocha was a means for municipal officers to move public funding they could profit from. According to Verónica, a *comunidad's* member, 'the employees in the region say "Danger, danger!" for taking money. But there's no danger. Years ago, there was dead ice in the water [in Palcacocha] that looked like a threat. ... That's why it was said that there was a danger. But now it doesn't exist anymore. It's a business run by the employees'. The technical problems that the SAT experienced during its initial months of operation did not help to improve its public image either. Even though it seems to have fared better than the system at Lake 513 and no group has tried to destroy it so far, its relevance has been constantly questioned by a population that consider other issues to be regional priorities, rather than an expensive system that, according to them, does not even work properly.

Mistrust of the SAT thus encompasses not only its installation but also performance. Many people believe that flood alarms are another means used by authorities to divert public funds. Under Álvarez, the regional administration is remembered for having the highest number of flood alarms of past decades, which people in the region associate with a form of funding embezzlement due to the amount of resources this type of warning mobilises. Early warning systems, in this sense, are associated not only with a form of infrastructure that facilitates the misuse of funds during its installation. The possibilities for corruption that these systems open up refer to their own operation: a source of money that, according to many *Huaracinos*, is activated every time the alarm sounds.

The controversies around Huaraz's early warning show that mistrust of flood risk management efforts seems to be a generalised issue in the Callejón de Huaylas. Efforts to establish a culture of preparedness for GLOFs have been undermined by the SAT's initial technical shortcomings and the widespread corruption that has affected the region. These have jeopardised attempts to build a future around an idea of security that tries to minimise the human losses that could result from an extreme event in Huaraz. As a preparedness device, the early warning system is a way of extending evacuation time by regulating rhythms relating to the mountain lakes – the rhythms of work, as we also saw in the previous chapter, together with the control of data feeds from lakes such as Palcacocha. Yet, the system's technical problems, together with the political scandals affecting the region in past years, make those efforts to regulate rhythms a contested practice. With no certainty on whether the system functions correctly, or whether it is based on honest attempts at risk management, the construction of a safe future is far from being achieved, at least for those questioning the operation of the SAT. What practices, then, do people engage in to make the future a less hostile time on which to rely?

Pagos and paperwork

During our conversation, Nicolás Peje affirms that the destruction of technological devices is not the only last-ditch resort that people call upon to cope with extreme situations such as droughts. When the rain does not come at the beginning of the harvest season, people 'burn the mountains' (*quemar los cerros*), intentionally setting long swathes of land on fire. The smoke emitted by the burning soil, he and local farmers think, attracts the rain immediately – a strategy with consequences of which they are very aware. 'We know we are polluting the environment, and it's dangerous, but there is no other way. It is an obligation, a response to our own necessity', he affirms.

According to Nicolás, such traditions are ways of communicating with their environments that, although less public than they used to be, are still part of the practices relating people and land:

you do [a *pago*] so that you have good production or so that you don't have natural disasters. You do it to the *Pachamama* so that she is watching over your produce, over you. Also, for always looking after your people. To the rivers, you make a *pago*, so it does not harm the population. And also to the *nevados*. ... Right now, we are all practising it by ourselves [individually]. You have to make a *pago* to your land so that it gives you produce, and so on. But we would like to do it as a community.

According to Marisol de la Cadena (2015), the word *pago* (payment) is a deviation from the original notion of *despacho* (remittance). Whereas the first implies an imbursement, something that can be acquired if enough resources are provided, the latter has to do more with a delivery, something that is given for its own sake¹. De la Cadena relates *pagos* to the packages that private companies offer to tourists in Cusco under the label of 'traditional experiences'. *Pagos*, in this sense, refer more to the transactional nature of tourism; 'an ephemeral economic relationship that continues to ignore *runakuna* [people in Quechua] existence, while consuming their practices for what tourists are insignificant exchanges of money and perhaps some sincere emotions' (De la Cadena 2015, 169). However, the idea of *pagos* has also proliferated more organically among people practising them with pure intentions of creating a bond with earth entities. Astrid Stensrud (2019) affirms that *pagos*, or *irantas*, are offered to mountains and lakes in the Colca Valley to avoid accidents – for example, before using dynamite in construction works. Similarly, the few people who refer openly to making offerings to the land, mountains and lakes in the Callejón de Huaylas talk about *pagos* rather than *despachos*. Whether a problematic deviation of the original practice or not, *pagos* is the most common term for the activities that people in the region conduct nowadays to ensure security in the mountains and a good harvest.

Since, as Nicolás suggests, people in places like Hualcán make *pagos* only privately, it is very rare to hear people speaking publicly of such practices. Forms of communication with other-than-human entities are difficult to find in an explicit form in the Callejón de Huaylas nowadays, as other investigations on the matter

1 This difference vibrates with Michael Taussig's (2010, 224) distinction between the offerings made by *campesinos* and miners to the spirits of mines, known as the Supay, Huhuari, Tío or Diablo (the Devil): 'Peasants exchange gifts with the spirit owner; the spirit owner converts these gifts into precious metal; the miners excavate this metal, which they "find" as long as they perform rites of gift exchange with the spirit; the miners' labor, which is embodied in the tin ore, is sold as a commodity to the legal owners and employers; these last sell the ore on the international commodity market. Thus, reciprocal gift exchanges end as commodity exchanges; standing between the devil and the state, the miners mediate this transformation'. Paraphrasing Taussig, changes in the relationship between local communities and their surroundings would be explained by the new commercial relations that the expansion of capitalism brought to almost every corner of the colonised lands – an expansion that even transformed the offerings provided to earth sentient entities.

have reported (Bode 2001; Rasmussen 2015; Walker-Crawford 2021). In cases where they have been documented, practices are rather subtle offerings based on an item of food, coca or alcohol left at the foothills of the mountains and lakes – contrasting with the more elaborated *despachos* to be found in regions like Cusco. Even in cases where people still have these types of relations with other-than-human entities, they commonly keep them secret for fear of discrimination.

Few studies have explored why traditional forms of communication with sentient beings in the Callejón de Huaylas are less visible than in regions such as Cusco. However, we may speculate on this. Many of the traditional linkages connecting people with other-than-human entities in the past, which Catherine Allen (2002) and Marisol de la Cadena (2015) relate to the figure of the *tirakuna* or earth-beings, have changed dramatically since efforts towards rural modernisation – especially after Juan Velasco Alvarado's agrarian reform in the late 1960s. These transformations led to a strong division between the former traditional *comunidades* and what emerged as *comunidades políticas* framed within the state apparatus, as Javier Puente (2023) states. The traditional relations that *runakuna* (Quechua people) and *tirakuna* developed within the *ayllu*, the basic social entity cohering Quechua society based on an intimate land cohabitation², would be slowly replaced by territorial demands of land restitution that *comunidades políticas*, under the figure of *comunidades campesinas*, raised. The shift from *indígenas* to *campesinos*, Puente suggests, would lead to a bureaucratization of the figure of the *comunidad*, undermining the relevance of public relationships and forms of communication with *earth-beings* within a specific *ayllu*, the community with the inhabited land.

Whereas Puente (2020) affirms that efforts to *campesinizar* (peasantise) the rural world were a nationwide phenomenon as a consequence of the agrarian reform, this political transformation of the social fabric was, according to Mattias Rasmussen (2015), particularly radical in the Callejón de Huaylas due to other two pivotal events: the 1970 earthquake and the creation of Huascarán National Park immediately after the agrarian reform. The former, as we have seen, would be used as the perfect scenario to accelerate Velasco Alvarado's political programme of social transformation

-
- 2 Inhabiting the land and creating a bond with it is a fundamental characteristic of the composition of an *ayllu*. According to Allen (2002, 84), '[u]nhabited places are not *ayllus*. But neither is a group of coresidential people. An *ayllu* exists through the personal and intimate relationship that bonds the people and the place into a single unit. Only when *Runakuna* establish a relationship with a place by building houses out of its soil, by living there, and by giving it offerings of coca and alcohol is an *ayllu* established. The relationship is reciprocal, for the *Runakuna's* indications of care and respect are returned by the place's guardianship'. This inhabitation is, according to Allen, driven by a common focus among the *ayllu's* members, which can include sharing a common ancestor, a common allegiance with a sacred place, or even common specializations and working tasks. This focus-driven bond enables individuals to belong to several *ayllukuna* simultaneously depending on the focus and context.

in the region, leading to a re-articulation of lowland–highland relationships. Moreover, the political changes in land administration brought by the constitution of the Huascarán National Park would force *comunidades campesinas* to adapt to new forms of engagement with the territory. Sentient entities such as lakes or snowed peaks, which previously perform a fundamental role in the *ayllus* where they belonged, underwent radical replacement by new administrative figures, including new state agencies, regimes of land property and, above all, paperwork. Tonnes of it.

According to Rasmussen, paperwork represents the ultimate expression of a complex bureaucratic reality that *comuneros* had to learn to deal with. ‘When an area is designated as worthy of conservation, it happens through a process in which plants, animals, people, practices and territories are reclassified and given new significance. Paperwork is a central strategy in those efforts to enclose resource territories by classifying, indeed claiming, history’ (Rasmussen 2018, 430), the author suggests concerning the creation of Huascarán National Park on former common lands. Just like labour regimes, administrative transformations in the Cordillera Blanca, together with the incommensurable lashes of events like the 1970 earthquake, accelerated changes in forms of relating to the territory – and its history – that had a tremendous impact on people’s lives. For *comunidades campesinas*, this implied justifying their existence not through their ancient connections with entities in the territory. Documents, particularly old ones, would be the primary strategy to connect people and land across history. As Pedro, a member of *Comunidad Campesina Tupac Amaru II*, tells me regarding conflicts with Huascarán National Park:

when we started to do the works with concrete [referring to the construction of the fence at the entrance to Lake Palcacocha], they brought us down [off the mountain] with the police. But then we showed our documents. We count on those documents. So, this time we have done new works with concrete, and they haven’t said anything.

The documents Pedro mentions are the land ownership certificates that, date back to when his *abuelos*³ bought those lands in 1886. Those documents, more than anything, are the proof the *comunidad* uses to certify their connection with what they define as their property – and their rights over it.

Although people might not discuss or recognise it explicitly, relations with sentient beings in the mountains still influence everyday life. Mountain lakes are still considered dangerous entities: they provide the population with water and life, but they can also be deadly – and not only via floods. Almost every lake of the Cordillera

3 Whereas the word *abuelo/a* means grandfather or grandmother, in the Andes is commonly used to refer to ancestors in general.

Blanca is associated with stories about people being victims of *encantos*: Enchantments in the form of treasures that the lake shows to visitors, to attract them into its waters and swallow them. Sometimes the water opens up, leaving a space full of treasures in the middle of the lake, so the victims can walk inside before the water covers the area again. In other cases, the swallowed victims are turned into stones that remain in the lake's surroundings forever. Lakes are protected by sirens and *toros bravos*, wild bulls wandering around the mountains and safeguarding the lakes' wealth. They are particularly *chúcaros* against people seeking mineral veins without the permission of the mountain or against *huaqueros* looking for *chullpas* and other ruins to loot. There are even rumours of people becoming ill after hunting wildlife in certain lakes. Even when denying the practice of *pagos* or other forms of offerings to mountains or lakes, they recognise these stories as part of their lives.



Figure 14: Syphons installed in Palcacocha, passing under the retaining wall (Usón 2020)

Creating proper relations with sentient beings in the mountains is not only a practice of rural highland communities. Roberto, the engineer behind the draining operations in Palcacocha, recognises that the people monitoring the lake until recently used to make *pagos* to the family of sirens that lives within the water. Eduardo, an older worker from Llupa who used to work for the Municipality as a *lagunero*, was in charge of offering *pagos* to them. 'When he lived upstairs, he stayed in the camp and in his dreams [the sirens] always told him what he had to give them. So, he would

go down, for example, buy a ham at the market and take it with him. What he never missed was the coca leaves and rum. He always, always gave it to them'. Roberto affirms that Eduardo was forced to leave his job at the lake under pressure from the *comunidad* Tupac Amaru II. According to him, Roberto was very efficient at his job and the *comuneros* felt he was giving them a poor reputation. In addition, some *comuneros* did not feel comfortable with him making *pagos*. 'From then on, it became difficult for us to manage [the lake] because we used to manage it through prayers and *pagos* to the land, right? And that *pago* was continuous, every 15 days or every month'. Without the *pagos*, Roberto affirms, the lake turned more *chúcaro*; the syphons (see Figure 14) stopped working properly and cavitation, a type of hydraulic void affecting the draining tubes to the point of risking their collapse, started occurring more often. Hernán, a *lagunero* from Uncush working in Palcacocha, thinks the same. Although Eduardo is no longer employed as a *lagunero*, Hernán still occasionally offers the lake *pagos*. 'We give coca, cigarettes, corn, wheat, everything. ... [We give it] when it starts growing and doesn't stop. It's like it's warning us. We dream with ladies. When we dream, we have to give it its *pago*. It is asking for something'.

The relationship between the people and entities like mountain lakes in the Callejón de Huaylas show us that different strategies for coping with extreme events cohabit in this region. The abandonment felt by highland people as a result of an absent, corrupt state seems to be managed through practices that, although apparently declining, are still a form of relating and communicating with sentient beings in the Cordillera Blanca. Far from being something engaged in only by highland people, practices like *pagos* are sometimes recognised and even embraced by authorities and engineers from urban areas. *Pagos* are considered necessary to manage the lakes like Palcacocha, being applied by workers there and combined with engineering operations for draining the water. Yet, not every practice outside the conventions of science would be embraced. In all its variants and explanations, the destruction of the early warning system was rejected by authorities and workers, even those supporting alternative relations with lakes, and was regarded as a form of superstition at best and the result of political manipulation at worst. *Comuneros*, as a figure, would be condemned for these acts, considering an expected reaction to their idiosyncrasy and lifestyle – even when, in many cases, *comunidades campesinas* would try to distance themselves from what are considered traditional forms of rural life. The entanglement of all these forms of relating with lakes and mountains creates a complex scenario where straightforward connections between figures and environmental responses are ambiguous. The political arrangements across the history of the Cordillera Blanca would create a diverse ecology of practices that, despite its messiness and unexpected connections, would be oriented towards the traditional lowland and highland figuration.

Despite the modest attempts nowadays by people like Nicolás or workers in Palcacocha to maintain good relations with entities in the mountains, practices like

pagos may not be enough to avoid the occurrence of extreme events. The extensive ecosystem of agents, practices and materiality composing disasters and the efforts to prevent them will require inclusion of other types of devices, entities that need to be carried from time to time, as we will see in the next section, to ensure that cities and villages remain safe.

Carrying protection

The Sun rose just a moment ago. I am joining a group of 15 men on their way to Runtu Hill, close to the village of Paria-Wilcahuáin in the vicinity of Huaraz. Their goal – mine too, I presume – is to bring the Cross Runtu from *his*⁴ throne, a cairn made of stones and concrete, to their village about two kilometres downhill. It is a Tuesday in early February, and next Sunday the *Fiesta de Cruces* (Fest of the Crosses) will take place in Huaraz, announcing the beginning of the carnival. Runtu must be dressed up before leaving for Huaraz, where his new *vestido*⁵ will be blessed. As living beings, Runtu and the many others crosses gather while waiting for their new *vestidos* to be dressed. This celebration, which will almost entirely consume people's time in Paria-Wilcahuáin over the following days, is fundamental to ensuring that crops will not be affected by frost or hail over the coming year. No *vestido*, no protection; it's as simple as that.

Crosses are central entities in Huaraz and its surroundings. They provide security for the people in the highlands and lower areas, protecting their parishioners from events threatening villages and towns. They can also send messages to their devotees to warn them about possible dangers. Like other entities in the mountains, the crosses reveal themselves in dreams. They can help find something lost or announce something bad that will happen, like a burglary or another significant event such as a flood or an earthquake. But to do this, the cross needs to be cared for. Every year, they need new *vestidos* that must be blessed. The *calvario*, the wooden body of the cross, has received the benediction several times over the years. But the adornments, renewed every year, must undergo the same process (Bode 2001, 303). To protect people, in other words, the cross must be mobilised.

Runtu, the cross we have come to carry, is a massive *cruz mayor* (main cross), one of the most famous in Huaraz's surroundings. It is approximately five metres high and two metres wide, and constructed of solid wood adorned with dried *car-rizo* (water-reeds, *Phragmites australis*) and other remnants of last year's *vestido* that

4 Despite their feminine grammatical article (*la cruz*), crosses are normally male entities.

5 Literally meaning 'dress', the term *vestido* refers to formal attire. It conveys the solemnity with which the crosses are treated when they are brought down from the hills each year to be dressed in new clothes.

make *him* a cumbersome structure. Alcohol, which has been consumed since early morning, helps to make the transportation of such a massive cross more bearable. Red wine, cola with rum and *chicha*⁶ *con punto* (*chicha* mixed with pure alcohol) are among the favourites we share from a single plastic cup. One serves, the rest drink. As soon as you receive the half-full cup, which happens every couple of minutes, you drink it fast, almost at once. You do not want to hold the only drinking vessel for too long. Consuming alcohol at this pace fulfils its goal quite efficiently. You can tell that the participants, myself included, already feel the effects of heavy drinking. All this happens while the traditional *caja flauta*, a small band consisting of two traditional drums and two *pinchuyos* (a type of flute), repeatedly plays the same traditional rhythms. This scene will set the tone for the next few days – a carnivalesque excess in its purest expression.

After taking Runtu down, we head to the house of the Ortúzar family, where the cross will be newly dressed in the following days. The family was randomly selected to be the *devotos*⁷ (devotees) of this year, the hosts of the celebration. They are in charge of keeping Runtu in their house and dressing him for the new year before leading to Huaraz on Sunday. The result of their work, some days later, is exceptional. The old, dry *carrizo* and *machitu* (*Tillandsia latifolia*, a plant endemic to the zone) comprising the structure of last year's decoration have been removed and replaced with fresh branches. Just like in past years, plastic flowers⁸ have been used to decorate the *carrizo* and the *machitu*. This year's decoration consists of mixed flowers of different colours: white lilies in the centre, surrounded by pink daisies then sunflowers at the upper tips of the cross. Some wooden butterflies pop up around the flowers in the upper part. Like every year, and according to the tradition, the *machitu* placed over the *carrizo* has been painted silver, leaving only its pink tips uncoloured. At the very centre, the heart of the cross shows a hologram of the Sacred Heart of Jesus. Around it, large red letters form the words Runtu and Paria. At the tips of the cross, large amounts of rosemary⁹ stick out among the artificial flowers.

6 *Chicha* is a traditional beer-like beverage of Latin America. In Ancash it is commonly made from malted corn (*chicha de jora*) but sometimes also from quinoa or peanut. It can be both alcoholic and non-fermented. During festivities, it is common for people to add pure alcohol to the *chicha* to increase its low alcohol percentage.

7 Whereas people in Paria-Wilcahuáin refer to the hosting family as the *devotos*, the traditional name of this position has commonly been the *mayordomo* (steward).

8 The use of artificial flowers instead of fresh ones, I later learn, was the result of a long-standing campaign conducted by the Huascarán National Park to avoid people overexploiting endemic species located within the park's protected areas.

9 Rosemary is particularly important due to the healing properties it has for agriculture. In some places, the rosemary is later removed from the cross and burned in order to avoid frost and hail. I also notice that it is commonly taken in little pieces by Runtu's devotees during the celebration days, as a form of keeping the protection of the cross with them.

Despite the relevance of Runtu for people in Paria-Wilcahuain, this is not the only cross they take care of. Runtu will be accompanied in the following days by Awaq, another community cross that, however, is considerably smaller than the former: about two metres high and one metre wide. You can tell that Runtu and Awaq are closely related. They even wear similar colours. Awaq is decorated with white and yellow daisies in the centre, pink lilies around it and white and pink daisies at the ends. Like Runtu, silver *machitu* can be spotted beneath the flowers, while large quantities of rosemary overflow to form the tips. Unlike Runtu, however, a bouquet of *ichu* and other wild plants is placed around the heart, also represented by an image of the Sacred Heart of Jesus. Instead of butterflies, five blue-and-white wooden birds are distributed along the cross's length.

Just like Runtu, Awaq offers protection to his devotees in the surroundings. The security he provides, however, is not against frost or hail but floods – specifically, from Lake Awaq (also called Ahuac or Aguak) – located further up in the mountains. The cross was placed there to protect the population against an outburst of the lake. *The lake has been amansado* (tamed) *anyway*, one of the other participants explains to me. In the past, few people would go up to the lake, as it was believed to be *encantado* (haunted) and, like other lakes in the region, it would show visitors jewels and treasures, in order to lure them into the water and kill them. Now, regular visits from *gringo* tourists, a more positive version of this foreign figure, have calmed the lake. However, it is still said that the surface of the lake often becomes rough as visitors approach. Having a cross nearby, in this sense, has been part of the process of taming the lake and ensuring it remains calm.

The connection between Runtu and Awaq extends beyond their geographical proximity. The two crosses are regarded as siblings, bound by a familial tie that renders their existence incomplete without one another. As siblings, Runtu and Awaq get to meet only once per year for *Fiestas de Cruces*, a massive event in Huaraz and the surrounding villages. Hundreds of crosses of all sizes and colours gather during the first day of the carnival, exactly one week before Lent. During that Sunday, *cruces de campo* (rural crosses) and small family crosses come down from the higher villages surrounding Huaraz to have their new 'dresses' blessed, which they will keep throughout the year. It is also one of the few moments in the year when crosses meet, in a real *fiesta* organised for them. When the *cruces mayores* get to see each other, they commonly dance while they greet joyfully but with formality, bowing slightly in front of each other. They are happy to gather with distant friends and relatives. Just like Runtu and Awaq, other crosses are related through family bonds, and it is the only time of the year that they are able to reconnect (see Figure 15). It is like visiting cousins and siblings during a family reunion.



Figure 15: Runtu (left) and Awaq (bottom right) dancing during Misa de Cruces in Paria-Wilcahuain, together with other cruces mayores (Usón 2020)

Carrying Runtu and Awaq from Huaraz back and forth and then back to the top of the mountain is an extremely exhausting task. After being dressed up, both crosses are walked about six kilometres downhill together to La Soledad Church in Huaraz, where they will meet all the other main crosses of the zone. I personally experience how heavy Runtu is while walking from Paria-Wilcahuain to La Soledad, when the participants invite me to carry him at some point. I timidly nod at the time while taking a jacket from my backpack to protect my shoulder from the cross's weight, a technique used by all the *cargadores*. As I slowly approach the cross, I receive an uncomfortable glance from an exhausted man under the head of the *calvario*, the heaviest part of the cross. At a sharp ¡*Cambio!* (Change!) the procession stopped for a second, and I quickly dive under the wooden structure in front of the previous *cargador*. While holding the upper branches of *carrizo* with both hands and my right shoulder, and as the other person withdraws, I receive the full weight of the structure. It is almost unbearable. I can feel the weight all the way down my back, from the upper part below the shoulder blades to the lumbar area. Little by little, though, I start to take slow but sure steps. I make pronounced gasps, trying to set tangible goals for where I plan to go. First, a rock up ahead, then a bush, then the entrance to a house further ahead; all those things works to specific milestones on how long to

walk. Once my turn is over, I feel a massive relief over my back and shoulders. Everything seems lighter. I try to estimate how far I walked. Was it 50 metres? 100 metres? One minute? A minute and a half? Less? I wonder if it was an average distance or if, in the eyes of the more experienced *cargadores*, it was merely a symbolic contribution. Carrying such a massive body is a constant reflection on limits: When is it enough, and when is it too little? When is one crossing a barrier of self-flagellation and when is one, in the eyes of others, eschewing one's communal duties?

The task of a *cargador* becomes more difficult as the days progress. After Runtu and Awaq receive their new dresses, their weight increases considerably due to the fresh branches of *carrizo* and *machitu*. The weight becomes even greater during rain, as the branches absorb the water. Once the celebration in Huaraz is over, *cargadores* must walk the six kilometres along the steep road back to the village, which can take twice as long as the way down. The last day, the *hawikuy*¹⁰, is the most strenuous part, as both crosses must be carried back to their homes over the mountains. The hike to the Runtu Hill takes at least two hours from Paria-Wilcahuáin. It is a massive farewell, bringing together the entire town and people from the surroundings. The hike to Lake Awaq, however, is less crowded. Due to the physical sacrifice it entails, only the youngest participants go up to the lake. It is a three-and-half-hour walk from Runtu's throne up a very steep mountain path. The top of the mountain is reached around nine in the evening, and then another two hours are required for the return. But, as in any other moment of the celebration, the hardship does not seem to matter. To carry Runtu and Awaq, to be their legs, is a blessing worth the burden.

Despite the longstanding tradition of this festivity, *Fiesta de Cruces* has not always been viewed positively by the Catholic Church. As we saw in Chapter Three, the cross came to replace other sacred entities, including *huacas* and *huancas* strategically placed as protectors of the land. The exhaustive campaign by the Catholic Church to eradicate those figures from the daily lives of the colonised population, replacing them with Christian crosses, only led to the articulation of a new being – one that, similarly to their predecessors, was considered a protector of the land. It was a reciprocal relationship, in which the oversight of the duties around the cross could bring dramatic consequences.

As Pierre Duviols (1976) suggests, neglecting the care of entities like *huancas*, or other forms of *huacas*, was not only a neglect of traditions; it was also a form of *jutsa*¹¹,

10 Quechua for placing, or planting, the cross in his throne.

11 Sometimes translated as 'sin' (e.g. Yauri Montero 2013, 135), the *jutsa* (Ancashino Quechua) or *hucha* (Southern Quechua) refers more to the breach of an obligation, subsequently leading to the occurrence of a major event, like a drought or the death of an Inca ruler (Cockrell 2017). The occurrence of those events, in this sense, reflected the abandonment of the duties, especially those that refer to caring for entities such as *huacas*. In contrast to the concept of sin in the Catholic context, *jutsa* has a strong political connotation and therefore constitutes more than a religious fault.

an infringement of the obligations imposed by the Inca rule, and could lead to disruptive events like droughts. Taking care of the *huacas*, in this sense, was not simply a religious duty or *costumbre* (custom) – under Christian terms – but a political one. As members of the communities and the Inca state-like apparatus, *huacas* were in direct contact with the Sapa Inca, the main Inca ruler, providing protection while demanding respect and attention from the people cohabiting the lands within their jurisdiction. It is precisely this centrality and relevance that would later be transferred to the crosses, a religious icon that, despite the Church's efforts otherwise, would be treated with the same fervent devotion as *huacas* in the past.

With time, the Church would make these celebrations an important part of its own traditions. Yet, this respectful coexistence of different traditions would also find some moments of tension throughout history. After the 1970 earthquake, Barbara Bode (2001) affirms, new reformist currents within the Church tried everything in their power to forbid the festivities. In tune with Velasco Alvarado's efforts to create a new Peruvian society from the debris of the disaster, and oriented through the recently celebrated Second Vatican Council that aimed to update Catholic practice, religious authorities used the destruction of the earthquake as an opportunity to reform what they considered old-fashioned traditions that had nothing to do with the liberatory role of the Catholic faith. As Bode (2001, 191) states, 'just as the Revolution saw an opportunity to move beyond agrarian reform and expropriate urban land of the levelled towns, the Church saw the chance to move beyond mere changes in ritual that broke with traditional Catholicism'. Changes, Bode suggests, included what the Theology of Liberation, a Christian theological branch with a deep concern for the poor and the emancipation of those oppressed, defined as the promotion of a radical self-awareness through *concientización* (consciousness-raising). The Church was mandated to make the poor aware of their exploited and precarious existences. From this perspective, devotion to figures such as crosses and saints was just another form of superstitious *costumbres* linked to a primitive Andean religion that kept people in ignorance and underdevelopment. *Indios* and *campesinos*, thus, had to overcome their backward traditions to be conscious of the social injustices surrounding their lives.

But despite the efforts to eradicate those traditions, the Church could not eliminate the festivities around the cross. Bode (2001, 309–12) relates how, two years after the earthquake, despite prohibiting the transport of crosses to La Soledad for the *Fiesta de Cruces*, several people from the higher towns arrived with their massive protectors for the first mass of carnival, begging the priest to bless them. Some people even attributed the earthquake to the downgrading of the crosses, something that people were willing to change by reinforcing their devotion to those entities. Facing crosses coming from all over the highlands, a mass overflowing the lowlands as in other moments in time, the priest had no alternative but to perform the blessing. Although a significant proportion of the mountain crosses were not transported

to Huaraz for benediction that year, the subsequent festivities recovered in scale as the city started to recuperate from the earthquake's effects. The crosses, just like El Señor de la Soledad, were fundamental figures in preserving the integrity of the destroyed city, with the hope that, by maintaining those ancient traditions, the ruined city would re-emerge from the rubble.

Nowadays, *Fiesta de Cruces* is one of Huaraz's largest religious celebrations, known nationally for the beauty of the crosses that join from different villages and towns surrounding Ancash's capital. Its current large scale, though, has not eliminated the historical friction with the Catholic Church. The institution still considers the *costumbre* around the crosses problematic and a practice that goes against the Catholic faith. Rather than just a symbol of redemption, crosses are portrayed as living guardians, and the connection people build with them is considered a form of worship that borders on the heretical.



Figure 16: The assistant priest gives the benediction to a mass of crosses gathered in La Soledad

(Usón 2020)

These frictions can be sensed throughout the Catholic rite. During the *Misa de Cruces*, the thousands of devotees gathered in La Soledad are mandated to stay outside the church, in the square in front of the temple. There, some plastic chairs and

a large folding table serve as an improvised altar for the priest leading the mass. The priest, a man in his sixties who mixes phrases in Spanish and Quechua throughout the ceremony, seems slightly from the thousands of people gathered in La Soledad square. It is a particularly short ceremony; the priest completely omits the Eucharist, the most important moment of the Catholic ritual. The crosses gathered that day, moreover, are barely mentioned during the ceremony. Only at the very end does the priest curtly congratulate devotees for the great work they have done *decorating* the crosses, never referring to their garments as *vestidos* or acknowledging their protective role in their communities. Some minutes before the benediction, the priest only calls for calm and order, promising that everyone will receive the blessing if they behave properly. Rather than talking to parishioners, he seems like a father preaching to his children.

After giving the main instructions for the benediction, the main priest disappears without saying a word. He does not even conduct the blessing; this is done instead by one of his assistants, an overwhelmed priest who faces alone the massive group of people that starts approaching him, slowly but steadily, carrying their family and community crosses (see Figure 16). They are waiting to receive the holy water he spreads through the air with a branch of wildflowers from a plastic bucket. Instead of a church choir singing Catholic songs, a large band comprising drums and brass instruments plays regional *huaynos* while other participants throw fireworks to cheer the moment. The scene differs entirely from the solemnity of the masses celebrated each Sunday in La Soledad. The celebration is for – and run by – the people; the Church simply endorses a ceremony that is beyond its control.

While I observe the benediction of the *cruces mayores*, Runtu and Awaq included, I notice that none of the *cargadores* of those crosses are attending the mass. On closer inspection, I can see hardly any people from Paria-Wilcahuaiñ. At some point, I spot one member of the group carrying Runtu and Awaq that morning. As I ask him where the others are, he tells me they have gone somewhere (*por ahí*). To recover energy, he says while imitating with his hand the raising of a glass to his mouth. The message is clear: *Cargadores* are not there to attend the ceremony. Their role is to carry the crosses and ensure they receive the benediction, so that they can then be returned to their thrones. What happens in-between is not their business.

It would be too easy to describe the celebration of the crosses as an example of what Isabel Cruz (1995) defines as a popular mestizo Catholicism – the result of a syncretic relation between two well-constituted worlds: the Andean and the Christian traditions. The festivities around the cross certainly have a direct link to the arrival of Catholicism in the region and its further entanglement with entities like *huan-*

cas. Yet, dealing with these entanglements as the originator of a unified synthesis impedes exploring in further detail the multiplicities that we can find around celebrations like Fiesta de Cruces – and the commemoration of the figure of the cross in general.

As we have seen in this section, for people in places like Paria-Wilcahuaín the cross is not only an icon; it is a being – not a human one, and certainly not an earth-being (*tirakuna*). The direct legacy of the *huanca* – the stone-based guardian protecting and demarking the lands of the *ayllu* – over the cross grants him the status of an entity deeply rooted in the place he aims to protect. In order to safeguard the population, the cross requires the display and mobilisation of a vast network of actors, materialities, practices and relations – in tune with what Brian Cockrell (2017) defines as a real assemblage between components to ensure the *camay*, the energising power, of entities like *huacas*. Without being bestowed new clothing, plus the work of *cargadores* and the constant music of the *caja flauta*, crosses like Runtu and Awaq could not take care of the population. It is a protection that needs to be embodied, to the point of feeling it in every muscle of the *cargadores'* back, as my experience carrying the cross shows. People holding up the cross turn, for the minutes their work lasts, into the cross himself. They are his legs that enable him to reach Huaraz and receive benediction and to then return to his throne in the highlands.

But this living condition of the cross in any case depletes the multiple realities around this figure. In the eyes of the Catholic Church, the cross is still an icon – a fundamental one, but which cannot be related to some concrete being with agency. The Church has fought against what they consider as a misleading interpretation, a *costumbre* representing the ultimate example of superstitious beliefs and a problematic animated world that the Catholic religion is – still now – unable to properly deal with. Recognising the existence of the cross beyond the icon is something that borders on the heretical. But rejecting such practices can lead to strong conflicts with the population, as history has shown. The Church, under these terms, has no choice but to accept the existence of this festivity even if it goes against its own teachings.

The ontological multiplicity (Mol 2003) that the cross entails strongly resonates with what in this work has already been presented under the notion of cosmopolitics – a politics of world-making that challenges the idea of unitarily constituted reality. The cosmopolitical arrangement around the crosses, however, is less about full recognition of all these versions of the cross coexisting simultaneously but more to do with partial recognition – or perhaps simple tolerance. Forced to accept this tradition to avoid social conflict, the priest from La Soledad is reluctant to fully recognise those crosses as what they are for the vast majority of the population: protectors of life and lands. At the same time, *cargadores* do not seem interested in the moment of the benediction, the central action for which Runtu and Awaq have been carried all the way down from Paria-Wilcahuaín. Instead, they prefer to go elsewhere and 'quench their thirst'. This ambivalence towards the other, however, should not be

interpreted as indifference or, worse, misrecognition. Both scenes show that these realities and their versions of the cross coexist in diplomatic terms (Latour 2004) but without necessarily fully recognising the other. This form of coexistence speaks more about a *tolerated* cohabitation, an exchange that, rather than embracing the otherness in its totality, aims to respect other existences without necessarily fully accepting them as real or genuine. It is a diplomacy that moves beyond unilateral communication and accepts that the positions at hand require instead negotiations, compromises, gains and losses. If the other cannot be persuaded, then peace needs to be found on other terms.

Such an approach to the multiplicity of the crosses reveals an interesting aspect of this encounter worth bearing in mind. The gathering of the two types of crosses seems to diverge from the already explored operation that the *tinku* inaugurates – an encounter with the difference that produces a synthetic union. Rather than a syncretic outcome, the cross embodies a multiplicity that relates more to another type of encounter in the Quechua world, known as *topay* (from Spanish *topar*, to butt or bump into something). According to Catherine Allen (2002, 267), although both concepts relate to a similar semantic field, *tinkuy* refers to a mixture ‘whose ingredients lose their separate identity in a new whole’. *Topay*, moreover, denotes ‘a coming together of parts that maintain their integrity within the whole’, like mixing water and oil. They raise two different types of encounters, one in which the components are merged into a new result – similar to what the idea of syncretism promotes – and another in which the different elements at stake remain autonomous without being corrupted or transformed.

The question of whether these concepts are ontologically applicable to the figure of the crosses or any other of the encounters explored herein is beyond the scope of the present volume. What is interesting is the disposition, the *epistemic mood* these encounters offer, as Andrea Ballesterio (2019) suggests. As a thing initiating an encounter, the cross does not provide an ontological unity. It/he is an icon and a living being, a tension oscillating between what María Alba Bovisio (2019) differentiates as representation and ‘presentification’ (*presentificación*). These different versions of the cross seem to cohabit in peaceful yet contradictory and sometimes tense terms. However, the multiple versions of the cross cannot be associated with a specific world order. People in urban and rural areas show devotion to the cross as a living entity. It is a pulsation beyond particular places, villages or social groups. The *topay* that the cross offers is not between the highlands and the lowlands, but between the multiple realities and temporalities that the cross [him/it]self contains.

Building security amid uncertain times

Here and in the previous chapter, we have explored the efforts of governmental agencies to create a secure environment in Huaraz and Carhuaz. We have seen how the installation of a complex network of monitoring devices, educational programmes and the creation of visual materials such as flood hazard maps have aimed to enhance a culture of prevention among the population, in the hope that people will react accordingly in case of an outburst flood or other extreme event. We have also seen how these efforts have been contested by a generalised mistrust of public institutions, fuelled by factors including persistent corruption scandals affecting the region in recent decades. We have also seen how this generalised mistrust towards public agencies has not impeded people from developing their own strategies to produce secure environments – some based on old traditions connecting towns and cities with other-than-human beings. Security, based on these examples, is a complex entanglement of practices and materialities involving diverse actors and heterogeneous efforts.

In this chapter, we have also seen that the moral impulse of anticipatory practices in the Callejón perpetuates a figuration that we have encountered several times in this work: the lowlands and the highlands. However, the management of glacial lakes in the Cordillera Blanca shows us that the boundaries between the low- and highlands are not fixed or static. These two porous regions experience a constant flow of state and private agents, members of *comunidades campesinas*, technical machinery, paperwork and traditional practices of communicating with sentient beings. *Pagos* are required to ensure the proper functioning of drainage syphons and to pacify the highland lakes and the entities believed to reside therein. *Laguneros* depend on messages, which the lake and its entities share with them in dreams, to know what to provide for the *pagos*. Furthermore, documents are used by *comunidades campesinas* to certify their historical land rights to authorities, replacing the relevance that connections with lakes and mountains previously held in validating their relationship with the land. Rather than two dichotomic world arrangements with scarce interactions, the case of the glacial lakes in the Cordillera Blanca shows us a scenario involving a massive amount of information, explanations, speculations and meeting points where all sorts of differences converge. The act of sabotaging scientific equipment is the result of more complex processes beyond simple ignorance. At the same time, the enactment of science is more than pure scientific rationality put into practice to manage the environment. The ecosystem of practices, materialities and affects around glacial lakes and early warning systems becomes a complex entanglement challenging simplistic explanations of highlanders intrinsically rejecting technology and authorities discarding non-scientific practices of engaging with lakes.

As a region that claims to have suffered chronic state abandonment for centuries, the highlands have known how to generate and perpetuate their own protective practices to cope with threats affecting communities and villages. Besides *pagos*, crosses have been a central figure in this context, protecting crops throughout the season. Massive efforts are involved in ensuring that crosses fulfil their protective roles throughout the year. Besides the transportation of crosses like Runtu and Awaq from one place to another during an entire week, families expend large sums on the new *vestidos*, and food and drink for all those participating in the process. But all these costs are justified with the entirety of the ceremony taken into account. As ambiguous figures tolerated by the urban world in their protective roles, crosses are nowadays one of the few devices people rely on to cope with the uncertainties of the future, which global climate change has only worsened.

According to Mathias Rasmussen (2015, 171), climate change has introduced new temporalities in the Andes that have affected people's sense of their direct environments. Climate change comes with new forms of waiting, in which more stable seasons with predictable rain patterns are replaced by an anxious state of not knowing whether the new season will bring enough precipitation to ensure a good harvest. It has also made other events such as hail and frost more unpredictable. Without adequate capacity to adapt to future climatic uncertainty, and in the absence of state support to cover associated costs, people in the highlands are forced to rely on alternative strategies to mitigate the possible impacts of cold or drought. 'Climate change provides a powerful language and a coherent narrative that emphasises how the social life of agricultural production is being reconfigured by the temporality of water', Rasmussen (2015, 172) suggests. This scenario introduces a new conceptualisation of an ongoing threat that, nevertheless, is interwoven with already existing figurations of abandonment and precarity.

Abandonment, Rasmussen (2017, 2) affirms, is a figuration that operates not only as a material condition but mostly as a critique of governance and its effects. 'As a vernacular of citizenship, abandonment serves as a leitmotif, conveying the distance from power, cities, comfort, security, dignity and general support'. Abandonment, in this sense, not only shows the concrete consequences of years of state absence, itself a disaster, but also reveals how abandonment, as an enunciation, is used among people in the highlands to articulate new political agendas and forms of citizenship, showing how successful these strategies can sometimes be.

When I returned to Carhuaz during my second period of fieldwork in 2022, I met Mauro again, the former officer of the Carhuaz Provincial Municipality with whom I first visited Lake 513 in 2019. We decided to visit Shonquil Pampa, the extensive meadow where one of the monitoring stations was destroyed by *comuneros* in 2016. As we pass by the remains of the station, I ask him about the possibility of reinstating the early warning system. Mauro left his job at Carhuaz Provincial Municipality about a year prior. He is now a private consultant to water infrastructure

projects, and his work around Lake 513's early warning system feels very distant to him. Nevertheless, he is still acutely aware of the conversations within the local government, due to his contacts there. Mauro thinks it would be very difficult, if not impossible, to reinstall the equipment. The agencies that provided the resources and technical knowledge to establish the system are not willing to give further funding after the destruction of the stations in 2016. Agencies like CARE Peru and COSUDE would provide further support only if the Municipality agrees to cover most of the expenses and guarantee constant security surveillance of the equipment – demands that are beyond the Municipality's meagre budget. Besides, people still do not want the equipment in the area. The region is still experiencing severe water scarcity due to lack of rain, which some groups still think would be exacerbated by the monitoring stations. In such a context, reinstalling the early warning system would simply be political suicide.

Either way, Mauro thinks that the SAT is now less important, and that things have changed since the last flood in 2010. He affirms that the glacier has retreated too far for a chunk of ice or avalanche to fall into the water. Even the 2010 event was not as dangerous for Carhuaz, he affirms; the water did not even reach the city at that time, and only affected some crops and roads. He believes that if a new outburst flood occurs, it would be very unlikely to reach the city due to the Shonquil Pampa buffer zone, which is estimated to halve the severity of any flood event. *A huge earthquake, like in 1970, would be required to bring down a piece of mountain big enough to trigger a threatening flood*, he says.

Mauro's new position *vis-à-vis* outburst floods surprises me. His attitude to the issue is completely different from what he told me two years prior, when we faced the angry Herd Association in Shonquil Pampa. At the time, he thought there was an imminent risk of an outburst flood through the Chucchún Valley, and that the early warning system should still be pushed forward. Nowadays, even the population in Carhuaz, strong advocates of the SAT at that time, seem to have reconsidered its relevance. Mauro tells me that there is even an idea of damming the 513, via a larger retaining wall that would accumulate more water, a proposal that – two years prior – would have been unthinkable for its associated risk. The idea is an old proposal that has gained momentum among civil society and the Carhuaz Irrigation Association in the past months due to the lack of water in the region. Although Mauro considers such a project unfeasible, he believes that the priority is now to ensure water supplies rather than deal with an unlikely flood event. It is no coincidence that this coincides exactly with his work as a private consultant: water sowing and harvesting (*siembra y cosecha de agua*), a practice that has been historically related to *campesinos* and indigenous communities in the *sierra*. Mauro is planning to build artificial lagoons, using geomembranes and concrete, for water accumulation – something that has been a quintessential demand of rural communities for decades. He seems excited when referring to those projects. That is where the urgency is now, and also the money.

Conclusions

Disasters, History, Time

These years working in Peru have been shaped by moments of crisis and global political turbulence. In this tumultuous period – marked by the beginning of the COVID-19 pandemic, a global recession, the resurgence of far-right movements and authoritarian regimes worldwide, and the acceleration of climate change – we have seen the very foundational principles of our societies challenged. Naturally, this generalised political turmoil has also had substantial impacts on Peruvian society.

At the end of my first period of fieldwork in March 2020, COVID-19 arrived in South America. The warnings of an imminent border closure forced me to abruptly end my stay in Peru some weeks earlier and return to Chile, where I spent several months before being able to return to my home in Germany. The pandemic changed our lives globally, perhaps more than any other event in the past decades – *the global disaster of our times*, as I heard many people calling this period. Millions worldwide died as a consequence of the virus – exacerbated by poor health protocols, delayed governmental reaction and a highly uneven distribution of vaccines between countries. Our unpreparedness to properly respond to the pandemic worsened poverty and social inequalities; people lost their jobs, while others were forced to work in precarious conditions and exposed to the fatal consequences of the virus. As other moments of crises have shown us, COVID-19 revealed the ugliest face of inequality and the brutal effects of health injustice.

When I was finally able to return to the Callejón de Huaylas in January 2022, after two years of strict travel restrictions and closed borders, I found a bleak scene. As in many other regions of the so-called Global South, the pandemic had severe consequences for Ancash. I came to find that many people I had met during my first visit had passed away due to the virus, some of them close enough that I considered them friends. Many others, moreover, lost their direct sources of income due to stringent curfew measures implemented for several months and the economic crisis affecting the country. The lack of social contact and the instability triggered by the pandemic had all sorts of psychological consequences for the inhabitants, increasing the already dramatic precarity that many faced even before the virus' arrival.

This new scenario, however, also contrasted with the apparent continuity that life in that Andean region seemed to show. Things had changed, it is true, but cities and villages were the same, at least materially and rhythmically speaking. Behind face masks and improvised sanitary measures to reduce exposure, besides the public vaccine campaigns and new informal market for increasingly demanded health products, *the hold life has* (Allen 2002) kept its path as always. Markets were doing business as usual, streets in cities like Huaraz were as crowded as they used to be two years before and the stunning beauty of the Cordillera Blanca was still there. My own feelings therefore reminded me of when people in the region explain how things evolved after facing past extreme events: that despite the dramatic destruction and transformation that disasters brought, *everything* and yet *nothing* seemed to change, after all.

Besides the clear consequences of the pandemic, the months leading up to my second visit were marked by deep political processes, which, as in other moments of history, saw Peru divided into two apparently irreconcilable groups. In June 2021, Pedro Castillo became the new president of Peru after winning a very close run-off election. A former *rondero*¹ and rural schoolteacher from a small town of Cajamarca Department, Castillo gained international attention after winning a completely unexpected first majority in the first round, beating Keiko Fujimori, Alberto Fujimori's daughter and the favoured candidate of ring-wing conservatives. A prominent figure of the Union of Peruvian Educators (SUTEP), Castillo's short political career began with his role during a national teachers' strike in 2017. Under the slogan 'No more poor people in a rich country' (*No más pobres en un país de ricos*), Castillo became a figure of hope for a part of the population that never felt represented by the political *status quo*. But he was also strongly criticised by that part of the country he aimed to fight against: a coastal, urban world revindicating Peru's *criollo* condition.

During the campaign, Castillo was constantly treated as an ignorant schoolteacher, representing a rurality incapable of ruling the country. Although he lacked political experience and dismissed many of the protocols expected of a national authority, the main problem seemed to be his origins – a lost town in the district of Chota – and what he sought to revindicate: the rural disposed world. Under that scenario, *Fujimorismo* found strong support in coastal regions of the country – a project that, despite being rejected by an important part of the population for its authoritarian past and the several corruption scandals related to Fujimori's father, many seemed to prefer to the idea of being ruled by a rural Marxist teacher. *Costa* and *sierra*, once again, were divided.

1 Member of a *Ronda Campesina*, autonomous *campesino* patrols created in the 1980s as a strategy to protect rural communities against the attacks by Shining Path revolutionaries during the internal war.

One and half years after being elected, Castillo's government would end abruptly with almost none of his campaign promises of social justice and wealth distribution achieved. The Congress twice attempted to impeach Castillo, and accused him of several crimes of corruption within a matter of a year. Finally, he would be accused of attempting a self-coup and imprisoned after shutting down the Congress and calling for new elections in December 2022, the same legal strategy that Alberto Fujimori used in 1992 to remain in power for more than ten years. Vice President Dina Boluarte assumed power with strong support from the right-wing sector, promising to ensure the country's stability and governance by any means.

The political scenario the country was experiencing as I was finishing my work elicited all sorts of reactions. As a response to Castillo's detention, massive mobilisations demanding new elections took place throughout the country, with an intense concentration in the rural departments of the Peruvian *sierra*. The response of Boluarte's government, however, was merciless. By the end of February 2023, 60 people had died as a direct or indirect consequence of police brutality. Protestors were commonly named *terrucos* (short for terrorist) by public opinion, a figure that has featured in the national consciousness since the internal war against Shining Path. The allegations against protests also reminded many of an article written several years earlier by former president Alan García (2007), Peru's president during 2006–2010 and maintainer of Fujimori's neoliberal legacy. In the article, García relates people in rural areas to the figure of *el perro del hortelano* (the dog in the manger), an ancient story of a dog protecting a stall full of grain that it does not eat but does not allow others to eat either. "There are many unused resources that are not tradable, that do not receive investment and do not generate work. And all of this is due to the taboo of outdated ideologies, idleness, indolence or the law of the dog in the manger that says: "If I don't do it, nobody does it", exclaimed García in his column. García's invocation of *el perro del hortelano* is, according to Paulo Drinot (2017, 228), a strategy to reproduce a particular form of sovereignty and governmentality that 'expresses a project of country against its own population'. Like the dog in the manger, the *terruco* is a figure built on fear, an internal enemy that the *status quo* uses to suppress any form of dissent against the governmental project of development. Both figures, *el perro del hortelano* and the *terruco*, question the alleged search for integration and development to which people all over the country aspire.

As in other moments in Peru's history, the political conflict the country has and is still experiencing has created an ambiguous alterity used for all purposes. The rural *other*, embodied in the figure of the *terruco*, would strongly resemble that of the *indigenous*, an uneasy figure in Peruvian politics. Some public speakers from the conservative world, like Fernando Rospigliosi close to Fujimorismo, would deny the existence of an organised indigenous project in the country, arguing that those are phantasies 'created by some intellectuals and NGOs' willing to install a leftist agenda similar to the political project inaugurated by Evo Morales in Bolivia in the past

decades. ‘What we have are people who want to integrate, not create this kind of different movement. ... They try to integrate and become *criollos*. That’s the Peruvian reality’, Rospigliosi affirms². For this position, the idea of indigeneity must be necessarily reduced to a multicultural category, a concept aiming to subjugate cosmopolitical differences to an epistemic exercise of domination while offering reduced spaces of controlled political participation (Blaser 2014; Babidge 2020). Any other expression of indigenism would be simply a hidden effort to implant chaos and terror in the country.

But for other voices, closer to the protests’ demands, the *otherness* embodied in the demonstrations represented a figure of hope, an organised rural mass capable of changing the country’s political structures. ‘This is historical, also because it has happened before. But never in Lima – to demand the right to a voice in politics as usual publicly, massively, relentlessly, from all over the country’, writes Marisol de la Cadena (an author quoted several times during this book), on 22 January 2023 on her Twitter (now X) account. Her words are accompanied by a picture of a woman in traditional rural clothes, waving a Peruvian flag in front of a police line. The committees that arrived in the capital from other provinces, to protest against the dictatorial regime installed by Dina Boluarte and demand political changes, were seen by many via the prism of heroic fighters, embodying the abandonment and abuses committed for centuries against rural areas.

The old conflicts we have seen throughout this book have all but disappeared in recent years. The permanent tension contained in the rural as a strangeness, an uneasy figure shaped by a constellation of experiences, histories, concepts and features (Timperley 2020), still defines the relationship between the national project and its allegedly uncivilised counterpart. Rurality still means an ambiguous category closely associated with the indigenous, the *campesino*, and, as such, with a form of existence that escapes the civilisatory project of the *criolla* nation. But it also refers to a mythical figure, an alterity emerging from the abandonment and isolation that has the capacity to change the course of the country, the ‘politics as usual’, in unimaginable ways.

Throughout this book, we have explored the entangled ways in which disasters and time are connected; how disasters articulate – and are articulated in, by and across

2 Debate between Fernando Rospigliosi, member of Keiko Fujimori’s campaign, and Betsy Chávez, representative of Castillo’s candidacy, on 26 May 2021. By the David Rockefeller Center for Latin American Studies of Harvard University and the Institute of Latin American Studies of Columbia University. Extract of the debate available at: <https://www.youtube.com/watch?v=m-cf900-nwo>.

– time; how those temporal arrangements that disasters produce (re)configure urban environments; and what types of disputes and conflicts those reconfigurations can elicit. By exploring places and devices where controversies around the memory of the past and the anticipation of future disasters arise, this book has analysed concrete moments in which apparently unsolvable oppositions seem to emerge – forms of *tinku* where the highland and the lowland, urban and rural, indigenous and *criollo* clash in conflictive terms. Yet, rather than focusing on such divisions as essentialising categories defining two inextricable worlds that come together, this book has considered those moments of encounter as entry points to explore further the articulation of those categories – how they emerge from vast ecologies of practices and materialities, and where they come from. It has been, in other words, an effort to explore how the massiveness that disasters entail can be conceived in actual terms – even in their past and future versions – but also how they are positioned historically through figures that transcend the material conditions from which disasters emerge.

To explore the chaotic, or disastrous, connections between the actual and the virtual, two main analytical concepts have been central to this work: the assemblage and the figure. Working with both concepts has been a way of dealing with the common risks that the application of those categories can have: in the case of assemblages, an all-too-actual arrangement that cannot deal with virtual existences properly, and all-too abstract figurations that run the risk of disregarding the material existence that the figures emerging from them can have. Throughout this book, we have seen how disasters are semiotic and material arrangements, through which all sorts of figurations are put into practice. As massive assemblages placed in time but also articulating particular forms of time, disasters coexist with figures that grant them historicity, a presence in time that defines the consequences – actual or potential – they have for the territories they reconfigure. Figurations, in other words, allow disasters to coexist with history because they place them and their massive consequences in a historical realm. Disasters create time, and figures place that time in historical terms. This work has critically analysed the interaction between disaster and figures, between the massiveness of those hyperobjects (Morton 2013) and the more concrete – although ambiguous – existence of figures.

The different sections of this book have explored how the temporal ecologies shaping disasters propagate all sorts of encounters between conflictive figures. By taking the notion of *tinkuy* as an epistemic mood, this work has analysed the types of configurations we find when we face disasters not only as disruptive events or processes perpetuating social order but also as moments of encounter. The gatherings explored in this work are never between indissoluble figures resulting from radically opposed worlds. Throughout the chapters of this book, we have seen how the apparently mutually exclusive urban and rural worlds, the lowlands and the highlands, are entangled in ways that overcome the initial division that the *tinku*, as an

encounter in the difference, entails. These ambiguities, it is important to remark, do not mean that those figurations do lack any correlative existence in *real* life. Figurations like the *indio*, *campesino*, *comunero* and their foreign counterparts such as the *gringo* or mining companies have operated as semiotic-material arrangements with a decisive presence in the history of regions like Ancash. As fixed categories, they operate as partial constructions that cannot contain or express the full complexity of the environments in which they are placed. In many cases, using these figures to talk about an alterity overshadowed by official history leads to generalisations often crossed by efforts of racialisation and class discrimination. The indigenous, as a colonial category, is commonly a form of denoting an uneasy other that can easily be appropriated to denote ignorance and barbarism, but also braveness and admiration – as the recent protests in the country have also shown.

In what follows, I will dedicate some final words to reflecting on these concepts and exploring some fundamental issues that have shaped the discussions developed throughout this work. First, I will briefly reflect on the relationship between disasters and history and how figurations help us make sense of catastrophic moments in historical terms. I will then reflect on the relationship between disasters and time, exploring how disasters produce temporal orientations that have political consequences when interacting with other equally massive attractors such as tradition and progress.

Disasters and history

The analysis of figurations in this work has allowed us to explore disasters historically – ‘moving across several times at once, putting into play the present and the past, or rather pasts in the plural, however far apart they may be in space and time’ (Hartog 2015, 16). But what does history under this context mean? How is history defined based on the case of the Callejón de Huaylas and the places and objects of encounter we have explored?

In the last chapter of *Wild Thought*, the anthropologist Claude Lévi-Strauss (2021) aims to overcome a totalising understanding of history – like that (according to him) presented by the philosopher Jean-Paul Sartre – by placing it as just another expression of the deep influence that structures have in every realm of societies. In his book *Critique of Dialectical Reason*, Sartre (2004) proposes a notion of history as a form of verifying the foundations of human existence, a sort of realm in which the ‘totalisation without a totaliser’ of dialectic takes place, while Lévi-Strauss offers an understanding of history shaped by the structures defining the human condition. The former considers history as the intrinsic movement of humankind across time, shaped by dialectic as a form of confronting the world, the latter just the expression of the regularities defined by the diagrammatic operation of social structures. Sartre’s hu-

mankind is determined by its freedom to define dialectically the consequences of its actions, and that of Lévi-Strauss by the structures defining the logical relationships among its members that make sense of those actions. It is, ultimately, a distinction of history shaped by agency or structure, but also as diachrony or synchrony – the result of actions across time or categories determining which events are relevant to describing the passing of that time in the first place.

Lévi-Strauss' understanding of history vibrates somehow with the figurational operations we have seen across these chapters. By exploring the concrete places and things from which figurations emerge, as practices defining the boundaries of society, we have seen that the historical existence they portray cannot be separated from the moments that configure them. Despite all the complexities it presents, the destruction of the early warning system is a moment in which the old figures comprising the highlands and lowlands are actualised. Figures are applied to make sense of events, to create forms of prioritising which elements of the event are important to remark: for people in Carhuaz, the destruction of the equipment was a form of superstitious understanding of reality; for some members of Shonquil Pampa Herd Association, the attack was a natural reaction against foreign machines intervening in the environment. The explanation, as a historical arrangement, is mediated by those figures. History, under these terms, is a means by which to make sense of discontinuous events. 'The alleged continuity of history is ensured only by tracing fraudulent lines', Lévi-Strauss (2021, 297) would suggest, with figurations as one strategy to ensure the existence of those fictional lines.

Yet, we have also seen that those same figurations are also a fundamental element in articulating the ground in which they are immersed. As we saw in Chapter One, the figures of the hero and the victim operate as 'condensed maps of contested worlds' (Haraway 2018, 11), archetypes that help us navigate the massive destruction that disasters can entail. The suspended time produced by the 1970 earthquake and avalanche over the former Yungay is overcome through the historical figures of the hero and the victim, providing a concrete yet diffuse arrangement offering order amid chaos. Figurations are a form of *figuring out*, of fitting the figure to the ground (Fortun 2009) that articulates the setting in which those figures move freely. In the case of the hero and the victim, they are not only part of the reconstruction that came after the earthquake and avalanche; they produce the recovery as a moment in history. History, viewed from this perspective, emerges from those categories connecting that moment with what came after – e.g., the cosmopolitan city, a place without identity as a result of a failed reconstruction. The testimonies around this period account for an unproblematically idealised past of a model city – of 'straight, cobbled streets, a plaza with lush palms and perfumed rose bushes, manor houses of white walls and red-tiled roofs and joyful, laborious people' (León León 2016, 91). *That Yungay is over, it's history*, I have heard old *Yungainos* say. If the old Yungay is associated with an uncontested homeland, the memories of the aftermath of the disaster re-

fer to a time of uprooting, dislocation and contradictions; a time of an unregulated recovery explained by different figurations – distinctions that articulate the notions of native and foreign; an *us* and *them* that works in time and space.

The relationship between figure and ground and their mutual configuration offers a syncretic union between agency and structure, event and process, that helps to move beyond Lévi-Strauss' rigid structuralist understanding of history. Figurations are those practices that, in a strict sense, provide situations like disasters with a historical existence. Disasters can operate as figures, things that unite but also that divide the society they help reconfigure. It is, however, an elusive existence; not concrete enough to be fully embodied but not abstract enough to be only an idea. The historical realm that figures offer differs from the historical production that material objects, say books or photographs, present. Figures, in a strict sense, are not material things. Their virtual condition moves across a material reality, but their existence cannot be reduced to the concrete moment in which that existence is updated. As with any other figure embodying the idea of rurality, categories like *comunero* are permanently embodied in an ambiguous other that implies a racialising exercise relating it to certain forms of life, of skin tones, clothing, artefacts – a materiality close to the ground, as Ben Orlove (1998) suggests. Figures require those practices and materialities to emerge, but their existence cannot be reduced to them. As historical figures, they provide a sense of deepness beyond the immediate arrangements in which they are immersed. Figures are historical because they help to make sense of events. History, moreover, is figurational, as it helps place those figures in a certain order.

History under these terms might leave a bitter taste as a realm offering a false sense of immanence. If history is only a method to order things through a chronological code (Lévi-Strauss 2021, 294), granting figures a concrete place in that order, how can they give such a deep sense of reality? Despite being *only* a method, in Lévi-Strauss's terms, history is a fundamental account that provides an order of things. Figurations, under these terms, are not only a way of classifying a problematic other that seems to escape the limits of our desired worlds – a violent rurality and a foreign modernity installing threatening machines. Figures provide an order that allows us to create a sense of being-in-the-world, which, at the same time, can be politically empowering. Whereas a result of a problematic colonial classification, the indigenous as a category has also been a fundamental device to empower those communities that have embodied the trials of colonialism – land dispossession, imposed world arrangements and genocide. Although categories like *comunero* have been associated with a backwards lifestyle rejecting progress, a 'dog in the manger' against private investment, they have also been revindicated as fundamental actors for the defence of the land. The rural other is an uneasy construct that finds in figures a means of stabilising that negative identity. History, under these terms, 'is thus never history, but history-for' (Lévi-Strauss 2021, 293), a form of creating a sense of place in

time, whether by excluding certain forms of world cohabitation or by revindicating those excluded existences.

Recognising figures as fundamental devices that create a historical reality allows us to acknowledge their contemporary existence. Here I call upon the notion of contemporary not as a historical epoch – with the inauguration of modernity as its foundational time (Koselleck 2002) – but to the recognition of figures as devices that, while cohabiting the *time of the simultaneity*, ‘give shape to the here and now’ (Rabinow et al. 2008, 57). The issue here, then, no longer necessarily concerns chronological succession – what comes next – but *coming together*: how things and positions that seem fragmented gather in the first place. As an act of contemporising, figurations can help us to overcome the idea that figures are *part of history* and replace it with the assumption that figures are *producing* history; they are devices providing historical orientation and order – especially during catastrophic moments when order appears absent. A direct consequence of this view is that history loses its unified condition, the ‘arrow of time’, and is instead characterised by a ‘*scattering in all directions that recaptures and repairs what the old sense of history sought to oversimplify*’ (Latour and Schultz 2022, 41). There are as many histories as the elements and stories producing them.

It is worth noting that even I, as a researcher working around the figures of disaster and their aftermath, cannot escape the necessity of using figures to argue for the historical consistency of my work. As Norbert Elias (1978, 20) rightfully affirms, ‘no matter how painfully aware we are of [concepts’] inadequacy, more adequate means of thought and communication are in many instances simply not available at present’. What in this work I have identified as highlands, lowlands, rural, urban and even the very notion of disaster are also figures that I have constantly applied; concepts that, as concrete abstractions (Cadena 2018; in Peterson 2021, 14), propose a material and semiotic articulation for the exploration of our worlds in-the-making (McGowran and Donovan 2021). By ‘emphasizing concepts in things’, Marina Peterson (2021, 14) suggests, it is possible to understand ‘theory as being in the world – of the ethnographic as intrinsically theoretical – and the possibility of drawing that out through writing’. My analysis of the figures that emerge from places and devices and their uneasy encounters has not been an effort to neglect them but to understand how they arise, the different settings they are immersed in and their consequences for (re)configuring in historical terms the realities in which they participate.

Disasters and time

A second reflection that is worth raising concerns the complex entanglements between disasters and time. Throughout the chapters of this book, we have seen that disasters can be both moments of unbearable magnitude that the very notion of dis-

aster aims to make sense of by giving a name – or a place, as the case of Campo Santo shows us – to those disruptive moments escaping human understanding. But we have also seen how disasters can operate as enunciations, interpretations with a strong political orientation – in our case, for time control. This double condition of disasters has been exemplified through concrete places and objects through which we have explored the ecologies of practices and materialities assembling past and future disasters while showing how disasters, as massive arrangements, are invoked to produce certain forms of time.

Considering disasters as both concrete arrangements of the world and conceptual devices has allowed us to explore not only how they are concretely enacted but also how they are used to promote specific political projects – in tune with what Deleuze and Guattari (1987) differentiate between machinic and enunciative assemblages. The conceptualisation of disasters as assemblages has allowed us to overcome the implicit understanding of disasters as events or processes taking place ‘outside’ the social order. The question that emerges, though, is how these arrangements behave in relation to other equally-massive arrangements that can have the same influence on the articulation of time.

Throughout this work, we have seen that, in the temporal production that disasters entail, they constantly operate with two other equally massive concepts: Progress and tradition. Yet, rather than being a category explicitly destroying the cultural heritage or jeopardising the region’s development, the relationship between the three concepts is much more complex. Disasters are sometimes called upon as a cause and effect of stagnation and loss of identity, but also as an opportunity for enhancing progress and protecting tradition. Sometimes tradition and progress are used together to ward off future disasters, while discourses around past disasters, together with a respectful treatment of traditional lives, are used to promote better futures. Disaster, tradition and progress have operated in a complex triad shaping the politics of the Callejón de Huaylas for many decades, showing that the temporal arrangements they produce are, in any case, a straightforward relation of antagonist categories.

The massiveness that disasters, progress and tradition entail requires us to deal with them in terms that embrace their magnitude. Here, the notion of attractor proposed by Manuel DeLanda (2002) can be helpful to conceptualise such massiveness. Attractors, according to the author, are singularities that, due to their strong influence, ‘are said to represent the inherent or intrinsic long-term tendencies of a system’ (DeLanda 2002, 15). Following Deleuze and Guattari’s (1987, 408) notion of singularity, attractors are types of events but without a concrete form. They operate as topological arrangements defining a multiplicity of trajectories in a system, giving the idea of a tendency that is followed in the long term.

As attractors, tradition and progress operate similarly to what Bruno Latour (2018) identifies as modernity’s two main poles of attraction: the local and the

global. According to the author, these two opposing positions have shaped discussions around globalisation for the past 50 years: the idea of the globe, related to multiplying viewpoints; and that of the local, associated with a single, provincial vision. Like tradition and progress, these two poles do not necessarily represent intrinsically positive or negative features of modernity. The local can be revindicated as a desired scale that permits a return to the certainties that old world orders provide. The global, in contrast, can be conceived as a forward movement chasing the ideal of a hyperconnected world – the cosmopolitan model of a nation-free globe guided by universalist principles. ‘To be modern, by definition, is to project onto the others at every turn the conflict between the Local and the Global, between the archaic past and future – a future with which the non-moderns, it goes without saying, have nothing to do’, Latour (2018, 29–30) affirms. It is a temporal and spatial scale that, despite the revindications it generates, sets clear boundaries: we can protect and preserve the past, but those figures comprising that past must remain there.

Tradition and progress are recurrent features that, due to the strong influence they produce, have the capacity to shape the trajectories of regions like the Callejón de Huaylas over time. Tradition, as we have seen, is invoked every time that political actions aim to protect a past threatened by the consequences of unregulated transformations – related in many cases to a frustrated modernity (such as the ‘cosmopolitan city’ that Huaraz has become) that does not respect the value of heritage for the creation of a common identity. Similarly, progress is called upon when programmes and plans seek to introduce new means of dealing with the challenges of, for example, climate change in mountain regions. The installation of expensive equipment to alert the population of outburst floods from glacial lakes would be an example of those progressist efforts; conversely, its destruction is a sign of a traditional form of living guided by superstitions and ignorance. Disasters, as a third attractor, are placed in relation to them when aiming to contest the promotion of tradition and progress – whether as an arrangement that impossibilities one of them while benefiting the other or as a feature that exacerbates their negative effects: tradition as stagnation, progress as identity loss. Together, these three attractors and their diverse linkages have marked the political agenda for coping with extreme events threatening the cities of the Callejón.

Just as figurations enable overcoming the dichotomy between agency and structure, defining disasters as temporising assemblages allows us to position ourselves beyond the two other main attractors in this work and to think of alternative ways of inhabiting time. A call to inhabit times of disaster can be one of those ways, a form of highlighting the fact that disasters cast a long shadow. Rather than a temporary stage, a disaster is an attractor that constantly articulates reality. The invitation to inhabit a time of disaster requires recognising that the material arrangements they produce remain in heterogeneous ways – whether defining a past that has been lost

or questioning the articulation of certain futures. Time, based on a relational perspective, moves away from the abstract dimension to which it has been commonly related and becomes a property that emerges from the realignment and displacement of practices and materialities. By assuming the relevance that concrete elements have for creating time, we recognise their capacity for shaping our temporal existences. We are accepting that such disruptive events – including outburst floods from glacial lakes or massive avalanches triggered by seismic movement – play a fundamental role in articulating what we conceive of as a disaster in temporal terms – the suspended times they can inaugurate, together with the feelings of loss due to a destroyed reality that becomes part of the past. In doing so, we are also accepting that concrete devices for coping with those massive forces deeply influence our temporal configurations of reality: early warning systems enacting times of preparedness; mitigation infrastructure like dams and drainage tunnels seeking to control the flows of lake water. But rather than generating forms of temporal dependencies towards those devices and elements, recognising their impact in temporal terms allows us to consciously ask what forms of time our environments mandate us to generate; what temporal rhythms catastrophes require to produce. How we want to cope with those challenges, and what costs our actions may have for the times we wish to inhabit.

Inhabiting the time of disasters is not necessarily a call to catastrophism. As Andrea Ballesterio (2019) suggests, underlying the end of times as a consequence of climate change can be an unsatisfying exercise as it mobilises hyperbolic anxiety triggered by an apparent lack of future. ‘The apocalyptic instils a sense of ends of times that depends on the existence of a previous definition of what is or should have been in the future. It depends on an implicit certainty about the existence of some vision from the past that has ended, that will not come’ (Ballesterio 2019, 197), the author remarks. To avoid that paralysing effect that the end of the world might arouse, it is necessary to place it in contemporary terms rather than subordinated to past or future orientations. This movement requires us to leave temporal orientations mandating us to move ‘forward’ or ‘backward’, to ‘advance’ or ‘retrogress’, to ‘progress’ or ‘stagnate’, and focus instead on the constructions of past and futures in contemporary terms. Accepting the contemporaneity of disastrous times means calling upon the legacy of those lost worlds without turning them into the only role model that current cities can have. It means speculating about possible futures without making that orientation a view of the world from afar, an outside gaze capable of controlling the forthcoming. To make disastrous times a moment of dwelling requires accepting the terrifying consequences that disasters can have for our current worlds. But it also means embracing the virtuous alliances and forms of diplomacy – as the figure of the guardian crosses shows us – that we can find in places dealing with scenarios of existential risks and uncertainty. Cohabiting those times implies leaving behind attractors categorising forms of existence as backward lives and recognising them

as valid forms of inhabiting the contemporary, with valid forms of future production beyond technocratic accounts of managing and controlling nature.

In any case, recognising the contemporary condition of catastrophic times means that the temporalities of disasters cannot allow us to construct concrete forms of past and future. As we have seen throughout this work, the moments of waiting amid flood risks, as shown in the case of the houses located on the banks of the Quillcay River in Huaraz, bring with them forms of stability that allow us to articulate futures based on precariousness that does not necessarily deny the existence of a threat. Likewise, remembering the severe consequences of the 1970 earthquake and avalanche in the province of Yungay allows us to put into perspective the drama of such an event for the thousands of victims. Inhabiting the time of disasters does not mean positioning oneself in a present time that does not change – similar to the suspended time that the total destruction of the city of Yungay inaugurated for its survivors. Inhabiting the time of disaster means, first and foremost, accepting that the limits of disaster do not begin and end with the triggering event, nor with the subsequent recovery – despite how effective or unsatisfactory it may be – nor does it end with the creation of preparedness mechanisms. It is when we situate ourselves in *the times of the end*, rather than waiting to see what comes after *the end of time* (Latour 2017), that the inability to escape the passage of time becomes evident.

The documentarist and the documentarian

The preceding reflections on our positions in *the times of the end* necessarily lead me to say a few final words about my own positionality in this whole work. In several moments throughout this book, I positioned myself according to the categories used by others to describe me in the Callejón e Huaylas: a Chilean *gringo*, a person that, despite being – topographically speaking – not so distant from the reality I was studying thanks to being of a neighbouring nationality, I was nevertheless topologically distant enough to be considered a stranger – a *gringo* that little had to do with the reality in which I was immersed. This double characterisation, which at first glance can be perceived as a tense construction, actually had much to do with the historical relationship between Chileans and Ancashinos, as explored in Chapter Six. The *Chileno* in Ancash has been historically considered an invasive figure, associated with the atrocities committed by the Chilean army during the War of the Confederation in 1936–1939 and the War of the Pacific in 1879–1884 between both countries. This strangeness was also related to my foreign-like physical appearance related to a *gringo*; a person looking, walking and dressing notoriously differently from people in Ancash.

Such a historical contextualisation certainly influenced my positionality in this work. This uneasy figure of a familiar stranger (Hall 2018) in the Callejón de Huaylas led me to adopt a more distant role in articulating my ethnographic scenes. My figure, as an ethnographer wandering around the different cities and corners of the Cordillera Blanca, is more like that of a passive observer – which in any case implies a ‘fly in the wall’ attitude. Whereas I recognise my presence in recounting the experiences during my fieldwork, it is always from a distant position – like an observer being shown and told something but without intervening too much. It is a strangeness I embraced in order to narrate my encounters as a foreign figure, one shaped by uneasy historical relations, during my time in Peru.

Adopting such a positionality was also strongly influenced by the difficult global events during which this research took place. Such difficulties are perfectly exemplified by one of my contacts during this work: Juan Benito Congo from Encayoc, the survivor of the 1970 earthquake and avalanche, who showed me, as seen in Chapter Two, the intangible condition of those devastated lands – the *hinterland* of Yungay. When I began preparing for my second visit to the Callejón in 2021, I received the sad news that Juan Benito had passed away from complications triggered by COVID-19. His son told me by phone that Juan Benito had died in April of that year, some weeks after he was exposed to the virus while being tested at a health centre. Despite being a high-risk patient due to his diabetes, he was only belatedly admitted – with very advanced pneumonia – to one of the few intensive care units available in Yungay’s overcrowded provincial hospital. Juan Benito was one of the thousands of victims underserved by a precarious public health system common not only in Peru but worldwide.

When I visited Juan Benito’s widow, Rosa, after hearing about his death, I brought her some photographs that I took of them at their old family house in Encayoc during my first fieldwork. These portrayed a happy couple, posing with the imposing magnitude of the Huascarán at their backs. Looking at those pictures, Rosa could not hold back her tears, while asking heartbrokenly *¿Dónde estás?* (Where are you?). Those images were one of the last records she had of her deceased husband. She was clearly still struggling to adapt to the shock and void of losing a loved one. Despite bringing her painful feelings of loss and grief, she was very grateful for those photographs, an affective trace that helped her to remember her life partner.

The news of Juan Benito’s death affected me in many ways. Through our encounters during my first fieldwork, our relationship developed into a friendship. The passing of Juan Benito was one of the first COVID-related deaths of someone close that I heard of in the Callejón de Huaylas. It was a sort of reality check about what a global pandemic truly means, a situation in which the loss of lives was – and still is – shared by people in every corner of the planet. It is a bizarre form of global solidarity emerging from the anonymity of our hyperconnected world.

Besides the evident sadness we experience when somebody close to us dies, one of the most shocking feelings after hearing about his death was of having recorded a piece of history that might otherwise have been lost forever. In several moments during our talks, Juan Benito constantly repeated that he wanted me to record his story and take pictures of his hometown, and that what happened in places like Encayoc should be known. He was very open to sharing with me his survival testimony, despite how painful it probably was, because he wanted that story to be told – a tale of subsistence and grief, full of details about how traumatic the end of the world can be as a seven-year-old boy. Although his family and friends were quite aware of his survival experience, the audio recording of our talks and my notebooks were, as far as I know, the only non-oral record of what he lived through that May day in 1970. That fact had quite a strong effect on me. I felt a duty to his request to share his story, one that I hope I have fulfilled on good terms.

The necessity Juan Benito felt for telling his story was not unique. During my fieldwork, survivors and authorities I spoke with consistently commented on the relevance of my work; that efforts like mine were fundamental to ensuring that the survival stories of people in that region were not lost. I constantly heard that something could be done with that information, that maybe others could learn about the testimonies of people that have experienced what it feels like to live in the ruins of a world (Tsing 2015) that came to an end. My persona – a Chilean *gringo*, this uneasy figure in the Callejón de Huaylas – somehow called the attention of the people in the region. Perhaps it was related more to the fact that somebody was interested in knowing about the suffering than to the otherness that my figure reflected. Or maybe the curiosity of a foreign stranger from beyond the Callejón made them feel that their experiences were sufficiently relevant to attract the attention of somebody from abroad. In any case, the recognition I gave to their stories seemed compelling to them. But why? What is so relevant about being heard, of feeling that somebody is interested in listening to those stories of loss and suffering?

I started reflecting on this issue while reading Valeria Luiselli's (2020) *Lost Children Archive*, a novel about the efforts of a couple to document the lives of children crossing the US–Mexican border through the Sonora Desert. At some point, the protagonist tries to explain the different understandings she and her husband have around the idea of documenting:

When I first met my husband, ... I found his ideas about soundscaping intriguing, and his past life recording bird songs and song paths in rainforests fascinating, but I never quite understood the methods he used for sampling sounds in our project: no direct interviews, no pre-planned anything, just walking around listening to the cityscape as if waiting for a rare bird to fly. He, in turn, never understood or came to terms with the sound tradition that I was educated in, a tradition much more journalism-based and narrative-driven.

... When we were in better spirits, we were able to joke about our differences. We'd say that I was a documentarist and he was a documentarian, which meant that I was more like a chemist and he was more like a librarian (Luiselli 2020, 99).

After reading Luiselli's book, the distinction between documentarist and the documentarian remained with me, as something that vibrated with my own work somehow. It was only after reading Tomas Lidman's (2008) historical analysis of scientific libraries that the distinction started to make more sense than ever. According to the author, both documentarist and documentarian emerged from similar principles: to explore the best strategies and techniques to document the knowledge found in scientific libraries. However, he argues that the traditional role of the documentarian, which can be associated with the figure of the librarian as a gatekeeper of institutional and scientific knowledge, began to be contested by the documentarist, a figure emerging in the late nineteenth century and aiming to produce bibliographic records rather than only describing existing material under the existing guidelines. These two fields would evolve, in principle and practice, into two different orientations, where 'the documentarists represented progress with their sights set on the future, while the librarians took the position of safeguarding historical continuity' (Lidman 2008, 11). These orientations, portrayed by Lidman as different temporal approaches to the figure of the document, are what I started to see reflected in my ethnographic work.

Anthropology has been persistently defined as a discipline that documents. It documents cultures, lives, modes of existence, conflicts and decision-making. It documents past worlds and the construction of those to come. Research interests and approaches might have changed over time, but the efforts have been somehow similar: to record, as far as possible, meanings, values and forms of kinship. Documenting efforts in the field have been so massive to the point of creating an excess that is sometimes difficult to manage. Anthropological footage has often ended up in vast archives storing an absurd amount of audio-visual material that remains unseen and unused (MacDougall 2005). This ethnographic impetus with documentation follows what Marilyn Strathern (2003, 5) describes as 'a methodology based on the deliberate attempt to generate more data than the investigator is aware of at the time of collection'. The initial collection of material brings the question about its uses and interpretation. In other words: if the documentarian efforts in anthropology have been focused on how to collect, protect and classify cultural knowledge, the documentarist driver has been oriented to explore what to do with that stored data in the first place.

I certainly relate to Strathern's interpretation of the ethnographic collection as an open-ended process in pursuit of a future, still unknown, analysis – left somehow to the documentarist orientation. But I think this view misses the impact that documentation work conducted during fieldwork might have on the people that the

ethnographer, as a documentarian, encounters along the way. To make this point more precise, I return to Luiselli's book – specifically, a passage in which the protagonist explains to her son that documenting means to collect the present 'for later', while reflecting on the act of documenting as a way of making sense of time:

I'm not sure, though, what 'for later' means anymore. Something changed in the world. Not too long ago, it changed, and we know it. We don't know how to explain it yet, but I think we all can feel it, somewhere deep in our gut or in our brain circuits. We feel time differently. No one has quite been able to capture what is happening or say why. Perhaps it's just that we sense an absence of future, because the present has become too overwhelming, so the future has become unimaginable. And without future, time feels like only an accumulation. An accumulation of months, days, natural disasters, television series, terrorist attacks, divorces, mass migrations, birthdays, photographs, sunrises. We haven't understood the exact way we are now experiencing time. ... Perhaps if we found a new way to document [the world], we might begin to understand this new way we experience space and time (Luiselli 2020, 103).

While re-reading this excerpt, I reconsidered the meaning that my efforts of documenting both the memory and anticipation of disaster in Ancash had for people like Juan Benito. It is less an effort of presenting or representing the disaster but to evoke it: to create an affection strong enough that it can re-orient the notions of time. I take this understanding of ethnography as a form of evocation from Stephen Tyler (1986), who connects it to the idea of aesthetic integration as therapy; it is what links the notions of art, rite and ritual to the practice of restorative harmony. Ethnography, under these terms, is a form of meditative vehicle to disrupt the commonsensical explanations that we may have of the world.

This book, in any case, aimed to be a fully innovative project of collaborative relations with the participants, informants, interviewees, interlocutors or whatever you want to call the people who contributed to this research. It is not a para-ethnographic work proclaiming the destabilisation of expertise hierarchies through collaborative relations with epistemic partners (Marcus 2000; Holmes and Marcus 2006). It is also not an effort to establish diplomatic relations mediating between different modes of existence, as Bruno Latour (2013) suggests what the role of anthropology should be. Yet, it is also not a simple act of 'granting with voice to those silenced by history'. My work, for people in the Callejón at least, had perhaps more to do with the humble task of being the scribe of ongoing events – with tracing 'the quickly changing circumstances of our common world' (Sansi 2013, 460). Maybe that is more than enough for the people I get to talk with during my fieldwork: to give a coherent account among many of the events that have taken place in a region deeply marked by loss, suffering, recovery and frustration. Collaboration here, perhaps,

means to help evoke something that allows us to pause and share those grievances for a moment, while exploring how the future is being conceived under that legacy of loss and trauma.

The difference between Tyler's proposal of a disruptive ethnography and my own experience in the Callejón de Huaylas, in this sense, is that I see my work there not as a way of evoking a rupture with common sense and normality but as the imperative necessity of returning to that normality once destroyed by extreme events. That is why the feeling of being documented here is so important. This, at the same time, is perhaps the main distinction that I found in the orientations of my work, a sort of *tinku* in its own way. Whereas the discipline implicitly requires, as a good documentarist, to disrupt, to create new meaning and forms of understanding reality, people in Ancash deposited on me the existential necessity of being a documentarian: of keeping alive the memory of the old cities, together with the testimonies of those who experienced how the world once came to an end.

References

- Adam, Barbara. 1998. *Timescapes of Modernity: The Environment and Invisible Hazards*. Routledge.
- Adams, Vincanne, Michelle Murphy, and Adele E. Clarke. 2009. 'Anticipation: Technoscience, Life, Affect, Temporality'. *Subjectivity* 28 (1): 246–265. <https://doi.org/10.1057/sub.2009.18>.
- Ahmed, Sara. 2000. *Strange Encounters: Embodied Others in Post-Coloniality*. Routledge.
- Alba Herrera, Claudio Augusto. 2006. *La Revolución Aprista de 1932 Huaraz-Ancash*. Instituto de Desarrollo Gerencial.
- Alba Herrera, Claudio Augusto. 2011. *Atusparia y La Revolución Campesina de 1885 en Ancash*. Instituto de Estudios Universitarios José Antonio Encinas.
- Alba Herrera, Claudio Augusto. 2012. *Las Luchas Campesinas en el Perú: Ancash y Región Central*. Ediciones El Inka.
- Alba Herrera, Claudio Augusto. 2016a. *Influencia del Pensamiento de José Carlos Mariátegui En Huarás – Ancash*. Waraq Quyllur.
- Alba Herrera, Claudio Augusto. 2016b. 'Pumacayán en la Historia'. *El Libro Azul* 3 (8): 38–41. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Alba Herrera, Claudio Augusto. 2017. *Huarás. Historia de un Pueblo en Transformación*. Killa Editorial; Hirka Ediciones.
- Alivizatou, Marilena. 2012. *Intangible Heritage and the Museum: New Perspectives on Cultural Preservation*. Routledge.
- Allen, Catherine J. 2002. *The Hold Life Has: Coca and Cultural Identity in an Andean Community*. Smithsonian Books.
- Allen, Catherine J. 2015. 'The World is Watching. New Perspectives on Andean Animism'. In *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*, edited by Tamara L. Bray. University Press of Colorado.
- Álvarez, Víctor. 2019. *El Terremoto en el Callejón de Huaylas, Perú y La Ayuda Humanitaria: Un «Momento Global» Durante La Guerra Fría (1970–1973)*. Thesis Submitted for the Degree of Doctor of Philosophy in the Latin American Institute. Free University of Berlin.
- Álvarez-Calderón Silva-Santisteban, Rosabella, and Julio Sánchez García. 2022. 'Re-thinking Inequality and the Future: The Pre-Hispanic Past in Post-Disaster

- Lima, Peru'. In *Invisible Reconstruction: Cross-Disciplinary Responses to Natural, Biological and Man-Made Disasters*, edited by Lucia Patrizio Gunning and Paola Rizzi. UCL Press.
- Amin, Ash, and Nigel Thrift. 2002. *Cities: Reimagining the Urban*. Blackwell Publishers.
- Andina. 2019. 'Ancash: Invierten S/145,000 en Mantenimiento del Sitio Arqueológico Pumacayán'. Accessed 23 May 2022. <https://andina.pe/agencia/noticia-ancash-invierten-s-145000-mantenimiento-del-sitio-arqueologico-pumacayán-773906.aspx>.
- Andrews, Hazel, and Les Roberts, eds. 2012. *Liminal Landscapes: Travel, Experience and Spaces In-Between*. Routledge.
- Ángeles, Julián. 2013. 'Fundación de La Nueva Ciudad de Yungay, 29-05-71. Para El Recuerdo de La Verdad'. Public letter. Courtesy of Digna Huincho Infantes.
- Angell, Elizabeth. 2014. 'Assembling Disaster: Earthquakes and Urban Politics in Istanbul'. *City* 18 (6): 667-678. <https://doi.org/10.1080/13604813.2014.962881>.
- Antze, Paul, and Michael Lambek, eds. 1996. *Tense Past: Cultural Essays in Trauma and Memory*. Routledge.
- Armas Asín, Fernando. 2018. *Una Historia del Turismo en el Perú. El Estado, los Visitantes y los Empresarios (1800-2000)*. Universidad de San Martín de Porres.
- Asensio, Raúl H. 2018. *Señores del pasado: Arqueólogos, Museos y Huaqueros en el Perú*. Instituto de Estudios Peruanos.
- Atwood, Roger. 2004. *Stealing History: Tomb Raiders, Smugglers, and the Looting of the Ancient World*. St. Martin's Press.
- Aubès, Françoise. 2021. 'Las Huacas no Volverán Jamás: Ficción sobre el Concepto de Transitoriedad en Memorias de un Caballo (2015) de Marcos Yauri Montero'. In *Cuadernos Urgentes: Marcos Yauri Montero*, edited by Edith Pérez Orozco and Jorge Terán Morveli. Distopía Editores.
- Auyero, Javier. 2012. *Patients of the State: The Politics of Waiting in Argentina*. Duke University Press.
- Auyero, Javier, and Debora Alejandra Swistun. 2009. *Flammable: Environmental Suffering in an Argentine Shantytown*. Oxford University Press.
- Babidge, Sally. 2020. 'Consultation's Overburden: Indigenous Participation in the Extractive Industry in the Salar de Atacama, Chile'. *Transformations* 33 (January): 48-63. https://www.transformationsjournal.org/wp-content/uploads/2020/02/Trans33_03_babidge.pdf.
- Bal, Mieke. 1997. *Narratology: Introduction to the Theory of Narrative*. University of Toronto Press.
- Ballesterio, Andrea. 2019. *A Future History of Water*. Duke University Press.
- Baraer, Michel, Bryan G. Mark, Jeffrey M. McKenzie, et al. 2012. 'Glacier Recession and Water Resources in Peru's Cordillera Blanca'. *Journal of Glaciology* 58 (207): 134-150. <https://doi.org/10.3189/2012JG11186>.

- Baraitser, Lisa. 2017. *Enduring Time*. Bloomsbury Academic.
- Barker, Mary L. 1980. 'National Parks, Conservation, and Agrarian Reform in Peru'. *Geographical Review* 70 (1): 1–18. <https://doi.org/10.2307/214364>.
- Barrón Pastor, Danilo, and Filomeno Zubieta Núñez, eds. 2020. 1970: *La Hecatombre de Áncash*. Asociación de Escritores Ancashinos.
- Bateson, Gregory. 1978. *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Ballantine Books.
- Bear, Laura. 2016. 'Time as Technique'. *Annual Review of Anthropology* 45 (October): 487–502. <https://doi.org/10.1146/annurev-anthro-102313-030159>.
- Beck, Ulrich. 2006. *Cosmopolitan Vision*. Polity.
- Beck, Ulrich, and Daniel Levy. 2013. 'Cosmopolitanized Nations: Re-Imagining Collectivity in World Risk Society'. *Theory, Culture & Society* 30 (2): 3–31. <https://doi.org/10.1177/0263276412457223>.
- Belshaw, Cyril S. 1951. 'Social Consequences of the Mount Lamington Eruption'. *Oceania* 21 (4): 241–252. <https://www.jstor.org/stable/40328301>.
- Bennett, Wendell C. 1944. *The North Highlands of Peru: Excavations in the Callejón de Huaylas and at Chavín de Huántar*. Nr. 39, Part 1. The American Museum of Natural History. <https://digitalibrary.amnh.org/handle/2246/133>.
- Bergson, Henri. 1911. *Matter and Memory*. Swan Sonnenschein.
- Bernasconi, Oriana, Jefferson Jaramillo, and Marisol López. 2022. 'The Number of Disappearance: Trajectories in the Tally of Victims of Forced Disappearance in Latin America'. *Tapuya: Latin American Science, Technology and Society* 0 (0): 2090486. <https://doi.org/10.1080/25729861.2022.2090486>.
- Bille, Mikkel, Frida Hastrup, and Tim Flohr Soerensen, eds. 2010. *An Anthropology of Absence: Materializations of Transcendence and Loss*. Springer.
- Birn, Anne-Emanuelle, and Carles Muntaner. 2020. 'Latin American Social Medicine Across Borders: South-South Cooperation and the Making of Health Solidarity'. In *Social Inequities and Contemporary Struggles for Collective Health in Latin America*, edited by Emily E. Vasquez, Amaya G. Perez-Brumer, and Richard Parker. Routledge.
- Blaser, Mario. 2014. 'Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages'. *Cultural Geographies* 21 (1): 49–58. <https://doi.org/10.1177/1474474012462534>.
- Bode, Barbara. 1977. 'Disaster, Social Structure, and Myth in the Peruvian Andes: The Genesis of an Explanation'. *Annals of the New York Academy of Sciences* 293 (1): 246–274. <https://doi.org/10.1111/j.1749-6632.1977.tb41817.x>.
- Bode, Barbara. 2001. *No Bells to Toll: Destruction and Creation in the Andes*. iUniverse.
- Bond, David. 2013. 'Governing Disaster: The Political Life of the Environment During the BP Oil Spill'. *Cultural Anthropology* 28 (4): 694–715. <https://doi.org/10.1111/cua.n.12033>.

- Bovisio, María Alba. 2019. 'Representaciones y "Presentificaciones": Funciones de la Imagen Plástica en el Mundo Andino Prehispánico'. In *Culturas Visuales Indígenas y las Prácticas Estéticas en las Américas desde la Antigüedad hasta el Presente*, edited by Sanja Savkić and Hannah Baader. Ibero-Amerikanisches Institut Preußischer Kulturbesitz; Gebr. Mann Verlag.
- Branca, Domenico, and Andreas Haller. 2021. 'Urbanization, Touristification and Verticality in the Andes: A Profile of Huaraz, Peru'. *Sustainability* 13 (11): 11. <https://doi.org/10.3390/su13116438>.
- Bray, Tamara L. 2015. 'Andean Wak'as and Alternative Configurations of Persons, Power, and Things'. In *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*, edited by Tamara L. Bray. University Press of Colorado.
- Brenner, Neil. 2013. 'Theses on Urbanization'. *Public Culture* 25 (1 69): 85–114. <https://doi.org/10.1215/08992363-1890477>.
- Burger, Richard L, ed. 2009. *The Life and Writings of Julio C. Tello: America's First Indigenous Archaeologist*. University of Iowa Press.
- Butler, Toby. 2007. 'Memoryscape: How Audio Walks Can Deepen our Sense of Place by Integrating Art, Oral History and Cultural Geography'. *Geography Compass* 1 (3): 360–372. <https://doi.org/10.1111/j.1749-8198.2007.00017.x>.
- Cardoso, Fernando H, and Enzo Faletto. 1969. *Dependencia y Desarrollo en América Latina*. Siglo Veintiuno Editores.
- Carey, Mark. 2010. *In the Shadow of Melting Glaciers: Climate Change and Andean Society*. Oxford University Press.
- Carey, Mark. 2012. 'Mountaineers and Engineers: The Politics of International Science, Recreation, and Environmental Change in Twentieth-Century Peru'. *Hispanic American Historical Review* 92 (1): 107–141. <https://doi.org/10.1215/00182168-1470986>.
- Carey, Mark, Rodney Garrard, Courtney Cecale, Wouter Buytaert, Christian Huggel, and Mathias Vuille. 2016. 'Climbing for Science and Ice: From Hans Kinzl and Mountaineering-Glaciology to Citizen Science in the Cordillera Blanca'. *Revista de Glaciares y Ecosistemas de Montaña* 1 (1): 59–72. <https://doi.org/10.36580/rgem.i1.59-72>.
- Carey, Mark, Christian Huggel, Jeffrey Bury, César Portocarrero, and Wilfried Haeblerli. 2012. 'An Integrated Socio-Environmental Framework for Glacier Hazard Management and Climate Change Adaptation: Lessons from Lake 513, Cordillera Blanca, Peru'. *Climatic Change* 112 (3): 733–767. <https://doi.org/DOI:%252010.1007/s10584-011-0249-8>.
- Carey, Mark, M. Jackson, Alessandro Antonello, and Jaclyn Rushing. 2016. 'Glaciers, Gender, and Science: A Feminist Glaciology Framework for Global Environmental Change Research'. *Progress in Human Geography* 40 (6): 770–793. <https://doi.org/10.1177/0309132515623368>.

- Carbajulca, Traverso, and Zavala. 1993. 'Proyecto Turístico Recreacional Ecológico Paisajista Memorial Yungay'. Courtesy of Mauro Dueñas.
- Casafranca Álvarez, Ángela Sharon. 2017. 'Las Áreas destinadas a la Protección del Patrimonio Cultural en el Perú: En Torno a la Regulación de las Excepciones a la Intangibilidad en las Áreas Restringidas a la Actividad Minera'. *Foro Jurídico*, no. 16 (April): 17–28. <http://revistas.pucp.edu.pe/index.php/forojuridico/article/view/19860>.
- Cecale, Courtney. 2017. 'Searching for Solutions to Climate Change Risks in the Peruvian Andes'. *Savage Minds*. Accessed 28 August 2017. <https://savageminds.org/2017/08/07/searching-for-solutions-to-climate-change-in-the-peruvian-andes/>.
- Clark, Nigel, and Bronislaw Szerszynski. 2020. *Planetary Social Thought: The Anthropocene Challenge to the Social Sciences*. Polity.
- Cockrell, Bryan. 2017. 'Capac Hucha as an Inca Assemblage'. In *Heilbrunn Timeline of Art History*. The Metropolitan Museum of Art. http://www.metmuseum.org/toah/hd/capa/hd_capa.htm.
- Coe, Michael D. 2011. 'From Huaquero to Connoisseur: The Early Market in Pre-Columbian Art'. In *Collecting the Pre-Columbian Past: A Symposium at Dumbarton Oaks, 6th and 7th October 1990*, edited by Elizabeth Hill Boone and Dumbarton Oaks. Dumbarton Oaks Research Library and Collection.
- Colonia, Daniel, Judith Torres, Wilfried Haerberli, et al. 2017. 'Compiling an Inventory of Glacier-Bed Overdeepenings and Potential New Lakes in De-Glaciating Areas of the Peruvian Andes: Approach, First Results, and Perspectives for Adaptation to Climate Change'. *Water* 9 (5): 5. <https://doi.org/10.3390/w9050336>.
- Comité de Defensa de los Intereses de los Damnificados de 1970 (CODEID). 1985. 'Conclusiones del Segundo Forum "15 Años del Sismo Sobre Sismo"'. Huaraz: Comité de Defensa de los Intereses de los Damnificados de 1970. Courtesy of Yehudí Collas.
- Contreras Elvira, Carlos. 2002. 'Apogeo y Crisis de la Teoría de la Dependencia en la Historia Económica sobre la República'. *Histórica*. *Histórica* 26 (1–2): 503–544. <https://dialnet.unirioja.es/servlet/articulo?codigo=2418803>.
- Cornejo Polar, Antonio. 2003. *Escribir en el Aire: Ensayo sobre la Heterogeneidad Socio-cultural en las Literaturas Andinas*. CELACP; Latinoamericana Editores.
- Cornell University. 2005. 'A Brief Story of the Cornell-Peru Project'. In *Vicos: A Virtual Tour*. Accessed 23 March 2022. <http://instruct1.cit.cornell.edu/courses/vicosperu/>.
- Cortés Rojas, Ignacia. 2019. 'Cuerpos, Coreografías y Desplazamientos: El Tinku en las Manifestaciones Sociales Recientes en Santiago de Chile'. *Conferencia Internacional de Comunicación y Cultura Popular En América Latina (Santiago de Chile)*, 158–167.
- Crellin, Rachel J. 2020. *Change and Archaeology*. Routledge.
- Cruz, Isabel. 1995. *La Fiesta: Metamorfosis de lo Cotidiano*. Ediciones UC.

- Davis, Tracy C. 2007. *Stages of Emergency: Cold War Nuclear Civil Defense*. Duke University Press Books.
- De la Cadena, Marisol. 2004. *Indígenas Mestizos: Raza y Cultura en el Cusco*. IEP Ediciones.
- De la Cadena, Marisol. 2005. 'Are Mestizos Hybrids? The Conceptual Politics of Andean Identities'. *Journal of Latin American Studies* 37 (2): 259–284. <https://doi.org/10.1017/S0022216X05009004>.
- De la Cadena, Marisol. 2015. *Earth Beings: Ecologies of Practice across Andean Worlds*. Duke University Press.
- De la Cadena, Marisol. 2018. 'Uncommons'. March 29. Fieldsights. <https://culanth.org/fieldsights/uncommons>.
- De la Cadena, Marisol. 2019. 'Uncommoning Nature: Stories from the Anthropo-Not-Seen'. In *Anthropos and the Material*, edited by Penny Harvey, Christian Krohn-Hansen, and Knut G Nustad. Duke University Press.
- De la Cadena, Marisol. 2021. 'Not Knowing: In the Presence Of...'. In *Experimenting with Ethnography: A Companion to Analysis*, edited by Andrea Ballesterio and Brit Ross Winthereik. Duke University Press.
- Dean, Carolyn J. 2010. *A Culture of Stone: Inka Perspectives on Rock*. Duke University Press.
- Dean, Carolyn J. 2015. 'Men Who Would Be Rocks. The Inka Wank'a'. In *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*, edited by Tamara L. Bray. University Press of Colorado.
- Defensoría del Pueblo. 2013. 'Reporte de Conflictos Sociales N° 117. Noviembre 2013'. Accessed 25 July 2022. <https://www.gob.pe/institucion/defensoria/colecciones/1356-reportes-de-conflictos-sociales>.
- Defensoría del Pueblo. 2021. 'Reporte de Conflictos Sociales N° 207. Mayo 2021'. Accessed 24 July 2022. <https://www.gob.pe/institucion/defensoria/colecciones/1356-reportes-de-conflictos-sociales>.
- DeLanda, Manuel. 2002. *Intensive Science and Virtual Philosophy*. Continuum.
- DeLanda, Manuel. 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*. Continuum.
- Deleuze, Gilles. 1990. *Bergsonism*. Zone Books.
- Deleuze, Gilles, and Felix Guattari. 1987. *Thousand Plateaus: Capitalism and Schizophrenia*. University of Minnesota Press.
- Desrosières, Alain. 2002. *The Politics of Large Numbers: A History of Statistical Reasoning*. Harvard University Press.
- Díaz-Andreu, Margarita. 2008. *A World History of Nineteenth-Century Archaeology: Nationalism, Colonialism, and the Past*. Oxford University Press.
- Dirección Regional de Cultura de Ancash. 2011. 'Resolución N° 003–2011-DRC-ANC/MC/DPA. Delimitación de Intangibilidad del Campo Santo'. Yungay: Moción a Sesión de Consejo. Courtesy of Sofía Gamarra.

- Donovan, Amy. 2017. 'Geopower: Reflections on the Critical Geography of Disasters'. *Progress in Human Geography* 41 (1): 44–67. <https://doi.org/10.1177/0309132515627020>.
- Doughty, Paul L. 1971. 'From Disaster to Development'. *Americas* 23 (5): 25–35.
- Drinot, Paulo. 2017. 'Foucault en el País de los Incas: Soberanía y Gubernamentalidad en el Perú Neoliberal'. In *El Perú En Teoría*, edited by Paulo Drinot. Instituto de Estudios Peruanos.
- Dudasik, Stephen W. 1980. 'Victimization in Natural Disaster'. *Disasters* 4 (3): 329–338. <https://doi.org/10.1111/j.1467-7717.1980.tb00120.x>.
- Dünne, Jörg. 2021. 'Writing the Long Durée: Foundational Fictions and the Anthropocene'. In *Earth and Beyond in Tumultuous Times: A Critical Atlas of the Anthropocene*, edited by Réka Patrícia Gál and Petra Löffler. Meson Press.
- Duviols, Pierre. 1973. 'Huari y Llacuaz. Agricultores y Pastores. Un Dualismo Prehispánico de Oposición y Complementariedad'. *Revista Del Museo Nacional de Lima XXXIX*: 393–414.
- Duviols, Pierre. 1976. 'La Capacocha: Mecanismo y Función del Sacrificio Humano, su Proyección Geométrica, su Papel en la Política Integracionista y en la Economía Redistributiva del Tawantinsuyu'. *Allpanchis* 9 (9).
- Duviols, Pierre. 1979. 'Un Symbolisme de l'Occupation, de l'Aménagement et de l'Exploitation de l'Espace. Le Monolithe Huanca et Sa Fonction Dans Les Andes Pré-hispaniques'. *L'Homme* 19 (2): 7–31. <https://doi.org/10.3406/hom.1979.367954>.
- Duviols, Pierre. 1986. *Cultura Andina y Represión. Procesos y Visitas de Idolatrías y Hechicerías. Cajatambo, Siglo XVII*. Centro de Estudios Rurales Andinos Bartolomé de las Casas.
- Earls, John. 1969. 'The Organization of Power in Quechua Mythology'. *Journal of the Steward Anthropological Society* 1: 63–82.
- Edensor, Tim. 1997. 'National Identity and the Politics of Memory: Remembering Bruce and Wallace in Symbolic Space'. *Environment and Planning D: Society and Space* 15 (2): 175–194. <https://doi.org/10.1068/d150175>.
- Edensor, Tim. 2012. 'Vital Urban Materiality and its Multiple Absences: The Building Stone of Central Manchester'. *Cultural Geographies* 20 (4): 447–465. <https://doi.org/10.1177/1474474012438823>.
- El Comercio. 1941a. 'Catástrofe en Huaraz'. 14 December 1941. Morning Edition Nr. 52767. Archive of Riva-Agüero Institute, Lima.
- El Comercio. 1941b. 'Huaraz Sufrió Grandes Daños por el Desborde del Río Quilcay'. 14 December 1941. Morning Edition Nr. 52767. Archive of Riva-Agüero Institute, Lima.
- El Comercio. 1941c. 'La Catástrofe de Huaraz'. 16 December 1941. Afternoon Edition Nr. 52771. Archive of Riva-Agüero Institute, Lima.

- El Comercio. 2014. 'Waldo Ríos Propuso Entregar S/.500 solo para Captar Votos'. Accessed 29 July 2022. <https://elcomercio.pe/peru/ancash/waldo-rios-propuso-en-tregar-s-500-captar-votos-293412-noticia/>.
- El Departamento. 1913. 'Las Ruinas de Ancash'. In *El Libro Azul* 3 (8): 37. https://issuu.com/gibergarcia/docs/libro_azul_-_n_8_-_2016.
- Elias, Norbert. 1978. *What Is Sociology?* Columbia University Press.
- Emmer, Adam, Jan Klimeš, Martin Mergili, Vít Vilímek, and Alejo Cochachin. 2016. '882 Lakes of the Cordillera Blanca: An Inventory, Classification, Evolution and Assessment of Susceptibility to Outburst Floods'. *CATENA* 147 (December): 269–279. <https://doi.org/10.1016/j.catena.2016.07.032>.
- Emmer, Adam, and Vít Vilímek. 2014. 'New Method for Assessing the Susceptibility of Glacial Lakes to Outburst Floods in the Cordillera Blanca, Peru'. *Hydrology and Earth System Sciences* 18 (9): 3461–3479. <https://doi.org/10.5194/hess-18-3461-2014>.
- Ericksen, George E, George Plafker, and Jaime Fernández Concha. 1970. *Preliminary Report on the Geologic Events Associated with the May 31, 1970, Peru Earthquake*. Circular 639. US Geological Survey. <https://pubs.usgs.gov/circ/1970/0639/report.pdf>.
- Erikson, Kai T. 1978. *Everything in Its Path: Destruction of Community in the Buffalo Creek Flood*. Simon & Schuster.
- Evans-Pritchard, Edward Evan. 1940. *The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*. Clarendon Press.
- Fabian, Johannes. 1983. *Time and the Other: How Anthropology Makes its Object*. Columbia University Press.
- Fabian, Johannes. 2007. *Memory against Culture: Arguments and Reminders*. Duke University Press.
- Farías, Ignacio. 2011a. 'The Politics of Urban Assemblages'. *City* 15 (3–4): 365–374. <https://doi.org/10.1080/13604813.2011.595110>.
- Farías, Ignacio. 2011b. 'Tourist Maps as Diagrams of Destination Space'. *Space and Culture* 14 (4): 398–414. <https://doi.org/10.1177/1206331210392682>.
- Farías, Ignacio. 2013. 'Virtual Attractors, Actual Assemblages: How Luhmann's Theory of Communication Complements Actor-Network Theory'. *European Journal of Social Theory* 17(1): 24–41. <https://doi.org/10.1177/1368431013484003>.
- Farías, Ignacio. 2014. 'Planes Maestros como Cosmogramas'. *Revista Pléyade* 14: 119–142.
- Farías, Ignacio, and Thomas Bender, eds. 2009. *Urban Assemblages: How Actor-Network Theory Changes Urban Studies*. Routledge.
- Farías, Ignacio, and Anders Blok. 2016. 'Introducing Urban Cosmopolitics. Multiplicity and the Search for a Common World'. In *Urban Cosmopolitics: Agencements, Assemblies, Atmospheres*, edited by Anders Blok and Ignacio Farías. Routledge.
- Fassin, Didier, and Richard Rechtman. 2009. *The Empire of Trauma: An Inquiry into the Condition of Victimhood*. Princeton University Press.

- Firth, Raymond. 1959. *Social Change in Tikopia*. Macmillan.
- Flores Galindo, Alberto. 2021. *Buscando un Inca: Identidad y Utopía en los Andes*. Editorial Horizonte.
- Fontc, Martín. 2021. 'Subterranean (In)Visibilities: Traces, Underground Water, and Thermal Flows in the El Tatio Geysir Field, Atacama, Chile'. *Arcadia* 24: 7. <https://doi.org/10.5282/rcc/9316>.
- Fortun, Kim. 2009. 'Figuring out Ethnography'. In *Fieldwork Is not What it Used to Be: Learning Anthropology's Method in a Time of Transition*, edited by James D. Faubion and George E. Marcus. Cornell University Press.
- Fortun, Kim, Scott Gabriel Knowles, Vivian Y. Choi, et al. 2016. 'Researching Disaster from an STS Perspective'. In *The Handbook of Science and Technology Studies, Fourth Edition*, edited by Ulrike Felt, Rayvon Fouche, Clark A. Miller, and Laurel Smith-Doerr. The MIT Press.
- Foster, Michael Dylan. 2015. 'UNESCO on the Ground'. In *UNESCO on the Ground: Local Perspectives on Intangible Cultural Heritage*, edited by Michael Dylan Foster and Lisa Gilman. Indiana University Press.
- Foucault, Michel. 2009. *Security, Territory, Population: Lectures at the Collège de France 1977–1978*. Edited by Michel Senellart. Picador.
- Frank, André Gunder. 1967. *Capitalismo y Subdesarrollo en América Latina*. Siglo Veintiuno Editores.
- Fraser, Barbara. 2017. 'Learning from Flood-alarm System's Fate'. *EcoAméricas*, April 2017, 6–8. Accessed 28 August 2022. <https://www.ecoamericas.com/>.
- Fraser, Valerie. 1990. *The Architecture of Conquest: Building in the Viceroyalty of Peru, 1535–1635*. Cambridge University Press.
- Fuentealba, Ricardo. 2021. 'Urbanising Disaster Governance: The Politics of Risks in the Foothills of Santiago'. Thesis submitted for the degree of Doctor of Philosophy in the Faculty of Social and Behavioural Sciences, University of Amsterdam.
- Gaillard, JC. 2021. *The Invention of Disaster: Power and Knowledge in Discourses on Hazard and Vulnerability*. Routledge.
- Gaillard, JC. 2022. 'The Epistemological Non-Sense of Disaster Studies and Some More Sensible Prospects'. *Australian Journal of Emergency Management* 37 (1): 14–15. https://knowledge.aidr.org.au/media/9181/ajem_06-2022-01.pdf.
- Gaillard, JC, and Jessica Mercer. 2013. 'From Knowledge to Action: Bridging Gaps in Disaster Risk Reduction'. *Progress in Human Geography* 37 (1): 93–114. <https://doi.org/10.1177/0309132512446717>.
- Gamboa Velásquez, Jorge. 2016. 'Pumacayán y Huaraz: El Sitio Arqueológico y la Ciudad'. *El Libro Azul* 3 (8): 34–37. https://issuu.com/gibergarcia/docs/libro_azul_-_n_8_-_2016.
- García, Alan. 2007. 'El Síndrome del Perro Horteleano'. *El Comercio*. Accessed 24 March 2023. <https://elcomercio.pe/bicentenario/2007-1-el-sindrome-del-perro-del-hortelano-l-bicentenario-noticia/>.

- Geismar, Haidy. 2015. 'Anthropology and Heritage Regimes'. *Annual Review of Anthropology* 44 (1): 71–85. <https://doi.org/10.1146/annurev-anthro-102214-014217>.
- Geissler, Paul Wenzel, and Guillaume Lachenal. 2017. 'Brief Introduction for Archaeologists of African Futures'. In *Traces of the Future: An Archaeology of Medical Science in Africa*, edited by Paul Wenzel Geissler, Guillaume Lachenal, John Manton, and Noémi Tousignant. Intellect Ltd.
- Ghosh, Amitav. 2017. *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press.
- Giddens, Anthony. 1991a. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Blackwell Publishers.
- Giddens, Anthony. 1991b. *The Consequences of Modernity*. Blackwell Publishers.
- Good, Byron, and Devon Hinton. 2015. *Culture and PTSD: Trauma in Global and Historical Perspective*. University of Pennsylvania Press.
- Gordillo, Gastón R. 2014. *Rubble: The Afterlife of Destruction*. Duke University Press.
- Greaves, Tom, Ralph Bolton, and Florencia Zapata, eds. 2010. *Vicos and Beyond: A Half Century of Applying Anthropology in Peru*. AltaMira Press.
- Gridilla, P. Alberto. 1933a. *Huaraz: Apuntes y Documentos para la Historia de la Ciudad*. Tipográfica la Época.
- Gridilla, P. Alberto. 1933b. 'Huaraz en Tiempos de la Conquista: Pumakayán'. *El Libro Azul* 3 (8): 4–8. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Grimaldi, Giuseppe. 2019. 'The Black Mediterranean: Liminality and the Reconfiguration of Afroeuro-peaneness'. *Open Cultural Studies* 3 (1): 414–427. <https://doi.org/10.1515/culture-2019-0035>.
- Gross, David. 1985. 'Temporality and the Modern State'. *Theory and Society* 14 (1): 53–82. <https://www.jstor.org/stable/657398>.
- Grosz, Elizabeth. 1994. *Volatile Bodies: Toward a Corporeal Feminism*. Indiana University Press.
- Guggenheim, Michael. 2014. 'Introduction: Disasters as Politics – Politics as Disasters'. *The Sociological Review* 62 (1): 1–16. <https://doi.org/10.1111/1467-954X.12121>.
- Hagen, Ryan, and Rebecca Elliott. 2021. 'Disasters, Continuity, and the Pathological Normal'. *Sociologica* 15 (1): 1. <https://doi.org/10.6092/issn.1971-8853/12824>.
- Hall, Stuart. 2018. *Familiar Stranger: A Life Between Two Islands*. Penguin Books.
- Haraway, Donna J. 2007. *When Species Meet*. University of Minnesota Press.
- Haraway, Donna J. 2018. *Modest_Witness@Second_Millennium. FemaleMan_Meets_OncoMouse*. Routledge.
- Hartog, François. 2015. *Regimes of Historicity: Presentism and Experiences of Time*. Columbia University Press.
- Hetherington, Kevin. 1998. 'Allegory and the Blank Figure: A Reply to Martin Parker (1998)'. *Journal of Material Culture* 3 (1): 124–127. <https://doi.org/10.1177/135918359800300109>.

- Hetherington, Kevin. 2003. 'Whither the World? Presence, Absence and the Globe'. In *Mobilizing Place, Placing Mobility: The Politics of Representation in a Globalized World*, edited by Ginette Verstraete and Tim Cresswell. Brill Rodopi.
- Hetherington, Kevin. 2004. 'Secondhandedness: Consumption, Disposal, and Absent Presence'. *Environment and Planning D: Society and Space* 22 (1): 157–173. <https://doi.org/10.1068/d315t>.
- Hirsch, Eric, and Michael O'Hanlon, eds. 1995. *The Anthropology of Landscape: Perspectives on Place and Space*. Clarendon Press; Oxford University Press.
- Hodgkin, Katharine, and Susannah Radstone. 2005. *Memory, History, Nation: Contested Pasts*. Transaction Publishers.
- Hoffman, Susanna M. 2019. "'The Worst of Times, the Best of Times"'. Toward a Model of Cultural Response to Disaster'. In *The Angry Earth: Disaster in Anthropological Perspective*, Second Edition, edited by Anthony Oliver-Smith and Susanna M. Hoffman. Routledge.
- Holmes, Douglas R, and George E. Marcus. 2006. *Fast Capitalism: Para-Ethnography and the Rise of the Symbolic Analyst*. Edited by Melissa S. Fisher and Greg Downey. Duke University Press Books.
- Horowitz, Andy, and Jacob A. C. Remes. 2021. 'Introducing Critical Disaster Studies'. In *Critical Disaster Studies*, edited by Jacob A. C. Remes and Andy Horowitz. University of Pennsylvania Press.
- Huaraz Noticias. 2016. 'Pumacayán Nula Recuperación'. Accessed 9 June 2022. <https://huaraznoticias.com/Pumacayán-nula-recuperacion/>.
- Infantes, V, J. Véliz, J. Morales, I. Pardo-Figueroa, and F.R. Jeri. 1970. 'Observaciones Psicopatológicas en el Área del Sismo (Ancash)'. Lima: Departamento de Psiquiatría del Hospital de Policía; Departamento de Neuropsiquiatría de la Universidad Nacional Mayor de San Marcos. Courtesy of Cécile E. Stehrenberger.
- Ingold, Tim. 1993. 'The Temporality of the Landscape'. *World Archaeology* 25 (2): 152–174. <https://www.jstor.org/stable/124811>.
- Ingold, Tim. 2010. 'Footprints through the Weather-World: Walking, Breathing, Knowing'. *The Journal of the Royal Anthropological Institute* 16: 121–139. <https://www.jstor.org/stable/40606068>.
- Ingold, Tim. 2012. 'Toward an Ecology of Materials'. *Annual Review of Anthropology* 41 (1): 427–442. <https://doi.org/10.1146/annurev-anthro-081309-145920>.
- Ingold, Tim. 2014. 'That's Enough about Ethnography!' *HAU: Journal of Ethnographic Theory* 4 (1): 383–395. <https://doi.org/10.14318/hau4.1.021>.
- Instituto Nacional de Cultura (INC). 2003. Resolución Directoral Nacional N° 294. Lima: Instituto Nacional de Cultura. Courtesy of Sofía Gamarra.
- Instituto Nacional de Investigación de Glaciares y Ecosistemas de Montaña (INAI-GEM). 2018. *Inventario Nacional de Glaciares: Las Cordilleras Glaciares del Perú 2018*. Huaraz: Instituto Nacional de Investigación en Glaciares y Ecosistemas de Mon-

- taña. Accessed 28 November 2019. <https://repositorio.inaigem.gob.pe/handle/16072021/57>.
- Instituto Nacional de Planificación (INP). 1972. Plan del Perú 1971–1975. Volumen XII: Plan de Desarrollo de la Zona Afectada, CRYRZA. Lima: Presidencia de la República. Courtesy of Rebecca Jarman.
- Jacobsen, Christine M, Marry-Anne Karlsen, and Shahram Khosravi, eds. 2020. *Waiting and the Temporalities of Irregular Migration*. Routledge.
- Jarman, Rebecca. 2023a. 'Before and After? Temporalities of Disaster'. *E-Flux*. <https://www.e-flux.com/journal/135/530642/before-and-after-temporalities-of-disaster>.
- Jarman, Rebecca. 2023b. 'When Worlds Converge: Geological Ontologies and Volcanic Epistemologies in Colombian Literature after the 1985 Eruption of the Nevado Del Ruiz'. *Textual Practice* 37 (12): 1932–1962. <https://doi.org/10.1080/0950236X.2022.2150290>.
- Jodłowska, Elżbieta, and Mirosław Mąka. 2019. 'El Ladrillo como Material, Símbolo y Comunicador del Paisaje Semiótico de la Ciudad: El Diseño de la Antropología de la Ciudad Andina de Huaraz'. In *Espacios En Movimiento. El Pasado y Futuro de las Estructuras Urbanas y Rurales*, edited by Nicole Bernex Weiss. Sociedad Geográfica de Lima.
- Johnson Lee, David. 2015. 'De-Centring Managua: Post-Earthquake Reconstruction and Revolution in Nicaragua'. *Urban History* 42 (4): 663–685. <https://doi.org/10.1017/S0963926815000577>.
- Johnson Lee, David. 2021. *The Ends of Modernization: Nicaragua and the United States in the Cold War Era*. Cornell University Press.
- Keesing, Felix M. 1952. 'The Papuan Orokaiva Vs Mt. Lamington: Cultural Shock and Its Aftermath'. *Human Organization* 11 (1): 16–22. <https://www.jstor.org/stable/44123976>.
- Klarén, Peter F. 1973. 'Review of *Peasants, Power, and Applied Social Change: Vicos as a Model* by Henry F. Dobyns, Paul L. Doughty, and Harold D. Lasswell'. *The Hispanic American Historical Review* 53 (3): 549–550. <https://doi.org/10.2307/2513012>.
- Klein, Naomi. 2008. *The Shock Doctrine: The Rise of Disaster Capitalism*. Picador.
- Knox, Hannah. 2020. *Thinking Like a Climate: Governing a City in Times of Environmental Change*. Duke University Press.
- Koselleck, Reinhart. 2002. *The Practice of Conceptual History: Timing History, Spacing Concepts*. Stanford University Press.
- Koselleck, Reinhart. 2004. *Futures Past: On the Semantics of Historical Time*. Columbia University Press.
- Kubler, George. 2008. *The Shape of Time: Remarks on the History of Things*. Yale University Press.

- Kuutma, Kristin. 2013. 'Concepts and Contingencies in Heritage Politics'. In *Anthropological Perspectives on Intangible Cultural Heritage*, edited by Lourdes Arizpe and Cristina Amescua. Springer.
- La República. 2020. 'Áncash Registra 70 Denuncias por Corrupción durante el Estado de Emergencia'. Accessed 12 October 2022. <https://larepublica.pe/sociedad/2020/08/10/corrupcion-en-peru-ancash-registra-70-denuncias-por-corrupcion-durante-el-estado-de-emergencia-del-coronavirus-procuraduria-lrnd>.
- Lakoff, Andrew, and Stephen J. Collier. 2010. 'Infrastructure and Event: The Political Technology of Preparedness'. In *Political Matter. Technoscience, Democracy and Public Life*, edited by Bruce Braun and Sarah J. Whatmore. University of Minnesota Press.
- Lakoff, Andrew, and Frédéric Keck. 2013. 'Preface: Sentinel Devices'. *Limn* 1 (3). <https://escholarship.org/uc/item/oxq1t67m>.
- Lampert, Jay. 2014. *Simultaneity and Delay: A Dialectical Theory of Staggered Time*. Bloomsbury Academic.
- Latour, Bruno. 1986. 'Visualisation and Cognition: Drawing Things Together'. In *Knowledge and Society: Studies in the Sociology of Culture Past and Present*, edited by Henrika Kuklick, vol. 6. Jai Press.
- Latour, Bruno. 1988. *Science in Action: How to Follow Scientists and Engineers through Society*. Harvard University Press.
- Latour, Bruno. 1990. 'Technology is Society Made Durable'. *The Sociological Review* 38 (S1): 103–131. <https://doi.org/10.1111/j.1467-954X.1990.tb03350.x>.
- Latour, Bruno. 1991. 'The Berlin Key or How to Do Words with Things'. In *Matter, Materiality and Modern Culture*, edited by Paul M. Graves-Brown. Routledge.
- Latour, Bruno. 1997. 'Trains of Thought: Piaget, Formalism and the Fifth Dimension'. *Common Knowledge* 6 (3): 170–191.
- Latour, Bruno. 2000. 'When Things Strike Back: A Possible Contribution of "Science Studies" to the Social Sciences'. *The British Journal of Sociology* 51 (1): 107–123. <https://doi.org/10.1111/j.1468-4446.2000.00107.x>.
- Latour, Bruno. 2004. 'Whose Cosmos, Which Cosmopolitics? Comments on the Peace Terms of Ulrich Beck'. *Common Knowledge* 10 (3): 450–462. <https://doi.org/10.1215/0961754X-10-3-450>.
- Latour, Bruno. 2007. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press.
- Latour, Bruno. 2013. *An Inquiry into Modes of Existence: An Anthropology of the Moderns*. Harvard University Press.
- Latour, Bruno. 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime*. Polity.
- Latour, Bruno. 2018. *Down to Earth: Politics in the New Climatic Regime*. Polity.
- Latour, Bruno, and Nikolaj Schultz. 2022. *On the Emergence of an Ecological Class: A Memo*. Polity.

- Lau, George. 2016. *An Archaeology of Ancash: Stones, Ruins and Communities in Andean Peru*. Routledge.
- Law, John. 2004. *After Method: Mess in Social Science Research*. Routledge.
- Law, John. 2008. 'Actor Network Theory and Material Semiotics'. In *The New Blackwell Companion to Social Theory*, edited by Brian S. Turner. Blackwell.
- Law, John, and Kevin Hetherington. 1998. 'Allegory and Interference: Representation in Sociology'. Department of Sociology, Lancaster University. <http://www.com.p.lancs.ac.uk/sociology/papers/Law-Hetherington-Allegory-Interference.pdf>.
- León León, Javier Eduardo. 2016. *31 de Mayo de 1971. Fin y Principio de un Pueblo Eterno, Yungay*. Ediciones El Inka.
- Lessa, William A. 1964. 'The Social Effects of Typhoon Ophelia (1960) on Ulithi'. *Micronesica* 1. <https://micronesica.org/volumes/1>.
- Lévi-Strauss, Claude. 2021. *Wild Thought. A New Translation of "La Pensée Sauvage"*. Translated by Jeffrey Mehlman and John Leavitt. University of Chicago Press.
- Levy, Daniel. 2016. 'Cosmopolitanizing Catastrophism: Remembering the Future'. *Theory, Culture & Society* 33 (7–8): 291–299. <https://doi.org/10.1177/0263276416669412>.
- Levy, Daniel, and Natan Sznajder. 2002. 'Memory Unbound: The Holocaust and the Formation of Cosmopolitan Memory'. *European Journal of Social Theory* 5 (1): 87–106. <https://doi.org/10.1177/1368431002005001002>.
- Li, Fabiana. 2015. *Unearthing Conflict: Corporate Mining, Activism, and Expertise in Peru*. Duke University Press Books.
- Licoppe, Christian. 2010. 'The "Crisis of the Summons": A Transformation in the Pragmatics of "Notifications," from Phone Rings to Instant Messaging'. *The Information Society* 26 (4): 288–302. <https://doi.org/10.1080/01972243.2010.489859>.
- Lidman, Tomas. 2008. *Scientific Libraries: Past Developments and Future Changes*. Chandos Publishing.
- Lliboutry, Louis. 1975. 'La Catastrophe de Yungay (Pérou)'. *Proceedings of the Moscow Symposium IAHS-AISH Publ. No. 104, 1975*.
- Lord, Austin. 2014. 'Making a "Hydropower Nation": Subjectivity, Mobility, and Work in the Nepalese Hydroscapes'. *HIMALAYA* 34 (2): 111–121. <https://digitalcommons.macalester.edu/himalaya/vol34/iss2/13>.
- Lord, Austin, Georgina Drew, and Mabel Denzin Gergan. 2020. 'Timescapes of Himalayan Hydropower: Promises, Project Life Cycles, and Precarities'. *WIREs Water* 7 (6): 1–15. <https://doi.org/10.1002/wat2.1469>.
- Low, Setha M. 2000. *On the Plaza: The Politics of Public Space and Culture*. University of Texas Press.
- Luiselli, Valeria. 2020. *Lost Children Archive*. 4th Estate.
- Macdonald, Sharon. 2008. *Difficult Heritage: Negotiating the Nazi Past in Nuremberg and Beyond*. Routledge.

- Macdonald, Sharon. 2013. *Memorylands: Heritage and Identity in Europe Today*. Routledge.
- MacDougall, David. 2005. *The Corporeal Image: Film, Ethnography, and the Senses*. Princeton University Press.
- Małka, Mirosław, and Elżbieta Jodłowska. 2019. 'La Figura del Pishtaco Andino como Expresión Simbólica de Trauma Social, Aculturación y Conflicto (SS. XVI-XXI)'. *Estudios Latinoamericanos* 39: 131–141. <https://doi.org/10.36447/studios2019.v39.a rt8>.
- Marcus, George E. 1995. 'Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography'. *Annual Review of Anthropology* 24: 95–117.
- Marcus, George E. 2000. *Para-Sites: A Casebook against Cynical Reason*. University of Chicago Press.
- Masco, Joseph. 2014. *The Theater of Operations: National Security Affect from the Cold War to the War on Terror*. Duke University Press.
- Matos Mar, José. 2004. *Desborde Popular y Crisis del Estado: Veinte Años después*. Fondo Editorial de Congreso del Perú.
- May, Jon, and Nigel Thrift, eds. 2001. *Timespace: Geographies of Temporality*. Routledge. <https://doi.org/10.4324/9780203360675>.
- McFarlane, Colin. 2011. 'Assemblage and Critical Urbanism'. *City* 15 (2): 204–224. <https://doi.org/10.1080/13604813.2011.568715>.
- McGowran, Peter, and Amy Donovan. 2021. 'Assemblage Theory and Disaster Risk Management'. *Progress in Human Geography*, April 7, 03091325211003328. <https://doi.org/10.1177/03091325211003328>.
- Meddens, Frank M. 2015. 'The Importance of Being Inka. Ushnu Platforms and Their Place in the Andean Landscape'. In *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*, edited by Tamara L. Bray. University Press of Colorado.
- Melgarejo Méndez, Francisco. 2013. 'La Provincia de Yungay En La Historia Del Perú. Los Vestigios Más Antiguos'. In *II Congreso Regional de Historia 'Yungay en el Devenir Histórico del Departamento de Huaylas, Hoy Ancash'*. Ediciones El Inka.
- Méndez, Cecilia. 2000. *Incas Sí, Indios No: Apuntes para el Estudio del Nacionalismo Criollo en el Perú*. Documento de Trabajo Nº 56, Segunda Edición. Serie Historia 10. Instituto de Estudios Peruanos.
- Messerli, Bruno, Daniel Viviroli, and Rolf Weingartner. 2004. 'Mountains of the World: Vulnerable Water Towers for the 21st Century'. *Ambio* 13 (Special Report): 29–34. <https://doi.org/10.1029/2006WR005653>.
- Meza Marcos, Lucio. 2021. *Catástrofes y Tragedias en Ancash*. Hirka; Bibliofilia Ediciones.
- Miller, Joan B. 1974. *Aberfan: A Disaster and Its Aftermath*. Constable.

- Milner, Alexander M, Kieran Khamis, Tom J. Battin, et al. 2017. 'Glacier Shrinkage Driving Global Changes in Downstream Systems'. *Proceedings of the National Academy of Sciences* 114 (37): 9770–9778. <https://doi.org/10.1073/pnas.1619807114>.
- Miroff, Nick. 2017. 'A Flood of Problems'. *The Washington Post*. Accessed 27 August 2017. <https://www.washingtonpost.com/sf/world/2017/08/07/perus-glaciers-have-made-it-a-laboratory-for-adapting-to-climate-change-its-not-going-well/>.
- Mol, Annemarie. 2003. *The Body Multiple: Ontology in Medical Practice*. Duke University Press.
- Morton, Timothy. 2013. *Hyperobjects: Philosophy and Ecology After the End of the World*. Combined Academic.
- Murphy, Michelle. 2018. 'Against Population, Towards Alterlife'. In *Making Kin Not Population*, edited by Adele Clarke and Donna Haraway. Prickly Paradigm Press.
- Nelson, Diane M. 2015. *Who Counts? The Mathematics of Death and Life after Genocide*. Duke University Press.
- Nora, Pierre. 1989. 'Between Memory and History: Les Lieux de Mémoire'. *Representations* 26 (April): 7–24. <https://doi.org/10.2307/2928520>.
- Norgaard, Kari Marie. 2011. *Living in Denial: Climate Change, Emotions, and Everyday Life*. The MIT Press.
- Nüsser, Marcus, ed. 2013. *Large Dams in Asia: Contested Environments between Technological Hydroscaapes and Social Resistance*. Springer.
- Olaza, Tito, and Juan Quirós Romero. 2015. *Huaraz en el Tiempo. La Vida de la Sociedad Huaracina antes de 1970*. Documentary. Huaraz: RedCondor Film. Accessed 21 February 2020. <https://www.youtube.com/watch?v=NLtC6IA4GMs>.
- Oliver-Smith, Anthony. 1977. 'Disaster Rehabilitation and Social Change in Yungay, Peru'. *Human Organization* 36 (1): 5–13.
- Oliver-Smith, Anthony. 1986. *The Martyred City: Death and Rebirth in the Andes*. University of New Mexico Press.
- Oliver-Smith, Anthony. 2021. 'Interview by Gregory Button'. *Society for Applied Anthropology* 32 (4). <https://www.appliedanthro.org/publications/news/november-2021/interview-anthony-oliver-smith>.
- Oliver-Smith, Anthony, and Roberta E. Goldman. 1988. 'Planning Goals and Urban Realities: Post-Disaster Reconstruction in a Third World City'. *City & Society* 2 (2): 105–126. <https://doi.org/10.1525/city.1988.2.2.105>.
- Oliver-Smith, Anthony, and Susannah M. Hoffman. 2002. 'Introduction: Why Anthropologists Should Study Disasters'. In *Catastrophe & Culture: The Anthropology of Disaster*, edited by Susanna M. Hoffman and Anthony Oliver-Smith. School of American Research Press.
- O'Reilly, Zoë. 2018. "'Living Liminality": Everyday Experiences of Asylum Seekers in the "Direct Provision" System in Ireland'. *Gender, Place & Culture* 25 (6): 821–842. <https://doi.org/10.1080/0966369X.2018.1473345>.

- Organismo Regional para el Desarrollo de la Zona Afectada (ORDEZA). 1977. 'Expeditivo Técnico de Ubicación y Delimitación del Área declarada Intangible'. Resolución N° 04 17-77-ORDEZA. Lima. Archive of Yungay's Provincial Municipality.
- Orlove, Benjamin S. 1991. 'La Violencia Vista desde Arriba y desde Abajo: Narrativas Oficiales y Campesinas de Encuentros Conflictivos en la Sierra Sur del Perú'. In *Poder y Violencia En Los Andes*, edited by Henrique Urbano and Mirko Lauer. Centro de Estudios Rurales Andinos Bartolomé de las Casas.
- Orlove, Benjamin S. 1998. 'Down to Earth: Race and Substance in the Andes'. *Bulletin of Latin American Research* 17 (2): 207-222. <https://www.jstor.org/stable/3339229>.
- Orsini, Davide. 2022. *The Atomic Archipelago: US Nuclear Submarines and Technopolitics of Risk in Cold War Italy*. University of Pittsburgh Press.
- Ortiz, Fernando. 1947. *El Huracán: Su Mitología y sus Símbolos*. Fondo de Cultura Económica.
- Osterling, Jorge P. 1979. 'The 1970 Peruvian Disaster and the Spontaneous Relocation of Some of its Victims: Ancashino Peasant Migrants in Huaynopampa'. *Mass Emergencies* 4: 117-120.
- Otárola Peñaranda, Roque. 2020. 1970. *45 Segundos entre la Vida y la Muerte*. Ediciones Nova Print.
- Pajuelo Prieto, Rómulo, ed. 2002. *Vida, Muerte y Resurrección. Testimonios sobre el Sismo-Alud 1970*. Ediciones El Inka.
- Pajuelo Prieto, Rómulo. 2010. *Yungay Ave Fenix. Testimonios del Renacer de una Ciudad*. Ediciones El Inka.
- Peterson, Marina. 2021. *Atmospheric Noise: The Indefinite Urbanism of Los Angeles*. Duke University Press.
- Petryna, Adriana. 2002. *Life Exposed: Biological Citizens after Chernobyl*. Princeton University Press.
- PLANAGERD. 2014. *Plan Nacional de Gestión del Riesgo de Desastres 2014-2021*. Accessed 11 June 2022. https://cenepred.gob.pe/web/wp-content/uploads/Guia_Manuales/PLANAGERD%202014-2021.pdf.
- Pratt, Mary Louise. 1991. 'Arts of the Contact Zone'. *Profession*, 33-40. <https://www.jstor.org/stable/25595469>.
- Proyecto Glaciares. 2016. 'Comunicado: Equipos del Sistema de Alerta Temprana de Carhuaz Definitivamente Inoperativos como Mecanismo frente a Aluviones'. Online press release. Accessed 28 September 2022. <https://www.ana.gob.pe/noticia/comunicado-equipos-del-sistema-de-alerta-temprana-de-carhuaz-definitivamente-inoperativos>.
- Puente, Javier. 2020. 'De Comunero a Campesino: El «Corto Siglo Veinte» en el Campo Peruano, 1920-1969'. *Investigaciones Históricas. Época Moderna y Contemporánea*, N° 40 (November): 40. <https://doi.org/10.24197/ihmc.40.2020.9-26>.
- Puente, Javier. 2023. *The Rural State: Making Comunidades, Campesinos, and Conflict in Peru's Central Sierra*. University of Texas Press.

- Quiroz, Alfonso. 2016. *Historia de la Corrupción en el Perú*. Instituto de Estudios Peruanos.
- Rabinow, Paul, George Marcus, James D. Faubion, and Tobias Rees. 2008. *Designs for an Anthropology of the Contemporary*. Duke University Press.
- Raimondi, Antonio. 1873. *El Departamento de Ancash y sus Riquezas Naturales*. Lima: Publicado por Enrique Meiggs.
- Ranciere, Jacques. 2004. *The Politics of Aesthetics: The Distribution of the Sensible*. Continuum.
- Rasmussen, Mattias Borg. 2015. *Andean Waterways: Resource Politics in Highland Peru*. University of Washington Press.
- Rasmussen, Mattias Borg. 2017. 'Tactics of the Governed: Figures of Abandonment in Andean Peru'. *Journal of Latin American Studies* 49 (2): 327–353. <https://doi.org/10.1017/S0022216X16001826>.
- Rasmussen, Mattias Borg. 2018. 'Paper Works: Contested Resource Histories in Peru's Huascarán National Park'. *World Development* 101 (January): 429–440. <https://doi.org/10.1016/j.worlddev.2017.05.005>.
- Rasmussen, Mattias Borg, Adam French, and Susan Conlon. 2019. 'Conservation Conjunctures: Contestation and Situated Consent in Peru's Huascarán National Park'. *Conservation & Society* 17 (1): 1–14. <https://www.jstor.org/stable/26554466>.
- Reina Loli, Manuel Salvador. 1959. 'Arqueología Huaracina: El Adoratorio de Pumacayán'. *El Libro Azul* 3 (8): 16–20. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Remy, María Isabel. 2005. 'Los Gobiernos Locales en el Perú: Entre el Entusiasmo Democrático y el Deterioro de la Representación Política'. In *El Estado está de Vuelta: Desigualdad, Diversidad y Democracia*, edited by Víctor Vich. Instituto de Estudios Peruanos.
- Reynolds, J. M., A. Dolecki, and C. Portocarrero. 1998. 'The Construction of a Drainage Tunnel as Part of Glacial Lake Hazard Mitigation at Hualcán, Cordillera Blanca, Peru'. Section 1: Coastal and Fluvial Geohazards. *Geological Society, London, Engineering Geology Special Publications* 15 (1): 41–48. <https://doi.org/10.1144/GSL.ENG.1998.015.01.05>.
- Rice, Mark. 2018. *Making Machu Picchu: The Politics of Tourism in Twentieth-Century Peru*. The University of North Carolina Press.
- Riley, Denise. 2019. *Time Lived, Without Its Flow*. Picador.
- Robles Mendoza, Román. 2021. *Extirpación de Idolatrías en Huaylas y Cajatambo, Cuatro Siglos Después*. Tarea Asociación Gráfica Educativa.
- Salas Carreño, Guillermo. 2008. *Dinámica Social y Minería. Familias Pastorales de Puna y la Presencia del Proyecto Antamina (1997–2002)*. Instituto de Estudios Peruanos.
- Sansi, Roger. 2013. 'The Latour Event: History, Symmetry and Diplomacy'. *Social Anthropology* 21 (4): 448–461. <http://onlinelibrary.wiley.com/doi/10.1111/1469-8676.12043/abstract>.

- Sartre, Jean-Paul. 2004. *Critique of Dialectical Reason, Vol. 1*. Verso.
- Serna Lamas, César. 2005. *Proyecto Arqueológico Pumakayán: Investigación, Conservación y Puesta en Valor*. Huaraz: Instituto Nacional de Cultura & Gobierno Provincial de Huaraz.
- Schneider, D, C. Huggel, A. Cochachin, S. Guillén, and J. García. 2014. 'Mapping Hazards from Glacier Lake Outburst Floods Based on Modelling of Process Cascades at Lake 513, Carhuaz, Peru'. *Advances in Geosciences* 35 (January): 145–155. <https://doi.org/10.5194/adgeo-35-145-2014>.
- Schreiber Rodríguez, Juan Manuel, and Francisco Ismael Neyra Rojas. 2009. 'Migración y Desarrollo Urbano de la Ciudad de Huaraz'. *Aporte Santiaguino*, 103–108. <https://doi.org/10.32911/as.2009.v2.n1.384>.
- Seki, Yuji. 1996. 'Huaquero and Archaeologist: Study on the Conservation of Archaeological Ruins in Northern Peru'. *Tenri University Journal* 48 (1): 197–214.
- Serna Lamas, César. 2005. 'Proyecto Arqueológico Pumacayán: Investigación, Conservación y Puesta en Valor'. *El Libro Azul* 3 (8): 34–37. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Serres, Michel. 2015. *Rome: The First Book of Foundations*. Bloomsbury Academic.
- Sharma, Sarah. 2014. *In the Meantime: Temporality and Cultural Politics*. Duke University Press Books.
- Shields, Rob. 2002. *The Virtual*. Routledge.
- Shields, Rob. 2004. 'Visualicity'. *Visual Culture in Britain* 5 (1): 23–36.
- Shields, Rob, and Andriko Lozowy. 2015. 'Mashup: New Representations of the City'. *Theory, Culture & Society* 31 (7–8). <https://www.theoryculturesociety.org/blog/rob-shields-and-andriko-lozowy-on-mashup>.
- Silva Santisteban, Fernando. 1972. 'El Reino de Cuismanco'. *Arqueología y Sociedad* 7–8 (July): 69–74. <https://revistasinvestigacion.unmsm.edu.pe/index.php/Arqueo/article/view/12767>.
- Simpson, Edward. 2014. *The Political Biography of an Earthquake: Aftermath and Amnesia in Gujarat, India*. Oxford University Press.
- Soriano Infante, Augusto. 1940. 'Pumacayán'. *El Libro Azul* 3 (8): 13–15. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Spalding, Karen. 2016. *De Indio a Campesino. Cambios en la Estructura Social del Perú Colonial*. Instituto de Estudios Peruanos.
- Spencer, Paul. 1965. *The Samburu: A Study of Gerontocracy in a Nomadic Tribe*. University of California Press.
- Star, Susan Leigh, and James R. Griesemer. 1989. 'Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39'. *Social Studies of Science* 19 (3): 387–420. <https://doi.org/10.1177/030631289019003001>.

- Star, Susan Leigh, and Karen Ruhleder. 1996. 'Steps Toward an Ecology of Infrastructure: Design and Access for Large Information Spaces'. *Information Systems Research* 7 (1): 111–134. <https://doi.org/10.1287/isre.7.1.111>.
- Stehrenberger, Cécile Stephanie. 2016. 'Psychische Störungen und sozialwissenschaftliche Katastrophenforschung, 1949–1985'. *NTM Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin* 24 (1): 61–79. <https://doi.org/10.1007/s00048-016-0135-6>.
- Stehrenberger, Cécile Stephanie. 2017. 'Praktisches Wissen, Wissenschaft und Katastrophen. Zur Geschichte der sozialwissenschaftlichen Katastrophenforschung, 1949–1989'. *Berichte Zur Wissenschaftsgeschichte* 40 (4): 350–367. <https://doi.org/10.1002/bewi.201701819>.
- Stein, William W. 1961. *Hualcan: Life in the Highlands of Peru*. Cornell University Press.
- Stengers, Isabelle. 2010. *Cosmopolitics I*. University of Minnesota Press.
- Stensrud, Astrid B. 2019. 'Water as Resource and Being: Water Extractivism and Life Projects in Peru'. In *Indigenous Life Projects and Extractivism: Ethnographies from South America*, edited by Cecilie Vindal Ødegaard and Juan Javier Rivera Andía. Palgrave Macmillan.
- Stobart, Henry. 2006. *Music and the Poetics of Production in the Bolivian Andes*. Ashgate.
- Stoler, Ann Laura. 2008. 'Imperial Debris: Reflections on Ruins and Ruination'. *Cultural Anthropology* 23 (2): 191–219. <https://doi.org/10.1111/j.1548-1360.2008.00007.x>.
- Strathern, Marilyn. 2003. *Commons and Borderlands: Working Papers on Interdisciplinary, Accountability and the Flow of Knowledge*. Sean Kingston Publishing.
- Strathern, Marilyn. 2005. *Partial Connections*. Alta Mira Press.
- Suchman, Lucy. 2012. 'Configuration'. In *Inventive Methods: The Happening of the Social*, edited by Celia Lury and Nina Wakeford. Routledge.
- Sultana, Farhana. 2013. 'Water, Technology, and Development: Transformations of Development Technonatures in Changing Waterscapes'. *Environment and Planning D: Society and Space* 31 (2): 337–353. <https://doi.org/10.1068/d20010>.
- Swyngedouw, Erik. 1999. 'Modernity and Hybridity: Nature, Regeneracionismo, and the Production of the Spanish Waterscape, 1890–1930'. *Annals of the Association of American Geographers* 89 (3): 443–465.
- Tanaka, Martín, and Carolina Trivelli. 2002. *Las Trampas de la Focalización y la Participación: Pobreza y Políticas Sociales en el Perú durante la Década de Fujimori*. Documento de trabajo N° 121. Instituto de Estudios Peruanos. <https://repositorio.iep.org.pe/handle/IEP/814>.
- Taussig, Michael T. 2010. *The Devil and Commodity Fetishism in South America*. The University of North Carolina Press.
- Tello, Julio C. 1921. *Introducción a la Historia Antigua del Perú*. Lima.

- Tello, Julio C. 2009. 'The Feline God and Its Transformations in Chavín'. In *The Life and Writings of Julio C. Tello: America's First Indigenous Archaeologist*, edited by Richard L. Burger. University of Iowa Press.
- Terheggen, Maaïke A, Margaret S. Stroebe, and Rolf J. Kleber. 2001. 'Western Conceptualizations and Eastern Experience: A Cross-Cultural Study of Traumatic Stress Reactions Among Tibetan Refugees in India'. *Journal of Traumatic Stress* 14 (2): 391–403. <https://doi.org/10.1023/A:1011177204593>.
- Thomassen, Bjørn. 2016. *Liminality and the Modern: Living Through the In-Between*. Routledge. <https://doi.org/10.4324/9781315592435>.
- Turner, Mark. 1997. *From Two Republics to One Divided: Contradictions of Postcolonial Nationmaking in Andean Peru*. Duke University Press.
- Tilley, Christopher. 2007. 'Materiality in Materials'. *Archaeological Dialogues* 14 (1): 16–20. <https://doi.org/10.1017/S1380203807002139>.
- Timperley, Claire. 2020. 'Constellations of Indigeneity: The Power of Definition'. *Contemporary Political Theory* 19 (1): 38–60. <https://doi.org/10.1057/s41296-019-00334-y>.
- Tironi, Manuel. 2014. 'Atmospheres of Indagation: Disasters and the Politics of Excessiveness'. *The Sociological Review* 62 (June): 114–134. <https://doi.org/10.1111/1467-954X.12126>.
- Tolosa, Sandra. 2020. 'Científicos vs. Huaqueros. Responsabilidad y Participación en la Competencia Comercial de Piezas Arqueológicas Calchaquíes, a Fines del Siglo XIX'. *Revista Española de Antropología Americana* 50 (September): 125–147. <https://doi.org/10.5209/reaa.71747>.
- Torres, Felipe. 2021. *Temporal Regimes: Materiality, Politics, Technology*. Routledge.
- Torry, William I. 1979. 'Anthropological Studies in Hazardous Environments: Past Trends and New Horizons [and Comments and Reply]'. *Current Anthropology* 20 (3): 517–540. <https://www.jstor.org/stable/2742110>.
- Tresch, John. 2007. 'Technological World-Pictures: Cosmic Things and Cosmograms'. *Isis* 98 (1): 84–99. <https://doi.org/10.1086/512833>.
- Tsing, Anna L. 2004. *Friction: An Ethnography of Global Connection*. Princeton University Press.
- Tsing, Anna L. 2010. 'Alien vs Predator'. *STS Encounters* 1 (1): 1–22.
- Tsing, Anna L. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton University Press.
- Turner, Victor Witter. 1967. *The Forest of Symbols: Aspects of Ndembu Ritual*. Cornell University Press.
- Tyler, Stephen A. 1986. 'Post-Modern Ethnography: From Document of the Occult to Occult Document'. In *Writing Culture: The Poetics and Politics of Ethnography*, edited by James Clifford and George E. Marcus. University of California Press.

- Ullberg, Susann. 2013. *Watermarks. Urban Flooding and Memoryscape in Argentina*. Thesis Submitted for the Degree of Doctor of Philosophy in the Department of Anthropology. Stockholm University.
- UNESCO. 2003. 'Convention for the Safeguarding of the Intangible Cultural Heritage'. MISC/2003/CLT/CH/14. UNESCO.
- UN/ISDR. 2005. 'Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters'. Accessed 24 July 2021. <https://www.unisdr.org/2005/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf>.
- United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2003. 'Convention for the Safeguarding of the Intangible Cultural Heritage'. MISC/2003/CLT/CH/14. Paris: UNESCO. Accessed 21 September 2021. <https://ich.unesco.org/en/convention>.
- Unidad de Glaciología y Recursos Hídricos (UGRH). 2014. *Inventario Nacional de Glaciares y Lagunas*. Lima: Autoridad Nacional del Agua. Accessed 28 November 2019. <https://repositorio.ana.gob.pe/handle/20.500.12543/199>.
- Uribe Chinen, Claudia. 2023. 'Unpacking Heritage and Human Rights in Peru: A View from Archaeological World Heritage Management'. *Nordic Journal of Human Rights* 41 (1): 105–122. <https://doi.org/10.1080/18918131.2022.2132773>.
- Usón, Tomás J, and Sandra Jasper. 2025. 'Ice as Trace. Correspondences and Conflicts Around Earthly Archives in the Cordillera Blanca, Peru'. In *Unearthings. Temporalities and Ethic of Traces in Collections*, edited by Magdalena Buchczyk, Martín Fonck, Tomás Usón, and Tina Palaić. UCL Press.
- Usón, Tomás J, and Cécile Stephanie Stehrenberger. 2021. 'A Temporal Device: Disasters and the Articulation of (De)acceleration in and beyond 1970 Ancash's Earthquake'. *Res Publica. Revista de Historia de las Ideas Políticas* 24 (3): 467–480. <https://doi.org/10.5209/rpub.79245>.
- Usón, Tomás J, and Cécile Stephanie Stehrenberger. 2025. 'Disasters as Time, Time as Disasters'. In *A Time of Disastrous Anticipations: Essays on Life in the Shadow of Catastrophe*, edited by Reidar Staube and Monika G. Bartoszewicz. Routledge.
- Valiente Catter, Teresa. 2016. 'Tinkuy. Encuentro de Contrarios o Diferentes. Una Mirada en las Fuentes'. *INDIANA* Vol. 33 (July): 199–220. <https://doi.org/10.18441/IND.V33I1.199-220>.
- Valladares Quijano, Manuel. 2011. *Yungay En La Memoria*. Pakarina Ediciones.
- Van Vleet, Krista E. 2010. 'Narrating Violence and Negotiating Belonging: The Politics of (Self)Representation in an Andean Tinkuy Story'. *The Journal of Latin American and Caribbean Anthropology* 15 (1): 195–221. <https://doi.org/10.1111/j.1935-4940.2010.01066.x>.
- Vaughan, Diane. 2004. 'Theorizing Disaster: Analogy, Historical Ethnography, and the Challenger Accident'. *Ethnography* 5 (3): 315–347. <https://doi.org/10.1177/1466138104045659>.

- Vega Rizo Patrón, Leoncio Augusto. 2011. *El Huaraz de mis Recuerdos*. Editora Katequilla.
- Vega Rizo Patrón, Leoncio Augusto. 2012. *El Trágico Aluvión de Huaraz en 1941. Recuerdo y Premonición*. Editora Katequilla.
- Vergara Méndez, Florencio Nehemías. 2013. *Luctuosos Aludes y Sismos sobre Yungay. Historia de la Formación del Nuevo Yungay en su Etapa Inicial*. RS Servicios Gráficos S.A.C.
- Vilímek, Vít, Jan Klimeš, Adam Emmer, and Miroslava Benešová. 2015. 'Geomorphologic Impacts of the Glacial Lake Outburst Flood from Lake No. 513 (Peru)'. *Environmental Earth Sciences* 73 (9): 5233–5244. <https://doi.org/10.1007/s12665-014-3768-6>.
- Vilímek, Vít, Marco Luyo Zapata, Jan Klimeš, Zdeněk Patzelt, and Nelson Santillán. 2005. 'Influence of Glacial Retreat on Natural Hazards of the Palcacocha Lake Area, Peru'. *Landslides* 2 (2): 107–115. <https://doi.org/10.1007/s10346-005-0052-6>.
- Villanueva Ramírez, Ricardy Ray. 2021. *Influencia del Crecimiento Urbano de la Ciudad de Huaraz en el Nivel de Riesgo Frente a Peligros de Origen Glaciar*. Thesis submitted for the degree of Master's in Environmental Sciences in the Faculty of Geology, Mining, Metallurgy, and Geographic Engineering, Universidad Nacional Mayor de San Marcos.
- Villanueva Sotomayor, Julio R. 2015. *Ancash, Cataclismo Social*. Ediciones Nova Print S.A.C.
- Villanueva Torrealba, Hermógenes. 2019. *Traición y Fraude al Perú y Huaylas. La Guerra de Chile y Gamarra Contra la Confederación Peruano-Boliviana*. Editorial Búho Rojo.
- Viveiros de Castro, Eduardo. 2004. 'Perspectival Anthropology and the Method of Controlled Equivocation'. *Tipiti: Journal of the Society for the Anthropology of Lowland South America* 2 (1): 3–22. <https://digitalcommons.trinity.edu/tipiti/vol2/iss1/1>.
- Viviroli, Daniel, Hans H. Dürr, Bruno Messerli, Michel Meybeck, and Rolf Weingartner. 2007. 'Mountains of the World, Water Towers for Humanity: Typology, Mapping, and Global Significance'. *Water Resources Research* 43 (7): 1–13. <https://doi.org/10.1029/2006WR005653>.
- Vuille, Mathias, Georg Kaser, and Irmgard Juen. 2008. 'Glacier Mass Balance Variability in the Cordillera Blanca, Peru and its Relationship with Climate and the Large-Scale Circulation'. *Global and Planetary Change* 62 (1): 14–28. <https://doi.org/10.1016/j.gloplacha.2007.11.003>.
- Walker, Charles F. 2008. *Shaky Colonialism: The 1746 Earthquake-Tsunami in Lima, Peru, and its Long Aftermath*. Duke University Press.
- Walker-Crawford, Noah. 2021. *Climate Change in Court. Making Neighbourly Relations in a Warming World*. Thesis submitted for the degree of Doctor of Philosophy in the Faculty of Humanities, University of Manchester.
- Wallace, Anthony F. C. 1956. *Tornado in Worcester: An Exploratory Study of Individual and Community Behavior in an Extreme Situation*. National Academy of Sciences.

- Wallis, George W. 1970. 'Chronopolitics: The Impact of Time Perspectives on the Dynamics of Change'. *Social Forces* 49 (1): 102–108. <https://doi.org/10.2307/2575743>.
- Wegner, Steven A. 2010. 'Pumacayán en Nuestra Historia e Imaginación'. *El Libro Azul* 3 (8): 21–23. https://issuu.com/gibergarcia/docs/libro_azul_-_n__8_-_2016.
- Wegner, Steven A. 2014. *Lo que el Agua se Llevó. Consecuencias y Lecciones del Aluvión de Huaraz de 1941*. N° 7. Notas Técnicas Sobre El Cambio Climático. Ministerio del Ambiente del Perú.
- Wegner, Steven A. 2017. 'Huarás Prehispánico II'. In *Huarás. Historia de un Pueblo en Transformación*, by Claudio Augusto Alba Herrera. Killa Editorial; Hirka Ediciones.
- Weizman, Eyal, and Ines Weizman. 2014. *Before and After*. Strelka Press.
- Welzer, Harald, Sabine Moller, and Karoline Tschuggnall. 2002. »Opa war kein Nazi: Nationalsozialismus und Holocaust im Familiengedächtnis. Fischer Taschenbuch.
- Williams, Philip J. 2001. 'Popular Religion and the (Re)Construction of Community in Yungay'. In *Christianity, Social Change, and Globalization in the Americas*, edited by Anna L. Peterson, Manuel A. Vásquez, and Philip J. Williams. Rutgers University Press.
- Woolgar, Steve, and Geoff Cooper. 1999. 'Do Artefacts Have Ambivalence? Moses' Bridges, Winner's Bridges and Other Urban Legends in S&TS'. *Social Studies of Science* 29 (3): 433–449. <https://www.jstor.org/stable/285412>.
- Yauri Montero, Marcos. 1971. *Tiempo de Rosas y de Sonrisas... Tiempo de Dolor y Muerte*. Editorial Imprenta ULTRA.
- Yauri Montero, Marcos. 2013. *El Señor de La Soledad de Huarás. Discursos de Abundancia y Carencia*. Segunda Edición. Killa Editorial; Fondo Editorial de la UNASAM.
- Yauri Montero, Marcos. 2014. *Ancash en el Tapiz: Imágenes de su Historia y Cultura*. Fondo Editorial de la Asamblea Nacional de Rectores.
- Yauri Montero, Marcos. 2020. *Pumacayán. Deidades Panandinas del Perú Antiguo en el Callejón de Huaylas*. Waras Editorial; Movimiento Ayllú.
- Yauri Montero, Marcos. 2021. *Áncash o la Biografía de la Inmortalidad. Nuevo Planteamiento de sus Problemas Culturales*. Cielo Gris Editores.
- Young, Allan. 1997. *The Harmony of Illusions: Inventing Post-Traumatic Stress Disorder*. Princeton University Press.

