Designing the Desert
Making and Unmaking Landscape in the Arid Southeast of Spain

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Solutions. . . What a terrible word!

— Anthony Carrigan

Contents

Summary

Positioned at the crossroads of environmental anthropology and the environmental humanities, this thesis explores ongoing processes of landscape design (formation and change) in the desert landscape of Almería in southeast Spain. This region, known as the most arid of Europe, shows the paradoxical coexistence of intensive greenhouse agriculture and pervasive depopulation. By focusing on both the *making* and *unmaking* of landscape, I propose a perspective that is attentive to the entanglement of progress and decay, creation and destruction. Based on ethnographic fieldwork and cultural analysis, the thesis demonstrates that un/making landscape is not just a spatial but also a temporal process. As an intentional project that intervenes in the experience and projection of time, it not only occurs at moments of drastic change, but through those various material forms and practices that infiltrate the everyday.

I argue, first, that the (re)production of normative desert imaginaries infuses human intervention in the landscape as both lived experience and discursive framing. I then analyse depopulation in the region through the concept of unmaking, which points to the gradual dismantling of material and social structures, but is also deliberative and creative. Finally, I highlight that ruination, decay and stagnation are not opposed but fundamental to the modernisation and renewal of the landscape. In this way, the thesis presents a reflection on the ways in which people engage with their environment, on the rhythms and excesses of modern progress, and on the making and unmaking of the desert landscape itself.

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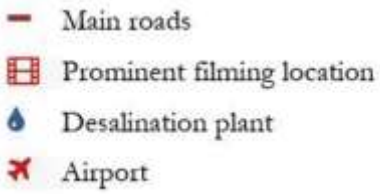
Field map

Legend:

1. Almería (city)
2. El Ejido
3. Roquetas de Mar
4. Berja
5. Níjar
6. Camporhermoso
7. Carboneras
8. Tabernas
9. Sorbas
10. Los Molinos
11. Pizarra de Filabres (Pseudonym)
12. Villaricos



Note the white areas of Dalías, Níjar, and surrounding the airport—these are the plastic greenhouses often referred to as the Plastic Sea; the greyish Tabernas Badlands; and the green areas indicating the increased foliage in the mountains. Satellite image based on Google Earth, February 2020.


< Granada
Murcia >
< Malaga
SIERRA DE LOS FILABRES
ALMANZORA
SIERRA NEVADA
DESIERTO DE TABERNAS
Rio de Aguas
Rio Andarax
ALHAMILLA
SIERRA GADOR
NIJAR
Rio Adra
DALIAS
CABO DE GATA
10 km
N
1
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3
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12

Introduction

> 'I was looking at the landscape,' I said. Ezequiel, a local shepherd who was passing by and had stopped for a moment to ask if I was waiting for someone, looked out onto the valley and smiled gently. 'We prefer green landscapes,' he said, pointing his walking stick at the partly collapsed terraces around us, where his goats reached for edible twigs and leafs in the shrubberies. 'Here, everything is dry.'

Departing from Granada in a south-easterly direction, the motorway that winds through the foothills of the Sierra Nevada begins to descend. Gradually, the pine and oak forests become thinly spread and make way for shrubs and grasses. The grey, solid granite turns to pale and crumbly limestone. The view extends in every direction as the hills flatten and vegetation becomes increasingly sparse. The landscape takes on craggy, eroded shapes. These are the arid landscapes of Almería, an Andalusian province in the southeast of Spain, also dubbed 'the desert of Europe.' Located in the eastern shadows of the Sierra Nevada mountains, the region is characterised by extremely low and irregular rainfall (averaging between 200 and 300mm per year, but concentrated in torrential rains that can release 50mm on a single day or even spike up to over 90mm [AEMET 2019]). Moving further into this desert landscape, every now and then, whitewashed, square houses pass by the side-windows. Tightly packed, they form small towns and villages. Others are worn down and collapsed, abandoned by their inhabitants recently or decades ago. Then, turning a corner, the eye adjusts to the simmering reflection of the Mediterranean sun upon plastic sheets that extend to the coastline tens of kilometres away. In thousands of greenhouses, fruits and vegetables grow, tomatoes mostly, for Spanish and European markets.

This arid landscape shows paradoxical signs of desolation and development. On one hand, the desert exposes a long history of abandonment, where both contemporary and ancient ruins of farmsteads, terraces, entire villages, infrastructures and industries draw scars in the landscape. On the other hand, the desert has been converted, subdued it seems, into landscapes centred on productivity and extraction through greenhouses, olive plantations and quarries. Trucks of all types and sizes, carrying tomatoes, gravel, plastics, can be seen

passing by uninhabited, derelict structures; and the inhabitants of a village on the verge of total depopulation may be heard discussing the latest controversies over intensive farming in a place where water is scarce. How do these modes of existence coincide in one place? How, if at all, do they relate? And what can they teach about the ways in which people engage with their environment, about the rhythms and pace of modern progress, and about the making and unmaking of landscapes?

This dissertation takes this initial sense of astonishment as its point of departure to look in detail at the paradoxical, contested and transforming arid landscapes of Almería. Bringing together views from the environmental humanities and environmental anthropology, and recognising that landscape is both imagined and experienced, it explores how and why people are involved in the material and narrative transformation of the landscape, and in so doing sheds light on some of the creative as well as destructive forms of human-environment relations.

These contemplations are situated, somewhat involuntarily, in a context of widespread environmental degradation: the destruction of 'nature' (whatever that category means to the reader) and its replacement with concrete, quarry or plantation continues at high speeds; the Anthropocene forces us to recognise human activity as a dominant power driving environmental change; and panic over climate change and total denial of the same coincide against a backdrop of increasingly polarising global politics where environmental concerns are placed in direct opposition to economic growth and perceived security. However, while the Anthropocene surely has negative connotations for most of its philosophers, it may well be a source of pride for those who continue to pursue the pleasures and benefits of modern progress, as the idea of human improvement of the world through infrastructures of production and consumption continues to hold sway. I find it important to understand why and how these ideas seem so tirelessly to inspire people as they go about their daily lives.

Hence, I take special interest in processes of modernisation, as well as its supposed antitheses of decay and ruination, as specific, though also awkwardly universal, modes of landscape transformation. This focus has mainly emerged during field research and the subsequent analysis of ethnographic data, and closely resonates with the cinematic landscape representations through which I have assessed popular imaginations of the landscape. Both modern progress (often through emic understandings of *innovation* and sometimes embedded in notions of Europeanness or sustainability) and ruination (here captured in the term *unmaking* and ethnographically grounded in experiences of decline and derelict material or social structures) were recurring themes in the narratives of my interlocutors, in

representations of the landscape, and in the social and material structures I came into contact with myself. Along the way, I gradually became aware that these themes would need to take central stage in the analysis of landscape transformations presented in this thesis. With this focus, I consider this thesis to be a very modest attempt to make sense of contemporary human-environment relations in a confused and tumultuous world.

The desert landscape provides a particular, but also exemplary case to do so. Deserts have taken a complex and problematic position in western cultural and environmental history. On one level, the desert has biblical connotations and is associated with divine presence and spiritual connection, coupled with a view of extreme climate conditions as divine ordeal or punishment (Davis 2016; Gersdorf 2009; Lane 1998). On another, the desert has an uneasy place in the narrative of European expansion into the Americas, Asia, Africa and Australia. Through environmental determinist views, desert landscapes long served to confirm the otherness and backwardness of these regions while posing Europe as the centre of civilisation and modernity (Davis 2016; Gersdorf 2009). The desert gained connotations of unproductive, degraded land, unfit for human habitation and mismanaged by native populations (Davis 2016). Such tropes spurred efforts to convert desert landscapes into productive, cultivated terrains. Here too, biblical notions of Eden and garden versus barren wilderness play a role, often at the cost of native pastoral livelihoods. Nowadays, this rings true for example in the various 'reforestation' projects that are implemented even in regions that never were forests. One example is the UN and African Union backed 'Great Green Wall' project that is supposed to surround the Sahara with a belt of vegetation with the aim of producing agricultural landscapes. As such, 'desert landscapes have been and are increasingly subject to global efforts to increase food production through agricultural expansion into arid lands' (Davis 2016: 8). The expansion of centre pivot irrigation in Saudi Arabia since the early 1990s is a case in point. The Almerían desert, with its thousands of greenhouses and super-intensive olive plantations that is the focal point of this dissertation, testifies to this view of desert landscapes as being in 'need' of transformation.

It should come as no surprise that the expansion of agriculture puts pressure on already scarce water resources in arid regions. To the extent that this is not the case already, scholars and institutions alike warn that water is about to become the primary political issue of our times. With population growth, growing consumption patterns, and climate change on the horizon globally, access to safe drinking water is a pressing issue for billions of people. The WHO, for example, announces that 'by 2025, half of the world's population will be living in water-stressed areas' (WHO 2019), while UN-Water launched its 2018-2028 'Water Action

Decade' (UN-Water 2019) drawing additional attention to Sustainable Development Goal 6 which is to 'ensure availability and sustainable management of water and sanitation for all.' This goes along with alarming messages on existing and potential conflicts over access to and control over water, especially in places that face water shortages (Strang 2004). 'Just as oil conflicts were central to twentieth-century history, the struggle over freshwater is set to shape a new turning point in the world order and the destiny of civilization,' Solomon (2010: 4) provocatively puts it. It has already been argued that ongoing conflicts in Syria and Yemen are the (indirect) result of water shortages (e.g. Parker 2016). But also in more peaceful places and times, the search for freshwater is taking forms that border on the bizarre: plans to tow icebergs from the Antarctic to South Africa and the United Arab Emirates are underway; nearly all major rivers in the world have been dammed, diverted or transferred; seawater is being desalted in vast quantities along the world's coastlines; and aquifer depletion stimulates ever deeper drilling into non-renewable fossil water sources. The Almerían desert, in the south of Europe, exposes all of these efforts (apart from iceberg towing) in a feverish search for irrigation as well as drinking water. The expansion of agriculture in the desert thus not only radically transforms the materiality and aesthetics of the landscape, but also ties into political questions of food- and water security, promises of modernisation and growth, and normative dreams of a 'green' landscape—as the shepherd above so unpretentiously suggests. Water politicises the landscape (Strang 2004). And while water scarcity in deserts may appear self-evident as a defining characteristic, the way we use water in the desert can also provide important lessons on how (not) to use water elsewhere.

In the context of southern Spain, drought is not a new phenomenon. Almería, usually characterised as a semi-desert or 'cold semi-arid (steppe) climate' (BSk in the Köppen-Geiger climate classification system), knows a long history of aridity, tracing back to Roman and Moorish eras. In the town of Sorbas, for example, a small geological centre provides information about natural park Karst en Yesos. It teaches the visitor about sediments and erosion, but also about the ways plants and animals have adapted to life in the desert. Protracted aridity and recurring droughts have become a centuries-old question of how to secure access to freshwater, reflected in the popular incorporation of environmental hardship in historical narratives and everyday life of Almería. In the words of one of my main interlocutors, ecologist Juan Carlos, 'both humans and other kinds of life are used to extreme conditions.' Life was normal, in Almería. However, this normality was also disrupted. On a daily basis, newspaper articles reported on the shortages of water, and when speaking to farmers in despair because their almond trees were dying, or when looking at the many ruins

of abandoned houses and farms, or again when listening to stories of how difficult life used to be before mechanised wells were introduced, a sense of urgency emerged: an image of a landscape in crisis. In a Eurocentric view, the landscape itself was often rendered problematic, or at least exceptional, compared against a norm of fertile, green land: a norm of humidity against a reality of aridity, of vegetation against barrenness, of growth against decay, of centre against margin, and of progress against backwardness. Aridity, understood as a social phenomenon rather than an absolute environmental category (Biagetti and Chalcraft 2012), was placed outside the realm of the ordinary, familiar and acceptable, and became a trope in political discourses and strategies. In a 'problematic' landscape, a range of interventions (often framed as 'solutions') becomes politically feasible. This would become apparent in my work in grand narratives of landscape transformation—of making an 'orchard' out of the 'desert'—but would also infiltrate more colloquial, everyday engagements with the landscape.

At the same time, the desert raises questions of human habitability. In Western thought, the desert has inspired images of barrenness and extreme conditions unfit for the lives of plants, animals, and humans, still less for cultivation. While this imaginary provokes efforts to conquer the desert—to 'civilise' or 'modernise' it by transforming it into arable land—many of my interlocutors also identified environmental hardship as a driver behind emigration and the resulting abandonment of farmhouses and entire villages. While as a noun, 'the desert' might seem a rather self-evident and static category, as a verb, 'to desert,' it invites reflection on the possibility of life and, more importantly, on how the imaginary ties into patterns of growth and decline and the affective, lived-in reality of a landscape of ruins. Although depopulation is not confined to desert landscapes, but occurs globally and can be identified as an aspect of shifting urban-rural or centre-periphery relations, the co-existence of modernisation efforts and abandonment in Almería provides a thought-provoking case to unravel the making and unmaking of landscape in terms of imagination and material engagement.

Aims and questions

Seeking to understand the transformation of landscape, I suggest a perspective of *un/making*, a compound term through which I explore the parallel existence and intertwinement of modes of making and unmaking, production and disassembly, creation and ruination. I demonstrate that un/making landscape is not just a spatial, but also a temporal process; an intentional project that intervenes in the experience and projection of time that occurs in

moments of drastic transformation, but also through those various material forms and practices that infiltrate the everyday. Un/making, in this regard, is embedded in concrete material forms where temporalities of crisis and normality, stuck-ness and movement, can coexist.

In highlighting this, I pay special attention to notions of progress, stagnation and decline. I demonstrate that modernisation (which I will use interchangeably with the notion of modern progress), as a temporal orientation and a process of induced and advancing social and technological changes, also produces experiences of stuck-ness and decay. I pay attention to how modern society is head over heels in pursuit of innovation, seeking only the newest in its aspiration to become the future, and what implications this might have in people's everyday lives as well as for the appreciation and adjustment of landscapes. Innovation, a trope of progress, may not be the panacea it is often portrayed to be. Parallel to this, I look at its antitheses: ruination, decay and stuck-ness, highlighting the damage that imaginaries of modernisation can do, seeking to portray these processes not as outside of, but integral to, the modernisation of the landscape.

On a more conceptual level, I explore how the imagination of landscape resonates with its lived experience and material formation. I highlight how the (re)construction of often normative desert imaginaries in representations and narratives of the landscape as discursive framing device may infuse, or form the background to, human intervention in that landscape as embodied, lived space. I consider the landscape to be paradoxical, contested and changing: seemingly contradictory narratives can find a place alongside one another in the landscape, conflicting temporal experiences can come forth from one another, and modes of un/making can take contrasting material forms while drawing upon similar images.

This is also an attempt to understand how the landscape justifies particular modes of action and intervention, or the absence of these. While I initially went to Almería to study how people live their lives in the face of environmental crisis, in this case drought, my approach to this has since changed. Through a critical appreciation of environmental concerns, as they are expressed in everyday experiences and popular representations, I came to question the crisis itself, and instead became interested in how it was produced. Hence, I aim to explore how the landscape is made into a problem and transformed accordingly. Part of this aim is to underline that desert landscape is *not* inherently worthless, backward or uncivilised, which effectively goes against common and historically persistent conceptions of the desert.

This thesis, finally, has a methodological objective, namely to explore the possibilities and limitations of interdisciplinary doctoral research. The thesis has one leg in environmental anthropology, the other in the environmental humanities. The environmental humanities, an interdisciplinary field in and of itself, seeks to 'understand and engage with global ecological problems by providing insight into human action, perceptions, and motivation' (Holm et al. 2015: 978)—an objective that is not at all foreign to environmental anthropology. In the sense that both the environmental humanities and environmental anthropology set out to provide in-depth understandings of the human aspects of the environmental concerns of our times, and insofar as both tend to draw on the power of stories and storytelling to nuance or directly speak back at the dominance of quantification and numerical modelling in environmental sciences, bridging these fields of study comes rather naturally. Seeking synergies between these fields, the challenge emerges primarily at the level of conjoining methodological traditions—cultural analysis and ethnography respectively—as well as epistemologies that pertain particularly to the definition of landscape. I will further elaborate on this in the methodology section of this Introduction.

First, however, I want to lay out the theoretical groundwork for the thesis. I first address the concept of *landscape*, unravelling its dual functioning as a site of imagination and experience. Second, I provide a conceptualisation of *un/making* as an intentional mode of engagement with the landscape. Third, I consider the *temporalities* of landscape transformation, underlining the unexpected, non-normative formations of time in the un/making of landscape. Fourth, I discuss *modernisation* as a dominant mode of un/making landscape, highlighting both its creative and destructive qualities. With these conceptual building blocks established, I then turn to a reflection on methods and the synergy between ethnographic fieldwork and cultural analysis. Finally, I provide an overview of the chapters that follow.

Landscape between imagination and experience

One central question I have been encountering during this study is the relationship between experience and imagination. Is landscape a product of imagination (a cultural symbol or readable text that conveys meaning discursively), or is it primarily a matter of experience (where meaning emerges from bodily embedding in a material world)? How does the materiality of landscape relate to how it is narrated?

Following influential writers on landscape such as historian Simon Schama (1996) and cultural geographer Denis Cosgrove (1985; Daniels and Cosgrove 1988), landscape can be

defined as a framing device for environmental relations. In this view, landscape is primarily a matter of *imagination* and *representation*. The cultural significance ascribed to landscape is at least as important as (if not more important than) its material form. The landscape 'itself' and representations of it become entwined to the extent that they become indistinguishable. As such, Schama argues that 'landscapes are culture before they are nature; constructs of the imagination projected onto wood and water and rock.' However, he continues, 'it should also be acknowledged that once a certain idea of landscape, a myth, a vision, establishes itself in an actual place, it has a peculiar way of muddling categories, of making metaphors more real than their referents; of becoming, in fact, part of the scenery' (1996: 61). Thus, the landscape *is* the meanings given to it. Similarly, Stephen Daniels and Denis Cosgrove come to suggest that it is necessary 'to understand written and verbal representations of [landscape], not as "illustrations", images standing outside it, but as constituent images of its meaning or meanings' (Daniels and Cosgrove 1988: 1). Although I will not be speaking much of aesthetics in this thesis, the way landscape is imagined clearly resonates closely with how it is appreciated. While this tends to be predominantly a matter of categorising landscape in terms of its picturesque qualities (Carlson and Berleant 2004), it may also involve (metaphysical) reflection, linking the particulars of landscape—its material forms and sensory experience—to our understanding of the world as a whole (Hepburn 2004).

Further, for Daniels and Cosgrove, landscape-as-image functions as a symbol. It carries value and meaning, which is not to say that there is only a single 'valid' meaning to the landscape. Characteristic of cultural symbols is precisely that they are polysemic and constitute a 'field of meaning' within which a range of mutually related meanings can be ascribed (see, for example, Turner 1967; Ohnuki-Tierney 2002). In this sense, the landscape is multivocal and intrinsically political: it carries value that is culturally shared, but that may also be contested. From this definition of landscape, it follows logically that the transformation of landscape should also be located in the realm of the imagination. Theoretically, the imagination of landscape can change and, with it, its cultural significance, without the landscape itself changing in material form. It is indeed an interesting thought that landscape might be 'a flickering text displayed on the word-processor screen whose meaning can be created, extended, altered, elaborated and finally obliterated by the merest touch of a button' (Daniels and Cosgrove 1988: 8). However, while such a metaphor underlines the malleability of landscape, it may also be too optimistic. While landscapes are cultural, they are also historically loaded and must relate to actual, lived experiences—

meaning that their cultural significance may shift, but only within the limits that their field of meaning will allow.

This view, whereby landscape is considered primarily as a matter of imagination, has been criticised by environmental anthropologists for whom landscapes are primarily *material*. Tim Ingold, an advocate of this perspective, has argued that landscape should not be defined in terms of imagination and representation, as Cosgrove and others have, due to confrontation with its materiality in human experience. "We could not calm the storm by any ploy of perception" (2011: 130), he writes, somewhat teasingly testing the significance of imagination against the sheer bodily experiences of rain, wind and weather, but nevertheless underlining the potential of an emphasis on imagination to trivialise the material landscape itself (cf. Brady 2004). In *The Temporality of the Landscape* (1993), as well as in subsequent articles and volumes (2000; 2011; Janowski and Ingold 2012), Ingold has elaborated on this view. Crucial here—with a nod to Heidegger (2001[1971])—is the concept of *dwelling*. In this perspective, people and landscape are co-constituted (or rather, co-constituting, pointing to the ongoing transformation of both). The lived spaces that people construct are seen as emerging from their practical engagements with their social and material environments rather than being built upon them, which also reflects on the ways in which they produce their own lives in interaction with the material world. The distinction between the two—the material world and its inhabitants—is analytical rather than real, for the tasks people perform reshape the landscape, and the landscape limits and enables the performance of tasks. In Ingold's words, 'the forms of the landscape are not pre-prepared for people to live in – not by nature nor by human hands – for it is in the very process of dwelling that these forms are constituted' (1993, 162). Paul Cloke and Owain Jones summarise the dwelling perspective on landscape as follows: 'any act of building, living, or even thinking, is formed in the context of already being-in-the-world which, in turn, affects that forming' (2001, 651). More recently, this perspective on landscape has been pushed further by Christopher Tilley and Kate Cameron-Daum (2017), who argue that representations of landscape are of secondary significance to material experience. In doing so, they explicitly counter authors such as Daniels and Cosgrove, moving away from the idea that landscape can be written, read or analysed as a cultural text—a move they describe as one 'from representation to the materially grounded messiness of everyday life and the minutiae of material practices that constitute it' (2017: 5). Materiality, in short, precedes meaning, discourse and politics (the landscape may be subject to politics, but is not considered to be intrinsically political). While this emphasis on materiality and embodiment is valuable for understanding humans in, and as part of, their

environment, I also find that it insufficiently explains cultural constructions of place and identity. When landscape is divorced from subjectivity, meaning and discourse, one risks depoliticizing the debate.

Aiming to take the best of both approaches to landscape, in this thesis I will consider imagination and experience not as separate entities, but as conjoined modes of engagement. Problematic in this discussion on materiality versus imagination is that imagination and representation are often addressed as forms of *detachment*, in opposition to *engagement* as practice (e.g. Benson 2010). Instead, in this thesis I will speak of imagination and representation as forms of engagement themselves, whereby portraying a landscape itself becomes a way to interact with it and even change its meanings, functions and configurations of power. In other words, bodily embeddedness does not exclude imagination and imagination does not preclude embeddedness.

I would hardly be the first to argue that the making of landscape is a project of both representation and physical engagement. In doing so, I align myself with Michaela Benson's point that 'practice and representation are intrinsically intertwined in the construction of the landscape' (2010: 64). Benson shows that in working the land, people—in her case lifestyle migrants in France—both physically adapt the landscape and build upon, as well as contribute to, how it is imagined. A similar point is made by Eric Hirsch and Michael O'Hanlon (1995), who define landscape as a cultural process through which the material reality of everyday life (what they call the 'foreground') is related to the imagined and the potential (the 'background' of social life). Landscape, for Hirsch and O'Hanlon, precisely encapsulates both 'foreground actuality' and 'background potentiality' (1995: 4), although they also note that 'everyday life can never attain the idealized features of a representation' (1995: 23). Particularly in moments of crisis or disruption (which can be protracted or sudden disasters), Mark Anderson (2011) notes, the reimagining of landscape is likely to go hand in hand with its physical renovation.

Thus, rather than envisaging landscaping just as a process of material creation, I argue that the entwinement of the various ideas, concepts and assumptions that shape the design process and its outcomes should be taken into account. But this is not to say that a landscape can be reduced to its representations. Landscape is uneasily balanced between representation and experience. As Spirn writes, 'words, drawings, paintings, or photographs cannot replace the experience of the place itself, though they may enhance and intensify it' (Spirn 2000: 21). Seeking a position between polarised standpoints requires unravelling the complicated relationship between imagination and experience—a conundrum not easily overcome.

Simply put, and echoing Emily Brady's point that 'perceptual attentiveness is intimately linked to imagination' (2004: 161), I take landscape transformation to be a process of both imagination and experience, or, in other words, of engagement through both materials and representations. I thus find it important to underline that imagination is not just cognitive: it is culturally shared and embedded in symbols and objects (including the landscape), while material engagement is always discursive and infused with cultural images (including discursive framings of the landscape). Inspired by new materialist approaches, I understand materiality as the conjuncture of the social, the discursive and the material without presuming dominance of one over the other, so that experience of the landscape 'is made up of matter *and* meaning' (Dolphijn and van der Tuin 2012: 91; see also Knappett 2007). To transform a landscape, in sum, is to alter its meanings and its symbolisms *and* to materially change it. New meanings can emerge from new material forms, and new forms can emerge from altered meanings. In this way, making and unmaking landscape is something humans do all the time—it is about making sense of the environment, telling and retelling its stories, reimagining its meanings, and redefining its forms.

Un/making: a design approach

In analysing the changing landscape I am interested in the process of un/making and its intentionalities. Writing it in this way, with a forward slash, is to include making and unmaking within a single frame so that making and unmaking coincide, or are rather entangled, in the transformation of landscape, each containing the other within it. Such intertwinement resonates with recent work on ruptures as 'moments at which value emerges through a break with something' (Holbraad, Kapferer and Sauma 2019: 1); on crisis as 'a terrain of action and meaning' rather than a temporary disorder (Vigh 2008: 8); and on the opportunities that emerge from disaster recovery, which 'encompasses both inequalities and creativity' (Van Dam 2015: 38; see also Klein's [2007] use of 'disaster capitalism'). I also draw from a renewed academic interest in ruins and ruination. This includes an appreciation for the transformative process of decay (DeSilvey 2017); attention to the lingering and ruinous presence of imperial pasts (Stoler 2013; 2016); the political potential of derelict structures (DeSilvey and Edensor 2012); and, as I will stress in this thesis, explorations of the lived experiences of processes of shrinkage and ruination (Dzenovska 2018; Edensor 2005; Gordillo 2014; Ringel 2018). Especially in post-socialist contexts, studies have proliferated on contemporary lives among the material remnants of the former system, including

everyday objects, architectures and industries (see, for example, Bach 2017; Ringel 2018; Pétursdóttir 2014; Dzenovska 2018).

My exploration of un/making further builds on a specific design analytic that posits design as a matter of everyday engagement, focussing on the human subject, and that bridges the imagined and the material through the notion of intentionality. But it also goes beyond design by embracing ruination and abandonment as integral to the changing landscape. In this approach, I am inspired by a recent turn in anthropology to design processes—mobilised under the banner of 'design anthropology'—which, as Keith Murphy states, reflects 'a rekindled sensitivity to the social world not just as it exists, but also in relation to the conditions of its making' (Murphy 2016: 443). Specifically, I follow Wendy Gunn, Ton Otto and Rachel Smith when they state that this design analytic is 'concerned with how people perceive, create, and transform their environments through their everyday activities' (2013: xiii). In so doing, I also wish to go beyond conceptualisations of design as a professional, commercial or institutional process, a position also advocated by Arjun Appadurai, who argues that design is not primarily a specialist activity but 'is better seen as a fundamental human capacity and a primary source of social order' (2013: 254). Design happens not only in design studios or architecture firms, but is instead a way of thinking about the way people are placed in and affect their surroundings. Through this perspective, I analyse the un/making of landscape by focusing on the positioning of human subjects in active processes, even where this is not something people do actively all the time—it is embedded in mundane ends, processes of 'muddling along,' in everyday life.

This means I am also interested in the *intentionality* of un/making: the design analytic I employ here is, borrowing Murphy's phrasing, about 'embracing intentional human action' (2016: 443). In the approach taken here, design is not restricted to practices based on a preconceived idea (an idea that comes 'before' the material form), for the conception of that idea itself is a form of design. What 'precedes' is not an image in the mind but *intent*. Design is intentional, as is un/making. Intentionality, for the purposes of this thesis, is what mediates between imagination and experience. Intentionality has also been posited as the relation between the self, or the mind, and the object (Smith and Smith 1995).[1] Although I address the imagination not as something confined to the mind but as culturally shared and represented, and while I conceive of the subject not as external but as already relational to

[1] Edmund Husserl's approach to intentionality has been subject of debate regarding the positioning of the subject within the world, as well as dilemmas regarding the 'existence' of both the mind and the object, which go (far) beyond the scope of this thesis. See Alessandro Duranti's *Anthropology of Intentions* (2015) for a clear and comprehensive discussion of various approaches to, and critiques of, the concept of intentionality.

the material world, I find this emphasis on relationality helpful in bridging experience and imagination. How people imagine the landscape, in this case the desert, or an object within that landscape, say a ruin or a greenhouse, relates to how they experience and act upon it (or un/make it). Intentionality is this relation. Do I see the landscape as an infertile, barren place in need of improvement, or do I see a site of specialised human and nonhuman forms of living of high cultural and ecological value? Do I leave the place to ruin, do I maintain its current forms in a 'politics of holding on' (Papanikolaou 2019; see also Baraitser 2017) to what is there, or do I convert it for agricultural purposes? Here I do not mean to distinguish between good and bad intentions or between intended and unintended outcomes; intentionality is not *per se* intentional, as in 'done on purpose' or 'deliberate.'[2] Rather, I seek to emphasise un/making as a qualitatively charged engagement with the environment.

This means that intentionality is directional; it involves a certain toward-ness (Duranti 2015; Relph 2016[1976]). I think of the intentionality of landscape transformation as the array of directional impulses that push and pull its course. Put differently, if un/making is a line of becoming, then intentionality constitutes the vectors that guide its direction. This resonates with Tony Fry's assertion that 'design gives *material form* and *directionality* to the ideological embodiment of a particular politics' (Fry 2011: 6, emphasis added). With this, the aspirational character of landscape transformation comes into view. Intentionality gives direction to processes of making and unmaking; it exposes the futurity of landscape and the normativity of its transformation. To look at the intentionality of landscape transformation in this way is to question the *why*—or, for lack of a better term, its motivation. It is to ask with what political purposes the landscape is narrated, how these discourses speak to policy and other narratives, and whose problem aridity is supposed to be. This also invokes the realization that imagining a place as 'arid' means inscribing it with a range of symbols and stereotypes, and that these affect how the landscape may be engaged with. Intentionality is thus also about how changes in the landscape become legitimised and about the narratives that justify material transformation. The *why* of landscape change—both in legitimising what

[2] A central concern in design studies and practices is the inevitable mismatch between designer intentions and user experiences, or its unintentional outcomes. However, recognising that design is always already embedded in the social undermines this question of to what extent design can really change existing values and structures, or if structures persist in the ways design becomes enveloped in the social. One problem underlying this, is that it assumes design is an intervention. To the contrary, I posit that design comes from *within* the social and is not external to it, and as such the social produces design as much as it may resist it. The social cannot overwhelm design because *design is social*. The other underlying confusion lies in the possible conflation of intentions and intentionality. By focusing on the latter I concentrate on the social-material world rather than a set of conflicting aims or purposes. This avoids the frustration of such a mismatch as it understands the design process, including modes of materialisation and 'use', as part of the transformation of the landscape.

'is' and projecting what 'should be'—becomes a question of whose imagination materialises, and of who has the power to dictate what kinds of landscape are made.

By focusing on the intentionality of un/making, finally, I also seek to debunk common associations of forms of abandonment and ruination as accidental or unintended. Ruins do not simply come into being, as if by virtue of the passage of time itself: they are *produced*. There is intentionality, I argue in this thesis, in the way that people relate to ruins. The environmental destruction that large-scale human activities of farming, mining, urbanisation and depopulation bring about is not simply collateral damage, to borrow Zygmunt Bauman's (2011) term. Unmaking, as much as making, is a mode of establishing and building upon meaningful relations between imagination and materiality. In taking this stance, I also turn the design analytic introduced above towards the destructive, an aspect of design all too often overlooked. Design is often thought to be oriented towards problem-solving. But this is not how I wish to reproduce it here, and I think it is important to move away from this. This view resonates with the only quite recent development of substantial, critical debates in which the destructive and violent potential of design (and of belief in engineering as a 'solution' to environmental hazards) comes to the fore (Antonelli and Hunt 2015).[3] As a mode of socio-material engagement, un/making certainly does not have to be idyllic. It may well be a site of repression and ugliness (cf. Cloke and Jones 2001).

To summarise, my approach to the un/making of the desert landscape as a lived and contested space, as a nexus of material and cultural formations, is a humble effort to expose 'culture in the making,' within the everyday interaction of the cultural, the social and the material; a view to how societies experiment with material and social change. This does not mean that imagination unambiguously directs experience and material engagement, nor do experiences shape the imagination in any clear-cut way. Intentionality, precisely, provides a mediating factor in their entanglement and co-constitution. The relationship between these two sides of the coin of un/making—explored here through an analysis of representation and experience—remains an uneasy one, and assessing how each is relevant, whether in contradiction or agreement to the other, remains a gap in our understandings of the ways in which people cope with environmental threats. In this thesis, I set out to explore this prickly relationship. A definitive answer, however, must remain sketchy and incomplete. The point is rather to take a close look at the 'formative process of the landscape' (Ingold 2017: 52), by

[3] Notably, critical debates on design-as-politics are initiated in design museums. Examples are the 2013 exhibition *Design and Violence* in the Museum of Modern Art in New York (see Antonelli and Hunt 2015), and, more recently, the 2019 *Design of the Third Reich* exhibition at the Design Museum in Den Bosch.

drawing attention to the way that individuals and societies actively and purposefully engage with their material environment in the production of landscape, which is surely a designed space *avant la lettre* in the sense not just of being materially altered, but also imaginatively framed.

Temporalities of landscape transformation

One of the main arguments I will be making throughout this thesis is that the un/making of landscape does not necessarily occur through drastic transformation, but infiltrates the everyday, and can be seen as a way of engaging with temporal experiences and projections. The making and unmaking of landscape—those human interventions that shape it materially and culturally—is a process that takes and, I stress, also *makes* time. As humans build, rebuild and destroy lifeworlds, they move along the 'lines of becoming' of the landscape while also redrawing them. This un/making is best understood as rooted in what people do in their daily lives and in how they experience, imagine and respond to their material surroundings as well as their imaginaries of future, past and present. In other words, processes of un/making are not only in dialogue with, but *produce* and *destroy* imaginaries and memories. Material and temporal forms are co-constituted and co-dismantled.

Moreover, I reason that change and stasis are not mutually exclusive, which is fundamental to understanding the temporalities of landscape transformation. The un/making of landscape is not a smooth process, but can be locked into experiences of stuck-ness and endurance. This also means I do not see lines of becoming as progressive.[4] It is not always the case that there is something to become, a direction to take, or a goal to follow. Sometimes, becoming can be circular, repetitive, exhaustive. This is to recognise that experienced and imagined stagnation can be formative. It is not always the radical revolution that shapes people and landscapes—I would dare to suggest that it is not usually—but the simmering, the chronic and the quotidian. Un/making, as I employ the concept in this thesis, is an attentiveness to how people engage with their lifeworlds and with what intentionality, both in moments of swift changes and idleness. This is the 'temporal work' done in the un/making of landscape.

Underpinning this argument is the understanding that landscape is in itself a temporal term as much as it is a spatial one. Walking through the hills of Almería, I surely experience

[4] Michael Fischer even evokes the term 'lines of stuckness' (2017: 295) in par with the Deleuzian term 'lines of flight.'

the landscape spatially. I look at its physical forms that change before me along my path and that convey distance and closeness; I am met by the resistance of the rocks and the unevenness of the gravelly ground under my feet; and I hear the wind and the sounds of humans and animals it carries from all around me. But I also experience the landscape as a temporal marker. Abandoned terraces point to histories and uncertain futures; live and dead trees portray growth and decay; and agricultural activities, changing weather and the setting sun form cycles of variable scales. Walking through the landscape, I construct images of continuity and fluctuation that tie into, but are not limited to my sensorial experiences. Here, Ingold's (1993) work on the temporality of landscape is formative, in that he builds a direct link between the human scales of intervention—everyday, annual and intergenerational rhythms—and the deep times of geological formation. Equally seminal is Schama's (1996) work, which demonstrates how landscape is always historically freighted, so that cultural meanings can shift but can rarely, if ever, be fully replaced by radically different ones. The landscape is an ongoing, dynamic and unfinished story, and a defining framework for temporal experiences.

Anthropologists have long tried to figure out how to account for change and process, rather than traditional depictions of cultural stasis in the 'ethnographic present'. Fredrik Barth, for example, wrote in 1967 that 'traditional anthropological description in terms of pattern and custom, convenient as it is for certain purposes, results essentially in accounts that do not adequately portray change' (1967: 661). More recently, anthropologists have turned to Deleuze's work on becoming to promote an empirical and analytical attentiveness to the ever-unfinished, unstable and open-ended character of the social, material and virtual worlds that humans inhabit (see, for example, Biehl and Locke 2017; Ingold 1993; 2011).

In using the term 'lines of becoming' in this thesis, I broadly follow Ingold's (2011) reading of Deleuze's conceptualisation of life as lived along lines. This is, as SueEllen Campbell also put it, to think of landscape 'not as solid, stable, complete, dominated by the landmarks that are always there, but instead as a process of constant movement, as something that is not really a "thing" because it is constantly being produced by action' (2011: 121). Others have cautioned that focusing on becoming can overshadow experiences of stuck-ness, by pointing to cases where time seems suspended, characterised by endurance and maintenance rather than renewal, and there is nothing to become (Baraitser 2017; Bryant 2016; Ringel 2014; 2018). Just because time goes on does not mean that things have to be in a perpetual state of becoming. In this thesis, I will look at the coexistence of these types of

experiences and narrations of time as renewal and endurance as these materialise in and through the landscape.

Modern progress and its antitheses

The primary temporal regime I observed in Almería was that of *progress*. Both efforts to 'improve' the landscape through industrial agriculture, particularly the construction of greenhouses, and the abandonment of 'traditional' livelihoods and outdated industries, were infused with notions of modernisation-as-progress. While decay might seem opposite to modernisation, one lesson I took home from Almería is that it is not, as modernisation itself can be destructive. This sentiment has been expressed by Marshall Berman:

> To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world—and, at the same time, that threatens to destroy everything we have, everything we know, everything we are. (1988[1982]: 15)

Accordingly, the main particular mode of un/making that I will be looking at in this thesis is modern progress and its supposed antithesis of decay. That modernisation has destructive potential is by no means a new insight. Even if only considering the twentieth century, a range of great writers has dwelled on this theme before me. The writings of Walter Benjamin come to mind, which address history as the wreckage caused by a 'stubborn faith in progress' (2003[1940]: 7). Iconic are also the dystopian novels of the first half of the twentieth century, including Aldous Huxley's *Brave New World* (1932), which targets the optimism of technological advancements (Fordism in particular) and the fear of losing individual identity, and George Orwell's *Nineteen Eighty-Four* (1949), which criticises the (totalitarian) modern state. In the wake of two World Wars, philosophers like Hannah Arendt and Primo Levi have reflected on the destructive capacity of modern social and political forms that produced fascism, genocide and dehumanisation. Others, with Jean-Paul Sartre, Simone de Beauvoir and Albert Camus at the fore, have sought alternative worldviews in existentialism that could counter the search for universals in modern rationalism and positivism. By the 1980s, modernity had lost much of its grace. Postmodernism, under the influence of Michel Foucault, Jacques Derrida and others, had taken central stage in challenging the optimism and naivety of modern ideals. The stage was opened up to look for the possibility of nonmodern worlds, as Latour (1993; 2013) and others have set the challenge.

Given this extensive and diverse body of reflection and critique, summarised here only in a most reductive manner, what is left to be said about modernisation? Two main reasons for

continued reflection emerged during this research project. The first is that despite substantial critique leading to its theoretical disintegration, modernisation continues to be a persuasive, even dominant force in the lives of many people and their environmental relations, and thus merits further investigation 'as indubitable ethnographic fact' (Ferguson 1999: 16). Belief in technological advancement seems to be strong as ever, as are related dystopian scenarios. In Almería, this would for example revolve around the application of technological 'solutions' to climate change and water scarcity. Surely, we live in a moment when there is widespread suspicion of progress, but just because modernity as a theory has been debunked, this does not mean it can be dismissed as a pervasive signifying myth and lived reality (Ferguson 1999; Holston 1989). On the contrary, there is an important project in 'showing how it becomes linked to social practices and thereby becomes a force in the social world' (Holston 1989: 6). Its continuing dominance means there is still much work to do.

The second and related reason to gain a better understanding of contemporary modernisation (and to keep knowledge of it up to date and critical, as modernisation itself is subject to change) is that it continues to provide meaning to those who live its promises and materialities. Through my engagements with farmers in Almería I have come to understand 'the modern' not simply as an estranging, top-down model of governance, but as a meaningful, vernacular and locally embedded marker of experiences. To quote Berman again, although modernisation has for many people been 'a radical threat to all their history and traditions, it has, in the course of five centuries, developed a rich history and a plenitude of traditions of its own' (1988[1982]: 16). Modern progress is full of meaning, and perhaps most significantly so as a temporal regime. It is, by definition, future-oriented: a way of imagining individuals, societies and landscapes positioned in time as relatively advanced or backwards; a politics of embracing the future and a letting go of present and past. It promises a kind of salvation from a closed, already defined past and present, into an open and hopeful future. Through innovation, renewal and detachment from existing forms, to modernise is to emerge from the margins. At least, that is what modernisation narratives tend to portray.

What I observed in Spain was more complicated. While I did see that people would feel reassured by notions of progress, I also noted that the linearity that it promises turned out to be more of a temporal imaginary than a lived reality. Hence, I stress that the search for the new, mainly through technological innovation, can culminate in experiences of stuck-ness, insufficiency and backwardness. Although innovation is future-oriented, I show that it can also form a compulsive repetition in the way it continuously discards the past, the old,

the traditional, in favour of the new (See also Baraitser 2017; Berman 1988[1982]). To subscribe to modernisation is to get caught up in this imperative of 'creative destruction.'

Following this line of thought further, I align myself with James Ferguson's approach to unravelling 'the modernization myth, and what happens when it is turned upside down, shaken, and shattered,' which requires an effort 'to concentrate on the social experience of "decline" itself' (Ferguson 1999: 13; 15). I also consider Ann Stoler's work on ruination, which advocates a focus on 'ruination as a ongoing corrosive process' (2013: 9) and the crucial insight that 'ruins are not just found, they are *made'* (2013: 20, original emphasis). Accordingly, in drawing attention to the ruinous capacity of modernisation, I look at the ruin not only as an aesthetic or material object, but also at ruination as a project and lived experience. I address this unmaking not in terms of a historicised status quo, but as a line of becoming; *unmaking is process*. This becomes particularly apparent in processes of depopulation that affect the more remote villages in Almería as well as in rural areas around the globe today. Ruins, there, are material forms that function as temporal markers of unmaking. Through their lingering presence they reveal past forms, lives and projects, but, I argue, they also present non-normative futures—futures of decay rather than growth, of foreclosure rather than opportunity—that disrupt experiences of the present in the prospect of total abandonment. In focusing on ruins and ruination, I explore what Ferguson calls 'modernization through the looking-glass, where modernity is the object of nostalgic reverie, and "backwardness" the anticipated (or dreaded) future' (Ferguson 1999: 13). Thus, while I seek to acknowledge and understand the pull of modernisation—how it continues to draw us into itself, and how people continue to make themselves at home in a modern world that is so disruptive and appealing at the same time—I also underline that its 'politics of letting go'—the temporal regime of progress—is juxtaposed with a 'politics of holding on' (Baraitser 2017): a temporal regime of nostalgia, maintenance and endurance.

Methodology

Situated at the interface of the environmental humanities and environmental anthropology, one of the main challenges in this project has been to find ways of allowing different methodological traditions to speak to each other, both in and beyond the selected case studies and primary texts. The main research questions will be answered using a mix of ethnographic methods, such as participant observation and in-depth interviews, and cultural analysis. As such, the thesis seeks to bridge the core methodologies of environmental

humanities and anthropology and to address the emergence of new knowledge between—or across—disciplines.

Often, interdisciplinary work is addressed in terms of the obstacles and opportunities in collaboration between disciplines: from the increasing attention to interdisciplinarity on the part of funding bodies to the difficulty of finding a common language; and from disciplinary publication requirements to the implications for knowledge production in a more abstract sense (Emmet and Zelko 2014; Strang, Edensor and Puckering 2018; Strang and McLeash 2015). This thesis adopts a somewhat different take on interdisciplinarity, in the sense that it is not the product of a collaboration between scholars based in different disciplines, but single-authored. Of course the work done is informed by countless encounters with people from a variety of academic backgrounds, as well as beyond the ivory walls of the university. Hence, this PhD thesis presents my efforts to reconcile my anthropological training, my participation in the ENHANCE ITN Environmental Humanities project, my visiting fellowship at the Rachel Carson Center in Munich, and my embedding in the School of English and the Arts and Humanities Research Institute at the University of Leeds.

This obviously poses both institutional and intellectual challenges. In an academic context where disciplines have drifted apart and withdrawn into their own particular jargon and modes of inquiry, interdisciplinary work has the potential to irritate everyone and satisfy no one, as well as to unite fragmented, specialised knowledges and produce new ones. Engaging with these challenges required a denaturalisation of my own assumptions and modes of thought. Finding my way into the environmental humanities meant casting new light on the kinds of questions I had been asking and the conceptualisations I was used to working with, while my anthropological baggage allowed me to critically consider the tools and approaches these disciplines had to offer. All of this with the aim of finding better explanations, not disciplinary boundaries. For Veronica Strang,

> This is the point of an interdisciplinary conversation: that interlocutors find their own thinking altered, as well as co-producing new ideas that would not have been arrived at independently. […] Genuine exchanges of knowledge—on any topic—should generate understandings that are more than the sum of their parts. (2018: 2)

My approach to navigating this has been to take the object of interest as the focal point. While numerous contemporary debates within anthropology or within the environmental humanities would have been tempting leads to follow, I had to remind myself, time and again, to return to the Almerían landscape. In this way, the landscape functioned as an anchor, from the initial stages of research design, through fieldwork and analysis, to the

writing of the thesis. Clearly, it would not be possible, at the crossroads of anthropology, the environmental humanities, and further influenced by disaster studies, cultural geography and globalisation studies, to give an extensive literature review of each implicated field of scholarship. Instead, what I have sought to accomplish here is to interrogate what happens at the crossroads itself. This, I think, should be one of the core principles of interdisciplinary work: that a concrete object, case or question—in this thesis the Almerían landscape—is addressed not only as a point of common interest between disciplines, but as the glue that binds people, debates and approaches together.

Ethnographic fieldwork

Ethnographically, this thesis is based on a total of six months of fieldwork between 2016 and 2018. A couple of two-week scoping visits to Almería were conducted at the research design stage to map the field and to allow for preliminary findings to inspire the themes and questions to be addressed. This approach to ethnography, where a number of shorter visits is combined—as opposed to a 'traditional' long-term fieldwork period—had advantages and disadvantages. It allowed for a productive exchange between moments of analysis and data gathering. The insights that emerged from the field directly sharpened the research questions and the focus, while the intermittent analysis of ethnographic information fed back into the fieldwork. The theme of abandonment and ruination was derived from these initial field visits. On the downside, such stroboscopic fieldwork meant I did not always have the time, especially during these initial visits to Almería, to build the relations necessary for in-depth ethnographic exchanges. These became more central to the two main field visits in 2017, which lasted several months. The ethnographic work *in situ* was complemented with continued online conversations with key interlocutors. In this way, I was able to further mirror my analyses with their continued involvement and insights.

The fieldwork itself involved different ways of moving through the landscape that produced particular forms of knowledge. The two main modes of movement I used were on foot and by car. Often, I would move along with others. Walking or riding with farmers on their land or through their greenhouses turned out to be a very productive way to gain insight into their material and cultural lifeworlds. I had tried, initially, to get access to everyday work and life in the greenhouses, but this form of participant observation was not possible. Understandably, farmers were very hesitant about this, not least due to the possibility of labour inspections and administrative hassle, and I was hesitant myself as I did not want to take a worker's place in a region of precarious labour. Given these ethical concerns, I decided

not to pursue this further. The alternative method of movement, however, more than made up for this. As we moved along rows of tomatoes, cucumbers, olives or almonds, farmers would point out things that mattered to them, while I could ask questions about the things that stood out to me: an irrigation pipe, a fence, a plant, a gutter, an animal, a door, etcetera. These material structures, forms and species often evoked conversations that went beyond the immediate object and addressed the experiences, discourses and politics of life and work in the arid landscapes of Almería. Similarly, I moved along with villagers in their everyday activities (village life was much easier to participate in than farming activities), where I learned how they related to particular places, buildings and people. Movement was also a principal method to get to know the landscape by myself. Following the lines in the landscape, I explored the more remarkable sites—this could be an irrigation channel, a regional basin, a row of abandoned terraces, a ruined farmhouse, a museum or a visitor centre—but also the (seemingly) unremarkable places that were not signposted or iconic. This involved climbing up and down the hills and *ramblas* (seasonally dry riverbed) or making my way through the alleys between greenhouses, where the unremarkable often turned out to be quite remarkable. Sometimes I looked these places up and mapped my way to them beforehand; more often, I would encounter them along the paths and roads I took.

Given these experiences, I have embraced walking as a method to understand the relationships between people and landscape. Through such a method of movement, the landscape becomes a sensorial and bodily experience that stands in dialogue—agreeable or tense—with its conceptual framing, while it also becomes a means through which research relations can be built, strengthened and utilised. I would not confine this 'method of opening up relational spaces of self and landscape' (Macpherson 2016: 431) to walking, however, and would add driving methods to this as well. While a downside of the car is that its movement is limited to roads (although some of the trips I took with farmers crossed their fields in a four-wheel drive), and the car has been criticised for detaching people from place, I found that 'machines also put people in contact with the world in an exciting, immediate and challenging way' (Relph 2016[1976]: 130). The navigation that is required in driving gave insight into distances, accessibility, and how various places related to each other spatially, in addition to culturally; the speed of driving allowed landscapes to change and to see the transitions between them; and it also had the great advantage of being able to cover larger distances (an olive farmer would think twice before walking from one end of their lands to the other). The car is not only an essential part of human-environment relations, it also can be a tool to explore such relations in greater depth. The combination of driving and

walking—to stop somewhere along the way, get out of the car, and explore the site on foot—worked especially well, both when by myself and when accompanied by interlocutors.

These interlocutors included a variety of people and sites. Broadly, I have engaged with people actively involved in or associated with the greenhouse-farming industry, and the people living, working and governing in small and often shrinking villages. Mostly, I draw on informal conversations with farmers and the inhabitants of the several villages I lived in during fieldwork. Semi-structured interviews were held with representatives of farmers' cooperatives and irrigators' communities, with architects involved in the greenhouse industry, and with functionaries at the levels of municipality, province and autonomous community, and in various departments including environment and agriculture. I have visited contemporary waterworks, such as major irrigation basins and desalination plants, and spoken to the engineers and managers in place. I have juxtaposed these with visits to the ruins of ancient waterworks, such as aqueducts, wells and mills, and observations during water-related manifestations and protests. I have paid visits to abandoned places, both industrial and domestic, including mines, towns and farmhouses. I have also explored many film sets, either abandoned or in use as theme parks, where I have also spoken to people involved in the film industry, including actors in 'western' village parks and the people behind the annual Almería Western Film Festival. Additionally, I build on conversations with researchers in hydrology, ecology and history at the universities of Almería and Cartagena.

Most of these conversations were held in Spanish, and so the quotations that appear in the various chapters have been translated. All translations, both of cited texts and interview excerpts, are my own unless mentioned otherwise. Most of the more formal interviews were recorded. I did not record the many informal conversations I had. Often I would jot down quotes during or after the conversation, and write these out later. Recorded interviews in Spanish were transcribed by a student from the University of Almería. Most people and a few of the places that appear in this thesis have been anonymised to protect the privacy of my interlocutors. A few public figures I have interviewed or whose public discourses I have analysed appear with their real name, as anonymising these people would be impossible and they were aware of their public appearance.

Cultural analysis

As the discussion on landscape imaginaries above suggests, it is not enough to look only into bodily experiences to fully grasp the un/making of landscape. The imaginaries that inform and are informed by these experiences, and that play a formative role in the processes of

making and unmaking, need to be taken into account as well. To get a hold on the imaginative layers of landscape, the ethnographic work was thus juxtaposed with an analysis of popular representations of the Almerían desert landscape. More particularly, I have conducted a qualitative audio-visual content analysis of a selection of films produced in Almería. Cinematographic representations of landscape have been subjected to a discourse analysis of content and narrative, and a descriptive analysis of form (e.g. visual, sound, dialogue and movement). Investigating content and form together can expose (sometimes stereotyped) representations. This approach to researching the imagination is based on the idea that struggles over meaning are embedded in cultural artefacts, including the various genres of film explored here. These texts, put differently, 'reflect macrosocial processes and our worldview' (Leavy 2007: 229). I am particularly interested in how the discursive formations of the landscape relate to its material forms; how representations of landscape affect its material transformation (and vice versa); and how, as part of this general transformative process, desert landscapes are constructed in relation to foundational narratives of place and identity in both their national (Spain) and transnational (European) forms. As any landscape, the 'dramatic' landscapes of the arid regions of south-east Spain are a site of normative and sometimes conflicting cultural imaginaries.

The choice to analyse various types of film, rather than depictions of the landscape in paintings, literature or photography, is not incidental, but is based upon the historical and existence of a lively film industry in Almería. This industry became significant mostly in the 1960s with the production of a large number of 'spaghetti westerns'—a genre of western films that were often Italian, German, Spanish and American co-productions. The arid landscapes of Almería have since featured in a range of productions, from Hollywood blockbusters to obscure B-films. The proliferation of this film industry, which came to Almería to exploit its arid landscapes as the setting and decor for its productions, already betrays the significance of the landscape and raises questions as to its representation. Hence, I am interested in what cinematographic representations of the landscape can tell us about how it is imagined. This analysis of how the landscape is represented, is further informed by reading policy documents, leaflets, communications, promotional videos and publications, although these feature only in the background of this thesis. The main aim with this method of analysis is to understand multifaceted desert imaginaries and to address the politics of representation that is bound up in it. To what political ends are desert landscapes created and imagined? How are such 'desert imaginaries' connected to transformative material

processes, and what impact do these changes have on the people that populate areas often considered to be unfit for human habitation?

As such, I have gone about the analysis of landscape designs, films, narratives and experiences, as various expressions of making and unmaking landscape in which imagination and materiality are in close dialogue. 'Forests tumble into fables tumble into politics,' write Heather Swanson and her colleagues, underlining that 'material worlds and the stories we tell about them are bound up with each other' (Swanson et al. 2017: M10). The interaction between film analysis and ethnography explored here is not immediate, however. I have not looked at how people in Almería perceived the images presented to them in the films I have analysed. Rather, I have focused on dominant and subversive cultural tropes that are at play in the desert landscape, and the emerging resonances between lived experiences and popular representations.

This Janus-faced analysis, combining ethnography and cultural analysis, further oscillates between various scales. The text presented in the chapters that follow shifts between spatial scales, from individual experience through village, regional, national and European politics, communities and identities, to the level of global environmental and social concerns and interactions. Temporally, it shifts from close encounters and conversations through everyday imaginations of past and future, to historical accounts of twentieth and twenty-first century development; from fascist, imperial and ancient hegemonies to the imagined foundations of Western civilisation and the epic timeframes of the Anthropocene. This otherness-through-scale should not overwhelm, though, as the landscape binds these various temporal and spatial scales together into a comprehensible framework. Landscape, as I will demonstrate, encompasses both the grandness and particularity of things.

Structure of the thesis

The thesis consists of three chapters that can be read relatively independently from one another. They are also each different in structure due to the use of different materials and narratives. However, they complement each other by shedding light on the making and unmaking of landscapes in Almería from different angles.

Chapter One, titled *Imagining the desert of Europe*, focuses on cinematic representations of the Almerían desert landscape. In so doing, the chapter aims to shed light on how everyday forms of coping with aridity are intimately tied up with the ways in which the environment is framed discursively. It addresses the interplay between un/making landscape as imagination and as material practice, arguing that forms of transformation which presume to

'modernise' or 'protect' the desert can succumb to the normative ways in which it continues to be imagined as 'other' and 'wild'. I highlight three images of the desert. The first, represented in the spaghetti western genre, reflects and reproduces a norm for what a desert should look like and who is supposed to live there, According to this normative imaginary, the desert appears as a thoroughly gendered and racialised landscape that appeals to popular Euro-American tropes of toughness, wilderness and lawlessness. The second image, represented in the Spanish television series *Mar de Plástico*, is that of the so-called 'Plastic Sea,' the vast area of greenhouses in Almería. While this apparently represents a complete transformation—indeed modernisation—of the desert landscape, much of the normative symbolic significance of the desert persists. The third image, as represented in a set of eco-activist documentaries, challenges the myth of desert lifelessness that has long been dominant in western thought by underlining the need to protect the various life forms the desert contains. In challenging this normativity, the documentaries also paradoxically reinforce another, namely that of the desert as exceptional and Other. Through an extensive analysis of these three interrelating 'desert imaginaries', the chapter seeks to question to what extent deserts can be remade, or even unmade, regardless of their climate or geology. As such, it establishes a frame of reference for the chapters that follow, which will continue to discuss various material and discursive transformations of the desert landscapes of south-east Spain.

Chapter Two, *A village in the un/making*, is an ethnographic portrait of a small village in the Filabres mountains, the northern border of the arid region of Almería and at the geographic edge of this thesis. The village is caught up in a seemingly irresistible trend of depopulation, which provides a case to look closely at what I call *unmaking*: the gradual disassembling of material and social structures. I stress that common understanding of abandonment as a form of neglect or a failure to care is inaccurate. Rather, in drawing attention to the intentionality and creativity of unmaking I underline instead that it is an active, considerate and culturally sensitive process. Unmaking, addressed as a socio-material engagement with environmental, economic and social conditions, can change the function, aesthetics and meaning of the landscape profoundly. I go on to unpack this idea, first by addressing the cultural significance of 'a life among ruins' through the accounts of people who have abandoned or are in the process of abandoning their rural homes and livelihoods. Nostalgic apprehensions of the past and an eerie sense of tranquillity come to the fore as important markers of everyday life. Next, I turn to the temporal projections of unmaking. Highlighting the ways in which ruined houses project a future of abandonment and further

decay, I dislodge the assumption that ruins must nostalgically reflect the past. In exposing the futurity of ruins, and elaborating further on maintenance as a form of containing decay, I draw attention to the production of a prolonged present in unmaking—unmaking can account for both, as a line of becoming that produces modes of suspension. I conclude the chapter with a reflection on unmaking as inherent to progress. Ruins, I suggest, do not form an antithesis for progress: rather, they are part of it as materialisations of its excesses and shortcomings. These ruins that are allowed to be ruins—that is, ruins that are not demolished or refurbished—become part of the iconography of landscape: the village in the unmaking as a landscape of progress.

Chapter Three, *Containing progress in the greenhouse*, addresses the transformation from 'desert' to 'orchard' through ethnographic encounters with people involved in the Almerían greenhouse farming industry. I explicitly take modernisation to be an intentional mode of making and unmaking that mediates between the imagination of landscape and its material engagement, an argument I develop in three steps. First, I discuss what kind of environmental relations the greenhouse represents through its material form, its everyday use, and its symbolic significance as an emblem of modernisation. By reflecting on its function as a paradigmatic separator of inside and outside environments and its paradoxical entanglement with the surrounding landscape, I consider the greenhouse to be a vernacular modern that is both placeless and emplaced. Second, I turn to the temporalities of modernisation, interrogating 'innovation' as a process in which improvements are continually made to renew the greenhouses, while older models and practices are either neglected or discarded. In doing so, I show that the continuous drive towards the future, inherent in modern progress, effectively betrays itself, producing a form of 'stuck-ness' in the present where contemporary practices are relegated to the past and shifting horizons cannot be reached. Third, in asking how technological 'solutions' sustain processes of modernisation, I describe desalination as a proposed technological solution to the problem of aridity, but also show that this promise has largely remained unfulfilled. This underlines my argument that narratives of temporal advance, innovation and modernisation can act as conservatisms in disguise, by keeping the imagination of, and material engagement with, landscape within the limits of existing paradigms. The environmental, temporal and technological aspects of progress are not as uniform, overwhelming or unidirectional as they might appear. As such, the technologies that are focal points for this chapter also stand for the environmental and temporal modes through which we as a species engage with, produce, and potentially destroy the world(s) in which we live. This unmaking in modernisation involves material ruination

of landscapes, people and nonhuman species, and techniques of temporal exclusion of the past and of those people, practices and places seen as belonging to that past.

Finally, in the Conclusion to this thesis, I bring together insights from the three chapters on the imagination, making and unmaking of landscape, to shed light on how and why people engage in the transformation of landscape, and to reflect on the implications of this research for our understanding of contemporary human-environment relations.

Chapter one:
Imagining the desert of Europe

> *One.* Having paid a considerable entrance fee, you stroll through the dusty streets of a film set from the late 1960s. Walking around the wooden facades of western-style saloons and storefronts, you find that the buildings consist only of their front walls, which are supported by beams. Later, you enjoy the spectacle of a western theatre show including pub fights and shootouts.
>
> *Two.* Driving through a maze of alleys between the walls of plastic greenhouses, you pass a woman who is loading pallets with crates, filled to the brim with tomatoes, onto a lorry. You get lost and stumble upon the ruins of an old Moorish well. Two young men on bicycles, wearing orange visibility vests, kindly direct you towards the nearest main road.
>
> *Three.* Descending into a flowery eco-village, you look out over a valley where, below, you see a man with dark curly hair and a beard swimming nude in a calm creek of turquoise water. You eat home-grown vegetables with villagers and learn about the apparently imminent destruction of the local ecosystem.

These three scenarios, at first glance, seem to have nothing in common except for their geographical placement in what has come popularly to be known as 'the desert of Europe', in south-east Spain. What is it then about this place, considered the most arid in the continent, that brings together such diverse and in many ways exceptional landscapes? To understand how (and why) these natural-cultural landscapes have formed in a region of drought, this chapter interrogates the process of making and unmaking landscape as a project of imagination and representation, as much as of material change, through an analysis of films produced in Almería over the past fifty years.

By paying attention to how normative 'desert imaginaries' are connected to transformative material processes, in particular industrialisation and conservation, and to what impact these changes have on the people who populate areas often considered to be empty or unfit for human habitation, the chapter asks how the representation of landscape is entwined with its

material transformation. I will discuss how, as part of this general transformative process, desert landscapes are constructed in relation to foundational narratives of place and identity in their regional (Almerían), national (Spanish), and transnational (European) forms. In so doing, the chapter ultimately aims to shed light on how everyday forms of coping with aridity are intimately tied up with the ways in which the environment is framed discursively. To what political ends are desert landscapes created and imagined, and who benefits from such desert imaginaries, which are both constructions of the present, reconstructions of the past, and projections of the future?

This chapter not only addresses the politics of representation bound up in multifaceted desert imaginaries, but also establishes a frame of reference for the chapters that follow, which will continue to discuss various material and discursive transformations of the desert landscapes of south-east Spain. To explore the making and unmaking of landscape through imagination and representation, this chapter looks at three ways in which the desert environment of Almería has been materially transformed and imaginatively framed. More specifically, it presents three images of what local ecologist Juan Carlos, in one of our conversations, aptly called 'dramatic landscapes'. The landscapes of Almería are indeed dramatic due to their striking features, which simultaneously provoke an affective response of exhilaration and derangement, of anxiety-ridden revulsion and jaw-dropping awe. Moreover, the landscape functions in each case as a stage for social drama: as an animated setting for the seemingly endless public debates on the management of water, environment and population to which I will return in the second and third chapters of this thesis. Finally, the phrase 'dramatic landscape' refers to the various ways in which the landscape has been dramatised, especially through film, the medium on which I will concentrate in this chapter. After briefly introducing these three dramatic landscapes, I will go on to discuss how each landscape relates in its own way to the arid region of south-east Spain as a site of normative, sometimes conflicting cultural imaginaries, proceeding to a reading of particular representational instances in popular television drama and western film.

The first image I want to focus on is the one represented in spaghetti westerns, a genre of 'Wild West' films produced in Europe in the 1960s and 70s, and Sergio Leone's so-called Dollars Trilogy in particular. The sandy cardboard village I mentioned at the start of this chapter is one of several film sets originally built in the Tabernas valley for the production of films in this genre. Many of these film sets can still be visited today, with some having been transformed into theme parks with resonant names like 'Texas Hollywood', where cowboy shows run on the main square of the village, while others have remained eerily

abandoned since the cameras left. A tourism cult has evolved out of these places, with guided tours and festivals. Down through the years, the movie industry itself has left clear marks on the Almerían landscape, both in terms of its material appearance and its imaginative power. As I will go on to argue, the spaghetti western, even though it is essentially a made-up landscape, reflects and reproduces a norm for what a desert should look like and who is supposed to live there: sand and eroded rock, dry twig and thorn, deadly snake and scorpion, forlorn widow and vicious outlaw. According to this normative imaginary, the desert appears as a thoroughly gendered and racialised landscape that appeals to popular Euro-American tropes of toughness, wilderness and lawlessness.

The second image I want to present is that of the so-called Plastic Sea, that vast area of greenhouses in south-east Spain which apparently represents a complete transformation of the normative symbolic significance of desert landscapes. I will interrogate this image, which speaks to the modernisation and industrialisation of agriculture in the desert region of south-east Spain, by analysing a contemporary Spanish television series, *Mar de Plástico* (2015). This popular crime series is set in a village surrounded by greenhouses and offers an interesting perspective on the imaginative power of the Plastic Sea. I will argue in my reading of this series that many of the norms that accompany desert imaginaries persist despite the large-scale industrial transformation of the desert itself. More pointedly, I will seek to question to what extent deserts can be remade, or even unmade, regardless of their climate or geology.

The perceived lack of human habitability that emerges from spaghetti westerns, as well as the industrial processes of modernisation represented by the Plastic Sea, are countered in the third image, which relates to the perspective presented by local ecologists and eco-activists. Situated in the idyllic eco-village of Los Molinos, which looks out over the oasis of the Río de Aguas, a local group of activists is currently struggling against exploitation—principally by industrial olive farms—of the aquifer that feeds the river. Consistent over-use of the aquifer, they argue, has caused the oasis to dry up and has put the entire local ecosystem in peril. In calling for this problem to be recognised, the activists have attracted media attention and have been involved in the production of several documentaries. The discursive framing of these documentaries is at the core of the third section of this chapter, which, in challenging the myth of desert lifelessness that has long been dominant in—for example—spaghetti westerns, underlines the need to protect the various life forms the desert contains, including non-human as well as human life. In so doing, it also confirms the desert's exceptionality and its otherness.

These three narratives represent three different genres, the first narrative being a form of cinema, the second a TV series, and the third documentary films—although, as Nichols (2010) makes clear in his analysis of documentary genres and styles, differences between documentary and fiction in film do not result in an absolute distinction between the two. The strongest contrast of the third narrative with the previous two is the importance of voice. While the Dollars Trilogy, and to a lesser extent *Mar de Plástico* as well, reject language as an effective means to accomplish a goal (French 1997; Thompkins 1992), voice-overs and recorded conversations form the main resource to bring across messages in the documentaries. Consequently, the third narrative builds more heavily on the discursive framing of landscape, while the first two rely more on cinematic framing. Thas is to say that, while the three sections of this chapter correspond to each other and should be read in relation to each other, they each assume their own form of writing.

Together, these three narratives offer windows through which to observe popular representations of desert landscape. Through its analysis of spaghetti western films, a detective TV series, and regionally situated eco-documentaries, the chapter asks to what extent a desert can ever be civilised or domesticated. To ask this question differently, as soon as a desert landscape has been appropriated by human settlers, either converted into farmland or carved out to make space for a town or city, is it no longer truly a desert at all? In asking these questions, the chapter seeks to address the interplay between un/making as *imagination* and as *material practice*, arguing that even those more advanced forms of capitalist and anti-capitalist transformation that might presume to 'civilise' or 'protect' the desert have failed to resist the normative ways in which it continues to be imagined as 'other' and 'wild'. In comparing three very different views of the desert landscape, my analysis aims to reveal some of the symbolic meanings of the desert, to chart their changing relationship to the nation and Europe, and to consider what happens to the imagined otherness of the desert when it has been *re*-imagined and *re*-designed. In my conclusion to the chapter, I further reflect on how these images, each in its own way, construct norms of who is considered to be able—and more to the point *allowed*—to live in a desert landscape, by drawing attention to the repeating tropes of lawlessness and violence that circumscribe desert lives.

The Dollars Trilogy

Fig. 1.1. The barren hills of Tabernas frame a desert town. The set can still be visited today. Still from *The Good, the Bad and the Ugly*.

With its steep, eroded hillsides and deep, dry riverbeds, the Tabernas valley is without a doubt one of Almería's dramatic landscapes. No wonder, then, that together with the volcanic hills of Cabo de Gata, this spectacular region has attracted not only geologists interested in the history of rock formation, but also filmmakers looking for settings for their work.

The movie industry in Almería began in the 1950s, but expanded exponentially in the early 1960s with the emergence of the spaghetti western genre. The term 'spaghetti western' is derived from the dominance of Italian directors in the genre, even though many of the films were in fact Spanish, German, British, Yugoslav or French productions (Hughes 2004). The spaghetti western has thus become an umbrella term for European westerns. These not only differ from the classic Hollywood western in their (relatively cheap) filming locations on the other side of the Atlantic. With more graphic violence, even more questionable morality, and an often flagrant disregard for historical fact, 'the Europeans were approaching the genre from a new angle': they were interested, in effect, in creating a new subgenre (Hughes 2004: xii).

In this and other respects, the spaghetti western can be considered as a looking glass into the European imagination of the Wild West, a place far removed from everyday life in Europe. The arid landscapes of Almería were central to this imagination and provided the setting for many spaghetti westerns, which grew rapidly in popularity in the 1960s though they had already reached their climax by the decade's end. Over 500 spaghetti westerns had been made by the late 1970s. Film experts tend to agree, though, that most of these films

can be considered pulp (Hughes 2010). Of those films that *did* become successful, on the other hand, some have gone on to gain legendary status, notably Sergio Leone's Dollars Trilogy, to which I will return below. From the 1970s onwards, the film industry began to leave the Almerían landscape behind (Hughes 2010). Nonetheless, every now and then a major production has continued to find its way to the region. Meanwhile, this dusty corner of the Iberian Peninsula has also appeared in such films as *Lawrence of Arabia* (1962), *Indiana Jones* (1981, 1984), and, more recently *Exodus: Gods and Kings* (2014) and the HBO hit series *Game of Thrones* (2016).

I will limit myself here to a consideration of Sergio Leone's seminal Dollars Trilogy. The trilogy comprises the films *A Fistful of Dollars* (1964), *For a Few Dollars More* (1965), and *The Good, the Bad and the Ugly* (1966). I have chosen these films because they are generally considered to be constitutive of the spaghetti western genre as a whole, because they have played a catalysing role in the Almerían film industry, and because of their emblematic photographic portrayal of the desert landscapes of Almería. As is immediately clear to anyone who has seen them, what binds the films in the Dollars Trilogy is not the narrative but the setting, and the imagined world this setting represents. The films share a set of archetypal characters, often played by the same actors, with more or less the same sets of relationships between them. In particular, the reappearance of Clint Eastwood in his signature outfit (poncho, hat and cigar) became a leitmotif in the three films. The films themselves are both placeless, in the general sense that both distance and location are made deliberately unclear, and timeless other than within the broadest of historical frames. It could be argued that Sergio Leone's fourth major western, *Once Upon a Time in the West*, would also fit well with this analysis since it uses many of the same tropes and cinematographic techniques. However, the most important argument for excluding this film from my analysis is that although some scenes were shot in Spain, Leone filmed significant parts of *Once Upon a Time in the West* in the deserts of Mexico and the USA.

The plot of *A Fistful of Dollars* revolves around a traveller with no name (Clint Eastwood) who arrives in a village dominated by the animosity between two rival families, both seeking to control the village. On one side there is the gringo sheriff Baxter (Wolfgang Lukschy) and his gang; on the other the liquor trading Mexican Ramon Rojo (Gian Maria Volonte) and his brothers. The newcomer fans the flames of their struggle by acting as a mercenary on both sides, eventually inspiring the Rojos to exterminate the Baxters. In a final standoff against Rojo, the traveller defeats him and leaves the village with gold stolen by the Rojos. Upon the success of *A Fistful of Dollars*, Leone returned to Almería to shoot another western that came

to be known as *For a Few Dollars More*. In this later film, two bounty hunters are after the same bandit, El Indio (once more Volonte), who has escaped from prison with some help from his gang. The bounty hunters, one named Manco (who unmistakably resembles the traveller from *Fistful* and is played again by Eastwood), the other a newly introduced Colonel Mortimer (Lee van Cleef), decide to team up to defeat the Indio gang. The gang robs a bank while, much like in *Fistful*, Manco infiltrates the gang to destroy it from the inside. In a final shoot-out, all the gang members are killed. It turns out that the Colonel's motive was not the money but revenge for the rape of his sister, so as they part ways Manco gets to ride off with a cart full of priced bodies plus the loot from the bank. Finally, in *The Good, the Bad, and the Ugly*, three men are introduced who are hunting for the same chest of gold. These are, respectively, Blondy ('the Good', another resurrection of Eastwood's character), a bounty hunter; Angel Eyes ('the Bad', with van Cleef also building on his previous role), a hired killer; and Tuco ('the Ugly', Eli Wallach who shows resemblance to Volonte's parts), a Mexican bandit. Each finds a different clue to the location of the treasure but they need all three to find it, which forces them to team up despite their rivalry. The American civil war is in full force in the background, accounting for some spectacular scenes missing from the previous two films. In a final shootout at a Civil War cemetery, Blondy kills Angel Eyes and then forces Tuco to dig up the gold from an unnamed grave. He takes half the treasure, leaving Tuco to balance precariously on a cross with a rope around his neck, only to release him with a single shot from distance.

In the background of all of these tales is the Almerían desert. While some parts of *A Fistful of Dollars* were shot north of Madrid, most of the scenery for the three films is provided by the treeless hills of Tabernas and Cabo de Gata, their scattered buildings framed by desiccated mountains. Some of these archetypal western towns, with their wooden facades, swinging doors, and balconies, are dedicated film sets and can still be visited today, as theme parks. Others are the whitewashed villages in Cabo de Gata which, with their low houses and narrow cobbled streets, convey a 'Mexican' or 'Hispanic' feel (Hughes 2004). In these 'on location' films, rugged men on horseback ride out of these towns into an equally rugged landscape that is actually in Spain but seems to come right out of Mexico or the south-western states of America.

Outlaws and institutions

Clint Eastwood's character's entry into *For a Few Dollars More* is a scene that I consider to be emblematic for the rest of the film and for the Dollars Trilogy as a whole. Riding into town

on a mule, a traveller passes a group of tobacco-spitting men in cowboy attire who are members of Sheriff Baxter's gang. The men jeer at the traveller and ridicule his looks. They then fire their pistols at the mule's feet, scaring it and causing it to run off. The traveller jumps off and moments later, having recomposed himself, returns to confront the gang. He insists that the men apologise to his mule, which of course they refuse to do. As they draw their guns, the traveller quickly—far too fast for any of them to respond—shoots each of them in the heart and, one by one, they drop down in the sand. The undertaker, who has been watching the scene from a distance, smiles gleefully at the sight of his new clients. Cinematic spectacle aside, the traveller's response to the mocking behaviour of the men appears excessive to say the least. What does this reveal about the traveller, who seems not only indifferent to danger, but to life itself? And what does this tell about the places he travels through, which not only allow, but seemingly encourage, such random acts of violence?

To me, this iconic scene demonstrates a central message of the Dollars Trilogy, namely that in the desert, it is not merely the environment that is wild and hostile; it is the people that dwell there. This is a place for outlaws, bounty hunters, grave diggers: merchants of death who reflect, and are in turn framed by, the normative desert landscape through which they ride. The landscape frames these characters, but is also framed by them. Long, slow close-ups are used in all the 'Dollars' films to draw intense portraits of these characters. Sergio Leone brings the viewer close to the face of one man, then to the other, then back to the first one. And just as I think it isn't possible to get any closer without smelling these men's breath through the screen, the next shots bring them even closer. Their faces, harsh and tortured by sun and dust, almost fill the screen, and from beneath the shadows cast by their hats, their sharp, bright eyes are always locked on their target. Every move of their facial muscles is visible and, with each twitch, the tension rises.

Despite this tangible tension, Eastwood's drifter remains emotionally cool. His movements are calculated, his words measured; he shows neither anger nor fear, neither regret nor hope. Nothing is revealed of his past or future, other than that he came from the desert and that he will ride off into it again when the film ends. Not even his name is revealed. The people he encounters call him 'stranger', sometimes 'Blondy', and in *For a Few Dollars More* he is spoken about as 'Manco'; but no one bothers to ask his real name. Indeed, his identity lies not in a name, but in the landscape itself: he embodies the desert from which he emerged and that will eventually re-absorb him. Both man and place are nameless, placeless, timeless. Throughout the films, even when he takes a severe beating from the Rojos in *A Fistful of Dollars*, he keeps his composure. This ability to keep cool, Hughes writes, 'defines

the distinction between the stranger's intelligence and the stupidity of the locals' (2004: 10). The locals, by contrast, are nervous, twitchy, uncontrolled. They are powerless against their more violent peers—and particularly the main villain—in what appears to be a savage pecking order. The clever traveller easily plays on their greed and pride, which soon becomes their downfall. For the traveller, the locals are as foreign and despicable as they appear to the audience.

An interesting counterpart to Eastwood is Lee van Cleef, who, though as contemptible as the rest, at least poses a worthy opponent to Eastwood's drifter. As Colonel Mortimer in *For a Few Dollars More*, carrying a long-barrel handgun, he easily beats the traveller in a shooting competition, knocking him off his pedestal of superiority. Interestingly, much more is revealed about him than about the drifter. His name is Douglas Mortimer, he is in his late forties, he used to be a US Army Colonel in the Carolinas, and he is after the villain El Indio to avenge the death of his sister. But both men are of the same make, which is underlined when they eventually team up to beat El Indio. What they share is confidence. In the case of the villains, this confidence is generally misplaced: they are overconfident, and this is undermined by the stranger, who is superior in character, patience, speed and intelligence, as well as in his almost preternatural ability to stay calm at all times.

This confidence, as evidenced in bounty hunters as well as outlaws, is a central feature of the films' torrid display of masculinity: The Dollars Trilogy, and spaghetti westerns in general, are at their core films about heterosexual men, and this celebration of heteronormative masculinity resonates in all of their features. Almost all of the characters are men, the plot takes place in public spaces, physical action and body language are dominant over speech, emotions are hardly expressed at all, pain and discomfort are stoically endured, and death is faced fearlessly (Tompkins 1992, French 1997). Meanwhile, women, when they appear at all, are generally either widows, prostitutes or damsels in distress: a young mother, kidnapped and separated from her family (played by Marianne Koch); a flirtatious, red-haired hotel manager's wife (played by Mara Krupp); a young mother who witnesses the massacre of her family (played by Rada Rassimov). As Martin Parker observes, women in spaghetti westerns 'usually only make sense in relation to men […] looking after men, yearning for men, being wounded by men' (Parker 2011: 361). Others are mute figures in black dresses and head-handkerchiefs, fleeing the streets, closing the shutters, and locking the doors of their houses as gunmen ride into their towns. This reveals more than just impoverished stereotypes of traditional gender roles, for which the films have been criticised extensively. Jane Tompkins, for example, offers an acute analysis of the gendered politics of the western genre (including

both literature and film), outlining a duality in which 'women are the motive for male activity (it's women who are being avenged, it's a woman the men are trying to rescue) at the same time as what women stand for—love and forgiveness in place of vengeance—is precisely what that activity denies' (Tompkins 1992: 41). Westerns, she argues, actively oppose femininity and associated forms of institutional life.

It is the landscape that facilitates this. The desert landscapes of the spaghetti western genre offer hiding spots for criminals between the cracks in their mighty rocks, their ruined buildings, their desolate graveyards. Quite often, the bandit does not even have to hide, for he is already in a place where the tentacles of civilisation do not reach. This becomes particularly pertinent in those instances when civilisation itself is directly confronted. For example, the opening scene of *A Fistful of Dollars* follows Eastwood's traveller as he dismounts from his mule to drink from a well. This immediately raises awareness of the crucial presence of water, for no traveller will make it through the desert without a suitably placed well. While he slowly drinks from a wooden spoon, the traveller silently witnesses an act of violence: a child is torn away from its mother and ground into the dust by a rough, unforgiving male figure. The traveller seems intrigued, but not impressed or dismayed, and initially he does not intervene. Later, it becomes clear that the only time this young family will find safety is when the traveller reunites mother, father and child, allowing them all to flee from this accursed place.

The family with whom *The Good, the Bad and the Ugly* opens meets an even less fortunate fate. A boy, walking in circles on a donkey to power a well, looks a little bored, until in the distance he sees a figure on a horse arriving. He jumps off the donkey and runs inside the whitewashed farmhouse. Slowly, the man on horseback (van Cleef) approaches. He descends and walks towards the camera. A close-up reveals a stealthy looking fellow, dressed in black and with a wide-brimmed hat. With the blinding light of the doorway behind him, he enters the farmhouse where a family, the boy, his father and mother, fearfully look at him. The cool shade of the thick, arched walls that offer protection from the aggressive desert sun are breached by his unwanted presence. Mother slowly puts the dish she was carrying on the table and leads her son out of the room. Father sits down at the table, looking at the intruder. He begins eating from a wooden spoon as the man approaches. Both keep their eyes locked on each other, in classic spaghetti western style. They both eat slowly, with slurping sounds and broth dripping down their chins. 'You're from Baker?' the farmer asks. The intruder grins but does not answer. 'Tell Baker that I told him all that I know already. Tell him I want to live in peace, understand?' The farmer continues talking, saying he knows nothing about

the whereabouts of a case of gold, but the intruder is not interested in that, saying 'that's not what I'm being paid for'. Instead, he questions the farmer about the name of another recent visitor. As the conversation continues, the intruder nods at a picture on the wall and asks 'is that your family?' The farmer hesitates and nods. 'Nice family,' says the intruder. 'What does he pay you for murdering me?' the farmer asks. '500 dollars,' is the answer, 'to get the name'. The farmer sighs and says 'Carson. Bill Carson, that's what he calls himself now.' He then gets up from the table and gets a sack of coins from a cupboard, throwing it on the table in front of the intruder. 'It's a lot of money. One thousand.' The intruder looks at the sack and says: 'A thousand dollars, and some in gold. It's a tidy sum. But when I am paid, I always see the job through.' The farmer realises he is about to be killed and draws a gun from behind his back, but the intruder already has a gun pointed at him underneath the table and fires a bullet straight through the table and the bowl of food into the farmer's heart. His wife, outside, is shown hearing the gunshot. The intruder then gets up from the table, sliding his revolver back into its holster, grabs the sack of gold from the table, draws his gun, and shoots the boy coming up behind him with a rifle. The mother hears the second shot and runs towards the house. Walking back towards the entrance, the intruder steps over the bodies of father and son and casually leaves the house. Mother enters from the kitchen and theatrically faints upon the sight of their bodies in the living room. This is obviously no place for a family.

Here, the Dollars Trilogy confronts the viewer with a landscape in which there is no justice, at least of the kind provided by conventional law and order. Justice only comes in the form of compassion or, more often, the cruelty of personal revenge. In this landscape, absolute freedom goes hand in hand with the possibility of crimes that will never be criminalised because there are no laws to do so. In this sense, the desert is a landscape not only characterised by a lack of water, but by a lack of institutions. Just as spaghetti westerns praise masculinity, individualism and a sense of absolute freedom, they are a rejection of the family and everything this stands for (Tompkins 1992). Family life, on the rare occasions that it appears in the Dollars Trilogy, is portrayed as having to pay an expensive price for its unwanted presence in the desert. The family is a sphere where men are not 'real' men but have been corrupted by, and incorporated into, a feminine domain. What the family stands for is institutional life—a life much more familiar to the audience than that of the outlaws and gunmen, but considered pathetic nonetheless (Tompkins 1992; French 1997). The sole reason for having an institution like a bank situated in the towns is for it to be robbed, for a prison for it to be broken out of, and for a family for it to be destroyed. As French points

out: 'The landscape also makes clear what the films reject as unworthy: cities, soft people, and soft things, and of course, anything Eastern, anything civilised' (French 1997: 136). It is clear that the desert has no mercy for institutions, whether these come in the form of law and justice, home and family, or state and army.

Fig. 1.2. The outlaw entering a family home uninvited epitomises the confrontation between 'wilderness' and 'civilisation'. Still from *The Good, the Bad and the Ugly*.

The absence of law and law enforcement are but a superficial reflection of a much deeper absence, of what might be called moral law. The desert is portrayed as a place where the only ruling entity is the landscape itself; but while this landscape dictates where one can or cannot live and how one can or cannot move, it does not distinguish between what is good or bad. In the absence of moral law, the landscape of the spaghetti westerns is not so much *im*moral as it is *a*moral: it is profoundly indifferent to the moral constraints that circumscribe civilised human life (French 1997). This amorality is played upon in Leone's title *The Good, the Bad and the Ugly*. As the film shows, there is not much that distinguishes 'the good' from 'the bad': both characters prove equally capable of killing for their own, usually financial ends, and both display occasional signs of compassion. And as the titles of *A Fistful of Dollars* and *For a Few Dollars More,* suggest, the main motive that drives the storyline is money, with the exception of Colonel Mortimer's quest for revenge. Throughout the Dollars Trilogy, Eastwood's drifter acts mainly out of personal gain. As Hughes comments, 'he was the epitome of cool, a man of few words and even fewer morals, who would sell his gun to the highest bidder in an effort to get rich in a desolate wasteland—where dollars meant everything and life meant nothing' (Hughes 2010: 'Introducing the gang'). And yet when

Eastwood's drifter frees a family from its oppressors, or lets Tuco ('the Ugly') live and even leaves him with a share of the gold, he seems to act in accordance with at least some form of moral imperative. However, it is a fragile morality at best, enforced through the individualism of despots rather than the custom of law and politics.

These cinematic characters, and the relationships between them, thus convey the idea that the desert offers people only unsophisticated cultures and savage habits. The various drifters, villains and outlaws that populate spaghetti westerns are all part of a world that is morally questionable. However, despite their displays of graphic violence, spaghetti westerns are intensely nostalgic, romanticising a natural landscape that has yet to be corrupted by civilisation. This romanticism can easily slide into a form of environmental determinism. The desert landscape, in this sense, is not just a passive background to the regular occurrences of deceit, theft, violence and revenge; instead, it makes these human acts possible, it actively *produces* them. To cite Parker again, 'crucial here is land, because it is land (visually and politically) which functions as the condition of possibility of the Western' (2011: 361). In other words, it is the landscape itself that brings forth the characters that inhabit it. This link between man and landscape is continuously emphasised. For example, close-ups of the main characters alternate with wide shots that emphasise that they are embedded in their environment, and their figures are framed by bare hills and distant mountains so that character and landscape merge seamlessly: man emerges from the desert, imitates it, becomes like it, and returns to it in death (Tompkins 1992; French 1997). But while humans live, fight and die, the landscape remains changeless. Night follows day, but it will be the same the next day and the one after that, and the same throughout the film and beyond. The desert exists in a temporal scale beyond that of the various human figures who enter it, dwell in it, and must eventually either abandon it altogether or convert it into something else.

Europe and the advance of civilisation

The landscape may appear to be changeless, but it still needs taming. The larger narrative of westerns is usually that of approaching civilisation and the increasing institutionalisation of social life (French 1997; Parker 2011). In such films, the hero figure often recognises the role of the outlaw as one that is constitutive precisely of the forms of civilisation he is seeking to evade. In *A Fistful of Dollars,* the nameless traveller is effectively on a quick-fire killing spree, but in the process he also manages to rid a village of its violent gangs and set free a young family on the fly. He then leaves the villagers with the possibility to build a better home for themselves and to build new institutions free from the toxic pressure of violence. This is a

paradox in which 'the violent beginnings of law must always be outside the law' (Parker 2011: 358). What the traveller leaves behind, as he rides on into the unknown at the end of the film, is a place where moral law may begin, if not exactly to flourish, at least to be meaningfully explored.

In this way, westerns present a clash of world-views: that of a familiar, 'civilised' life in which Christian values prevail, and that of the anti-heroes and villains of the films, who 'have invested themselves in a moral code that regards the commands of Judeo-Christian ethics as senseless' (French 1997: 11). Leone leaves no doubt about this when he stages an abandoned church as el Indio's hideout in *For a Few Dollars More*, where the dusty statues of saints witness beatings, drug abuse and killings. The rejection of civilisation goes hand in hand with the rejection of the church and Christianity. In this sense, the Dollars Trilogy is ultimately secular in its view: abolishing all forms of spirituality, the films offer a strictly materialist entry into a territory where what matters is neither God nor the institutions of civilisation, but rather the blinding sun, the greyish wooden saloons and whitewashed villages, the rugged surfaces of the earth (cf. Tompkins 1992: 36).

This confrontation between (Christian) civilisation and (amoral) wilderness is beautifully played out in the opening sequence of *For a Few Dollars More*. The shot opens with a close-up of a bible, and as the camera slowly moves away it reveals a figure (Colonel Mortimer) sitting in a train, his face hidden by the holy book he is reading. Without revealing himself, he asks the conductor how far it is to Tucumcari, who replies that it will only be a few minutes before they pass it. Across from him, a slim fellow traveller, smartly dressed and sporting a bowler hat and nose-pinch glasses, starts speaking. In his outflow of words, he initially mistakes Mortimer for a man of the church until the Colonel lowers the bible and reveals his face, which is evidently not that of a pious man. Caught a little off guard, the well-dressed man informs Mortimer that the train does not stop at Tucumcari. Mortimer looks out of the window at the approaching station, takes his pipe out of the corner of his mouth, and says impassively: 'This train will stop at Tucumcari.' The fellow traveller looks baffled as Mortimer then stands up and pulls the emergency cord. A bell rings, and the train makes an emergency stop exactly at the platform of Tucumcari. Confused, the train driver and conductor are discussing what might have happened when one of the freight carriages opens and out comes Mortimer with a black horse as if it is the most ordinary thing in the world. 'Hey, mister!' shouts the conductor. 'You just can't pull the emergency cord and jump off! Tell me, why'd you stop that train? If you want to get off you…' But he then pauses as Mortimer turns around and reveals the gun on his belt, continuing in a much more

accommodating tone: 'Well, the railway company'd be mighty pleased to make any arrangements for any passenger if you want to get off yourself'. 'I did get off. Thanks' is Mortimer's blunt response. The conductor scratches his head with a fearful expression then runs back to the train shouting: 'Ok, let's go!' Clearly, the rules set by the railway company are no match for Mortimer's power as a denizen of the Wild West. As the train, itself a symbol of progressive civilisation, pulls out and the other passengers look out of the window at Mortimer, he turns his back on them: he is not interested in their 'civilisation', with its superior technology and fancy dress. Instead, his natural environment is a country of outlaws. A bounty killer, he pulls a 'wanted' poster off the wall at the station, and opens the hunt.

But while many westerns show how the advance of civilisation—the coming of the railroad, so to speak—brings an end to the frontier, in Leone's films the advent of law and order does not yet progress that far. In *A Fistful of Dollars*, Sheriff Baxter not only stands powerless against the more violent Rojo gang, but is also deeply corrupted by the family feud between them, a war he loses miserably after much blood is shed on both sides. The nameless traveller, positioned between the two gangs, never picks his side but instead watches from a distance as the Baxters are slaughtered by the sadistic Rojos. The few representatives of law in the other two films show a similar impotence as their only means to power is to place a price on a wanted man's head, effectively leaving justice to the hired guns and bounty hunters. Even when a bandit is caught, escape is imminent, whether it is from a well-guarded prison or hanging from the gallows. 'People with ropes around their necks don't always hang', Angel Eyes ('the Bad') sardonically says, summing up the inadequacies of the justice system. The trilogy teaches that law is not fit for this landscape and that law does not equate to morality—or at least not until the landscape, unburdened of its wildness, is tamed. Hence, the notion that the outlaws and bounty hunters might be protective of their ways of life against the constraints of civilisation and are afraid their freedom will be corrupted by the establishment of institutes and regulation (French 1997), does not hold strongly in the Dollars Trilogy. Instead, the outright rejection of civilisation at the hands of protagonists and antagonists alike reinforces the representation of the desert landscape as timeless: the films show a time not only before progress, but cut off from the very idea of progress, just as they show a space removed from 'Europe, civilization and constraint' (Parker 2011: 350).

This association of Europe with civilisation and vice versa does not stand on its own in the western genre, but is rooted in a much deeper history—one of colonialism and the ways in which Europe has historically justified the expanse of its empires. To understand this discursive construction of colonial relationships between Europe and its 'Others', it is helpful

to turn briefly to Edward Said's well-worn if still serviceable concept of Orientalism. In his 1978 book of that name, Said uses the term 'Orientalism' to demonstrate how the Orient has been constructed more as a projection of western imagination than as the reflection of any empirical reality of the various places and cultures of Asia and northern Africa that might fall under this category. Orientalism, as a 'style of thought' (Said 1979 [1978]: 2), constructs the Orient in binary opposition to the West, partly through the employment of derogative stereotypes. The Orient has been constructed as backward, bizarre and irrational, as well as morally and sexually degenerate (See also McLeod 2010: 47-55). In this sense, Orientalism legitimises European domination over the non-European 'Other'. As John McLeod clarifies: 'With the Orient perceived as inferior, its colonisation could be justified in benign or moral terms, as a way of spreading the benefits of Western civilization and saving native peoples from their own perceived barbarism' (McLeod 2010: 24). It is important to understand here that a significant focus of colonial projects worldwide has been, in Etienne Balibar's words, to expand the 'civilisation that the colonial powers believed themselves [to be] the guardians of' (Balibar 2004: 10). This colonial history of 'civilising' the rest of the world has basically meant imposing European values and institutions, but also European ways of seeing and imagining. As McLeod writes: 'Orientalism in part provides the West with the means of fashioning an image of itself, by setting up a supposedly degenerate and brutish part of the world against which it can be beneficially compared' (McLeod 2010: 49); or, in Said's own words, 'the Orient has helped to define Europe (or the West) as its contrasting image, idea, personality, experience' (Said 1979 [1978]: 1-2).

The link between civilisation and European-ness, to the extent that one implies the other, can thus be traced back much further than the emergence of the western genre. And although the term 'Orientalism' does not strictly apply here, it should hardly come as a surprise that this image looms large in the western genre. Interestingly, though, civilisation and European-ness are not upheld or celebrated in spaghetti westerns. Instead they are tacitly *rejected* as a site of weakness. This can be related to trends in the representation of Europe that have become, although no less Eurocentric, notably less triumphalist since the First World War (Spiering and Wintle 2002; Ifversen 2002). As Jan Ifversen (2002) argues, the idea of European civilisation was effectively shattered by the First World War; and as Michael Wintle writes, 'the Second World War and the Holocaust continued what the Great War had started: any noble portrayal of the Old Continent was unacceptable, and the humiliation of decolonization which followed hammered home the message' (Wintle 2002). In this context, it is possible to see the spectre of two World Wars, fresh in the collective memory of

European audiences, revived with Clint Eastwood's suitably ghostly appearance in a violent desert landscape, far removed from the barbarisms of European modernity yet redolent of them nonetheless.

The western is often characterised as a typical 'American' genre (e.g. Tompkins 1992: 27). Western narratives generally represent, with a greater or lesser degree of historical accuracy, a particular view of the colonisation of North America. Furthermore, as Tompkins argues, these tales of 'how the west was won' *before* the advance of 'civilisation' emerged in response, and as an alternative, to literature by women writers of the second half of the nineteenth century, who presented an image of America rooted in Christian values (Tompkins 1992). However, it is clear that, with their mixed casts of American, German, Italian and Spanish actors, the Dollars Trilogy (like other spaghetti westerns) were meant to appeal to each of these markets. Recorded without sound, the dialogues would later be dubbed in the desired languages, a common practice at the time. While every now and then this caused some mismatches between image and sound, it also meant the films could be well received across linguistic borders. Additionally, the names of some actors would be changed on posters and advertising material, ensuring an increased success throughout Europe (Hughes 2004). The films were clearly made, in other words, with a European audience in mind and did not, as could be argued for Hollywood westerns, emerge from an American process of nation building. Instead, they were building on *European* fantasies of the Wild West.

This also had an inevitable bearing on their representation of the desert. In her 2009 study *The Poetics and Politics of the Desert*, Catrin Gersdorf discusses how North American desert landscapes were systematically incorporated into American nationalism throughout the nineteenth century, and how the meanings attached to them shifted from a foreign, anomalous and unfamiliar topography to a domestic, normal and even canonical landscape as part of a cultural process that she calls the 'Americanization of the desert' (Gersdorf 2009: 26). This was a shift in which the view of America as a fertile land had to be reconciled with the physical presence of vast arid regions. Gersdorf makes clear that this reframing of the desert happened only in response to the desert's perceived otherness to Europe. In her words, 'the desert functions as the topographical manifestation of difference; the real-and-imagined territory that confirms America's difference from Europe' (Gersdorf 2009: 14-5). The desert, in this view, is 'American' insofar as it is not European, or is even *anti*-European.

By transposing a southern European landscape onto the US (and Mexican) Wild West, the films effectively displace it in time and space, an argument that can be extended to other films produced in Almería, such as *Indiana Jones*, *Exodus: Gods and Kings* or *Lawrence of Arabia*,

which relocate the Almerían landscape in northern Africa and the Middle East. In *Game of Thrones*, meanwhile, this landscape is even projected onto a medieval fantasy world beyond our own. The main point, however, is that the desert is depicted as non-European, despite its geographical placement within Europe. The displacement of western tales onto a landscape unrelated to their historical origins is not particular to spaghetti westerns. As French points out, many American westerns portray their tales in the impressive landscapes of Monument Valley. He writes: 'It never ceases to amaze me […] that it was in uninspiring prairies where most of the real stories of the West occurred' (French 1997: 135). To be preoccupied with any 'real' western story, however, misses the point of what spaghetti westerns are about, which is the imagination of a space beyond European confinement.

According to this view, the Wild West, and more to the point the desert in which it is situated, operates antithetically to Europe, which becomes redolent of civilisation and constraint (Parker 2011). Through the spaghetti western, the Almerían landscape has been constructed as a place outside of Europe, a faraway place corresponding to Europe's wildest fantasies about the lawless deserts of America. In creating a mythical landscape, a world unknown to the lived experiences of its predominantly European audience, the spaghetti western reveals a profound politics of environmental othering to which aridity is central, even if it is never explicitly mentioned in the films. In addition, the Dollars Trilogy appeared in European movie theatres at a time when the cold war had dropped to its chilliest point and in which the perceived American way of life, opposed to the perceived threats of communism and the Soviet Union, had reached new heights. This was a time when, as Alexander Stephan writes, Europe 'was flooded with images—concrete if not always realistic—of the American way of life' (Stephan 2006: 3). New forms of technology, food and entertainment (especially the movies) presented Europe with an image of America as a paragon of freedom (Kroes 2006; Stephan 2006). Hence, as Stephan argues, the youth that was 'devouring American products and indulging in new forms of lifestyle […] regarded these activities not as a move to Americanize their societies but as a liberation from rules and customs they grew up with' (Stephan 2006: 14). It is against this historical-cultural background that the appeal of westerns to European audiences can be understood. Another way of putting this is that Sergio Leone's films were not only part of the imagination of America from a European perspective, but also became a way for Europe to relate to itself. The image of Europe as the centre of civilisation and of 'high' culture was no longer only a matter of perceived superiority (although, as noted, Orientalism continued to inform colonial power relations), but had also become framed as constraining and limiting the possibilities

of individual lives. As such, Rob Kroes argues, the exposure to American imagery was not only a process of the Americanisation of Europe, but contributed paradoxically to its further Europeanisation. American mass culture became, as it were, a common denominator to which people all over western Europe could relate and through which they could imagine a life beyond the constraints of their own societies. In Kroes's words, 'the particular fantasy of America as unbounded space, free of the confining limits set by European cultures on dreams of individual freedom, may well have activated the dream of a Europe as wide and open as America' (Kroes 2006: 348). In this sense, it may be argued that the spaghetti western genre answered to, as well as inspired, an urge to escape the constraints of 'civilisation'. And where better to escape to than the desert landscapes, resolutely un-modern, demonstrably uncivilised, thrillingly masculine, of the Wild West?

Without exception, each of the 'Dollars' films ends in a final standoff. In *For a Few Dollars More*, three men walk onto a paved threshing circle, where they know—and the audience knows—that at least one of them will die. Staring intensely at each other, they make to draw their guns. Who will have superior speed? Assisted by Ennio Morricone's evocative soundtrack, the scene builds up slowly to its climactic violence. The act of violence itself, when it finally happens, passes in a split second. The cameras are now long gone, the actors ageing, but the threshing circle is still in place: a touristic landmark. An accompanying information sign displays a still of this final scene, accompanied by a brief description in four languages and a drawing of an agave flower that resembles those standing at the edges of the circle. In the background, pulling me back into the present, is a series of long plastic greenhouses, draped over the hills. This is where the Plastic Sea starts.

Mar de Plástico

It is thought-provoking that many of the establishing shots from the Dollars Trilogy would be impossible today due to the development of greenhouses. With this and other developments, the arid regions of Almería have undergone an immense transformation over the past half-century, resulting in what is now known as the Plastic Sea. This 'sea' is an expanse of roughly 200 square kilometres around El Ejido, east of Almería town, which is blanketed by plastic greenhouses. This area also extends to the west and into the valley of Níjar. The greenhouses are used to increase temperatures in winter, producing plentiful fruits and vegetables for export to other parts of Spain and Europe. The all-year-round high temperatures inside the greenhouses ensure a steady and highly productive form of agriculture. This is a significant competitive advantage for the southern coast of Spain in the

European food market, and Almería has consequently become one of Europe's most important regions in terms of food security. Looking out over the greenhouses from the mountainous edges of the Plastic Sea, the shimmering reflections of the Mediterranean sun on the whitened rooftops stretch as far as the eye can see beneath a hazy blue sky. This 'dramatic landscape' is human-made and seemingly disorganised, simultaneously eerie and fascinating. Keeping in mind the various desert imaginaries that have previously been produced in spaghetti westerns, the Plastic Sea offers a stark confrontation with the materialisation of a domesticated desert: an image of what comes after the western's credits have faded to black, and when civilisation has been allowed to advance.

Fig. 1.3. The seemingly endless greenhouse rooftops under the desert sun as portrayed in *Mar de Plástico*.

Becoming European

A very interesting image of this domesticated desert can be seen in the Spanish detective television series *Mar de Plástico* (2015). This popular series was produced in 2015 and is set in a fictive town amidst the greenhouses. On 22 September 2015, Antena3 aired the first episode. Directed by Norberto López Amado, Javier Quintas and Alejandro Bazzano, the first season ran for 13 weeks. Although its second season was aired in Spain in 2016, I will address only Season One here. In the first episode, which serves as an introduction to the setting and many of the characters, the owner of a large agricultural enterprise, Juan Rueda (Pedro Casablanc), shows the main character, detective Héctor Aguirre (Rodolfo Sancho), around his farm and brags: 'Up to 40 years ago, all of this was nothing but a desert. And now

we are the orchard of Europe.' These words capture the essence of agricultural productivity in the desert regions of south-east Spain and their relationship to Europe. How can a desert have become 'the orchard of Europe'? There seems to be a contradiction between the image of the desert as a place where life is close to impossible and as a flourishing site of intensive, controlled agriculture. Lush green lettuce fields, bright juicy oranges, endless olive trees and plastic tunnels with rows of tomatoes, peppers and aubergines question what life can be, or should be, in the desert. Granted, this is a form of life that is standardised, intensified and commoditised—but it is life nonetheless. The underlying model for this specific form of life is based on extraction, expansion and intensification. Agricultural production is still growing in the region, as is the number of greenhouses. The Plastic Sea relays the conviction that, as Anderson observes in the case of north-eastern Brazil, 'the fundamental consequences of drought are due to underdevelopment, and only development can remedy drought' (Anderson 2011: 71). In Spain, such economistic thought is known as *regeneracionsimo* (regenerationism), an ideology that built momentum in the nineteenth century, and which portrayed the Spanish nation as having declined in the wake of decolonisation in the Americas and instead demanded from society a focus on internal development. Under *regeneracionsimo*, such thinking suggested, the desert could be tamed.

In my own conversations with farmers in Almería (see Chapter Three), a common explanation I heard for the development of plasticulture in Almería was that farmers in the 1950s accidentally found their crops grew better when protected from the dusty winds with plastic sheets instead of traditional fences made of fibre or twigs. Indeed, several early experiments with plasticulture have been recorded. Marín Martínez (2016), for example, writes of the development of a particular *finca* (grapefarm) that grew through the 1950s and 60s from a family farm to a business with a workforce of 1500 men, women and children. He confirms that this farm was the first in Almería to construct a greenhouse in 1959, which was beset by numerous failures and mistakes in the beginning. Nevertheless, it would be a romantic fallacy to ascribe this 'Almerían miracle', as the Plastic Sea is also called, to the sheer inventiveness and entrepreneurial skill of the farmers. Without dismissing their role, it should be stressed that the development of greenhouses owes much to the *Instituto Nacional de Colonización* (National Colonization Institute, INC), which was established by Franco's regime in the immediate aftermath of the civil war in 1939 and was a brainchild of regenerationist ideology (Martínez Rodríguez 2018; Rivera Menéndez 2000).

The INC was a response to severe problems in rural Spain in the twentieth century, where a dichotomy between landowners with extensive but scarcely productive plots and peasants

living in dire poverty was causing social tensions. Under Franco, Spain turned its gaze inward and became oriented towards autonomy. As Franco's image of Spain was one of self-sufficiency, this meant that the primary sector had to be developed to the extent that Spain was capable of feeding itself. Agriculture thus became a key element in the ideology of *Franquismo* (Centellas Soler, Ruiz García, and García-Pellicer López 2009). This image of a strong primary sector had been threatened by rural abandonment and this trend of urbanisation was seen as a threat to the regime, as it was to the urban centres themselves, from where unrest and revolts were considered to originate (Pérez Escolano 2009). Modernising agriculture through the enhancement and regulation irrigation systems would thus serve two needs at once: it would increase the productivity of the primary sector and, at the same time, offer better living conditions in rural areas, preventing people from moving to the cities by housing them in smaller towns and villages.

Functioning under the Ministry of Agriculture, the INC's main objective was to instigate such developments. It sought to counter the problematics of rural Spain through the organised settlement of families in prefabricated towns, with plots allocated to each family. The basic idea was to increase productivity by populating previously unproductive territories that had since been improved by the introduction of irrigation systems. So although colonisation was primarily a technological reform, it also encompassed a moderate agrarian reform that included a redistribution of land ownership, which in Almería has resulted in a large number of small landowners (Centellas Soler, Ruiz García, and García-Pellicer López 2009, Rivera Menéndez 2000). This is noteworthy considering that until Franco came to power, significant parts of Spain were still functioning under feudal systems. The family was a pillar of Franco's regime, and it was around the nuclear family that the new rural landscape was designed. Selected for colonisation were poor, landless nuclear families with five or six members. Rather than placing families in traditional *cortijos* (farmhouses) separated from existing villages, the INC took an urbanist approach and constructed neatly ordered villages for the inhabitants of the new countryside. These new villages were built in modernist architecture and highly planned: they were to be populated by 80 to 200 families, housing between 500 and 1000 people, with the distance between the plots and the family residence not to exceed 2.5 km, meaning that the towns were designed to be constructed at 5km apart (Centellas Soler, Ruiz García, and García-Pellicer López 2009). The modernist architecture of the INC was also a form of propaganda for the authoritarian state. The new clean, white towns, furnished with modern services, favoured functionalism and rationalism over romantic nationalism and became emblematic for modern life—the long envisaged

regeneration of the rural environment (Centellas Soler, Ruiz García, and García-Pellicer López 2009).

Centellas Soler et al. further suggest that in most of Spain the colonisation programme was illustrative of the regime's populism, but it still could hardly be said to have had a structural impact—with the notable exception of Almería, where it *did* signify a radical transformation of the economy (2009: 35; Rivera Menéndez 2000). This can be attributed to a combination of a favourable climate, accessible groundwater, and the availability of convertible terrain (Molina Herrera 2005: 16). Between 1939 and 1971, the INC established around 130 villages in Andalucía, fourteen of them in the province of Almería. Although two villages were constructed further north in Huércal Overa, the majority were built near the coast: eight in Campo de Dalías and four in Campo de Níjar (Centellas Soler, Ruiz García, and García-Pellicer López 2009). It is no coincidence that these are also the places in which the Plastic Sea is now located. Campo de Dalías is the largest irrigable region of Almería and is blessed, like Campo de Níjar, with large and accessible bodies of groundwater. These regions formed an excellent base for the development programmes of the INC. The INC led 'an anxious search for water' in southern Spain (Centellas Soler, Ruiz García, and García-Pellicer López 2009: 13, see also Rivera Menéndez 2000). With no reliable source of surface water available, and without the technical possibilities of transporting water from neighbouring regions, the only remaining source of water that could be explored was groundwater (Rivera Menéndez 2000), and it was the INC that introduced new technologies to extract, channel and distribute it. The most significant changes were made from the 1950s up to the mid-1960s, when all the new villages in Almería were constructed and hydraulic infrastructures were built. In the 1970s, the INC was dissolved into the *Instituto de Reforma y Desarollo Agrario* (Institute of Agrarian Reform and Development, IRYDA), which in Almería continued to operate in much the same way as the INC before it.

In short, the colonisation campaign was aimed at preventing, and even reversing, the depopulation of rural Spain, and at increasing the efficiency and productivity of its agriculture. Colonisation was thus not a romanticisation of the countryside, or simply an attempt to improve the lives of poor farmers there; rather, it was a regulatory (and repressive) mechanism to prevent excessive urbanisation and political resistance. Either way, the INC played a key role in the development of the Almerían landscape into how it appears today. In Almería, its effects have been overwhelming, and the success of the Plastic Sea is something that no one could have foreseen (Pérez Escolano 2009). While the introduction of new technologies through the INC, and with it access to groundwater, stimulated a steady

growth of plasticulture, this only spiked when Spain entered the European Economic Community in 1986 and access to the European market opened up (Molina Herrera 2005). Both the inward-oriented gaze of *Franquismo* and the resistance of other EEC members towards the totalitarian regime had prevented Spain from entering the EEC before Franco's death in 1975. The transition to democracy opened up new possibilities for the export of Almería's products. Accordingly, the symbolism of agriculture in the most arid region of Europe appears to have changed drastically. In the Plastic Sea, a complete transformation of the landscape has taken place—not merely changes to aspects of it, but a radical rethinking of its meanings and functions, of its entire shape. Transforming the desert into a hyper-productive landscape has changed the very patterns of human habitability: not just in relation to subsistence or livelihood, but also in broader cultural terms. There is understandable pride in the transformation of a place previously considered to be 'nothing but a desert' into 'the orchard of Europe', with the Plastic Sea, and the intensive agriculture it represents, standing in for a landscape that answers to a long history of drought and the economic and social deprivation that is supposed to come with it.

Almería has long been at the margin of the Spanish national imaginary, arguably due to its geophysical placement at a far south-eastern corner of the Iberian Peninsula, locked in between mountain ranges and the sea, as well as to its socio-economic status of backwardness, illiteracy and poverty (Sánchez Picón 2005). The development of plasticulture, however, suddenly propelled Almería into national and European space in new and unexpected ways. The aforementioned fact that a popular series was recently aired on national television with the Plastic Sea as its subject only underlines this. As Centellas Soler et al. write: 'Before, wind and sand, aridity and hardness of life, [were] traditional symbols of the space and the socioeconomic reality of Almería. Today, wind and sand are keys to the success of the sanding and the intensive agriculture under plastic, symbols of wealth and development of our province' (2009: 12). For many people in the region and beyond, the Plastic Sea is nothing less than a symbol of modernity and globalisation, and is looked upon in awe: finally, humans have conquered the desert; finally, Almería has become European.

Contested representations

Notwithstanding, the exceptionality of the local landscape remains (Rivera Menéndez 2000: 15): nowhere else has agriculture developed into such forms which, while not necessarily 'miraculous', still border on the bizarre. Comparing economic growth and migration patterns with other provinces in Spain confirms Almería as a case apart (Molina Herrera 2005). In

imaginative as well as material terms, the changes are not straightforward. The story *Mar de Plástico* tells is not a pretty one. A girl disappears in the night, in an alley between two greenhouses. The next morning, her blood is sprayed through the sprinklers in one of the tomato greenhouses and her head is found in a water basin. This gruesome discovery is the prelude for a series of hostile events in a small town in the middle of the Plastic Sea where everyone knows and hates each other, and where everyone has secrets. Racial tensions between white Spanish managers and black African immigrant workers escalate after it becomes known that the girl, who was white, secretly had a black boyfriend.

Although the series was popular throughout Spain, with nearly 5 million viewers tuning in to the first episode (Migelez 2015), it was not well received in the Almerían province. The mayor of El Ejido, Francisco Góngora, weighed in and is reported to have said that he '[did] not believe there is a single *Almeriense* who liked that series' (Estrella Digital 2015). Already before the TV series was aired, farmers' associations expressed their concerns with the series due to the 'negative stereotypes and exaggerations' it portrayed (León and Martínez 2014). One farmers' association, the ASAJA, even called upon its members not to watch the first episode and to avoid feeding into the controversy on social media, hoping that the series might be discontinued when viewers' numbers turned out to be low (Vargas 2015). One reason behind this suspicion was that the accents of the actors did not represent Almerían ways of speaking and were considered more similar to Sevillan accents (Rodríguez and Martínez 2015). More importantly, farmers' communities and officials in Almería felt misrepresented with regard to the theme of racism and xenophobia in the series, which was considered to portray Almería in an inaccurate and negative way. Jesús Muñoz, president of the provincial separatists group Acción Por Almería, was reported to have rejected *Mar de Plástico* as 'a series that shows our land as a sinister place where indiscriminate crimes and beatings occur' (Rodríguez and Martínez 2015).

Two weeks before the first episode of *Mar de Plástico* was due to air, the Provincial Secretary of COAG Almería, Andrés Góngora Belmonte (Góngora Belmonte 2015), sent a letter to the Atresmedia, expressing the concerns of the farmers' union with the upcoming release of the series, and stating that 'there is much concern in the region for the image that the series 'Mar de Plástico' could project of our province and our agriculture.' The letter urged the producers to base their representation of the agrarian sector on 'reality' instead. Góngora emphasised the social integration of people with migrant backgrounds in Almerían society and how people from different countries had found in Almería a home, a place 'to live and thrive', sketching a situation of mutual respect and harmonious labour relations in

which different cultures productively coexist. How fragile this harmony might turn out to be was revealed when he continued to write that: 'We fear that series like 'Mar de Plástico' can distort this reality and generate situations of irritation and tension'. The main message of the letter to Atresmedia is that a misrepresentation of the region has the potential to damage labour relations, to tarnish the image of the sector in national and international markets, and ultimately to 'cause serious economic damage to the province.' 'Should you not respect the reality of our sector,' the latter ominously ended, 'COAG Almería reserves the right to undertake as many legal and media actions as are necessary to restore the good image of the Almerían agriculture and farmers that have cost us so many years to build'.

Unions and politicians are certainly not the least influential parties in Almería, and their concern with the image of agricultural business beneath plastic was immediately responded to by Atresmedia with a statement that '*Mar de Plástico* is fiction' and a promise to include a corresponding statement at the beginning of the series (León 2015). As a result, each episode of the series starts with a white text on black background that reads: 'The facts and personages that appear in this series, as well as the locality of Campoamargo, are totally invented'. Still, one cannot escape the feeling that this statement signifies precisely the opposite. While the storyline, the town and the characters are without question fictional, the thematic representation of the cultural landscape, with all its racial tensions and power abuse, resembles reality much more closely than anyone might wish for. After all, it was only 15 years before, on 5 February 2000, that riots had broken out in the municipality of El Ejido. The riots, which lasted for three days, followed the death of Encarnación López, a 26 year old woman who was killed in a robbery, and which followed the deaths of José Ruiz and Tomás Bonilla, farmers killed two weeks earlier. In all three cases, the perpetrators were immigrants, and although both suspects were detained, the events triggered an outbreak of violence in El Ejido that was directed primarily at its Moroccan population, but also at immigrants more generally. Several main access routes were blocked and establishments and homes of immigrants were attacked, with fire set to buildings and vehicles. The national police were called in from the neighbouring provinces to suppress the uprising. The events were discussed in national newspapers in terms of xenophobia and racism or, as one article in the post-Francoist national newspaper *El País* commented, 'racist barbarism' (Constenla and Torregrosa 2000).

Mar de Plástico's lurid story of a murder in the greenhouses that is reacted to with racial violence may be fictional, but its resemblance with the events of February 2000 is hardly a coincidence. No wonder the Almerían agricultural sector feared for its image: framing the

local population as xenophobic could potentially rake up old sores. Since at least 2000, the sector has had to cope with a bad image in terms of its social dynamics: labour exploitation, xenophobia, racism and dehumanising living conditions for workers are recurring topics in public debates about the Plastic Sea. As recently as in March 2016, *El País*, for example, reported that 'thousands of immigrant workers live poorly without electricity or running water camouflaged between the greenhouses of Almería' (Carbajosa 2016). *Mar de Plástico* gleefully builds upon this negative image of the greenhouse landscape and its inhabitants; the landscape itself may be flooded with light, but the imaginary it reproduces is unremittingly dark.

The inhospitable greenhouse

While the plot takes the form of a classic detective story, with some love affairs between the characters and plenty of suspects with fraught alibis, the title *Mar de Plástico* indicates what this series really is about: the Plastic Sea itself. As such, the series not only represents the Plastic Sea visually as the setting of its narrative, but also tells the story of the landscape. 'Plastic Sea' is a very strong metaphor: the landscape of greenhouses is not called the plastic desert or the plastic field. The sea is a place of life—both generative and regenerative—as opposed to the 'dead zone' of the desert (Strang 2004). Just as important is the material marker of this particular landscape imaginary: plastic. Having replaced many traditional forms of production, plastic commonly stands in the region for modernity, progress and development. Without it, according to the modern regenerationist narrative, the Almerían coast would still depend on a limited economy of wheat, some almonds and olives, and a few goats. Malleable, waterproof and cheap, plastic is the very material of human progress. However, plastic also suffocates and pollutes: it is at one and the same time the material of waste.

On several occasions, the series shows the environment of the inside of a greenhouse that is not in use. Such interiors form secluded spaces, sheltered from the outside world yet permeable as light and sound travel through the plastic. On some occasions, these 'empty' greenhouses are used as tools for torture, their material characteristics making possible the forms of violence that occur. In one scene from the series, a girl walks down a dark alley between plastic greenhouses. She stops at a corner in the spotlight of a street lantern. She looks around, as if she is waiting for someone. The lights go out. Scared, the girl uses the flashlight on her mobile phone and looks at the shadow that has surrounded her. She sees the shadow of a figure, and runs. When she stops a bit further on to use her phone someone

grabs her from behind and drags her into the greenhouse. Moments later, the police arrive after a drunk man reports having seen or heard something suspicious. The officers briefly aim their torches at the greenhouse, but do not enter. The girl is shown inside, tied to a wooden pole with tape across her mouth and blood on her forehead while the lights of the torches move across the plastic behind her. The police officers move away, the blue lights of their car fading through the plastic. In the next shot, the girl's body is dragged by her feet over the sandy floor of the greenhouse. The next morning, a group of workers, supposedly African immigrants, assemble. A white Spanish foreman picks some of them for the day's labour. The group then enters a greenhouse where tomatoes are growing in narrow, tall rows. The Guinean Kaled (Will Shephard), a prominent figure among the migrant workers, is just about to start his work when the sprinklers turn on. But instead of water they spray blood through the greenhouses: over the plants, the tomatoes, and the workers themselves.

On another occasion Marta, one of the main female characters in the series, enters an 'empty' greenhouse. The scene shows remnants of agricultural activities. Hooks hanging from the ceilings, normally used to suspend the tomato plants, now invoke associations with a slaughterhouse. Suddenly someone closes the entrance to the greenhouse behind her—she is trapped. Gas seeps in and she has difficulty breathing. She crawls to the wall, manages to cut through the plastic, and drags herself out onto the road. The greenhouse itself has become a tool to bring about harm. Whether the unknown torturer was actually intending to kill the woman is uncertain; surely he or she would have foreseen that the plastic walls would allow her to escape just in time before choking or passing out. The materiality of the greenhouse is brought into play here, as the plastic that sustains capitalist forms of life is also able to smother it.

In another episode, Juan Rueda, the wealthy farm owner, has tied the town's drunkard, Amancio, who runs the local tapas bar, to a chair in order to beat him up. They are deep inside an abandoned greenhouse, where torn flaps of white plastic hang from the ceiling, preventing a clear view through the space and creating a horror-like impression. Just as Rueda is about to administer the final blow with a hammer, a blow that would surely kill Amancio, detective Héctor intervenes. The police seem to have entered the greenhouse without being noticed by the farmer or the old man, and they suddenly appear from behind. Again, the greenhouse comes across as a place that is poised precariously between the private and the public: anything can happen in such places, but they are also impossible to shield off completely from the outside world. Here the greenhouse is not so much an instrument of torture, more an accomplice to the crime, facilitating violence by giving it a space in which

to develop. *Mar de Plástico* reveals that progress has not brought morality to the desert. On the contrary, it has brought greed and lies, social inequality and violence. Compared to the lynching of racist mobs that is graphically shown in *Mar de Plástico*, the violence of the outlaw figures in spaghetti westerns appears almost innocent. And instead of a standoff between anachronistic emblems of masculine superiority, *Mar de Plástico* exposes the disturbing violence of modernity itself.

Fig. 1.4. A display of violence in the obscurity of an abandoned greenhouse. Still from *Mar de Plástico.*

Prevailing (a)morality

Héctor, the main protagonist, is a lonesome and handsome detective who suffers from PTSD. He lives in an empty apartment with an empty fridge and spends all his time on the case, seemingly to escape flashbacks to his time in the military which reveal, little by little, that he accidentally killed his comrade in friendly fire. The series follows the detective, who is as unfamiliar with the region as the audience, as he encounters corruption, adultery, deceit and violence. He skilfully follows the traces of the murderer, which in one scene leads him to a remote ruin (of which there are many in the region: see also Chapter Two). Entering its darkness, he finds the murderer's lair, hidden in plain sight. He is good looking, but socially a little distanced, especially around women whose flirtatious behaviour he tends to ignore. Still, he retains an unquestionable superiority over the townspeople, including his team of detectives (Lola, played by Nya de la Rubia and Salva, played by Luis Fernández) who are, if equally easy on the eye, too deeply enmeshed in local relations to make clear judgements of the case. He is a character who always defends the weak and embodies justice. Against his

sizeable silhouette, the shadowy landscape he enters, as well as the people who inhabit it, appear diminished, loathsome and disgraceful.

The moral superiority of Sancho's detective, who is demonstrably an outsider, only reinforces the questionable morality and sense of lawlessness of the Plastic Sea. Many of the Spanish villagers Héctor finds himself among are introduced as white supremacists, who aggressively deny people of colour access to their spaces, and who carry swastika tattoos beneath their shirts. Repeatedly the detective, frustrated with local short-sightedness, arrives just in time to prevent racial violence from escalating. The 'immigrants', on the other hand, are portrayed as living in uncomfortable shacks, in poor conditions, and without access to rights or services. They fight amongst each other, distrust their white Spanish employers and work for day wages in the heat of the greenhouses. A stark contrast between landowners and day wagers appears to have returned to Almeria's farms, and it might well be asked whether Almerían agriculture has not morphed into a new form of feudalism. Only gradually, and with Héctor's involvement, do the two clashing groups begin to accept each other as they come to realise they are both suffering from the same crime. This reconciliation is exemplified by the love affair between a white Spanish man and a black woman of Guinean background: a bond that is forbidden on both sides.

A particularly interesting character is Pilar, played by Andrea del Río, who is one of the most outspoken racist characters, and the last to accept any newfound accord between the two main ethnic groups, although it remains unclear where her hatred comes from. A young and clever woman, she is quick to pull out a knife if people insult her in her presence and she holds shooting practice in the desert between the greenhouses with a silenced sniper rifle. However, while women do have a much more prominent role in the TV series than in the spaghetti westerns, their parts are mostly stereotypical: a murder victim, the victim's mother, an eastern European trophy wife, a war widow. Although it is still the powerful men who define the plot, Pilar, it appears, is the type of woman who survives in a desert setting. Her ways of assuming a 'masculine' toughness suggests that in this landscape of domesticated desert, there is still very little space for sensitivity of any kind.

Most of the interactions between characters in the series take place in secluded, almost claustrophobic spaces: a crowded tapas bar, a busy police station, alleys between the greenhouses. This social scale at which these events take place stands in stark contrast to the wide landscapes. Between the different scenes, images of the Plastic Sea are shown, often from a helicopter view, reminding the viewer of the strange, elongated landscape in which the events unfold. The colours in *Mar de Plástico* are warm, intensifying the sun and the heat

to the extent that even the sky is filtered to a faded yellow. These surrounding landscapes are vast, without the possibility of control; meanwhile, shady exchanges take place in the darkness between the plastic walls, and a car accident happens on an unlit dirt road without witnesses. In this artificially created landscape, corruption thrives and is beyond the control of law enforcement; thus, together with the detective, the viewer is made to wonder at the lack of regulation, the absence of law that is so central to the spaghetti western as well. For all its modernisation, the place is still a desert.

In *Mar de Plástico* as in the spaghetti western it is above all the survivalist narrative of toughness that prevails. Industrialisation has not changed much in that regard, it seems, but what *has* changed is the desert's relationship with the normative European imaginary. Now the desert is productive and fertile, though still very much a wild place, fundamentally 'other' to civilised society. Michael Fischer (2003: 51) has argued that new technologies require new forms of morality and social life. However, *Mar de Plástico* suggests that in the process of 'becoming European' through agricultural development, the desert has received an entirely new narrative, namely that of social inequality; and while this is in itself highly undesirable, it might ironically be the ultimate proof that the desert has indeed become a human, habitable place.

The first season of *Mar de Plástico* ends with an epilogue that is set several months after the murderer has finally been caught and Héctor's lasting efforts at solving the crime have paid off. A mountain biker, dashing across the desert, finds the body of Marta, one of the main female characters, in a dumpster filled with lettuce. Again the Plastic Sea becomes the scene of a gruesome crime. The biker, who is coincidentally one of the three detectives, recognises Marta and turns around in shock. The camera follows his movement. Behind him loom the bare, inhospitable hills of the Almerían desert. One crime may have been solved, but there will be plenty of others: the desert remains unaffected by feeble human efforts to bring it into line.

Eco-documentaries

It should not come as a surprise that the expanse of intensive agriculture that forms the basis of the Plastic Sea, with its capitalist models of life, has far-reaching consequences for the environment upon and within which it is implemented. This brings me to the third and final image of this chapter: the Río de Aguas. Although the Río de Aguas itself is hardly more than a small stream, it is one of the few rivers in Almería with flowing water throughout the year, with a spring at the village of Los Molinos. This eco-village in Karst en Yesos de Sorbas

Natural Park serves as a hub for experiments with sustainable building and off-grid living, but it is also politically interesting as its inhabitants challenge the expansion of intensive agriculture in the Tabernas valley. The water extracted for super intensive olive plantations, the villagers argue, is directly withdrawn from the aquifer that feeds the Río de Aguas spring, giving rise to a dispute between the villages along the river, of which the people of Los Molinos have been the most outspoken, and the olive farming industry. The proliferation of olive plantations resonates with the expanse of plasticulture, in the sense that both build on an intensification and industrialisation of agriculture, but differ visually (the olive trees do not grow under plastic, ensuring an entirely different visual landscape), in terms of labour (the olive plantations are considered almost fully mechanised, while the greenhouses are considered labour-intensive) and geographically (the olives directly affect the spring of Los Molinos, while the Plastic Sea is supported by aquifers further away).

Fig. 1.5. A drone shot reveals the vast scale of an olive plantation and its water consumption in Tabernas. Still from *El Último Oasis*.

In this section, I address the ways in which the Río de Aguas and the olive plantations have been represented in documentaries that deal directly with this landscaping conflict. In particular, I look at *El Último Oasis* (2015), *From Under Our Feet* (2015), and *Every Drop Counts* (2016). These three documentaries should be understood as part of a wider campaign by the inhabitants of Los Molinos against industrial olive plantations in the Tabernas region. *El Último Oasis* is a 25-minute TV-documentary that was produced as part of a series called *El*

Escarabajo Verde ('The Green Beetle'), a series of short documentaries covering a range of topics concerning environment, ecology, sustainability and their relation to social issues, which was broadcast on Spanish television and online by TVE. Originally aired on 27 November 2015, the series narrates the story of Los Molinos and the Río de Aguas which, it is suggested, suffers from water extraction at the hands of super-intensive olive plantations. The same argument is made in *From Under Our Feet* and *Every Drop Counts*, which were made by villagers of Los Molinos and affiliated activists, and were published on their Youtube channel. Although the three documentaries are very similar in their narrative form, the content of their presented arguments, and their cinematographic style, there is a noticeable difference between the professionally produced documentary of TVE and the two more 'home-made' films. While *El Último Oasis* presents the perspectives of experts in ecology and hydrology, as well as official standpoints, *From Under Our Feet* and *Every Drop Counts* focus mainly on the communities that have been affected by the dropping water levels in the Río de Aguas. With somewhat shaky camerawork following the movements of the protagonists and the use of relatively pale colours, the realism of these two documentaries stands in stark contrast to the aestheticized forms of the Dollars Trilogy and *Mar de Plástico*. This is not to criticise them for being amateurish. On the contrary, the 'home-made' feel of the films contributes to a feeling of authenticity, a crucial aspect in documentary film (Nichols 2010: xiii). Giving voice to locals, neighbours and farmers, rather than experts or government officials, combined with seemingly raw images of people and landscapes, strengthen the sense that the films are portraying an undeniable reality. Nevertheless, cinematographic techniques—including the framing of landscapes, people and objects, and the use of sound effects and music—are used throughout to dramatise and invigorate the narrative.

Los Molinos and the Río de Aguas

As previously mentioned, the documentaries revolve around Los Molinos, a small eco-village in Karst en Yesos, a natural park located on the hillsides of the valley of the Río de Aguas with roughly thirty permanent inhabitants and an equal number of temporary visitors and volunteers. Like many settlements in Almería, Los Molinos was abandoned in the first half of the twentieth century as its residents migrated to other parts of Spain and elsewhere in Europe. However, unlike other places that are now in ruins, Los Molinos was transformed into a thriving eco-village that continues to attract international inhabitants and students who want to experience living off-grid, practising sustainability and participating in community life. The village experiments with eco-construction, using environmentally sustainable

building materials and energy systems. As such, the ecovillage appears as a project of making the uninhabitable desert habitable, albeit in a radically different way than the once INC-propagated intensification of agriculture against which it is now campaigning.

Los Molinos, along with the ways of 'sustainable living' it represents, counters the idea of lifelessness in the desert. With the little water available, the villagers still manage to conform to certain standards of comfort: for example, they have fully equipped bathrooms and kitchens, and they produce their own food in the vegetable gardens. Furthermore, the richness of the local ecosystem is repeatedly stressed in the documentaries. The Río de Aguas is framed as 'an area of special scientific interest', and the documentaries give voice to ecologists and environmentalists who have studied the area, who confirm the natural richness of the valley, who comment on its cycles of life, in which plants may appear dead until the rains return and the flora blossoms, and who assert that, considering its rich biodiversity, the desert is underappreciated. The most notable figure in the films is David Dene, a long-time British settler in Los Molinos who takes the lead in the activist struggles and in the production of the films. He is often shown explaining the situation, talking to neighbours, or inspecting the irrigation systems of the industrial olive plantations. Dene emphasises that, even though it appears as if nothing lives in the desert landscape, the spring is located in a natural park with many endemic species. 'It is incredible,' he says as he introduces the filmmaker to Los Molinos, 'down there is like a forest, there are tortoises... there is life. There is life. There is good life.' An underwater shot shows a tiny tortoise emerging from the green-blue haze of the pond. As the narrator of *El Último Oasis* comments: 'The desert is a great unknown. Its enormous diversity goes unnoticed.' It is clear that the documentaries are seeking to make a political statement in admiring the multiple forms of life to be found in the desert.

It is further emphasised that water scarcity has become a point of reference for these forms of life, and for the cultural and material configuration of Los Molinos. The only water source in the village is the river, which is channelled from its source to the village through a system of canals and pipes that distribute water between the houses, irrigate the vegetable gardens, then finally release what remains back into the main stream. In this way, the village is laid out to accommodate what little water is available. Dene makes this point explicit in *Every Drop Counts* when he says: 'So in effect what was our capital, it was not money, our capital was, and there is still some of it left, was water.' Many of the activities organized in Los Molinos revolve around water scarcity, such as maintaining canals and combating soil degradation. These activities are part of a larger framework of environmental sustainability

in everyday life, but they also fit into a larger historical narrative of water use in the valley. In keeping with this narrative, the spring is described as having provided the valley with running water 'for thousands of years.' Allegedly, the canals and tunnels (*qanat*) were constructed by the Romans to transport water to Los Molinos where grain was treated in mills, and they have been maintained ever since. The documentaries show how the villagers of Molinos clean the Roman channels. A tedious job, it seems, which involves crawling into the narrow tunnels with a torch and dredging the sand and rocks from the water with bare hands, yet necessary: 'This is our lifeline,' says David Dene, while images are shown of a man drawing buckets of dirt from the channels. 'Every drop we can get is important.' It is important to acknowledge here that the oasis is itself a project of un/making landscape rather than just a 'natural' spring.

In recent years, this historical narrative of water scarcity has been called to attention as its future is challenged: the river is drying up. Long-term drought has suddenly become an urgent issue for those dependent on the river. In *El Último Oasis*, José María Calaforra, a geologist at the University of Almería, estimates that it will take up to seven years before the spring completely disappears, but warns that the process may be irreversible. Dene's estimate in *Every Drop Counts*, published about a year later and based on recent calculations, is even less optimistic: In a matter of months the river could stop flowing altogether. Although this has not been the case as of yet, it is clear that the Río de Aguas is in dire straits.

Dene shows the *nacimiento* (spring) of the Rio de Aguas, and points out to the viewer what the landscape used to look like. The camera follows him as he says: 'What we are walking down now is the stream, but it is no longer a stream. This was the main feed for el Río de Aguas. Right where we are walking, right here, right now.' The river appears as just a small pond in the pictures, and underwater images show how shallow the water is. These visuals are strengthened with the testimony from people who are affected by the increasing water scarcity. As a Spanish woman in one of the neighbouring villages to Molinos, a little further downstream, whom Dene pays a visit to discuss the issue, puts it: 'Where there is water, down there, it was up to here! You could have bathed up to here!' She holds her hand horizontally at her collarbone, indicating the water level. 'And today there is almost nothing left,' she says. A close-up of a man, a foreigner who explains he came to live in Almería twelve years ago, is shown with the barren hills in the background. Looking around, he proclaims that 'everything is dying. All the trees are dying. There is not one almond coming off.' Waving his arm over the hills, he continues: 'I had lots, I had lots. It was beautiful when I came.' Then, shown looking out over a barren piece of land, he adds: 'When I bought this,

everything was alive, many almonds, many flowers. And now, look, the Chumba [prickly pear], almost nothing, nothing.' A shepherd is shown, sitting between the reeds of the Río de Aguas while his goats roam around him, saying: 'There is no food, every day there is less and less. Well, what are the animals going to eat?' Data quoted from research at the University of Almería gives a numerical value to these experiences: the flow of the river has been reduced from around 40 l/s to 3.2 l/s.

The cause presented for this is clear: falling water levels are a direct indicator of excessive water extraction for intensive agriculture. It is thus not meteorological drought that is the problem. As Calaforra states: 'This spring has always been supplied and we are in an area where it practically never rains. That is to say drought does not affect this spring. It rains little, and nevertheless water flows.' This water, the documentaries explain, is non-renewable, and overexploitation by intensive agriculture has resulted in more extraction than enters the aquifer naturally. The conviction that overexploitation of fossil groundwater is to blame is specifically targeted at industrial olive oil production in Tabernas, which is said to tap into the same aquifers that supply the spring of the Río de Aguas. The images of the documentaries, with people walking through the valleys, the measuring of water levels, or featured underwater scenery of the shallow river ponds, all substitute for what cannot be shown: the invisible bodies of water that must exist beneath the arid surface, 'under our feet.'

Images of endless rows of olive trees and an enormous water basin evoke astonishment, while low, ominous music increases the tension. The camera follows Dene as he enters the plantation. He kneels down between the olives and lets the sand run through his fingers. 'Dust. This land is dead,' he says. 'Vast tracks of land have been completely and totally destroyed.' Later, he is shown sitting on one of the wells that are used to extract water from the aquifer: a shiny, bright blue, metal pipe with valves and metres attached. He looks defeated by this solid materialisation of groundwater extraction, and shrugs his shoulders. 'This is it,' he says, before he explains: 'This is one of many pumping stations.' And pointing at the small whitewashed tower behind him: 'A lot of investment has gone in here. New pylons, new cables. Well, this is a disaster.' He pats the pump and asserts: 'That's our problem.' While in *From Under Our Feet* the well was not working, and stood unused in an uncultivated field, Dene revisits the borehole in *Every Drop Counts*, published about a year later, and finds it fully functioning. In the meantime, new trees have been planted in the background. Clearly frightened, he reads the metre on camera: 'This pump is taking 146 thousand tonnes of water. […] This is enormous'. Again he pats the well with his flat hand, but harder this time. 'This is so dangerous to our existence […] purely on a precautionary

principle we need to close these. We've got to. Otherwise we're gonna be… we're dying. We're dying for lack of water.' Shown standing by the blue pipe, his hand by the valve as if tempted to close it himself, Dene concludes: 'So this is the catastrophe. This is an example of one of the points of the catastrophe. I have no idea how many pumping stations are on the aquifer like this one, but say we have ten like this, we're facing complete disaster.'

Chronicle of a death foretold

The disaster Dene is referring to here can be considered twofold. First and foremost, the documentaries suggest that something disastrous is about to happen to the precious ecosystems of the desert, which have been in place since time immemorial but are now under severe threat. Environmentalist Ian Holban talks of habitat fragmentation that occurs when the different ponds of the river become disconnected and become death traps to species living in the water. Underwater shots of tortoises assist to imagine what this might entail. He foresees a full ecosystem collapse. 'When that happens,' he says, 'you're looking at losing 90% or more of the total species in this place, and the green landscape behind me would just become the same as the arid rocks that you see behind me. It would turn into a desert basically.' He warns that it would be impossible to bring back biodiversity, even if somehow the river rose again.

Emphasizing the precariousness of, and flagrant injustices done to, the local ecosystem by using terms such as 'ecocide,' the villagers have been trying for some time now to convey the message to a larger public that super-intensive agriculture urgently needs to be stopped from developing any further and should preferably be dismantled altogether. The documentaries are part of this effort, but are not their only means of communication. A report on deteriorating environmental conditions in the valley, for example, consistently highlights potential threats to the environment and provides an impressive list of endangered species, which are vulnerable, as are the habitats, to destruction as the river declines (Holban, Diaconita, and Beldiman 2016). The report, which is specifically directed at European Natura 2000 guidelines, draws particular attention to the habitats of tortoises and birds, but it expresses grave concerns for 'all the habitats and species that rely on flowing water/increased humidity' (Holban, Diaconita, and Beldiman 2016: 32). In appeals to regulating bodies at local, national and European levels, as well as through social media and local campaigning, the villagers of Los Molinos and related activists have been making their case for the protection of this vital water source in the desert. As of 2017, an online campaign was launched by *Acuíferos Vivos*, primarily on Facebook, under the hashtag *#SalvemosElRioAguas*

(Saving the Río Aguas). Directly addressed at Susana Diaz Pacheco, president of the autonomous community of Andalusia, this campaign consists of short videos in which people, some of them well-known, implore Diaz Pacheco to take immediate action. And, as Dene mentions, the community has been appealing to the UN to secure their right to a secure and sustainable environment. The goal of these documentaries is thus primarily to raise awareness of how and why the valley of the Río de Aguas has been changing. This appears explicitly in a text display at the end of *From Under Our Feet:* 'to all the people, plants and animals reliant on this ancient source of water, we hope this film helps raise awareness to our plight.' A question here is whom it raises awareness for, or who is supposed to be impressed by the films to such an extent that political or even legal actions will be undertaken to address water scarcity in the Aguas valley. It is to a lesser extent than later online campaigns that these films address particular people or institutions that might be in a position to bring about change. In this sense, they serve more as a general framing of the landscape and the present conflicts, albeit by taking a clear stance in the dispute.

Next to the rational and data-backed arguments, the documentaries also show anger and astonishment at the lack of intervention from the government. In the village of Los Molinos, a group of young men, villagers presumably, are shown discussing this: 'The same government of Andalucía that puts up the sign 'natural park' permits and authorizes this exploitation of the natural park.' Arguments follow each other at a fast pace—about the age of the aquifer, about the lack of regulation, and about the lack of morality. 'The thought that one person can end what has always existed,' says one. 'This is not the right land for intensive agriculture,' says another.

Secondly, it becomes clear in the documentaries that the activists are not only fighting for the survival of the ecosystem that the Río de Aguas sustains, but are also engaged in a struggle for the future of their own village. The rhythmic, thumping sound of a hydraulic pump that sends water from the river uphill reminds the audience that the stream is indeed the heart of the village. 'Little, by little, by little,' says Dene, the water continues to find its way to the village. Without the Rio de Aguas, Los Molinos would lose not just its source of life, but its right to exist as a state-of-the-art eco-village. The human habitability of the valley, and still more the possibility to sustain an off-grid lifestyle, would be seriously compromised. 'The other way to bring water here is by truck and, as you see, watering a vegetable garden of this size with a truck is not sustainable,' comments one of the members of the community. The young man, who speaks with a crisp English accent and appears alongside his mother in the documentaries, looks angry. His face is shown in close-up as he speaks: 'All the springs that

used to be here in the mountain ranges have dried up because the water level is dropping. We know that it is not long until that water level drops to nothing and we've got no more water and have to move on. But where do we move on to? We have nothing else. We're simple farmers here.'

The documentaries convey the pressing message that time is running out for the villagers, who are dependent on the Río de Aguas. They do so as farmers and other community members relate the images of the landscape that appear on screen to what used to be there, and what they have lost in recent years. Several locals are given a voice as they relate how they experienced landscape change through the years, each relating to their own timeframe and biography. A farmer elaborates: 'There is nothing extra for life with what little money we have, and small amount of land, we supplement by buying vegetables and things we need. And when we arrive at the point that we do not have the ability to have chickens or rabbits or natural eggs or vegetables, then what? All from the store? From where? Where is the work that allows us to go to the store every day? Where is the economy that allows you that? […] How can a family survive? Without water, without work, without anything. This is not quality, this is how it is.' He explains that he does not have enough water to keep his trees alive. He is shown standing before a field of dead trees, severed above the trunk. Pointing at the plots around him, he continues: 'With the same water, five years ago, we would irrigate these 25, the other 115, we would plant on that terrace over there near my father's house, we had potatoes and would sow beans, my *huerta* was also in use. That's it. And now, the only thing that is left is this.' He looks at a few olive trees that are still green amidst the dead ones. 'We irrigate them so they don't die. It's the only thing that we are able to irrigate with the water that's left. It's a pity, no?'

Another farmer is shown standing on a barren piece of land, saying that he used to have too much food in summer from his land, and now 'it's not enough for the hens.' A dead tree in the background, framed by a dark grey sky, confirms the grimness of the situation. A shepherd is then introduced, carrying a classic curved stick, whistling at his goats that are grazing by the riverside. 'We are totally ruined because there is no water,' he says to Dene, who steps up as the interviewer, and warns: 'Not much more, no. One Year or two at the most, not much more. Because it is drying out. If they cut the water where it springs, well, it dries out.' Dene affirms: 'So there is no life for us.' 'No, we will die, we will die, that's for sure,' confirms the Shepherd laconically. 'Here, in this village, what is there to do? This will have to be abandoned.'

The ruins of the old village of Los Molinos are still visible between the exotic, solar-panel covered renovated houses. An abandoned farm on the opposite hillside testifies to a different era in the village: it stands in ruin, with dry terraces stretching along the hill. But where ruins speak of abandonment in terms of what used to be, a past that frames today's imaginations, it appears from the experience of Los Molinos and neighbouring villages as a prospect: the subject of an anticipated future. In what appears to be a family gathering at the porch of a house by the river, a woman argues, when Dene asks her about the future of the village, that: 'This village, and the one over there, and the one up there, and the one further on, all of this will be dead without water. If this issue is not solved, it will be a '*Crónica de una Muerte Anunciada*' [Chronicle of a Death Foretold].' She is, it can be assumed, the daughter of an elderly couple that lives by the river and is visiting from Barcelona. Presumably she is one of many of her generation who have migrated away from the villages of Almería in search of a better future. In a contradictory way, she both denounces and embodies the ongoing abandonment of the villages and farms and her own childhood home. As the son in law of the elderly couple—possibly the daughter's husband—remarks: 'For sure, the small villages like Los Perrales, Los Molinos, or others further down the river, they have no value, because nobody *le importe un pepino* [cares the least about] what dries or does not dry out here. And in a way their destiny is to disappear. Just like [the village of] Marchalico disappeared for one problem or another, or distinctly like the disappearance of El Tesoro. Well, it is the destiny of these small villages to disappear.'

The future of Los Molinos, then, is bound up in uncertainty. And although the campaigns of which these documentaries are part aim their arrows at industrial agriculture in the Tabernas basin, the broader threat of death emerges from the landscape: it is the threat of the desert itself. As the young British farmer says: 'Bit by bit, and within a year we won't have any water, to water our gardens, to feed our animals, because there won't be nothing there. It would be a desert.' An image of a goat's skull between sunburnt twigs of grass on a cracked earth confirms the deathliness of the desert. The music closely resembles Morricone's scores of the spaghetti westerns. Once again, Los Molinos is facing abandonment, with the prospect of becoming desert—a death foretold.

An exceptional landscape in Europe

In the documentaries described above, the villagers call for immediate protection of endangered habitats and livelihoods: The tortoise acts here as an affective symbol legitimising the villagers' ongoing struggle to escape vulnerability: they need the tortoises just as much as

the tortoises need them. But why does a desert need protection? After all, if the standard tropes of emptiness and lifelessness applied, there would be nothing to protect, and industrial development would seem the only sensible solution for a historically impoverished region. The presence of the Plastic Sea only a few kilometres away testifies to this. The emphasis on biodiversity is therefore crucial to environmental activism in Los Molinos; countering the homology between desert and death becomes a prerequisite for environmental concern. However, an interesting chink in this conservationist discourse appears. While the idea of the lifelessness of the desert is challenged, its perceived otherness is not; on the contrary, it is underlined. The various ways in which the landscape has been designed at the spring of the Río de Aguas and in Los Molinos can be seen as a cultivation of the state of exception that the valley enjoys, as an oasis in an otherwise arid region. The oasis brings unexpected forms of life to the desert, but it also serves as an exclusion zone, embracing the desert as 'other'. The realization that neither human nor non-human life is possible without the river's water can only underscore this exceptionality. The oasis is a defensive landscape, shielding human and non-human life from the savagery of the desert. Now threatened by tropes of modern progress such as extraction, intensification and cancerous growth, protection against abandonment or loss of life has become even more significant as the underlying model for this landscape. The modern desert, with its greenhouses, olive plantations and highways, is no less threatening in its own way.

There is a European dimension to this as well, for in the films the transformed desert landscape is repeatedly constructed as a state of exception in Europe. The title of *El Último Oasis* itself appeals to this positioning in Europe as a unique place: 'The last oasis'—in Europe, that is; the film also suggests that it may be Europe's *only* oasis. Thus, in the film's opening scene, the narrator establishes Almería as 'the place where it rains the least in Europe. It is the most arid zone of the continent.' The oasis is presented as 'one of the most unique springs in Europe,' while it is underlined that 'all of this unique ecosystem in Europe is endangered.' What is more, the image of exceptionality presented in *El Último Oasis* not only applies to the "natural" world, the flora and fauna of the desert, but is also reflected in the people who are presented as its inhabitants. Just as the semi-permanent if ever-decreasing flow of water is an exception in the region, everyday ways of living in Los Molinos are represented as an exception to the norm. This is never explicitly mentioned, but it becomes clear when the villagers' lifestyle is discussed as off-grid, and images show how they manage to live beyond the bounds of broader society, outside of its networks of electricity, sewage and water, using water transportation and solar power systems to enhance connectivity and

food security. The documentaries reinforce this when they reveal that many of the villagers are foreigners, with some interviewees answering in broken Spanish or English.

In this way, environmentalist discourse refashions the desert as *exceptional to* Europe: the desert is constructed as foreign and distant, but paradoxically its European-ness is emphasised, for a prerequisite to qualify for European protection is that it must be conceived of as a *European* landscape. Hence, precisely because the 'last' oasis in Europe's 'only' desert is different from other European landscapes, there is a need to preserve it—a need for protection that is rooted in its exceptionality. The desert of these documentaries is full of life and inherently valuable, but it is simultaneously a place of otherness—a form of otherness that serves to *increase* its value; the desert is an "outside" space, but a precious one for all that.

The environmental reports produced by the activists confirm this when they appeal to European legislation (Ito 2015; Dene 2015; Holban, Diaconita, and Beldiman 2016). In so doing, this environmentalism constructs Europe itself, embodied in the policies of the European Union, as a form of regulation. Complaining that the status of 'Natural Park' is not respected, Dene and his fellow activists have explicitly called for the enforcement of the European Birds Directive, the Habitats Directive, and Natura 2000 frameworks more generally. European-ness, in this sense, means governance, abiding by the rules and regulations for environmental concern of the European Union.

For the desert, in opposition to Europe, remains lawless. The shepherd, for example, believes that only money can bring about change: 'If you have money, you can do here what you want. If you do not have money, don't even try.' He further insinuates that there are practices of bribery that prevent wells from being closed. 'Here's money—take it and close your mouth.' Dene elaborates on this theme, but also shows that while Europe emerges as a layer of governance that can potentially provide justice for the people and habitats of the Río de Aguas, it also appears impotent, being unable to enforce its own legislation: 'The European law for protection, that's not holding. National law, that's not working. Certainly on the national level we see the power of industry, the power of industrial agriculture, the power of massive amounts of money, trampling over our rights as human beings, our rights as *campesinos*, and mercilessly there seems to be a level of immorality which is, I don't know, distressing is a kind word to use.' Dene's discourse then assumes full force: standing on top of a hill, with two shirtless men in the background, he says: 'This is not only a natural park, it is also the biggest aquifer in Almería province. It covers a 150 square kilometres, for farmers, and local users of water, communities, it looks as though we'd never dry out.' Ominous music starts, then swells. Dene's voice continues as images are shown of the

camera slowly submerging into the pond, showing the underwater world of the Río de Aguas: 'I would say that what we are experiencing here is a wilful blindness to the fact that this aquifer is being drained to the extent that our spring and the livelihoods of the people living off this aquifer are seriously endangered'. The music takes on lighter tones to accompany images of the slow, mesmerising beauty of underwater plants. But danger looms: the next images are of newly planted olive trees, supported by white wooden posts, that stretch towards the horizon in orderly fashion, in resemblance of a war cemetery beneath the fiercely red and yellow glow of the setting desert sun. Dene comments on the deathly image, emphasising that these plantations have been endorsed by the Department of Environment. He blames the Department for not caring for the environment in the right way. If Europeanisation, as Börzel and Fagan write, 'refers to the process of adopting new compliant laws, adapting domestic policies and ensuring that institutions are able to then effectively implement these policies' (2015: 888), then the desert has yet to become 'Europeanised'.

In a similar way to how the desert is represented in the spaghetti western, the desert of the eco-activists comes equipped with a very different morality: thus, just as the outlaw makes his own moral judgements and acts upon them as he sees fit, the villagers are portrayed as a community that is seeking to protect the living landscape against the faceless, 'unstoppable advancing' force that is industrial agriculture. It is a force, moreover, that operates beyond the law and inspires rumours of corruption. For example, the films move into the olive plantations, where ecologist José Rivera questions the role of the Andalusian government which, from his point of view, acts according to crude developmental criteria and studiously avoids environmental concerns. Legislation surrounding the olive plantations, he suggests, was also carried out incorrectly, with the government dubiously approving a formal change of zoning from a 'natural' to a 'productive' area. To discount their environmental impact, the large plantations were registered as a suite of smaller projects. In their continuing calls for environmental justice, the activists therefore appear to be struggling against the incapacity of the state to account for its own territory.

Teaching the audience about biodiversity and harmonious ways of living with the environment, *El Último Oasis*, *From Under Our Feet* and *Every Drop Counts* all show that the desert is not amoral, but inherently good; it only suffers from its own lawlessness. This narrative serves a very particular goal: to show that, in the desert, there is something worthy of protection, which can be described in terms of the *good life*. The desert, the films romantically suggest, is a place for honest people who do everything they can to do good to their environment; to live exemplary lives in harmony with a vulnerable but pure natural

environment. If only the developers of industrial agriculture could see this, they bitterly complain. 'Above all the people here, who are from Almería, have to learn to love and to appreciate what they have, the gem they have,' says Marcos Diéguez, one of the ecologists interviewed. In narrating the precarious situation of this village and its river, the documentaries present a counter-discourse to the normative idea of the desert as a lifeless place. Quite the opposite, they seek to conceive of the desert as a place of *life*, emphasizing the desert's biodiversity. However, as I have demonstrated in this section, the perceived otherness of the desert is maintained here, co-opted so as to serve the political purposes of conservation. Paradoxically, the desert also remains a place of irreversible lifelessness: the emptiness of death that remains after abandonment.

Fig. 1.6. One of the protagonists of the eco-documentaries is shown documenting the region's rich biodiversity. Still from *El Último Oasis*.

Conclusion

In this chapter, I have addressed the question of how the arid landscape of Almería has been made and unmade by looking at some of the different ways in which it has been represented in TV and film. With this approach, I have suggested that un/making landscape involves interrogating and amending its symbolic significance—engaging, in other words, with the ways in which the landscape is or can be imagined—even as it is materially transformed.

Despite alluding to entirely different timeframes, plots, genres and objectives, the three narratives—spaghetti westerns, a detective series, eco-documentaries—reveal remarkably similar imaginaries. The faltering advance of (more or less explicitly European) 'civilisation'

in a lawless, exceptional and uninhabitable space, is dominant in each image. The relationship with Europe is interesting in that in each of the three narratives, the desert of Almería has been represented as a landscape that falls outside what is normatively European in terms of morality and temporality, as well as in its forms of civilisation, market and governance. Paradoxically, a territory located geographically *within* Europe continues to be discursively positioned *outside* it, or is at least relegated to its margins. The ideological relationship between Europe, as the centre of civilisation and with it, modern progress, and 'non-Europe', ever lagging behind, is writ large in this odd yet fascinating landscape.

Whereas the spaghetti westerns lay out this normative desert imaginary, *Mar de Plástico* and the eco-documentaries speak back to it. The Plastic Sea answers to the popular conception of the desert as a useless, lifeless landscape by materialising progress narratives, while the ways of living and activism around the Río de Aguas challenge it by confirming the desert's inherent value and liveliness. These images and representations are thus not only descriptive, but also set the stage for possible interventions. The imagined landscape, in other words, gives direction to, and builds upon, material transformation.

In this chapter, I have also underlined the broader premise of my thesis that un/making landscape intervenes in the experience and projection of time. The anachronism of the desert as portrayed in the Dollars Trilogy is also reflected in *Mar de Plástico* and to some extent as well in the eco-documentaries. The desert is seen as a place that exists outside of conventional notions of progress and time. The spaghetti westerns show the desert in a cyclical time—an impasse, perhaps—where the trade-off between civilisation and wilderness is repeatedly negotiated, and hint at an unknown future where, perhaps, progress succeeds. The Spanish television series, for its part, presents the achievement of modernisation—the seemingly completed transformation from 'desert' to 'orchard'—and at the same time undermines this idea by gradually revealing the 'backwardness' of the landscape and its characters. In doing so, even the 'modernised' desert, which has embraced the linear trajectory of progress, is enveloped in futureless cycles of deceit and violence (opening up, of course, the possibility of a second season of the series). The eco-documentaries, in turn, show an entirely different future: one related to in terms of disaster, catastrophe, abandonment and death. This culminates in a nostalgic view of past experiences along with a perceptible and measurable though slow-onset 'disaster' in the present, a pressing sense of finality in 'running out of time', dreary hopelessness, notions of irreversibility, and an imminent prospect of death. Again progress narratives take the stage, this time in the guise of industrial olive farming, which seems to be advancing unstoppably with each new

documentary and each measurement of dropping water levels. And where abandonment in both the spaghetti westerns and *Mar de Plástico* is something of the past, having left ruins behind that are now used as shelters, for Los Molinos, abandonment is a frightening prospect. In this way, an array of temporalities come together in the material and symbolic making and unmaking of a desert landscape.

Having analysed cultural representations of the desert landscape, this chapter prepares the ground for the subsequent chapters, where I will show further how this basic imaginative framing plays out in the gradual unmaking of a small and shrinking village on the margins of the Tabernas desert (Chapter Two), and in the imperative of modernisation in greenhouse agriculture (Chapter Three).

Chapter Two:
A village in the unmaking

It is nostalgia to speak out for what is being lost.
— Anna Tsing (2005: 25)

On my first, preliminary field visit to Almería, the large number of ruins I saw throughout the landscape began to intrigue me.[5] Abandonment was a topic I had not expected to be relevant—or, to be more precise, I had not even considered—before I went there, but it was omnipresent in the ruins of deserted villages, houses and terraces, but also mines and film sets. These places reveal a history of movement, crisis and opportunity. Could the desert landscape be understood without addressing these ruins? In the previous chapter, I already drew attention to the curious appearance of ruins in cinematic representations of the Almerían landscape. In the Spaghetti westerns, ruined farmhouses, mines and churches provided convenient places of shelter for various outlaws, and ghost towns were iconic sites for shootouts; in the *Mar de Plástico* series, ruins appeared as living spaces for illegal immigrants and as sites of criminal activity; and in the documentaries, eco-activists had converted abandoned homes into off-grid housing, while they challenged the looming ruination of the river ecosystems and their own associated ways of living. The ruin, then, appears as a powerful icon in the desert landscape.

This chapter presents an appreciation of the processes through which forms of life may be discarded, cultural structures disassembled, and material constructions undone. To address this question, I introduce and elaborate on the concept of *unmaking*. How do these ruins come into being, and how is their presence sustained? How do people live with, in, and between these ruins?

[5] Ruins have drawn my interest before, for example during ethnographic fieldwork in Sri Lanka in 2014, where damaged, concrete lavatories and kitchen sinks remained along the beaches where, ten years before, the 2004 tsunami had swept away much of the rest of these houses.

I am drawing most of the material in this chapter from ethnographic fieldwork in Pizarra de Filabres,[6] a small village in the arid southeast of Spain. This provides an ideal case to study unmaking, as the village is caught up in a seemingly irresistible process of depopulation. Throughout the twentieth century, and increasingly so since the 1960s, Pizarra de Filabres has been subject to steady and seemingly irresistible abandonment. The result is that in a village that used to have 1500 inhabitants, at the time of my fieldwork there were 247 people registered at the municipality (INE 2018), but a mere 60 permanent inhabitants remained. The village provides a clear view of how individual buildings become subject to ruination, but also of how the village inhabitants engage in a gradual disassembling of the social and cultural fabric of life. Unmaking, then, emerges at the level of culture, materiality and landscape and, as I will flag throughout this chapter, occurs across various temporalities.

Although I limit my elaboration in this chapter to Pizarra de Filabres, the phenomena I describe are by no means limited to this village alone. In Almería, the ruins of *cortijos* (farmhouses) are conspicuously present, scattered throughout the bare hills. Even in the 'Plastic Sea' of Campo de Dalías and Níjar, where land prices are much higher than in the mountain ranges, abandoned *cortijos* and *aljibes* can be found. A relatively famous example is El Cortijo del Fraile, a majestic ruin of an estate with an adjacent chapel in Cabo de Gata. The iconic building was the site of a murder in the early twentieth century that inspired Federico García Lorca to write the play *Bodas de Sangre* (Blood Wedding, 1928), and it has featured in numerous westerns, including *The Good, the Bad and the Ugly*.[7]

At the national level, Sergio del Molino (2016) has called the depopulation of the Spanish countryside *el gran trauma* (the great trauma): the rural exodus that coincided with rapid urban growth between 1950 and 1970. He speaks of '*La España Vacía*' (The Empty Spain), a landscape that surrounds the major cities and 'no longer exists' except for in the literature about it, and in the minds of the children and grandchildren of rural-to-urban migrations. He claims that while the rural forms an essential and powerful part of the Spanish national

[6] To protect the privacy of the people whose narratives make up this chapter, their names, as well as that of the village of Pizarra de Filabres, are fictional. 'Pizarra' refers to the slatestone buildings that are characteristic to villages in the Filabres mountains. I realise that any accurate description of the village will make it recognisable to those familiar with it, and so many of the inhabitants I mention would be identifiable as well. This possibility I cannot circumvent. However, all villagers I spoke to and whose voices I have included in this chapter were aware of my role as a researcher and of the fact that I would be writing about their experiences and the topics of depopulation and water scarcity. Further, the arguments formulated in this chapter do not address Pizarra de Filabres per se; rather, the village and its people feature as a case in point to better understand the globally occurring phenomenon of depopulation.

[7] This relates again to the cinematic portrayal of the Almerían landscapes, where, as I noted in Chapter One, ruins feature abundantly. The film industry itself has also left ruins of its own, some turned to amusement parks, others indistinguishable pieces of board.

consciousness, it is in fact a reference to a place that only existed in the past and that is now devastated and '*desertico*' (deserted, desert-like). While for del Molino the 'emptiness' of rural Spain signifies a differentiation between Spain and the rest of Europe, depopulation is certainly not only a Spanish phenomenon. More broadly in the European context, rural depopulation is a matter of concern. Nearly all EU member states have some rural (and in some cases urban [e.g. Ringel 2018]) areas where depopulation is a major issue. Presently, the most severely affected regions are in eastern Europe and along the Mediterranean; towards the north, the Baltic and Scandinavian countries all have to cope with this trend (ESPON 2017).

Speaking to colleagues working on the topics of ruination and rural abandonment across the globe, I have been struck time and again by the similarities between the case studies. Of course, there are cultural, historical and political specificities at play, but whether looking at cases in Japan (e.g. Love 2014), post-socialist Europe (e.g. Dzenovska 2018; Ringel 2018), or in this case southern Spain, all over the world people living in depopulating areas seem to be experiencing similar processes and facing similar challenges. Perhaps, this is one of the central paradoxes of rural depopulation: while it is a global phenomenon, the abandonment of rural places is linked to their perceived isolation. Worldwide, these places seem unable (or sometimes unwilling) to get a hold of the global currents of modern progress. The rural, it might seem, has become disconnected from modern progress.

At the same time, rural depopulation resonates with deindustrialisation. The Almerían landscape bears more than just the ruins of a rural existence, for there are also many industrial ruins. One such site, not far from Pizarra de Filabres, are the abandoned iron ore mines in the Filabres mountains that were active in the nineteenth century but closed in the 1960s. What remains of this industrial site today are a series of collapsed houses in the mining town of Las Menas, as well as a church and a series of bent, and partly missing, train tracks. A similar industrial site is the decommissioned goldmine of Rodalquilar in Cabo de Gata, which was operative between the 1860s and 1960s. Extracting the gold from the volcanic rocks became unprofitable when gold prices dropped, and the mines, with their processing baths and belts, were closed. Related to these abandoned industries are the rusty remains of a tall pier known as 'El Cable Ingles' in the port of Almería, where freight trains once unloaded their rocky cargo onto ships. At the time of fieldwork, parts of this pier had been refurbished into a city park, while public debates revolved around the possibility of renovating the remaining sections as well. Many more industrial ruins of this kind can be listed, including

the lead mines of Gador, or the calcination ovens of Lucainena de las Torres in the Alhamilla mountains (which I initially mistook for the remnants of a row of windmills).

Rather than seeing these rural and industrial ruins as signifiers of the absence of progress, I consider them integral to it. Just as industries up and leave as economies shift, people follow opportunities and ways to make a living. My interlocutors often referred to this as '*buscandose la vida*' (looking for a life), a much-used expression that underlines the precarity of life, but also the creativity with which they confronted this challenge. In a village like Pizarra, this mainly plays out in a negative way, producing voids, emptiness and ruins. This is progress as portrayed by Walter Benjamin (2003[1940]) in his famous description of the Angel of History:

> His face is turned towards the past. Where we see the appearance of a chain of events, he sees one single catastrophe, which unceasingly piles rubble on top of rubble and hurls it before his feet. He would like to pause for a moment so fair, to awaken the dead and to piece together what has been smashed. But a storm is blowing from Paradise, it has caught itself up in his wings and is so strong that the Angel can no longer close them. The storm drives him irresistibly into the future, to which his back is turned, while the rubble-heap before him grows sky-high. That which we call progress, is *this* storm.

Where progress is normally oriented towards the future and works through tropes of advancement and renewal, Benjamin here subverts it. Following the gaze of his Angel, I want to immerse myself in the ruined landscape of Pizarra de Filabres in order to understand its *unmaking*.

Structure of the chapter

In this chapter, I will narrate the village's history of abandonment, its contemporary life among ruins, and its complicated relationship with the future. First, I present the central conceptual framing of this chapter. I introduce unmaking as a productive engagement, showing that common understanding of abandonment as a flipside of urbanisation, effectively a form of neglect, is inaccurate, and that it is instead an active and culturally sensitive project. By focusing on unmaking, I thus look at abandonment in its *active* form. In other words, rather than addressing the village as 'being abandoned' I am interested in people's involvement in 'abandoning.' This interplay between active and passive forms will re-emerge throughout the chapter. For the sake of clarity, I end this theoretical frame with an outline of some of the distinctions between closely related concepts—unmaking,

ruination, depopulation, shrinkage, abandonment—although these categories sometimes do (and will) fold into one another.

I then proceed to sketch an ethnographic portrait of the village of Pizarra de Filabres. Reflecting its historical narrative of abandonment, I place current concerns with depopulation within a context of social, environmental and economic transformations. I draw particular attention to out-migration as an appeal to progress (both in terms of economic opportunities and lifestyle) and its relation to the sense of hardship in the arid landscape. I go on to address the cultural significance of 'a life among ruins' through the accounts of people who have abandoned or are in the process of abandoning their rural homes and livelihoods. Nostalgic apprehensions of the past and an eerie sense of tranquillity come to the fore as important temporal markers of everyday life.

Next, I turn to the futurity of unmaking. Highlighting the ways in which ruined houses project a future of abandonment and further decay, I dislodge the assumption that ruins can only nostalgically reflect the past. I elaborate on some of the fatalist narratives I heard in Pizarra, which tended to present partial loss as total loss and to foreclose the future. Finally, I elaborate on the dynamics of *maintenance* as a form of containing decay through which a future of further unmaking might be held off. Throughout the chapter, a range of temporalities of unmaking is reviewed as these become apparent in historical continuity of narratives of abandonment, the construction of ruins as cultural heritage, uncanny experiences of nostalgia and tranquillity, acts of closing and repurposing, and projections of finitude. In the concluding section, I return to the question of unmaking as a productive engagement, and offer some reflective thoughts on unmaking and the value of loss. These thoughts relate to the question of how the process of abandonment might be valued differently when the creativity of unmaking is taken seriously.

This chapter will not save Pizarra de Filabres, or the countless examples of villages like it, from its projected future of abandonment. Studies of ruins and abandonment sometimes assume an attitude of doing so 'before it is too late': before the villages are fully abandoned, or before the cultural significance of specific ruins becomes lost. This mind-set of researching a phenomenon 'before it is too late' has haunted anthropology in its (post)colonial guilt. Documenting 'savage' cultures before they 'disappear' in the advance of westernisation and modernisation (known as salvage ethnography) is now widely considered problematic, to say the least (Clifford 1986). I think a similar, critical approach to studying depopulation is necessary. For me, doing so is not about lamenting or documenting what has been or may be lost, but about understanding and valuing the process that occurs.

I have also found that depopulation is not a trend to be lamented only. It has, perhaps, as much to do with hopeful human movement as with the desperation of a form of life closing down. This chapter, then, is not a requiem. However, to tell stories of destruction, as Anna Tsing writes, 'we cannot avoid the viewpoint of despair' (2005: 26). Hence, I do hope to present a text that is respectful of loss, which is real and profound, but next to and in dialogue with an appreciation of the active processes through which people take part in their own, and their village's, future.

Unmaking

I borrow my understanding of unmaking, in part, from Tim Ingold's (2011; 2013; Hallam and Ingold 2014) provocations on the idea of *making*. Making, he finds, is not a project in which the maker imposes a pre-conceived idea upon materials; the maker does not begin with a design concept (framed within the imagination) and finish with the final form of the artefact.[8] Instead, he argues that making is a question of 'intervening in the fields of force and flows of material wherein the forms of things arise and are sustained' (2011: 178). Making, then, forms an entanglement of the 'lines of becoming' of maker and matter. Turning to *unmaking,* in light of this view, reveals that it is perhaps not so different from making as the supposed opposition in the 'un' prefix would suggest. Where making is an engagement with material forms, unmaking is *not* a disengagement. Rather, it is an engagement through which forms are disintegrated. I thus see unmaking as a line of becoming: a creative, transformative process that emerges from interweaving life trajectories, social dynamics and material characteristics.

Considering the creativity of unmaking, Ingold's suggestion that 'the creativity of making lies in the practice itself, in an improvisatory movement that works things out as it goes along' (2011: 178), provides a starting point. As I will go on to describe below, the inhabitants of a small village are aware of the ongoing disassembly of the social and material structures of their village and they try to resist it even if, all the while, they are consciously implicated in the process. Rather than simply 'moving along', creativity thus lies both in how people resist and play their part in unmaking processes. Even if no-one considers the 'final form'—total abandonment—desirable, people's awareness of and participation in this project suggests an intentionality that infuses the improvisatory movement. This is, in its abstract

[8] Note that, for Ingold, the idea of a 'finished artefact' is a fallacy in itself in light of the timeframes of production, use and discarding, and the even broader (geological) temporalities of materials-in-formation (Ingold 2013; Ingold and Hallam 2014).

sense, a tension in anthropological thought, which on the one hand locates creativity in everyday cultural emergence, where culture is seen as continually constructed, and on the other seeks to understand periods of major cultural change. John Liep, for example, proposes a continuum to distinguish 'a diffuse, widely distributed creativity of everyday life from concentrated bursts of creativity which, in specific environments, under certain conditions and within particular periods, give rise to centres of novel cultural productivity' (2001: 6). With this in mind, I understand the creativity of unmaking as located in the everyday, but as unevenly balanced; it occurs both in transformative events and in people's everyday lives.

Further, to see unmaking as creative requires departing from the tendency to think of creativity as constructive and positive. While making is without question creative, creativity does not imply making—it may be destructive. In economics and social sciences, *creative destruction* is commonly understood as a model of economic growth under capitalism whereby innovation propels the destruction of current forms: the creation of new technologies, products and institutions makes the old ones obsolete. This view, which I will unpack further in Chapter Three, is paired by the idea that holding on to the 'current' obstructs growth and produces stagnation (Black, Hashimzade and Myles 2017; Castree, Kitchin and Rogers 2013). The 'creative' is then located in innovation and the production of the 'new', at the cost of destruction of the 'current' or 'old'. Still, the creativity inherent in destruction itself seems overlooked.

A slightly different notion of creative destruction is evoked in more historical reflections on human-environment relations. For example, in criticising contemporary industrial modes of production that have produced what he calls 'structural unsustainability', Tony Fry (2011: 1) writes:

> Human beings have always had a propensity toward destruction. The more we made, the more we destroyed. In making our wold within the world we failed to understand what of the former was being destroyed.

A comparable view is expressed by Simon Goldhill (2018). In a lecture that addresses the separation between the categories of 'nature' and 'culture' in relation to the extinction of species, he considers that:

> Where we are in the current time, call it the Anthropocene, is an extreme and potentially catastrophically irreversible version of what has been a constant pattern of human interaction with materiality: we destroy things.

For both Fry and Goldhill, destruction is a core feature of human existence. However, both seem to posit destruction as a side-effect of production (and, especially, modernity).

Similarly, Liep (2001: 5) writes of creative destruction as part of the historical expansion of capitalism:

> Hand-in-hand with the growth of forces of production have gone the expansion of the destructive forces of war and the degradation and pollution of the natural resources of soil, water and air. Thus, creative construction in all its material and cultural aspects was predicated upon a creative destruction of awesome proportions and consequences.

Again, creation, underpinning the very essence of culture, builds upon and even requires destruction. While this view removes the positive connotations from creativity, it works little to see the creativity *in* destruction. Conversely, the view of unmaking that I am proposing here, does not posit destruction as 'collateral damage' (as unintended but nonetheless harmful effects that are made acceptable in service of a 'greater good' [see Bauman 2011]), but sets it central stage.

My approach here comes close to, but also slightly diverts from, Giuseppe Feola's (2019) recent conceptualisation of unmaking. Feola posits unmaking as a prerequisite for degrowth, reasoning that in order to produce new, non-capitalist socioeconomic configurations, dominant capitalist forms need first to be unmade. Unmaking, in his view, can thus be strategised to open up space for alternative ways of living. This implies that Feola is taking unmaking as deliberate, goal-oriented and purposeful. I take a slightly different stance. The process of unmaking I describe, through which a village is gradually dismantled and subjected to decay, should not be understood as prefigured, deliberate or intended. Rather, building on the previously outlined conceptualisations of making and creativity, I take unmaking as *improvisatory*, in the sense that the people involved respond to, and move along with, changing social, economic and environmental circumstances; as *deliberative*, in the sense that they tend to reflect on the process and their own implication in it; and as *intentional*, in the sense that they draw on and produce meaningful relations between imagination and materiality.

The focus here is neither on origin and cause, nor on destination and effect, but on *process*: on how humans 'move along,' experience, and narrate the profound changes in the function, aesthetics and meaning of the landscape. Conceptualising unmaking in this way contributes to an understanding of how people take control over and give shape to their daily lives, within and in relation to existing and newly emerging structures of society. To quote Anna Tsing, 'destruction too requires agency' (2005: 25). To close a school, or a shop, or a bar, is an activity, just as the decision to no longer maintain your late grandparent's house is active—however painful and undesirable it may be.

One insight I take from my fieldwork in Spain, is that unmaking, even as it takes the form of abandonment, is not the same as neglect or disinterest. Instead, *unmaking is active and affective.* For example, during my time in the village, I met a relatively young couple, in their 40s, who were harvesting almonds. They each carried an empty basket when I encountered them. It was a weekend and they had come over from the city for this. The woman said: 'but he needs to work during the week', explaining that they could not maintain their entire farm as they would like. 'I don't have time to fill two hundred boxes', he added, and then: 'We are thinking of selling the land.' Such a rapidly changing environment, as encountered in this village, requires ever new practices, experiments and modes of cultural production. Various stakeholders, this couple for instance, engage with this hastily changing environment—but more importantly they participate, as protagonists of this change.

Juan Carlos, who lived in city of Almería permanently, but repeatedly expressed his affection for the landscapes of the province, recalled how he and his family had been involved in the process of abandonment:

> In my family, we have some farms, and they are totally abandoned now. And the ones responsible are ourselves. When we left these places, well, I liked to go in weekends sometimes, but my brothers, sisters, and me, we finally said, what are we doing there? Working hard all week, and afterwards working hard in the weekend. And finally we began to abandon the land. Every day you abandon these places it becomes more difficult to recover them. It is a slow process, happening year after year. And one of the important things is the new generation. When I was a teenager, I told my parents, I want to look for girls, in the city, I don't want to spend my weekend here, I don't like it. Ok, so finally we were the ones responsible for this abandonment. It is a continuous process of generations. And now, the next generation, they are growing up, they don't know that story. They say, abandoned fields? Phuh! Our grandparents were working there. And the result is the abandonment of the place. Do you understand? It is so simple.

Juan Carlos clearly placed the responsibility for depopulation in the hands of those, including himself, who had emigrated from the countryside into urban centres. But his narrative was not one of detachment or indifference. Rather, abandonment appeared as the outcome of a mismatch between forms of life, urban and rural, in which difficult decisions had to be carefully made.

One crucial chapter of abandonment seems to have been that the schools of Pizarra de Filabres were closed. Interlocutors often told me that 'once, there used to be five schools in

the village."[9] This was habitually followed by the remark that 'now, there are only three children in school age.' On one hand, the remark was an indicator of how the village had revolved around family life. It related to a past wherein Pizarra de Filabres had been a densely populated village, with its facilities and social structures well in place. On the other, it revealed how many of these structures had become gradually dismantled. Javier, the mayor, was angry at the previous councils for not having defended the schools more; for not having pushed harder to keep one open. He had been a schoolteacher himself, and was passionate about the importance of education. 'A main problem with depopulation,' he said, 'has been that the schools were closed.' The result has been that the children who remained in Pizarra de Filabres had to take school transport to Tabernas. 'That further complicated everyday life. So many parents started leaving,' Javier said. 'Clearly, that increased it only more. Many of them also did not have many economic possibilities to stay, and so they left.' Then, reflecting on his own role in the process, he concluded: 'Surely, if I had children to raise, I also would not stay here. It's very sad. We have done it ourselves.'

Appreciating process

While Javier evoked the closed school as an example of how 'everything, everything is becoming less, and less,' the school can also illustrate how unmaking can create potentialities for new social and material forms to emerge. During fieldwork, the building where the last school was located, just off the village square, housed the Women's Club. The old classrooms had been re-appropriated as a social space where women gathered at the weekend to chat, create handicrafts and decorations for the village *fiesta*, and sometimes organise activities such as discussions. As such, the Women's Club formed an important place of sociality in addition to the two bars and market square.

That new forms of life can emerge from ruins is often alluded to in romantic discourses of 'nature taking back', or the 'return to nature' of cultural materials, evoking images of ruins that are overgrown (DeSilvey 2017; Edensor 2005). Specific to ruins in Almería is that, in the desert climate, they do not typically get 'overgrown'. The relative lack of lush vegetation in the region is also why Almería's ruins are so readily visible in the landscape, even from afar.

[9] These 'five schools' were primary schools at a time when each teacher had their own school; there were thus also five teachers in the village. The composition of schools seems to have shifted over the decades between the 1940s and 1960s, as several boys, girls and mixed schools, as well as at least one illegal Marxist school, were established (Rodríguez Barreira 2007). In later years, these schools combined into a single primary school near the village square. Those pupils who went on to secondary education would have to go to the city of Almería, often around the age of twelve.

In the villages in the Filabres mountains, such a view of 'natural' appropriation of ruins is instead confirmed in the way cats, rats, swallows and other species live in ruins as spaces that are no longer disturbed by human interference. In some cases, *Chumberas* ('Prickly Pear' or Nopal cactus, themselves often ruined by the Cochineal parasitic plague) take root in the walls and roofs of collapsed buildings.

Fig. 2.1. A dead *chumbera* (prickly pear) emerges from a collapsed roof.

Others have drawn attention to the possibilities of human life in and among ruins—which is also my focus here. To name a few examples, Yael Navaro-Yashin (2009; 2012) has narrated her encounters with the everyday lives of Turkish-Cypriots within and among the ruins appropriated from the Greek-Cypriots following the partition of Cyprus in 1974; Gastón Gordillo (2014) has shown local engagements with the rubble of imperial expansion at the foot of the Argentine Andes, as well as confrontations with contemporary forms of social and environmental ruination; and Ariella Azoulay (2013) has drawn attention to the magnitude of the destruction and violations of homes in Gaza, evoking the image of Israeli soldiers sleeping on the floor in an abandoned Palestinian home. In less blatantly violent contexts, human activity in ruins can involve the pleasure of engaging with places that are otherwise no longer valued, with its associated freedom to do what you like, as well as the excitement and unease of trespassing (Edensor 2005)—something I experienced myself

when exploring the ruined houses and terraces in the Almerían landscape. In other cases, and this is certainly true in many bigger cities, the re-appropriation of ruins can take institutional and commercial forms, where derelict industrial buildings are re-appropriated by artist collectives or refurbished to house start-ups and young professionals. In various ways, these examples underline what Gordillo calls the 'productive force of negativity' (2014: 32). Similarly, reflecting on the generative character of processes of decay, Caitlin DeSilvey argues that:

> The disintegration of structural integrity does not necessarily lead to the evacuation of meaning; processes of decay and disintegration can be culturally (as well as ecologically) productive; and, in certain contexts, it is possible to look beyond loss to conceive other ways of understanding and acknowledging material change. (2017: 5)

I evoke such texts to underline how unmaking and making can coincide and clash. When something is unmade, something else emerges. I will return to the question of human life among ruins below. First, however, I would like to place a note of caution: I find it important not to over-celebrate the possibilities of life emerging from ruins. To paraphrase Aet Annist, when looking at the forms of life that have emerged from the ashes, we forget there were ashes (2018). There is great solace in the idea that destruction breeds creation—but it also destroys, and this positivity should not overrule the loss, which is also very real. This is something DeSilvey has also demonstrated. In her 'radical willingness to find positivity in processes that are currently framed in largely negative terms' (2017: 9-10), she is not so much romanticising the forms of life that come forth from decay, but turning to an appreciation of the process of decay itself. In DeSilvey's accounts, this includes the sometimes gory substances that decay produces, rather than any phoenix-like resurrection of life that it might promise. I think turning to the process of unmaking works in overcoming this pitfall, not by providing an overall answer to how change occurs, but by providing a contrapuntal perspective on what becomes and what is undone.

To summarise my argument thus far, I want to appreciate the complexities of unmaking, rather than either celebrate its productivity or lament it as loss alone. The 'event' of abandonment cannot easily be distinguished from the passage of time and changes in the landscape in a broader sense. It is not enough to narrate a history of abandonment to understand unmaking, since there are different temporalities at play, which I will outline in the following sections. The disintegration of material and social forms appears as a line of becoming that fluctuates and is ongoing, but also requires engagement in the present. Analytically, this involves 'a conception of the abandoned not simply as a relic of something

terminated but as an evolving and dynamic context in its own right' (Pétursdóttir 2014: 339). It also implies a conception of unmaking, not simply as a more or less violent form of destruction or neglect, but as a gradual and careful if also sometimes chaotic and disruptive dismantling. To claim that this process is active and affective means recognising the love, as well as the great sense of loss, with which Pizarra de Filabres is being abandoned.

Ruination, abandonment, depopulation

Before turning to the ethnographic sections in which I discuss some of the affective and temporal dynamics of unmaking, I should pause for a moment to prevent a conflation of terms. First, I draw inspiration from Ann Stoler's (2013) work on *ruination*. The concept of ruination, she has argued, draws focus away from the ruin as object and towards process; a shift from ruin as noun to ruin as verb. 'To ruin' then becomes an active process that involves people, and therefore also politics. Ruination also circumvents musings on the aesthetics of ruins. I hope it has become clear by now that I am not interested in reproducing the kinds of aesthetic representations of ruins that have dominated much of Western art history from the Renaissance onwards (Lyons 1997: 80). Such representation of ruins can work as a means to freeze the process of decay: 'the process of ruination is contained by the aesthetic frame' (Roth 1997: 3). Shifting analytical focus to ruination can potentially liberate ruins from this 'elite fetishization' (Gordillo 2014: 26), what Stoler calls writing 'against the melancholic gaze' (2013: 9). As Nancy Hunt (2013) has also argued, the ruin is not, or rather should not be, a visual category. One alternative is to take 'ruin' as a political category and ongoing process. Ruination draws attention to the power dynamics through which ruin is brought upon the social and the material.

This is where Stoler pushes ruination to address colonial processes and their ongoing, lingering impact on people and places—in essence, she employs the term to write against the destructive force of empire. Ruination, for her, is a form of destruction through more or less direct violence, often characterised by a certain disregard for what is being ruined. One example is the destruction of forests for plantations (e.g. Gordillo 2014, Stoler 2013, Tsing 2005). As an '*act* perpetrated, a *condition* to which one is subject, and a *cause* of loss' (Stoler 2013: 11), ruination refers to the process in which ruin is brought upon the subject. A similar stance is taken by Yael Navaro-Yashin, who states that ruination refers to 'the material remains or artefacts of destruction and violation, but also to the subjectivities and residual affects that linger, like a hangover, in the aftermath of war or violence' (Navaro-Yashin 2009: 15). As Stoler writes, to ruin is a 'violent verb' (2013: 7).

I turn to unmaking to depart from this connotation with violence. As I use it here, unmaking is a move from looking at processes that 'bring ruin upon' something or someone (Stoler 2013: 11), to an attuning to people's active engagement in the processes of disassembly. This distinction between unmaking and ruination is conceptual rather than lived, an exercise of scholarship more than emic categorisation. Yet it is important to differentiate the process of dismantling social and material forms (unmaking) from the destructive violence of war and colonial oppression (ruination). Surely, there are forms of slow violence (Nixon 2011) to be recognised in the abandonment of rural livelihoods. I consider depopulation as it occurs in Pizarra to be a product of modernisation and capitalist configurations of space, with its preferred forms of life (favouring urban centres and standardised, mass production), at the cost of non-normative and subaltern forms (in this case, 'traditional' rural lives). Unmaking can have real destructive force, and overlap with the concept of ruination is to be expected. However, only by looking at the local engagement of these processes can its subtleties and specificities be appreciated. Failing to do so would disregard the attentive approach taken and the hurts and hopes that it accompanies.

A second term that aligns with my approach to unmaking is *abandonment*. 'We used to have two bakeries in the village. Today we do not have a single bakery anymore,' said one of my neighbours. He was using a narrative form that I heard often in Pizarra de Filabres, starting with a statement of how things used to be, usually based on personal and shared memory, followed by a remark of its absence or loss in the present. In this way, it seemed as if abandonment had 'happened' to the village, beyond the involvement of the villagers themselves. This passive view of abandonment—fatalistic even, as in to undergo submissively—evokes images of broken windows, obstructed doors, rusty frames and peeling paint. It brings into view buildings, infrastructures and communities as *already* ruined.

And yet something occurred between the moment there were supposedly two bakeries, and the moment when there are perceptibly none. Closing a bakery is an active, and I would say intentional (even if not intended) process. In turning to unmaking, I wish to underline this active aspect of abandonment. Abandonment, as the ethnographic examples above illustrate, is not a form of neglect or disengagement, but a particular mode of engaging with the village and the landscape that involves both interference and letting go. I am precisely concerned with these 'lines of becoming' of unmaking, through which forms of life are dismantled; abandoning in process. In so doing, I mean to offer a view that sets people's active (both proactive and reactive) engagements with their environment in the spotlight, as they go along with, exacerbate and challenge the various changes in their lifeworlds.

Finally, *depopulation* and *shrinkage* are primarily demographic terms. They point to numerical registers of inhabitants, rather than offering a culturally sensitive view of human-environment relations. Dace Dzenovska, in her work on post-Soviet deindustrialization in Latvia, has criticised the term 'depopulation' for being dislodged from everyday experience. Policy makers and politicians, she states, 'also thought that the countryside was emptying, but instead of an emplaced sense of emptiness, they talked about depopulation and economic efficiency' (2018: 20). I embrace her sensitivity for local discourse over official and demographic terms. Still, I will be using the term depopulation throughout this chapter, because its Spanish equivalent, *depoblación*, was also the most common way to refer to the phenomenon in Spain, both in official and lay discourses. Any cold, statistical connotations will in the remainder of this chapter be qualitatively infused and juxtaposed with a discussion of some of the temporal and affective facets of unmaking: nostalgic apprehensions of the past, a sense of 'stuck-ness' in the present, the fuzzy absence of a future, and, above all, people's everyday productive engagement in the process. First, I will describe in more detail the village of Pizarra de Filabres and its relation to abandonment.

Pizarra de Filabres

Pizarra de Filabres is a small and quiet village located halfway up the Filabres mountain range, as one of four villages of similar lay-out, architecture and depopulation concerns. Footpaths cross the mountain ridge laterally connecting Pizarra to the neighbouring villages—between a one to three hour walk—which shows how their historical ties have been largely replaced by motorised access to the lowlands. The only paved access road winds north from the village of Tabernas to Pizarra de Filabres, and further up to a mountain pass (at 1900 metres above sea level), from where it descends towards the Almanzora valley. The road attracts a modest number of recreational cyclists and motorcyclists due to its many hairpin curves. Looking out over the valley, I have watched cyclists speed down that winding road without ever pedalling, passing those who venture in the opposite direction, working hard to move forwards and upwards. Their movement on the road is like that of the swallows above them—appearing to float easily in the wind, yet swaying and turning at breakneck velocities. Every now and then, some of them stop in the village for a drink at the bar. Most of them, however, just pass by.

At an altitude of about 950m above sea level, Pizarra overlooks a long valley towards the wrinkly Tabernas plains. With its back into the Filabres mountains and looking southward, out over the desert, it balances on the edge of two different climatic, hydrological and

geological spaces. On one end, there is the coastal, Mediterranean summer heat, and on the other, there are metres of snow piled upon the mountaintops in winter. Both climates are part of the seasonal life cycles in the village, as snowfall and aridity dictate irrigation rhythms, and warmth and cold prescribe harvesting times.

When I first arrived, I stopped at the village entrance and walked uphill through the street that leads from the main road to the village square. Ahead of me, an elderly woman walked up the same street and stopped to take a rest in the shade of the houses. She leaned against the wall while she rested her hand casually on her walking stick. As I passed by, she looked at me with some suspicion and did not respond to my polite (or at least so intended) '*buenas dias*.' It was a look I encountered many times, as the villagers observed the presence of a stranger in their midst, strolling their streets. Usually, however, this reserved attitude would break the minute I started a conversation, and several people invited me into their homes mere moments after we met.

Fig. 2.2. The house referred to as 'the most beautiful house in the village' reflecting the idyll rural life. Paradoxically, its owners had emigrated and visited the village only occasionally.

I found Pizarra de Filabres to be an idyllic place. Large, colourful flowers bloomed in many streets, on the main square, and on the front porches of many houses. Living in Pizarra de Filabres, I developed a pleasant morning routine. On the days that I did not have any

appointments (sometimes I agreed with a neighbour to meet in the morning to visit their terraces or some other place), I got up around seven, made myself breakfast of yogurt and cereals with locally picked fruits and nuts. Often, neighbours would give me these as a present, themselves having pomegranates, figs and almonds in abundance. I would sit down on my balcony in the morning, looking out over the village and the valley below. I would watch how, when the church bell rang three times to indicate that the hour had reached its third quarter, the first sunbeams started to peek over the mountains on my left and hit the top of those on my right. I was fascinated by the still movement of the light: looking at it, its movement could not be observed; looking away for just a second, it had noticeably shifted downhill and over the village walls and roofs. By the time the church bells rang eight times the entire valley was blazing in the sunlight. I took a moment to take in the crisp mountain air, the unceasing chirping of the birds, and the light reflecting from the white houses. On a few of these mornings I could already hear some activity in the valley, in as far as this was mechanised. The distant sound of a generator, for example, or a car passing by, would alert me to human activity. I would then take a walk through the village. Sometimes I turned left, to the upper boroughs, sometimes right, downhill and towards the central square, curious to what the day would have to offer. Along the way, I was bound to meet some of my neighbours, who were always ready for a chat.

It took me some time before I figure out how the streets connected. None of the narrow alleys run straight and all of them incline in one direction or another. But my landlady, Maria, tried to reassure me: 'They all lead towards the main square, and the rest towards the church.' She was a small woman (which she repeatedly pointed out, joking that she was 'only half a woman') with gentle, sparkly eyes and short grey hair. She knew the village, which at the beginning of my stay was an incomprehensible maze to me, like the back of her hand. As we walked through these streets she told me at a fast pace whose houses some of them were. One belonged to a sister in law's brother, another to a cousin. The people of this house were in Barcelona, the people of that house in Valencia, the people of that house in El Ejido, and so on. I could not keep track of the mental map she was drawing for me. Clearly, though, the absence of these inhabitants marked the space.

A history of abandonment

Pizarra de Filabres has a long history of abandonment that can be traced back at least to Moorish times. During the so-called Reconquista, the village was completely abandoned when the Moors were expelled from the peninsula. Being left abandoned and partly

destroyed after the '*Guerra de los Moriscos*', the village (along with many other places in the south of Spain) was actively repopulated between 1574 and 1577 with 30 new inhabitants, who were recruited from northern Spain (Tapia Garrido 1990). A narrative of this process is recounted annually in a festival called *Moros y Christianos* (Moors and Christians) in many Spanish towns and villages, including Pizarra de Filabres. Villagers re-enact the battles between the Moors and Christians (the Christians always win). The shift in power is symbolised by the 'Moors' handing over of the keys to the village. Some ruins of Moorish structures are still visible in the village, including foundations of an *alcazaba* (Moorish fortress) that testifies to a bygone concentration of power. Other structures include irrigation channels that are still in use today. The church is said to have been built on the foundations of a mosque, and the tower by the cemetery used to be a minaret. The story goes that there used to be a fourth barrio that was never re-inhabited after the 'Reconquista', and the ruins of which are so barely visible that different people have pointed at different hillsides to indicate its supposed location.

In more recent history, already in the late nineteenth, but more significantly in the twentieth century, people moved away from the village to find 'a better life'. Many men went to Barcelona, Germany and France. While some families emigrated, most women stayed behind in traditional caring roles. Nearly every person of this generation, who now make up the elderly inhabitants of the village, can recount stories of going abroad to find work. One elderly man, who lived at the lower end of my street, told me he had lived 8 years in France, and that he came back every year for 15 days. First he worked in agriculture and later in construction. His wife added that she would have gone with him, even though she had to take care of their daughter, whom she could have taken along, but could not because her brother was ill and she could not leave her parents alone with him. Pepe, an 87 year-old widower, likewise told me he had lived in France for 8 years, in Paris, 'where there is a lot of rain', and had also lived in England. He started counting in broken English: 'One, two, three,' up to sixteen, then stopped and said something like 'you get the point.' Once, he said, he was away for 7 years without returning. They had no phones, so his mother used to write to him. He said he had also lived in Germany, and had been to Morocco. 'For work?' I asked, and he confirmed. In 1980 he returned to Pizarra de Filabres. Going abroad was the most lucrative, and for many people the only option to make a living, but it was not then that Pizarra de Filabres depopulated rapidly: at some point, it was expected that the men would come back.

This transmigration also marked a transition from hardship to a life that was at least a little more prosperous. 'The first thing people did when they came back was to improve their houses,' said one of the four men seated at the bar while we were involved in a conversation on the issue of labour migration. Pointing at an old oil lamp on the mantelpiece, the men remembered that electricity 'came to Pizarra de Filabres in 1963,' and that it took until the early 1970s before it was fully integrated into people's homes. People used to have no bathroom, they said, did not even think of having one, as it was common to defecate in the *rambla*. Running water and electricity came, bathrooms were installed, and houses were remade with concrete instead of slate, or plastered with cement. 'People have suffered much here, there was a lot of hunger after the war,' Antonio, the municipal functionary, told me. 'Thanks to the migration, people in Pizarra de Filabres have been able to escape poverty, and their children could study.'

One Saturday morning, when she had come to visit Pizarra de Filabres from her home on the coast, I spoke to a woman who narrated in detail this pattern of migration in her own family:

> My parents had my brother, my younger sister, and myself. I was one year old when my father went to Barcelona. My mother with three small children stayed behind. but they didn't want the marriage to fall apart, so we went to Castro de los Filabres (a neighbouring village), because there was a *cortijo* available. I was then four years old. My father went to work with the mules, my mother, a fighter, planted potatoes. And we went to school. I was six years old. But there was no food, so my father had to go to France, and Germany, where he stayed many years. When my grandparents died, my mother and us moved into their home, back in Pizarra de Filabres, and she opened a shop. I was about 10 then. My father would come in August, or with Christmas, but you see, all that struggle and they still had to be separated. Because the shop alone didn't bring in enough. And when we were 12 years old, each of us went to study in Almería. So my mother was left alone, with the shop, my father in Germany, and we in Almería. And when my father came back from Germany, after 20 years, my entire childhood, only the two of them remained in the village, and all of us in Almería. So our roots are here, and I come to the village, but I left when I was 12 years old. This is my history, but like my story there are many, well, nearly all of them. Of my generation, almost all of us went to Almería to study. Why? Because our parents sacrificed themselves. Imagine the sacrifice.

Clearly, the two emigration trends are closely related, and one would not have been possible without the previous one. But there is a fundamental difference between generations: many of this younger generation, who are all adults now, have remained in the province of Almería.

The economy of Almería has changed to such an extent that the younger generation can now afford to move closer; the need to go abroad has been reduced.

In the neighbouring village of Senés, which is similar to Pizarra de Filabres in many aspects, a statue at the village entrance has been dedicated to emigration. It portrays a man and a woman, in simple clothing and with stern faces. The woman sits and rests her hand on a globe; the man stands behind her with one hand on her shoulder, the other on the globe. They represent the villagers who left in search of opportunities. A text, in Spanish, next to it reads:

> The Village of Senés
> In honour of all those who had to leave their land that saw them born, to try to get a better life, carrying Senés in their hearts to all corners of the world.
> Your village will never forget you.
> Senés, August 2010.

Javier, the mayor of Pizarra de Filabres, summarised the issue: 'The reason is that the economy of the village, traditionally, was based in subsistence agriculture. It was not an income to live from. So the people left, to live. They have work in Almería, or in el Ejido.' He had moved to the coast himself to work as a teacher, and spent more time in Pizarra now that he had retired from this work. Drawing on his own experience and that of his neighbours, he also related depopulation to the appeal of modernisation and a cultural attitude that favours the urban over the rural: 'It's also that culturally there is the idea that it is better to live in a city. Without doubt, we believed that living in a city is of higher rank than being in a village.' Javier was aware that depopulation was not just a matter of economics, or of people trying to escape poverty. Young people, he realised, want fun, movement, city life. The tranquillity of the village implies a boredom that the city does not have. Frustrated, he countered this image:

> But we did not consider that, maybe, it is safer to live in a village, or healthier, with less pollution. That relationships are closer. Here, we live more in contact with nature. We used to be so much richer. Surely, instead of being here tomorrow, I could be at the boulevard in Almería, having a beer. To me that life does not fulfil. But unfortunately, to many people, life in the countryside does not satisfy.

He continued to paint a somewhat romantic image of village life in the past, of children playing in the streets, of close relations between neighbours, and of communal harvesting. 'That has been lost, because we went to the city.'

The arid landscape

Several neighbours have also related the issue of depopulation to concerns with water scarcity. The village of Pizarra de Filabres is located between desert and mountaintop on the southern flank of the Filabres ridge. Its municipal territory, however, stretches beyond the mountain pass towards the northern side. Whereas this region, known as Upper Pizarra, used to be populated in remote *cortijos*, nearly all of these have been abandoned and have collapsed. Nowadays, its main use is for hunting. The north face is less arid, and all of Pizarra de Filabres' municipal wells are located there. This water is much better in taste than in other parts of Almería, where it is common to buy it bottled. Early during my stay, at about eleven in the morning, I entered the bar through the curtain of metal chains (every house has a curtain in front of the door to keep flies and wasps out) and took a stool at the chrome bar. I ordered a sparkling water. Rosario, who ran the bar together with her husband Jesús, staring into the fridge, shook her head: 'We don't have it.' 'A water without gas then?' I asked. Again she looked into the fridge, even though she already knew the answer: 'No.' Instead she offered a Coca Cola zero, or a normal Coke. She explained that she did not sell water because 'it does not sell. People drink water from the tap here.' I quickly learned that Pizarra de Filabres was proud of having '*agua buena que viene de la montaña*' (good water that comes from the mountain).

Nevertheless, water is one of Pizarra's main concerns, intersecting with depopulation. I found it striking that almost everyone could tell me stories of how there used to be much more water in the *ramblas* in the past. One neighbour told me that, as a child, she had had swimming lessons there. Today, the riverbed is little more than a series of muddy ponds. Another neighbour, Encarna, an elderly woman who often invited me for a cup of warm milk and biscuits, recounted how she used to get water at the village *fuente*, carrying it on her back. There was water, she affirmed, but she could only use it for the most necessary of things—washing, cooking—as its use was directly linked to the physical labour of getting it. During my stay, the *fuente* delivered only a miserable little stream. It had been refurbished, with three outlet pipes and an amphora jar integrated into the renewed brickwork. It appeared more decorative than functional. 'All of us went there for water,' Encarna said. 'And there was always water in the *ramblas*.' The encounter with Ezequiel, the shepherd with whom I opened the Introduction of this thesis, similarly reflects local concern with the arid landscape. 'We like green landscapes better. Here, everything is dry,' he said, while both of us observed the terraces around us. 'It's always been dry,' he continued, 'but it's getting worse. Every time it rains less.'

Just like the people of Pizarra, I have been puzzled by the question why there would be less water nowadays than in their collective memory. A range of popular beliefs mingled with scientific explanations. For example, an argument I often heard was simply that 'it does not rain.' Climate change was often mentioned as a possible reason, but rumours of insurance companies dissolving clouds with airplanes releasing Silver Iodide were also discussed. The idea that precipitation has decreased is also challenged by rainfall records that do not show significant changes.[10] One alternative explanation for the dry *ramblas* is that increased forestation in the mountains—once a typical 'desert improvement scheme'—increases infiltration and blocks the flow of water downhill. The number of artificially forested areas has increased significantly since the 1960s with the decrease of the use of firewood and the cancellation of logging programs. Another explanation is the increased numbers of mechanised wells across the region, due to which water tables have dropped in many places. As Javier, the mayor said: 'The water levels have dropped much here. Before, it rained more or less the same, but not with so many wells. In the past, the *fuente* never ran dry in summer. This year it has rained a lot and the *fuente* is dry. Why has it dried? The water levels are dropping. In the last years we have seen olive trees dry out that may have been 250 or 300 years old.' Even if some of these explanations are more believable than others, my aim here is not to debunk them. The point is that many people are experiencing a water shortage, even though tap water is seldom cut, and have witnessed changes taking place that they cannot fully account for. Changes in the landscape mingle with changes in population.

Pizarra de Filabres has an elaborate traditional water management system for irrigation, organised by the village Community of Irrigators. From 25 may to 1 February, irrigation occurred *en tanda,* that is, according to the geographical position of plots, moving from top to bottom, whereby the number of hours of irrigation corresponded to the relative size of the land. From 1 February to 25 May, when the abundance of water gradually decreases into aridity, a different family obtained ownership over the water that happened to be available that day, a system called *los días comprados*. When, and as long as, it rains, water is distributed on a first come, first served basis, with a prohibition on cutting someone else's water. Additionally, the municipality distributes any leftover drinking water among interested neighbours for irrigation. This system gets complicated further as families split up, and as land and water rights can be sold independently, leaving some with more land and less water,

[10] Note that there is few reliable historical meteorological data for the Filabres mountains. The only meteorological station in Almería that records data back to 1968 is located at the airport of Almería, down by the coast. This station does not register significant precipitation changes over the last 40-odd years (AEMET 2019). However, rainfall recorded there is unlikely to represent snowfall in Filabres.

or vice versa. As several neighbours attested, this unwritten system, which used to be respected 'like law', was becoming increasingly untenable and less respected—one sign of gradual social disintegration. Considering that, as Jessica Barnes (2017) has attested in an Egyptian context, the maintenance of irrigation channels is as much about fostering communal relations that are essential for the delivery of water as it is about 'cleaning ditches', the gradual discontinuation of maintenance practices in Pizarra de Filabres reflects breaches in the social fabric. In similar vein, the ruins of Pizarra de Filabres also seemed to resemble the social and cultural unmaking that comes with depopulation.

Fig. 2.3. Shepherd walking his goats and his little dog along collapsed terraces.

The connection between water scarcity and depopulation was often made, sometimes explicitly, sometimes implied. For example, the first time I met one of my neighbours living in a house below mine (my balcony looked out on their roof), she stood on her front porch leaning over a metal bowl where she was roasting peppers on the ashes of a wood fire. The smell reached me on the balcony where I had eaten breakfast that morning. She asked if I was visiting family and so I told her I was doing research, whereupon I mentioned water. 'Oh, the water…' she said understandingly; a common response. She told me she was born and raised in Pizarra de Filabres and had lived there all her life. 'The changes I have seen.' She told me that there used to be snow until May, and recently there had only been some in

February. 'At the *cortijo* [up on the mountain]', she said, 'we used to have two doors in winter: one of wood, and another one of snow.' Every now and then she bent down to turn the peppers around. Interested in everything she had to tell me, I asked her how the lack of water had changed life in the village. 'How many people have you seen this morning, two? There used to be many more people, families,' she answered, making a direct link between water scarcity and abandonment. Also for Javier, this connection was obvious. As he explained: 'It is one of the reasons. The soil we have here is very rich. So if we had sufficient water, we could look for other crops to cultivate. We could plant potatoes, peppers, tomatoes, for example. But there is no water anymore. It's not that the water is expensive, we could pay for it, it's just that there isn't any. It is also true that the *acequias* (irrigation channels) are not well maintained, because there are no people. It's a vicious circle. There's no water, so the people leave. As they leave, the *acaquias* aren't being fixed. As the *acequias* aren't fixed, the little water there is, is not taken advantage of.' Still, he attributed depopulation mostly to economic reasons, whereas the water accounted for 'maybe twenty percent.'

Others disputed the connection altogether. Jesús, the barman, told me he thought abandonment had no relation to the water. He gave an example of a village near the French border he had heard of, next to a river, that just like Pizarra de Filabres suffered from depopulation. In other words: water was not the problem. The problem, he thought, is that the terraced land cannot be worked with machines. He related this to the intensive olive plantations in Tabernas, where mechanisation is a must if one wishes to stay in the competition in today's market. 'Here on the terraces that is not possible,' he explained. 'If you want to harvest almonds you have to beat them loose by hand, catch them, and carry them on your own back to your car. That cannot be done, not in these times.' Moreover, while water scarcity is integrated into village life in Pizarra de Filabres, it has been so for centuries. It was a common joke (among the men, at least) to say that 'there is no water, and therefore we have to drink beer.' Furthermore, as abandonment of rural areas happens globally, I believe it would be imprudent to ascribe depopulation to the aridity of the landscape. Yet abandonment does seem to underline its desert characteristics: the harshness of life that eventually pushes people to seek their fortune elsewhere, and leave behind a *desert*ed village. Just as aridity has become inscribed in the landscape, through the presence of irrigation channels, wells and *aljibes*, so abandonment has become a feature of it, in the presence of ruins. Dried-out trees and collapsed terraces speak to one another even if causality remains unclear, with both becoming integral to the imagined and experienced landscape, and both infusing the process of (further) unmaking. As I will go on to discuss,

the gradual unmaking of a village also means people need to find ways of living in and between ruins.

Life in ruins

In so far as unmaking produces ruins, Pizarra de Filabres bears the signs of its depopulation in a material way. Most apparent are the uninhabited houses in various stages of decay that can be found throughout the village. Ruins stand between the houses that are still being maintained as hollow spaces, without windows, some without roofs. The white layers of plaster, which I know must have been there, have washed off, revealing rugged dark grey brickwork.

The most common way of referring to the ruins in the village was as '*casas caidas*', literally collapsed houses. Similarly, terraces in state of decay were referred to as '*barrancas caidas*' (collapsed terraces) and farmhouses as '*cortijos abandonados*' or '*cortijos caidos*' (abandoned or collapsed farmhouses). I had not given this phrasing much thought until reading Gordillo's (2014) plea against the 'fetishism' of ruins as heritage and their subsequent separation from the present and the everyday. Gordillo draws attention to the many forms of ruination that are not considered heritage, and argues for an appreciation of colloquial ways of relating to the derelict in daily life. Similar to Gordillo's observations, I found that this phrasing of 'collapsed' was linked to the current material state of being of the structures, as well as their (past) primary function (house, terrace, farm) to the people that addressed them. Importantly, it revealed their integration in everyday life in the village—including their role in apprehending past, present and future.

One instance in which the intertwinement of ruins with daily life became apparent was when I visited the ruins of the *alcazaba* together with José Maria, the village janitor. On our way to the hilltop where the ruins were located, we passed a sign towards the '*Castillo'*. José Maria pointed out that this term, meaning castle, was incorrect. He thought the sign should say '*Alcazaba'*, in recognition of the Moorish origins of the building. As we climbed up the hill, I noticed how steadfastly José Maria was walking ahead of me. As I had difficulty distinguishing slate rocks from eroded walls, he pointed out some of the features of the *alcazaba*: its residential areas, its walls, its *aljibes* (water basins). Looking down into the collapsed roof of one of the *aljibes*, he looked for a way in. 'There used to be some things in there so you could climb in and out,' he said, 'but someone must have removed it.' As we explored the ruins, he told me how as a young boy he used to play there with his friends, and later, as a teenager, they used to come here to hang out. We circled around the hilltop and

looked down upon the village of Pizarra de Filabres, a steep descent of some 150 metres below us. From there we scrambled along the cliff, to a second set of *aljibes* that were partly collapsed. He moved between the rubble in ways I would not have dared to had I been there by myself. 'Watch out for scorpions,' he said casually. 'They could be underneath the rocks.'

After we had crawled out on the other side and were back up on the flat hilltop, José Maria shifted some of the pebbles and rocks on the ground where we were standing, until he found what he was looking for and handed me a small piece of greyish ceramic. He distinguished it as being 'from the Moors', in contradistinction to some other pieces scattered about that were from a more recent past. Once, he said, he and his friends found parts of a human skull. With a grin, he related that he had scared the life out of his mother when they brought it home. He recalled how archaeologists had later come in to study the ruins, with their shards of pottery, utensils and human remains, and how the site had subsequently been turned into a visitor's attraction. The ruins, which had been an integral part of his childhood and material environment, became, as DeSilvey puts it, 'infilled with official memory and asked to perform as an object of heritage' (2017: 2). Fences were placed where he used to climb and descend the rubble. With his physical movement through the landscape, José Maria resisted its conversion into the kind of heritage that would separate the ruins of the fortress from life in the present. In asserting that the ruins were not of a castle, with its Christian connotations, but of an *alcazaba*, José Maria also emphasised the Moorish roots of the village; he could mount the rubble, and pass the fences, precisely because the ruins were, and continued to be, part of Pizarra de Filabres.

José Maria showed me that the remnants of the *alcazaba* were both heritage, reflecting the site's past-ness and thus deserving of respectful preservation, and a site of everyday, physical engagement that could not be separated from the present. In this way, the ruins of the *alcazaba* on the hill, the standing foundations of the *cortijos* along the mountainsides and the collapsed houses in the village itself all form what Gordillo refers to as 'nodes of rubble', which may be of different ages and of different cultural and historical significance, but that together form constellations in the landscape (2014: 20). The question 'What characterizes a ruin, as opposed to an abandoned or damaged structure?' as asked for example by Claire Lyons (1997: 80), becomes obsolete in light of Gordillo's (and José Maria's) critique. I am more interested in the question that Lyons poses next: 'How do ruins authenticate mythological origins, exemplify the achievements of past cultures, transmit moral precepts, and sustain and promote national identities?' (1997: 80). This calls attention to the contemporary political significance of ruins. It is with this in mind that I address life among

ruins in Pizarra de Filabres, or, in other words, the effects and affects of unmaking in daily life.

Nostalgia

Eduardo and I agreed to meet at 10 am at the bar to have a coffee and then proceed to harvest almonds on his land downhill. First we drove by his *cortijo*, a two-room building which he said he also used as a shelter and where he sometimes slept, and where he picked up a net to capture the almonds and a few bags to collect them in. The ceiling was insulated with egg-boxes, and the walls were all fully adorned with collected key-rings, tools, lottery tickets and two pin-up calendars. Back outside, he stretched his arm out over the hill and said that all of the land, as far as a row of *mojones* (landmarks), was his. It was overgrown with stiff, yellowish blades of *Esparto* grass, but uncultivated. 'It used to be,' he remarked. Further down, when we had crossed the road to his *finca*, he said: 'This here, used to be full of almond trees. You could hardly pass through.' In the area where we were standing there was not a single tree. We passed further, making our way through the shrubs. On the way, we passed a large collapsed building. Parts of it were little more than a mount of slate stones, but some parts were still standing: a full two storeys. Eduardo paused to tell me that his family used to live in the *cortijo* together with two other families. They moved out when he was 3 years old, about 60 years ago, when people were 'leaving, leaving, leaving.' Since then, the building had been left to crumble.

We continued walking across a field when he praised the *campo* (countryside): the fresh air, the smell of herbs, the food, the quality of the water: 'everything that the city does not have.' We arrived at the place where the *noria* (well) used to be located. Eduardo pointed at the rectangular hole in the ground that was now covered by a metal grate and mentioned briefly that, many years ago, his grandfather had fallen in and died there. He then pointed out how the donkeys used to walk in circles, and how the wheels turned to draw up the water. He took up some of the wooden planks, parts of the wheels and gears, that were scattered about. 'All of that is still lying here,' he sighed. In this way, each spot had its own memories and stories. At an old, half-collapsed watermill, he told of the donkeys that brought the grain over a stone path that was for the most part overgrown with shrubbery, adding that 'all of this was clean.' Later, when we crossed yet another abandoned plot, he said 'this used to be like a garden.'

We arrived at a narrow strip of land that he still cultivated. It featured an old well in which water, a few metres deep, could be seen. 'That's the luck I have,' Eduardo said. He dug up a

solar panel of about 30 by 40 cm from under a plastic sheet. As soon as he placed it on a hook in the sun, water started running from the old well, through a narrow tube (about 1cm in diameter) into a barrel. We both laughed at the pathetic trickle of water that flowed from the tube, but in three hours, Eduardo commented, the barrel would be full. With this water, he irrigated a few small fields of vegetables (about 12m^2) where he had planted carrots, garlic, peppers, onions, and aubergines. We then moved on to harvest the almonds. We placed the sheet underneath a tree, and hit its branches with sticks to make the ripe almonds drop. We collected them in the sacks Eduardo had brought, and moved to the next tree.

Fig. 2.4. Villager walking by a collapsed *cortijo*.

After we had collected the ripe almonds from five or six trees, we passed the collapsed *cortijo* again on the way back. I looked into an open doorway and pointed out to Eduardo that there was still some furniture inside. Without much hesitation, he went inside. I had remained outside, unsure how stable the structure would be. He started inspecting the wooden objects. There was a ladder, a trough from which, he said, the donkeys used to eat, and a wooden basket of which Eduardo could not remember the name but which had been used to transport stones on a donkey's back. By chance, I had seen the object the day before in a dictionary of regional phrases made by two sisters, Encarna and Marcela Martínez (2015), and was able to assert that it was a *pedredera*. 'What do you think when you see all this

abandoned and collapsed?' I asked when he had stepped back into the sunlight. Eduardo sighed, defeated, rubbing his thumb and index finger together as if to indicate the costs, and just said: '*Es una pena'* (It's a pity). As usual, he was using few words to express himself and made a melancholic impression.

More specifically, Eduardo was nostalgic for the life that used to be in Pizarra de Filabres. Perhaps this was due to the attention I was giving to the rubble we encountered along our way through the partially ruined landscape (the *noria*, the *cortijo*, the terraces), but his affection for collecting items of the past made me think my influence on him was marginal. Back at his apartment, he put some good *jamón* on the table, together with roasted chestnuts and olives, and poured me a glass of last year's homemade wine, a sour-sweet drink that I categorised somewhere between port and vinegar. While I politely declined a refill, I admired the memorabilia he had collected in his home. There were collections of stamps, bullets, keys, photo cameras, old tools, a whip, pins, thimbles, a goat bell, and much more. He explained what nearly every object was and how it had been used. It appeared to me that he had abandoned the farmhouse, but had also taken it with him to his apartment, aware of the process of abandonment that was going on and of his own part in it. Abandonment, in this perspective, seemed overwhelming and all-encompassing. Just as interlocutors would tell me that there was 'no water anymore', even though there clearly was at least some, the unmaking of the material and social structures of the village, was often narrated with a fatalism that portrayed partial loss as total. Nostalgia is a sentiment for something already lost, even though life in the present would suggest otherwise.

Others resisted this politics of nostalgia, arguing for example that an uninhabited village is not the same as an abandoned village, and that it would only be truly abandoned if no-one remembered or cared about it. Juan Carlos, for example, who, as I described above, had reflected on his own role in abandoning his family's farmhouses, and who had explicitly used the word 'abandoning', later wrote to me in an email that: 'I do not feel nostalgia because I never abandoned, abandon, or will abandon the land that I love. I live them with passion every day, every minute and every second.' In light of this, my neighbours' engagement with ruins was not just about lamenting a vanishing past. In literature and arts, ruins have long been the object of romantic reflection, addressed (and fetishized) as material traces of the past that together tell of civilizations that have come and gone through the centuries. In this sense, ruins can be seen both as creating a connection with a past that is fantasised as legitimising the present, and as relegating the past to the past, establishing the present as somehow emancipated from it. Roth writes that 'the ruin appear as an anachronism: as a

message from the past more than as an active site of life in the present.' (1997: 8). Speaking of ancient, valued ruins, in which past-ness is emphasised through the physical separation of ruins from everyday life, he embraces the separation of past and present materialised in ruins. Here I tend to disagree: living in Pizarra de Filabres, and speaking with its inhabitants, showed me that ruins were integrated in the everyday and engaged as being of the present. Examples of this can also be found in Gordillo's work, where he discusses the present activities in ruins as well as their capacity to 'haunt' from the past. In his own words, 'ruins have an active presence that shapes the configuration of the present' (Gordillo 2014: 32). In similar vein, Navaro-Yashin describes the affective force of ruins upon people living with and among the ruins of war. 'How could this debris not hurt?' she asks, and 'how could it seem normal?' (2012: 132). Ruins are not only signifiers of a lost time, but take on renewed significance in the present moment.

One aspect of this renewed meaning is the simultaneous sense of absence and presence that ruins can convey (Gordillo 2014). The material forms of houses, terraces and mills that were once integral parts of village life posed a strong, even inescapable confrontation with the absence of those people and those forms of life. In this sense, the ruins of Pizarra de Filabres were not just remnants of the past, but propelled that past into the present. They allowed, and at times even forced, my neighbours and myself to see what simultaneously was and was not there. This tension of past and present resonated through the nostalgic environmental relations of people like Eduardo and in the entitled movements of people like José Maria, the gardener. It also became apparent in the theorisations and narratives of those who used to own buildings and objects, and those who still used them. For example, Jesús, the bartender, told me with a big smile how they used to organise dancing nights in the cellar space. Those times were over. He looked outside, through the chain fly screen in the doorway, and pointed at the houses on the opposite side of the square. 'All these houses are empty. I still know of each house who used to live there.' These stories, often narrated in terms of what used to be versus what is now, were narratives designed to fill the social and material voids of everyday life in the village. I turn to this sense of emptiness next.

Tranquillity

If any single word could capture the state of social life in Pizarra de Filabres, it would be *tranquilo*. Villagers often used this word to describe the village, and I noticed that it assumed an array of meanings. Initially, I associated it with the English equivalents of 'quiet,' 'peaceful' or 'calm,' and assumed it had positive connotations. One morning, for example, I was

chatting with two women on their way to the plaza, who used *tranquilo* to describe the sense of safety in the village: how people would leave their doors open and nothing would happen. 'Pizarra de Filabres is not like other places,' they added. One of them seemed to remember some disturbances in the past. 'Wasn't there something that time…?' to which the other responded that 'they were not from here. They came from Tabernas to steal solar panels.' She paused for a moment. 'Oh, the chapters of a lifetime.' On another occasion, I went up one of the streets in the upper borough and met a woman who greeted me by saying 'look at this guy who has found the end of the world.' In our conversation, she praised Pizarra de Filabres for its fresh air, the calm atmosphere, the relaxation. 'It's very *tranquilo*,' she said, then, lowering her voice, 'there are no moors, no negroes, no gypsies. This is the last place where you have any of that.' Racism aside, she was alluding to a sense of security and familiarity, as well as reflecting the popular imaginary of the coastal plains of Almería as an ethnically tense region (see Chapter One). While I tried to swallow this brief expression of xenophobia, she stressed that the upper borough was even quieter than the rest of Pizarra de Filabres. 'Where I live, there is no movement at all. Below, at the square, maybe a little more.'

However, I soon noticed that besides familiarity, security and peacefulness, *tranquilo* also had negative connotations for the villagers. When I mentioned that I found Pizarra de Filabres *tranquilo* (by which I meant peaceful) in a conversation with Encarna, she pulled an ugly face, as if disgusted by the word, and said '*muy tranquilo!*'—very much so! She was walking with difficulty, and for her, the tranquillity meant facing loneliness in old age. Several neighbours and family members would come by her house regularly, and she would make her way to the market in weekends, but she also wondered out loud what she was doing in such a large house, all by herself. 'There are very few people here,' she said and, as she often did, finished her sentence with 'Life is tough.' When I left, she welcomed me to come back later and said, 'I'm here. I'm not going anywhere.' She pointed at the flowers by her front door and, referring to herself in the plural, said, 'We're now cleaning the entrance, and that's where we're at.' Quiet, Encarna taught me, could also mean uneventful, boring or sleepy. It summarised a sense of standstill, the 'stuck-ness' of a life that seemed suspended between the collapsed houses and terraces.

The only times when the village tended to appear a little more lively was at the weekend and on special occasions, such as communal hunting activities, or when the village *fiesta* is held in August. On the weekends, some people who have ties to Pizarra de Filabres would come from the coastal regions where they work during the week. On Saturdays, a small

market was staged in the village square. It often consisted of a cheese van, a vegetable stand, a van with household products, a stand with nuts and sweets, and a fish van. Not all vendors 'came up' to Pizarra de Filabres every week. Passing through the village on weekends was always interesting, in the sense that the number of encounters with neighbours increased significantly, both those who came to visit the village over the weekend, and those who lived there permanently but ventured out more with the increased activity around them. Picture grandchildren playing on a set of swings, families hanging out in their yards, neighbours tinkering with an old motorbike, someone standing on a rooftop to fix a TV antenna: weekend activities. Several houses would show signs of life that otherwise remained shut during the week. In this sense, the relatively noisy weekend (the sounds of children playing stood out immediately) underlined what was not there during the week: the absent presence of family life.

Every night as evening fell, at the sound of the 19.30 bells sharp, the streetlights turned on. They were few and far between, and appeared to have more of a decorative purpose than to provide light in the streets. The hollows of the ruins were a little scary at this hour. But the worst, I think, was the silence. How comforting to hear voices and the clatter of silverware inside the houses, how eerie when the sound was absent. This discomfort must be what Maria, my landlady, was referring to when she was talking about the long winters. It is not just that the village gets boring, it gets uncomfortably silent.

Tranquility, then, both in its positive connotations of safety and peacefulness and in its negative connotations of absence, silence and emptiness, was a condition, produced in the ongoing process of unmaking, that captured life in Pizarra de Filabres in all its aspects. It crept into social relations, it lingered in the voids of the built environment, it coloured memories of the past, and, as I will suggest in the following section, it blurred visions of the future. For, as Dzenovska (2018) has suggested, emptiness is an in-between condition: a lasting state that is as much about absence as about a pressing uncertainty over what the future holds.

A future unmade

What future is there for a place that seems bound to inexorable abandonment? While the attention paid to how ruins relate to the past is important in understanding the temporal work of ruins, I would like to underline two different, and simultaneous, temporalities at play. The first, which I have already elaborated on, is the *duration* of unmaking itself, not as an instant but as protracted and enacted in the everyday. The second is a sense of *futurity* that

may be reflected in ruins, to underline that unmaking can be aspirational or projected, even if dreaded.

The future in Pizarra de Filabres, needless to say, was coloured by a shrinking and ageing population. On one hand, in our conversations villagers were actively assessing the future as much as they were evoking the past. Just as they were expressing how things used to be, they expressed estimations and expectations of what could become. Sometimes these were explicit, such as when Javier, the mayor, said that:

> The majority of people who live in the village are very old. There are hardly any young people. Now, people still come up to visit their parents. But when someone dies, the house is closed and like that, with the death of the grandparents the children and grandchildren also stop coming. So that is very, very sad. But clearly, a village that does not have young people, is a village that is set to be abandoned to die.

More often, the imagined future was encapsulated in references to hopelessness. 'What does youth have to do here?' my landlord said. He proceeded to tell me about his children, how they had gone off to Almería to study and gained a steady income there. 'Here, life is to be lived at ease. But for young people? They have nothing to come for. Here, you cannot aspire.'

On the other hand, I got the sense that the future was somehow unspeakable, as if the finitude of village life meant there was no future to discuss. In this sense, unmaking entailed a kind of anti-futurity, an outright rejection of the category of 'future'. My question, 'how do you see the future?' was often answered with a remark that the village would probably be fully abandoned in a few decades' time. The follow-up question, 'what will you do?' was often left unanswered. If there was no future, what answer could possibly be given to satisfy the question? One afternoon, Jesús, the barman, and I were discussing the issue of depopulation in Pizarra de Filabres. He gave a clear prospect of the village: 'In 10 or 20 years, there will be nothing.' He sought to verify with Rosario: 'right, Rosario?' But Rosario had turned her back on the conversation and withdrawn into the kitchen behind the bar. As usual, she avoided the topic of abandonment.

Having articulated this fatalistic vision, Jesús commented on depopulation, saying that there used to be at least three bars on the plaza alone. Now there was one in the entire village, and one uphill by the swimming pool at the weekend and in the holidays. One by one, the other bars, as well as the shops, had closed. His bar used to be full, Jesús remembered, always with people standing along the long metallic counter, playing billiards, or sitting by the glass extension looking out over the valley. He recalled again that they used to organise parties and dances downstairs. With more and more people leaving, and fewer people ordering, he

noted that it was becoming harder and harder to keep the bar open, as many of the regular expenses remained. At this point, he confessed, they had not closed the bar because Rosario had a year to go before she could retire as well. However, he recognised that this bar, too, would have to shut its doors at some point. Not that they would close the bar immediately on her retirement. When I asked what he would do if the bar closed, he said he would be 'waiting for death.'

In this way, the 'closed houses', in various stages of decay, that Jesús had referred to, could be signifiers of the future as much as they were of the past. As a warning, ruins can be framed in order to portray a tentative future (Edensor 2005; Merewether 1997). For residents in rural Latvia, Dzenovska has observed, 'the ruins were not only nostalgic objects of the past and the past's futures but also harbingers of the dystopian futures inherent in the present' (2018: 19). Just so were the ruins in Pizarra de Filabres a foreboding of the continuing spread of unmaking. They were a materialization of what could become: the material forms that the intact houses, and their associated familial and communal coherence, could turn into, as well as the absence of inhabitants that was expected to transpire.

In this sense, Pizarra de Filabres appeared to me as a village suspended in unmaking. For Akhil Gupta, ruination is not a mode of becoming something else, but 'a condition in its own right' (2018: 70). Gupta speaks of a form of ruination that appears when large infrastructures are in a state of lingering 'construction' (supposedly awaiting 'completion') where the presence of the unfinished 'stands neither for senescence nor for anticipation, but for the suspension between what was promised and what will actually be delivered' (2018: 70). Similarly, Thomas Yarrow analyses the unrealised promises of a resettlement project, abandoned before completion, in Ghana. In the ruins of only partially constructed buildings and infrastructures, he suggests, ruination appears as the paradoxical relationship between 'the actuality of existing circumstances and the imagined futures that continue to be projected from the unrealized plan' (2017: 568). For Yarrow, the ruins of infrastructure are not so much eliciting the memory of what existed in the past, as pointing to what might have been, or could still become. Even though ruination in Pizarra de Filabres does not appear to relate to an unfulfilled, promised future, as in modern infrastructure, a similar mode of suspension can be recognised.

Unmaking, in Pizarra de Filabres, produced an 'uncanny present' (Bryant 2016), leaving inhabitants in the gap between past and future. The uncanny present, for Rebecca Bryant, is a temporal mode 'when the inability to anticipate the future makes the present-ness of the present visceral and immediate' (2016: 29). In moments when the future loses its teleological

orientation, when it signifies an unforeseeable breach with the present, Bryant suggests, the present itself becomes suspended and intensely distinctive. This is similar to what Lauren Berlant calls an 'impasse':

> The impasse is a stretch of time in which one moves around with a sense that the world is at once intensely present and enigmatic, such that the activity of living demands both a wandering absorptive awareness and a hypervigilance that collects material that might help to clarify things, maintain one's sea legs, and coordinate the standard melodramatic crises with those processes that have not yet found their genre of event. (2011: 4)

In Pizarra de Filabres, the prospect of total abandonment appeared to signify just such a discontinuation of life as it was currently known, leaving people with an acute awareness of the present. This present was filled with temporal markers, including the regularity of the church bells, references to seasons of harvest and irrigation, the coming and going of snow, and, pertinent to this chapter, the material presence of ruins.

However, Bryant also suggests that 'the uncanny present appears to portend the future to the extent that it is either a repetition or a return of the past' (2016: 21). This, I find, was not strictly the case in Pizarra de Filabres. The strangely unfamiliar present did not figure the future as a return or repetition of the past, but as past, present and future all crumbling into nothingness. Surely, evoking 'how things used to be' provides a particular mode of apprehending 'how things may become'. As the past was continuously evoked, the ruins of social and material forms, brought into the present as how things used to be *but not anymore*, challenged the capacity of the future to become the future. As the past infused the present, the future was unmade. The tranquillity of this uncanny present provoked images of a foreclosed future in which the villagers, and with them the village, including its buildings and terraced landscapes, would not participate (cf. Dzenovska 2018). To put this differently, living through the process of unmaking of the social and material structures around them, which required a temporal reflection from neighbours, also involved the unmaking of the future itself. This temporal reflection traced not only the past, but also the future, even when this was denied as by Ignacia, my downstairs neighbour: 'There is no future.'

Maintenance

In the absence of a future, the present becomes suspended and heavily invested in the past. This resonates with Bryant's depiction of the uncanny present, which, she suggests, is 'produced by futures that cannot be anticipated' (2016: 20). Based on my observations of the way the future is apprehended in Pizarra de Filabres, I agree with this statement. However,

I also saw that suspending the present requires ongoing engagement in the everyday: the work of maintenance. Throughout my fieldwork, I was impressed at how well-maintained Pizarra de Filabres appeared. Brightly whitewashed houses stood along clean streets of smooth flat tiles, fitted with retro streetlights with classic cast-iron curls. In front of several houses, on the porches where large, colourful flowers filled the air with a sweet smell, women could be seen brushing the tiles, collecting old leafs and dust. Numerous street cats sought the warmth of the morning sun, but their faeces were nowhere to be seen or smelled. The village was pleasing to the eye, nose and ear. In between the white plaster, the village's ruins formed black, hollow spaces. '*Se vende*' (for sale) was sometimes written on the wooden doors or on cardboard signs. They evoked, I thought, an image of isolated, rotting teeth in an otherwise shiny white denture. It was as if the villagers of Pizarra de Filabres had been brushing their remaining 'white teeth' ferociously: not to 'heal' the parts that had succumbed to the 'rot' of ruination, to borrow a phrase from Stoler (2013), but to prevent the rot from spreading: maintenance as containment of ruination.

On one of my morning walks, I heard the sound of water and followed its flow through an *acequia*, curious to find where it would lead. Some parts were difficult to cross on foot or without getting my feet wet, but for the most part I could walk on the edges of the channel itself. Along this route, I came upon a woman with a shovel who was scooping leaves and twigs from the running water. She wore two white caps on top of each other, a white lab-coat and green rubber boots. She told me she came from the village but lived in Tabernas, and commented on her own actions: 'In the past, everyone used to clean their own part [of the channel adjacent to their plot], but not anymore. Some parts are no longer being maintained at all.' 'Because they have been abandoned?' I asked. 'Yes. Or because they don't care for it anymore.' She pointed at the neighbouring plot: 'And not just for the water, also for the fire.' I looked around and saw that the terrace she was pointing at was knee-high overgrown with hard, dried-out bushes. 'This would catch fire in no time.' She nodded. Leaning on her shovel she said: 'You know, we did not know much. But we always made sure things were in order.' I pointed to the collapsed terraces on the opposite side of the hill. 'Like those terraces?' She squinted her eyes a little to look over the valley. 'Yes. Before they would rebuild them. They've just let them fall.' She pointed out how the landscape bore the signs of ruination everywhere, in its collapsed terrace walls, its overgrown agricultural land, its clogged up *acequias*. It confronted us with how things had been, in a past of cultivation and maintenance, and how things used to be done, in communal management systems that failed with the absence of people.

My landlord was also concerned with maintenance. I encountered him one afternoon on the village terraces. He was collecting dried and cut branches in heaps on the ground. 'As we're retired, and don't have anything else to do, we're just tidying this up a bit,' he explained, referring to himself in the plural.

> Here, we grew good potatoes. Once. By now there's little water. So, previously, everything was cultivated. Summer potatoes, winter potatoes, vegetables, peppers, tomatoes, everything. This was the pantry of the village, we called it. Here, there would always be a little water. Nowadays, no longer. Some terraces are being maintained, but 90% have been lost.

Continuing his casual talk, he seamlessly weaved together his own activity on the land and the ongoing transformation of the landscape, including past aspects of village life, an increasing sense of water scarcity, and the process of depopulation.

> There used to be many families. Clearly, the people had to go, to where they could. Well, I also left. I had a taxi in Almería for forty-eight years. I didn't go abroad. Now we have our house, and I live here almost permanently. I only go down to Almería to visit. I have an apartment there, where my son lives.

Returning to his work on the land, he remarked that: 'It's not as if this is something I must do. It's more of a hobby.' It occurred to me, though, that perhaps he was not just spending leisure time; that there was more at stake in the project of maintenance. 'It would cost me a lot to abandon it,' he said. 'I intend to preserve it as well as possible. And to keep living. I have a bit of my pension, my wife as well. Within what you can ask for, I am doing fine.'

His preoccupation with maintenance also came up in relation to the apartment I was renting from him and his wife. The building stood half in ruin; the other half was where I lived, of which the ground floor was renovated and habitable, though the upper floor had not been refurbished. Upstairs, the roof was sagging and looked in bad condition. I wondered how it would affect the building as a whole if the top layer was kept in disrepair. But I was more impressed by the remnants of previous lives that were on display there. There were some tools such as a chainsaw, which the owners had put there to use the apartment as storage space. But there were also books, brown and dusty, traditional water jars, suitcases and plastic flowers; a blonde doll, a near-empty bottle of liquor, a hat: all things that belonged to a previous life that they were no longer there for. It appeared to me like a place in the process of abandonment. I could see, touch and smell it, and it was still owned by my landlords, and yet it had been left there to be forgotten. 'We bought the house in a moment of madness.' My landlord said. 'I fixed it up a bit. It has a total surface of almost five hundred

square metres, but only one floor has been fixed.' He told me he had been planning to renovate it, correcting slightly: 'When I have some money.' He explained that it was expensive to build on this site because no trucks or even cars could come close to the house. Yet in the midst of abandonment and decay, he still spoke of a project of renovation, which in itself was hopeful. But if he really thought he would ever finish (or rather re-start) the project, I could not be certain of that.

Maintenance, in Pizarra de Filabres, was a way to confront abandonment, and formed an integral part of the process of unmaking. This worked not only materially, resisting decay, but also socially, keeping people occupied and invested in the place. This resonates with Barnes' point that the shared labour of maintenance 'maintains not only the material but also the social order' (2017, 160). For those in the village who are unemployed, for example, the municipality offers work for three months a year. This means that those inhabitants can have an income tied to the village, but it also means the pavement, the flower beds and the cemetery are all very well kept. Maintenance emerges as a form of care, restoring and securing value in time and place. The material form (well-maintained houses and streets) presumes and requires the presence of people, and thus signals a continuation of life.

I asked Javier about other strategies through which he, as the village mayor, had sought to confront the issue of depopulation. 'We, from the municipality, have done an infinity of things,' he emphasised, to attract people to Pizarra de Filabres. Over the last two decades, the municipality had provided free sports facilities; a restaurant that opened on weekends 'so that, when people come up to Pizarra in the weekends, they at least have a place to eat, to have a beer, and so on'; a new social club for young people that had closed again by the time I did my fieldwork; a series of residences to rent (*casas rurales)* to attract rural tourism; a theatre where once a month free activities and performances were scheduled; a milking station for goats and sheep, the milk of which was exported to France 'to make the famous French cheeses'; guided excursions in the region four times a year; and a hunting ground that spanned the entire municipality, also aimed at attracting youth. Javier emphasised how exceptional these facilities were for a municipality as small as Pizarra, and that all these efforts had been made 'so that things wouldn't get worse… Just so the village does not die.'

We were seated on a wooden bench in front of the municipality, looking out over the village square where night had started to fall. Javier looked onto the square, and, as if having listed all these initiatives to maintain life in the village confronted him with the despair that rang through them, he continued:

> But why do people not come? Why is this house closed, and that one closed? We are trying to make sure that the village does not die. We are doing everything we can. But clearly, the problem is that there is nowhere to make a living. And the truth is, I feel unable to see what we could do. If anyone would only approach me with an idea… We have spent a great deal of money in an attempt to make sure that the people we have don't leave us. But it's not enough. It's very easy to close a school, but it is very difficult to create a new one. There would have to be many children, and the administration is very difficult too. I am telling you this because the municipality cannot take any more initiatives. I go to all the forums there are, to all the reunions, to look into a future, what could we do? And we do not find it. I'm telling you sincerely, we can't find it. Every time an idea comes up, we push for it. We have done everything in our capacity, but we are seeing that people are not coming back.

To look into a future. As the mayor was eager to point out, there was still some hope for a future, even if this was meagre. Hence, I should also be very careful now in describing this village as in a process of unmaking: it is not up to me to leave it for dead. But I do not see unmaking as inherently hopeless. As Felix Ringel (2014; 2018) has pointed out, hope not only centres on beliefs in the emergence of something new ('the hope of promises of change'), but in how people continuously and consciously maintain the forms that make up their lives ('the hope of endurance'). This also reflects Berlant's assertion that hope is 'an orientation toward the pleasure that is bound up in the activity of worldmaking, which may be hooked on futures, or not' (2011: 14).

In this sense, maintenance is about resisting inexorable abandonment. It materialises, solidifies, the presence of people in the present, so as to project their presence into the future. This produces what Ringel calls a 'temporal and hopeful logic of endurance' (2018: 150). He criticises academic 'imaginaries of change', reflected in the recent proliferation of 'emergence' and 'becoming' as conceptual approaches to social practice (2014; 2018). He contrasts these with the experience of his interlocutors in a German site of urban depopulation. For Ringel's interlocutors, change 'consisted of the old *not* disappearing – as was predicted' (2018: 165). Against all realistic expectations, and against their own better knowledge, he shows, his interlocutors sought to maintain their present forms of life. This, he states, is 'a form of agency that […] demands the impossible: it transcends the present by striving to make this very present practically endure against all odds' (2014: 54). This echoes Berlant's comments on 'slow death', where the very reproduction of life as it is currently known is at stake, but 'agency can be an activity of maintenance, not making' (2011: 100).

Maintenance, then, is not simply a matter of keeping things as they currently are, as if fixed in an unchanging present, but is aimed at keeping things going, securing their presence into the future. It challenges the binary between making and unmaking: sitting somewhere

in between, it is simultaneously both and neither. In Pizarra de Filabres, this meant maintaining the village in a state of unmaking: the uncanny present was produced through maintenance as much as by the perceived absence of a future. Leaving the process of decay to go its course would mean giving up on the village and its inhabitants; but keeping decay from happening required continuous and repetitive intervention—an intervention that produced a durative, suspended state of being. The past of a lively Pizarra de Filabres might not be recovered, but at least temporarily, a future of further unmaking could be held off in prolonging the present.

Fig. 2.5. Ruins and maintained buildings standing side by side underlines the importance of maintenance to prevent the 'rot' from spreading.

Conclusion

In this chapter, I have explored the lived reality and conceptual implications of unmaking. Initially, I sketched a portrait of Pizarra de Filabres, to give the reader a tangible and rich feel for the social, material and historical lay-out of the village. The portrait, however, is not static, as a landscape framed in place and time, but both fluid and fragmented. I have argued for an understanding of unmaking as a line of becoming, an active and productive process. A portrait of a village in the unmaking is inevitably a portrait that continues to change.

Unmaking a way of life does not happen from one day to the next. Dismantling a village is such a grand project, with all its heritage, culture, socialities, material forms, and yet it is so mundane, infused in everyday life and marked with the lines of becoming of people and landscape. It involves a historical reflection upon what it is that is being dismantled, and happens in dialogue with that history. This is a deliberative process, and it was, generally, with great sensitivity that villagers themselves engaged with it. This suggests that the study of unmaking requires an unlearning of what counts as cultural production. Taking a close look at this process shows that when social and material forms are unmade, other forms emerge. It also reminds us that the opposite resonates as well: when something is made, something is also unmade or remade. Unmaking and making, then, form a particular dynamic of engagement within the broader frame of social and environmental change.

How to align this plasticity with the sense of 'stuck-ness' that Pizarra de Filabres seemed to be caught up in? This 'stuck-ness,' I have shown, involved a culturally charged sense of tranquillity (simultaneously an eerie emptiness and a comfortable familiarity) that emerged from the impasse between unmaking and maintenance. I have defended unmaking here as a line of becoming, but I also recognise Ringel's (2014; 2018) critique of such ideas and agree that to see unmaking only as progressive decline overlooks how the present can become suspended. However, to see only the 'uncanny' quality of the present would overlook people's temporal reflection and their active, often self-aware participation in the project of unmaking. Both temporalities—'stuck-ness' and 'becoming'—offer valuable insight into how people engage and live with change. Unmaking can account for both, as a line of becoming that produces modes of suspension. The tranquillity and nostalgia, which I found characterised a life suspended in and between ruins, might suggest that unmaking is a narrative that challenges dominant tropes of progress. But this is not the case. Where becoming—a view of unfinishedness—assumes there is something to become, unmaking can also illuminate instances when what is 'to become' is negatively defined, in terms of what *is not*, *not anymore*, or *not going to be*. Ruins do not form an antithesis to progress: rather, they are part of it, materialisations of its excesses and shortcomings, and as such become part of the iconography of the landscape.

In this chapter, I have both offered a description of everyday life suspended in a process of abandonment and embraced this unmaking as a productive engagement. Looking at the interplay between what is lost and what is newly created, I have argued for an understanding of unmaking as a form of cultural production. Unmaking, I have shown, does not strip a

place of value, but inscribes it with different values: value is created as much in preserving and maintaining as in discarding and rejecting.

This is ultimately a question of the value of loss. What possibilities emerge when we try to, in DeSilvey's (2017: 3) words, 'understand change not as loss but as a release into other states, unpredictable and open'? Such a question works both against conservative preservation of the status quo, and in recognition of the continuous processes of transformation that characterise the socio-material world. 'Why should we care if a language disappears?' Simon Goldhill (2018) has asked, pointing to the (hidden) normativity of value and loss: 'the ideological assumption that homeostasis of nature is a good thing, and must so be. What is, must remain, or something terrible has happened.' Why should we care, I might add, if a village like Pizarra de Filabres disappears? If all its inhabitants were to leave the village because their lives could be better elsewhere, whose loss would abandonment be? The question turns out to be difficult to answer without appealing to 'continuity as a necessary good.' However, such an embrace of loss-as-change can also form a blind spot for the triumph of normative ways of living under a regime of modern progress: a modern rejection of anything 'traditional', reframed as open-ended change. For the people who live in Pizarra de Filabres, or who spend their weekends there, the sense of loss is real. Hence, I am also concerned with the opposing question: what does this appreciation of change obscure from view?

Perhaps the 'good' that can pose an answer to the question 'why should we care?' lies neither in the idea of continuity nor in the idea of loss-as-value, but in an appreciation of the people and the dynamics involved in the process itself. Such was the sense of responsibility and affection that Juan Carlos felt for his family's abandoned fields; José Maria's appropriation of ruined space; Eduardo's nostalgic collection and display of tools; the mayor's many maintenance projects. Each of these people, in their own way, took part in the project of unmaking. Each also experienced abandonment both in its active sense, reflecting on and recognising their own implication in the project, and in its passive sense, narrated as an unstoppable process that had befallen them and their village. The nostalgia and fatalism with which their stories were told reflect the totalising sense of loss, while in everyday movements and interactions with the landscape, this total loss was also resisted and proven inaccurate. The inevitability of (total) loss was not disabling, at least in everyday life.

Finally, seeing unmaking as a flipside of making and ruins as inherent to progress, is similar to the viewpoint taken by Walter Benjamin's (2003[1940]) aforementioned Angel of History. Facing the past, the Angel can only see ruins as the outcome of the destructive force

of progress. Before him, he sees debris piled upon debris, wanting but being unable to intervene. Perhaps, I would suggest, a perspective of unmaking might interfere in the Angel's helplessness, help him see through the debris on which he is fixated, and see instead the creativity of the people who move amidst it.

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The day before I was to leave Pizarra de Filabres, I went down to the bar for a coffee. It was a Saturday, and the market stalls were in the village square: the vegetable stand was there, the cheese vendor too, and the van with household products. 'You're leaving tomorrow?' asked Antonio, who lived a few houses uphill from my apartment. I confirmed this. 'Well, at least we had one more neighbour.' Jesus, the barman, joked. 'Yes, one inhabitant more in Pizarra de Filabres,' Antonio added. We all realised that my visit to Pizarra de Filabres (for it was a visit after all, even if a protracted one) would not alleviate the difficulties its inhabitants faced in the near future, and in their everyday lives. Later, someone joked that it was probably for the best that I left, because 'otherwise you will become just like us, drinking beers without tapas,' referring to the routine and seemingly unchanging situation in the bar, and the uncanny present of the village outside.

Before I said goodbye to my neighbours, I told them I was moving to Níjar, to the Plastic Sea, to study the greenhouses. I wanted to learn more, as I will elaborate in the next chapter, about the significance of these greenhouses in the lives of farmers and for the transforming landscape as a whole. My remark evoked a vivid conversation among some of the men present, about the use of pesticides and racial relations in the coastal region. Amused, Rosario, the barwoman, turned to me and said: 'So much tranquillity as here, you are not going to find.'

Chapter Three:
Containing progress in the greenhouse

In a landscape covered in plastic, where life moves under, above and between semi-transparent sheets, the greenhouses tell a multifaceted tale of what has become—a historical narrative of the transformation from 'desert' to 'orchard', brought to completion. The once rapid development of greenhouses in the second half of the twentieth century is itself argued to have reached 'maturity' (Sánchez-Picón 2017). Meanwhile, the 'wild' Almerían frontier of post-Civil War Spain seems to have been tamed, or is at least in the process of being so. However, the Plastic Sea is also a site of continuing innovation. 'Efficiency,' 'productivity' and 'improvement' all remain dominant tropes that reverberate like the wind through the plastic sheets, implying progress and linearity, moving only and ever forwards. Technological interventions have propelled the region's movement through time, and they continue to do so. This 'ongoing-ness' of modernity interests me here. Modernisation does not exclude the possibility of further modernisation—on the contrary, it presupposes it. So what comes next, after the frontier, after the boom? And what happens to modernity's temporal frames of becoming?

In this chapter, I turn to modernity—more specifically the multiple processes of modernisation—as a set of ways of making and unmaking landscape. I have already touched upon this in previous chapters. In Chapter One, I referred to various cultural attempts to 'civilise' the desert. The region's imagined landscape, I showed, is one where the desert falls outside of the normative categories of the modern, the contemporary and the European. It was in this first chapter that I introduced the Plastic Sea through its representations in the television series *Mar de Plástico*, illustrating the intertwinement of processes of modernisation and Europeanisation as well as the stubbornness of the desert imaginary as somehow 'uncivilised' and 'anti-modern'. In Chapter Two, I then turned to the destructive capacity of modern progress as expressed in the material and social disintegration of a mountain village. Specific forms of village life, I suggested, have been diminished by the myth of progress,

which leaves both material ruins and visions of dystopian futures in its wake. While depopulation is not specific to Almerían landscapes, this particular form of abandonment coincided to a large extent with the agro-economic boom in the late twentieth century. This third and final chapter returns to the Plastic Sea, where the boom first occurred, to look in more detail at the material forms and meanings embedded within the modernisation processes that drove it.

The reader will notice that I use 'modernisation' and 'progress' interchangeably, in the sense that modernisation refers to a progressive (and thus unidirectional) transition from the 'pre-modern' or 'non-modern' to the 'modern'—a particularly diffuse destination which, as I will explain later, may never be reached. Here as elsewhere in this thesis, I take modernisation to be an intentional mode of making and unmaking that mediates between the imagination of landscape (e.g. the 'non-modern' desert) and its material engagement (e.g. the processes of un/making that occur through greenhouse construction). My approach takes its cue from the double volume *Arts of Living on a Damaged Planet*, co-written by Anna Tsing and several others (Tsing et al. 2017). Here, Tsing and her colleagues base their critique on two essential building blocks of modernity: modernity as a particular set of environmental relations, and as a particular set of temporal experiences and imaginaries. In the former category, the authors counter modernisation as a project of separating 'nature' and 'culture.' Modernisation, they contend, has not produced any such separation, but is instead infused with interspecies assemblages and interdependencies of different kinds. In the latter category, they challenge the notion of modernisation as a singular and linear temporal trajectory. Modernity does not fully detach from the past, they suggest, since past forms leave traces and continue to linger in the present. The structure of this chapter resonates with these two critiques. I have added a third, which is voiced in the chapter's final section. This section addresses technology as integral to modernisation. According to this logic, technology is introduced as a 'solution' to complex social and environmental problems. The belief in technology is a dangerous 'dream of modernity' (Swanson et al. 2017: M9) where environmental and temporal concerns coincide, and technology is posited as a heroic triumph of 'man' over 'nature,' as well as a generative vehicle that allows for forward movement in time.

Several recent critiques of modernity have come from postcolonial contexts, which often advertise the struggle to reconcile cultural diversity and local histories, on the one hand, and the global imperial legacy and appeal of western modernity, on the other (see, for example, Appadurai 1996; Chakrabarty 2002; Deeb 2006). That the category of modernity (as well as

its various fabricated antitheses: the 'non-modern', the 'pre-modern', the 'traditional', etc.) does not always fit neatly into postcolonial contexts has been linked to the problem of describing non-European socialities 'through the filter of European-derived social sciences and political philosophies' (Chakrabarty 2002: xxiii). The very delineation of 'First World,' 'Second World' and 'Third World' for much of the Cold War period was premised upon varying degrees of modernisation, with the capitalist west representing itself as the spearhead of history and the post/colonies seen as lagging behind, 'still bound up in "tradition" and strangled in [their] efforts toward modernization' (Wolf 2002: 370). These tensions need not be postcolonial and/or non-European in character; indeed, to presume the 'modern-ness' of Europe *as inherently so* equates modernity with Europe, glossing over the specificities of European histories and societies themselves (see Chapter One for an extended discussion of the relationship between modernisation and Europeanness).

What critiques such as these have convincingly demonstrated is that modernisation works as a mechanism of differentiation between the powerful, legitimate and central, on the one hand, and the weak, invalid and peripheral on the other, reinforcing inequalities within societies as well as on a global scale. They have also added to the understanding that there is no single modernity out there to which societies can somehow conform. Rather, modernity itself is pluralised, and alternative modernities are recognised to have emerged in different parts of the world. 'It is important to remember that people can and do draw on many different discourses about being modern simultaneously,' Lara Deeb (2006: 15) states, stressing that not only is modernity plural, but people work with a multiplicity of experiences that relate to categories and understandings of modernity in their everyday lives.

Building on this literature, I am not just interested in building a critique of modernisation. While I deem it important to dislodge its dominance by highlighting some of modernity's shortcomings and its destructive capacity, I also wish to take seriously the cultural positioning of my interlocutors.The critique of modernisation by no means implies its dismissal. As Deeb writes, 'for many interlocutors around the world, […], being "modern" is a deeply salient issue, and as such, there is a strong case for continued engagement with it, especially at the level of ethnographic complexity' (2006: 15). Interrogating modernisation as a driving force of making and unmaking landscape similarly answers to a need to understand the persistent appeal of 'being modern.' In what follows, I side with Deeb in her situated approach to 'focus on how people understand the terms of debate, how they approach the question of being modern, what they desire for themselves and their community – without assuming the universality of desires or that "progress" has a singular trajectory' (2006: 16). In so doing, I

reject the hasty assumption that the idea of 'being modern' is as good as meaningless. Modernity is rich with significance (Kockelkoren 2018). However uniform and generalising it might seem, it deserves to be appreciated in all its complexity.

As previously stated, my focus in this chapter is on modernisation as a nested set of ways of making and unmaking landscape. Modernisation has long been a dominant narrative underpinning the human appreciation and adaptation of landscape. Understanding landscape in terms of its (degree of) modernisation is a mechanism for justifying change: a landscape deemed to be non-modern implies the need for alterations to be made. While explicit efforts may be made to modernise the landscape, modernisation is often implicit or expressed in terms such as 'improvement,' 'renewal' or, as I will highlight later in this chapter, 'innovation.' Modernisation appears both as a deliberate intervention in the landscape and as a discursive foundation for such intervention. Furthermore, while the verbs to 'ruin' or 'damage' seem to be antonyms of the verb to 'modernise,' I contend that modernisation entails *un*making as much as making. Unmaking in modernisation, as I see it, is twofold. Firstly, it involves material ruination. Countless examples exist of landscapes, people and nonhuman species being destroyed once they are subjected to what counts for modern progress. To cite *Arts of Living* once more, 'we are willing to turn things into rubble, destroy atmospheres, sell out companion species in exchange for dreamworlds of progress' (Gan et al. 2017: G2). Secondly, modernisation involves a temporal mode of unmaking. Again, this revolves around the strategic designation of the non-modern. Insofar as modernisation involves a commitment to the future, it also involves a rejection of the past and of those people, practices and places seen as belonging to that past. Ultimately, this comes down to a struggle over who gets to define themselves as triumphant in the course of history, and who can be judged for being unable to escape from the 'traditional' (Chakrabarty 2002; Wolf 2002). Such logic dictates that the 'traditional' is devalued as much as possible in favour of the new and advanced. These two forms of unmaking (material and temporal) are separate only conceptually. In reality, they work together. Moving towards the future requires material destruction, and overcoming environmental constraints requires techniques of temporal exclusion (Tsing et al. 2017).

In the rest of this chapter, I trace these forms of making and unmaking in those contemporary forms that signify the transformation from 'desert' to 'orchard'—a transformation that can be understood within the broader framework of modernisation processes in southern Spain. In tracing modernisation in Spain from the late nineteenth through to the early twenty-first century, Erik Swyngedouw argues that this 'progressed

through the momentous and turbulent transformation of the environment' (2015: 2). Modernisation as a project of socio-environmental change revolved to a large extent around water. Aridity was posited as nature's defect, a manifestly unequal distribution of the nation's water resources that demanded human intervention. This intervention, which Swyngedouw terms 'hydro-modernization' (2015: 4), involved the extensive large-scale engineering of rivers, interbasin transfers, dams, hydroelectric technologies, groundwater access and desalination, transforming entire landscapes and producing new socio-ecological configurations in their place.

The greenhouses of southern Spain represent a particular episode in this larger process. Irrigating the desert brought an array of related processes, including the colonisation of the countryside, the industrialisation of agriculture,[11] the education of people, and the immigration of labour forces. Reading the transformation from 'desert' to 'orchard' as a project of modernisation, then, is not just about water. Rather, it is about a whole host of environmental relations that greenhouses produce: how they simultaneously exclude and depend on external environmental conditions; how they contain life-worlds of their own that implicitly challenge the homogeneity assumed by modern progress. The environmental, temporal and technological aspects of progress are not as uniform, overwhelming or unidirectional as they might appear. As such, the greenhouses and greenhouse technologies that are focal points for this chapter also stand for something broader than Almería, or even Spain. My main concern is not with greenhouses, water pumps or desalination plants, but with the environmental and temporal modes through which we as a species engage with, produce, and potentially destroy the world(s) in which we live.

The arguments presented in this chapter are based on several periods of ethnographic fieldwork in the Plastic Sea, mostly in the Níjar and Dalías plains between 2015 and 2018. This work involved driving and walking among the greenhouses so as to get a sense of the general lay-out and atmosphere of the landscape; observing the specific uses of greenhouses, which included walking along with farmers; analysing their architecture through blueprints and conversations with architects; conducting interviews with cooperatives, government officials, engineers and scientists; visiting desalination plants and local wells; attending lectures and public debates; and participating in informal conversations with people living and working in the area.

[11] In their analysis of greenhouse development in Almería, José Aznar-Sánchez and Andrés Sánchez-Picón (2010) conclude that the concentration of intensive greenhouse agriculture in the region, including its associated services, control mechanisms and modes of production and innovation, means that it can indeed be characterised as an 'industrial district.'

In the sections that follow, I first enter the greenhouse. I discuss its material forms, its everyday use, and its symbolic significance as an emblem of modernisation. I reflect on the function of the greenhouse as a paradigmatic separator of inside and outside environments, while coming to appreciate its paradoxical entanglement with the surrounding landscape. *What kind of environmental relations does the greenhouse represent?* I ask, underlining the fact that the greenhouse is both modern and vernacular, both placeless and emplaced. Second, I turn to the temporalities of modernisation, keeping the greenhouse as my main focus. Here, I interrogate 'innovation' as a trope of modern progress. Improvements are continually made to renew the operating systems of the greenhouses, while older models are either neglected or unceremoniously junked. Asking *what kind of temporal experiences the greenhouse produces*, I show that the continuous drive towards the future effectively betrays itself, producing a form of 'stuck-ness' in the present where contemporary practices are relegated to the past and shifting horizons cannot be reached. In the third section, I reflect further on the interplay between the environmental and temporal relations produced in the transformation from 'desert' to 'orchard,' focusing on the introduction of desalted seawater in greenhouse agriculture. In asking *how technological 'solutions' sustain processes of modernisation*, I describe desalination as a proposed technological 'solution' to the 'problem' of aridity, but also show that this promise has largely remained unfulfilled. In juxtaposing environmental and temporal aspects, this chapter underscores the central argument of my thesis: that the making and unmaking of landscape occur not only in moments of drastic transformation, but also through those various material forms and practices that infiltrate the everyday.

Environmental relations

My first encounter with the Plastic Sea was though a Google image search. I was exploring possible research sites and realised I was onto something when I came upon Almería, an arid region of southern Spain where desert conditions and intensive agriculture have formed a remarkable coexistence. The initial images I found were nearly all birds-eye views, photographs taken from aeroplanes or helicopters that gave an overview of the immense greenhouse expansion in the region. Through these images, as well as via the satellite imagery of Google Earth, I gazed down upon the plastic roofs of the greenhouses. What goes on inside and between these greenhouses? I wondered. What do they look like on the other side of these plastic sheets? I travelled to Almería, and I found that the sheets are opaque, not transparent: they allow light to pass through, but not sight. Exploring the landscape 'on the ground,' I still found myself facing plastic sheets. I also found that I could look into the

greenhouses through the windows in their walls, which are made of a fine black mesh. Later I would learn that this mesh is designed against pests—allowing air to pass through but keeping insects out—but initially they allowed me to peek in. I was still outside though, and I needed to find an entrance. Eventually I gained access through farmer's unions, whose members were only too pleased to show me their greenhouses from the inside, or by telling people in the region about my interests. Often these locals would invite me themselves or put me in touch with a greenhouse owner they knew. Still, this seemingly arbitrary separation between outside and inside turned out to be crucial to understanding the Plastic Sea, reflecting some of the ideological underpinnings of the modernisation of environmental relations in the region's transformation from 'desert' to 'orchard.'

Fig. 3.1. The Plastic Sea in birds-eye view, courtesy of photographer Yann Arthus-Bertrand. For an impressive collection of aerial photographs of this landscape (as well as many others in the world), see his website: www.yannarthusbertrand2.org

As I would come to discover, in modernising the landscape through greenhouse development, distinctions between 'culture' versus 'nature' are upheld, if only implicitly. Greenhouse design seeks to safeguard the controlled and ordered interior from the unruly and threatening exterior. In what follows, I look in more detail at the architecture of the greenhouse, drawing on the idea that the built environment reflects broader environmental relations by providing shelter from hazards, exploiting resources, and providing an aesthetic

frame (Hochhäusl et al. 2018). In asking what *kinds* of environmental relations the greenhouse and the Plastic Sea might represent, three particular sets of relations come to the fore. First, I show how the inside of the greenhouse is designed through a politics of containment, control and order. Second, I discuss some of the ways in which the external environment is posited as a designated 'other' over and against which the project of modernisation takes shape: the seeming disconnectedness of the Plastic Sea thus produces a sense of placelessness. Third, in focusing on the various ways in which the greenhouse is embedded in local cultural and environmental arrangements, I nuance the previous two points. Notions of containment and placelessness thus stand in tension with vernacular embedding, challenging the apparent homogeneity of modernisation.

Inside: containment

One of the farmers who invited me in was Ivan. It took me a while to find the right greenhouse, even though he had previously sent me the GPS location. This was how I often made my way through the Plastic Sea, where street names are generally absent and all greenhouses look alike. I wondered at times how I would have been able to get around without GPS navigation. Luckily, neighbouring farmers tended to know which greenhouses belonged to which owners, and after asking around near the red dot on the map I finally arrived at Ivan's farm. He greeted me and opened the metal sliding door to the greenhouse, which triggered the roaring sound of a large fan that was suspended from the ceiling. With the wind blowing in our faces, we entered a hallway of about two by three metres with a spongy wet mat on the floor. The fan turned off as Ivan closed the door behind us. 'To prevent insects from entering in when the door is open,' he explained, having noticed that I was looking at it. 'And the mat is there to decontaminate our shoe soles.'

Ivan then opened a second, plastic door into the greenhouse, where we were met by the warm, thickly sweet smell of tomato plants. We had entered the microclimate of the greenhouse. The warmth inside felt different from the warmth without: more stable, less penetrated by the glaring sun, yet more enclosing. The light, dispersed by the plastic sheets, seemed evenly distributed through the space, flowing in no particular direction. We were sheltered from the wind that every now and then sent a ripple along the roof. Once inside, the outer world had vanished. This is the primary aim of greenhouses of this kind: to create a controlled environment within their plastic covers. Ivan's greenhouse was a model known as 'raspa y amagado.' This was the most common type of greenhouse in Almería at the time of my research, although continuous innovation in agriculture means that the landscape of

greenhouses is continually changing. This particular type of greenhouse is characterised by the zig-zag shape of its roof, which is supported by steel or wooden posts (*raspas*) at its highest points, and pulled down by steel wires anchored in concrete (*amagados*) at its lowest ones. The strength of this structure is based on the tension created by alternating between pushing the sheet upwards and downwards. The roof itself is usually made up of three layers of plastic: a strong exterior layer against UV radiation, an intermediate layer for thermal insulation, and an interior layer for the diffusion of light. The plastic sheet, too weak to withstand the tension by itself, is kept in place between two layers of interwoven metal wires. Most greenhouses of this kind have rooftop windows that can be opened to allow the wind to pass through, depending on their size and location. The walls typically consist of a black, fine-meshed sheet on the inside that allows air to pass through but not insects, and a white plastic sheet on the outside that can be raised and lowered to function as a window blind. Inside, farmers like Ivan are able to influence temperature, light and humidity, seeking to optimise crop productivity per square metre.

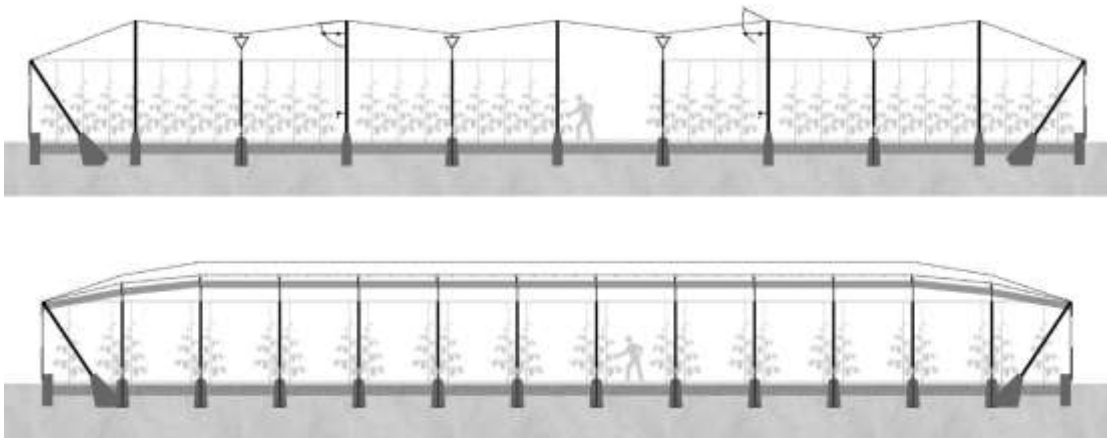

Fig. 3.2. Front and side sections of a typical 'raspa y amagado' greenhouse. The greenhouse depicted here would be 30 to 60m wide, considering the distance between each post is typically 3 to 6 metres, and the roof is 3 to 5m high. Note the feature of manually operated rooftop windows. The location and facing direction of these windows is dependent on the location and orientation of the greenhouse in the landscape vis-à-vis the wind. Note also the triangles below the lowest points in the roof, in which rain gutters can be placed and where the plastic would be perforated. Finally, rows of plants are depicted, leading to a central walkway, where a farmer might inspect a leaf for traces of pests.

Such greenhouses are dedicated to specialised crop production, although most farmers also experiment with crop variations and diversify their production. Ivan, for example, grew tomatoes in two of his greenhouses and courgettes in the third (a total of two and a half hectares). At the back of the greenhouse, he had dedicated a few short rows to a variety of tomato types. About eight different types (all cherry tomatoes) were labelled by name, with

the aim of seeing which ones grew best and gave the best fruit, and also of making decisions on what types to cultivate on a wider scale in the next seasons. Although the horticultural industry in Almería does not use mechanised harvesting, relying instead on manual labour, standardised operations across the farm offer relatively high levels of efficiency.

Monoculture is obviously about increasing productivity, but it also offers a frame for ideological human-environment relations. Broadly speaking, it aims for human control through simplification and isolation. In the Almerían greenhouses, farmers have generally relied on notions of sterility to achieve this goal. Sterility takes on a specific meaning here. Simply put, it refers to the elimination of all life forms apart from the monoculture, with the assumption that this will enhance control over cultivation. This sterility goes hand in hand with an aesthetic of order. Weeds that emerge from between the tomato plants are removed, as are insects and other species that might form potential threats to the productivity of the plants and the farm as a whole. The plants themselves are neatly organised into straight rows, planted at an equal distance from each other. They grow straight up along wires so their stems and branches can be prevented from becoming entangled. After the seedling has grown to a height where it starts developing side branches, the stem is cut off so that the two branches each develop into a full-sized plant. The farmer gets two fully productive tomato plants from a single set of roots. Ivan bent down and tore leaves from below the splitting point of one plant. He explained that these lowest leaves were all to be cut off, to allow for airflow underneath the rows of plants. 'And so it doesn't become a jungle,' he added.

Such 'clean' monoculture usually requires chemicals, both as fertilizers and pesticides. The Plastic Sea has been criticised for its abundant use of chemicals that may have filtered over the years into the soil and groundwater underneath the greenhouses. 'There was little knowledge about the effects of pesticides back then,' Ivan acknowledged. He then gave an anecdote of how, as a child, he used to pick recently sprayed tomatoes from the plant and put them straight in his mouth. Looking back, he realised that 'this may have been very irresponsible, but at the time, people were not aware.' Ivan himself, being part of a collective dedicated to ecological farming, had abolished chemical pesticides altogether and was instead using biological pest control. The field of biological pest control has been developing rapidly in Almería, and was a much-debated topic among the farmers I interviewed. It involves employing carefully selected species, which are introduced and distributed in the greenhouses in order to combat pests. Greenhouses of this type have thus become containers for the creation of artificial ecosystems.

I discussed this topic with Juan in the laboratory of one of Almería's largest farmers' cooperatives, where he worked as a biologist to research and promote biological control. The creation of an ecosystem, he explained, requires careful monitoring of the various species that are present within the greenhouse, including those that are cultivated, those that are unwanted or considered harmful, and those that have been introduced against the harmful ones. If too many bugs are introduced, or if they run out of 'pest' species to consume, they might start feeding on the crops themselves. As Juan asked, trying to convey the complexity of the endeavour: 'When should a species be introduced, before or after flourishing? Where in the greenhouse should they be introduced, on the leaves, between the plants? And how close together? And how do they respond to other treatments and other species present?'

The main concerns for tomato farmers are thrips and whiteflies, two tiny insects that can damage the leaves and fruits of the plant, either directly or as disease carriers. Within greenhouse monocultures, these can rapidly reproduce, becoming devastating plagues if no measures are taken. Against these, Ivan worked with predatory wasps and bugs (*nesi* in particular). However, the introduction of one species can have cascading effects. In one of Ivan's greenhouses, at the end of each row of tomatoes stood a small bush with small white flowers. In another, yellow flowers grew in a corner. These flowers, he explained, helped to create a suitable habitat for the predators. Life inside the greenhouse was thus optimised, characterised by a careful choice and balancing of species, and by experiments with various combinations for increased productivity. Reflecting what Marianne Lien, in her research on salmon farming in Norway, has called 'multispecies domestication' (2017: M108), greenhouses of this type have become a bounded site in which the simplification of monoculture is complicated by added combinations of other simplifications (cf. Lien 2017; Swanson et al. 2017). 'It also looks nice,' Ivan said.

Ivan's precautions against pests were certainly more rigorous than I saw with other farmers, which can be attributed partly to his commitment to biological pest control. Decontamination mats at the entrance were not common in the greenhouses I visited. But the concern for who and what can enter or leave the greenhouse, and in what form, was something that all farmers shared. The entry points for human—and sometimes animal or vehicle—movement between inside and outside space are usually fitted with double doors, curtains or fans to keep insects out. Some farmers go so far as to install a shallow basin at the entrance to their premises with the purpose of decontaminating car tyres. All of this is to prevent plagues that can, as sometimes happens, destroy an entire harvest. Whether an

aesthetic of sterility is being pursued or biological control is being followed changes little in this respect. In either case, the greenhouse's politics of containment revolves around the questions of which species to allow in, which ones to ignore, and which ones to eradicate. The analogy between my own difficulty of finding a way through the plastic and its functioning against penetration from outside forces is not incidental. Containment, order and control are important tropes that give substance to the project of modernisation as it has unfolded in the Almerían desert. The greenhouse and its accompanying technologies have been designed in such a way that they materialise and aesthetically confirm these tropes. Greenhouses like these are built to keep the inside environment separated from the outside—a division, essentially, between 'culture' and 'nature.' In this way, they not only offer a promise of modernisation through control over interior space, but also represent a discursive rejection of the surrounding landscape.

Outside: placelessness

This paradigmatic rejection of the outer environment means that the Plastic Sea can be understood in part in terms of *placelessness*. Following Edward Relph, I understand placelessness as the monotonous standardisation of landscapes around the globe that are produced in projects of modernisation. Placelessness involves 'a weakening of the identity of places to the point where they not only look alike but feel alike and offer the same bland possibilities for experience' (Relph 2016 [1976]: 90). Suburbs and industrial areas, airports and tourist destinations are just a few examples that share the characteristics of placelessness, where similarity, vast scale and insensitivity to local conditions triumph at the cost of diversity and experience. In similar vein, James Scott (1998) has argued that modernisation demands the standardisation of landscape. The state, Scott suggests, seeks to make society legible, which involves simplifying the complexity of its subjects and terrains into recognisable and governable categories of populations and landscapes. In the modernising narrative of landscape transformation from 'desert' to 'orchard,' the greenhouse is represented as a tool through which humans have (finally) been able to overcome local environmental conditions. In Almería, the desert landscape became 'domesticated' through the advent of colonisation schemes, mechanised groundwater access, and greenhouse development in the first half of the twentieth century (see Chapter One). This landscape transformation has both symbolic and material importance as a transformation from poverty to prosperity, from wildness to civilisation, and from marginality to Europeanness. The 'unruly' desert has been subjected to the geometric forms of the cadastre—repetitive rows of industrial production—and has

been made legible in terms of the associated rulings of state governance and the market. Along the way, the greenhouse has taken on historical significance as a step in the triumph of 'culture' over 'nature,' while the local, endemic and particular have been routinely suppressed.

In this context, the Plastic Sea and the thousands of greenhouses that form its building blocks can be added to the growing list of modern 'non-places'. Several of its general characteristics point in this direction. To begin with, the development of intensive farming in Almería, which is run along the modernising lines of sterility, order and containment, has shown little concern for those forms of life that might thrive in the desert. Broadly speaking, monocultures are modes of production 'that deny the intimacies of companion species' (Swanson et al. 2017: M4), requiring a more or less total erasure of the ecosystems that were in place before. Characteristic of placelessness is the apparent destruction of what is considered to have preceded it. Having become 'orchard,' the Plastic Sea is a 'desert' overcome. This has come at the cost of locally specific forms of cultural life as well as the desert terrain itself. The move to intensive farming signifies a cultural and environmental transformation that has resulted from colonisation, internationalisation, immigration and the economic boom. Ties with the local and particular not only seem to have been ignored in the Almerían landscape, but to have been actively discontinued as modern progress spreads.

This logic entails that greenhouses are enforced upon the landscape. Placelessness, Relph suggests, typically 'cut[s] across or [is] imposed *on* the landscape rather than developing *with* it' (Relph 2016[1976]: 90, emphasis added). To build a single greenhouse already alters the appearance of the landscape, let alone a conglomeration of thousands. The plastic, forming long straight lines, stands out sharply in the desert landscape of Almería, with its rugged expanses and rocky outcrops. The implicit rejection of this landscape becomes apparent in the very materiality of plastic, which is such that it bears no resemblance to the world in which it is emplaced, and by which the greenhouse comes to deny any links with the landscape that surrounds it. Further, as noted above, plastic regulates the controlled movement of light, air, species and materials in and out of the greenhouse. In summer months, the roofs of the greenhouses are 'whitened' in a practice locally known as *blanquear*. With a hose and broom, a chalk-based paint (a calcium carbonate) is sprayed on and distributed over the plastic sheets. Reflecting the sunlight, the white chalk protects the plants below against ultraviolet radiation and the summer heat outside. Local firms are specialised in applying the right types and amounts of paint, adjusting these to the time of year and type of crop cultivated inside. In preparation for winter, if the chalk has not worn off by then the

roofs are washed to allow more light and warmth to pass through. In this way, the relative cold during winter (though temperatures hardly ever drop down to 0°C or below) is kept outside, while in summer the 'whitened' plastic blocks out the heat. In this and numerous other ways, a single greenhouse works against the grain of the desert; while in their thousands they effectively obliterate the desert that used to be.

Fig. 3.3. A greenhouse on flattened land cuts through the mountains near the town of Berja, on the physical margins of the Plastic Sea. Inside, neatly ordered rows of crops are visible through the window mesh.

Moreover, the Plastic Sea is a landscape of standardisation. Forming a seemingly homogenous whole, all greenhouses look alike and are built so close together that little else can exist beside them. Their architecture and construction is also highly standardised. Of course there are architects and engineers involved in the planning and construction of these greenhouses. But as one specialised architect told me: 'Normally we don't use CAD [Computer-Aided Design] to draw the greenhouses. Only if the plot has an exceptional shape or special requirements do I use CAD to design particular elements of the greenhouse, such

as abnormal connectors or support posts.' CAD stands here for the detailed technical drawings that are commonly used by architects and engineers to realise their designs. In the absence of the need for such programs, knowing the size and shape of the plot is sufficient to calculate the number of standard-sized posts, the amount of plastic and concrete, and the metres of wire that are needed. Comparable to a large tent, a greenhouse can be put up in a matter of weeks. The implementation of such standardised design suggests an apparent lack of creativity (although, and I will return to this below, innovation is an important driver of changes in greenhouse design), and, more importantly here, a general absence of adaptation to or concern for local conditions. The ideological underpinnings of monocultures are thus exacerbated by the materiality and symbolism of the greenhouse. As a result, the Plastic Sea becomes detached from the scale of human experience, producing an eerie sense of placelessness. Paradoxically, however, and as I will now go on to demonstrate, the greenhouse cannot but fail to maintain this enforced dichotomy between inside and outside.

A vernacular modern

Notwithstanding modern dreams of productive containment, the greenhouses of Almería are also deeply embedded in their locale. Contrary to the ideological separation of inside and outside that underpins it, the greenhouse actively embraces its own environmental entanglement; rather than being placeless, the greenhouse is premised upon the landscape itself. To take just a single example, the presence of pests and farmers' unceasing efforts to eradicate them provide a striking reminder of the limitations of containment. Despite farmers' unstinting efforts to keep them out, insects, fungi and other unwanted species keep finding new ways to get at the precious plants; thus, as Lien writes, 'we are reminded that singling out and staying in control are constantly undermined by a multispecies world that turns out to be far more lively than humans imagined' (Lien 2017: M121). This world effectively forms a structural breach in the material function of the greenhouse and the ideology that sustains it; the ideals of a sterile monoculture and an isolated microenvironment appear untenable.

Sometimes, these breaches take blunt forms. Every now and then, extreme weather such as hail or rain storms can break the plastic roofs, which after all are only so many sheets of plastic supported by nets of steel wires. Almería is known for its strong winds and, on rare occasions (as happened for example on 6 January 2018 in El Ejido and La Mojonera), a tornado may be seen tearing up greenhouses, catapulting long strips of plastic into the air and exposing crops and steel frames. It goes without saying that in such cases the losses

suffered by farmers are huge, especially when it is not just a case of the plastic being torn, but of the harvest being lost and the greenhouses' steel frames being damaged. More often, these breaches are much smaller in size and impact. One farmer, Joachim, for example, showed me part of his greenhouse that had been damaged by a hailstorm about a week earlier. The hail had at one point perforated the roof, and once the plastic was torn, the hole had rapidly grown to about a metre in diameter. The frayed plastic hung down loosely from the edges. Beneath it, three tomato plants were covered in a white substance that had also accumulated on the sandy floor. Where the plastic was broken, white chalk had poured into the greenhouse and onto the crops. Joachim himself did not seem too bothered by it. When I noticed the pattern of plastic patches where holes in the roof had been repaired, he explained that such breaches were quite normal, certainly when the plastic roof got older and in the hot summer months. His greenhouse was built on a gentle slope, and where the higher parts accumulated hot air the roof had already been patched repeatedly. The lower part being in better condition, he was holding off on full replacement until after summer. On average, he said, the sheets had to be replaced every four to six years. Greenhouses, I came to learn, are anything but stable structures; they require continuous maintenance to perform their daily work.

Breaches aside, I take *vernacular architecture* as an alternative lens through which to understand the Plastic Sea. In opposition to placelessness, the vernacular offers a point of view that focuses on the enmeshment of the built environment and locally specific needs and practices. A common understanding of vernacular architecture is the traditional (and thus considered authentic) design of buildings in harmony with their cultural and environmental contexts (Asquith and Vellinga 2006; Bergdoll 2010; Oliver 2006; Vellinga 2015). As a sub-field of architectural studies, vernacular architecture forms a response to the arrogance inherent in the idea that its western, modern counterpart should be aspired to in all societies, cultures and environments alike (Asquith and Vellinga 2006; Oliver 2006). Instead, it articulates a point of view that promotes the value of cultural diversity (Vellinga 2015). Often, this is framed by the question of what contemporary designers can learn from vernacular architecture in terms of environmental compatibility, materials used and energy efficiency, although the view of the vernacular as inherently sustainable has also been criticised for being overly romantic (Vellinga 2015).

Interestingly, the vernacular is by no means restricted to the traditional and indigenous building practices that underpin, say, the Yurts of Mongolia or the earthen dwellings and mosques of Mali. Even modernist architectures owe creative debt to vernacular traditions;

and even suburbs, the prime example of standardisation in the built environment, can be seen as a 'modern vernacular' of a kind (Lejeune and Sabatino 2010; Oliver 2006). Further, while the use of 'modern' materials, such as cement blocks or corrugated iron, does not strictly fit the views of vernacular architecture, which tends to advocate the use of traditional, organic and locally sourced materials, such materials are often fully integrated into vernacular building practices. Similarly, the urban waste materials used in shantytowns worldwide can be testimony to the pragmatism embedded within emergent vernacular (Oliver 2006). Such 'hybrid architecture,' which combines elements from 'traditional' and 'modern' sources, 'serves as a valuable source and an experiential means through which modernity and local identities are shaped' (Nurliani Lukito 2016: vi). A similar argument, I would suggest, can be made for agricultural practices. Standardisation and the use of non-vernacular materials do not preclude local adaptation and cultural value. The use of plastic in greenhouse agriculture might not be as disconnected from the local and particular as it seems.

Farming is usually taken as a prime example of the vernacular. Appalled by the ugliness of late 1960s' industrial urbanisation, and mesmerised by the contrasting beauty of nature, Ian McHarg has described the destruction of nature inherent in modern landscape architecture, seeking alternatives in ecology-based approaches. 'The farmer is the prototype,' McHarg writes. 'He prospers only insofar as he understands the land and by his management maintains his bounty' (1969: 29). More recently, in his analysis of how cultural rituals are framed by the built environment, Peter Blundell Jones shows an appreciation for agricultural practices and the variety of material forms these have produced in terms of landscape, building and dwelling. As he writes:

> Agriculture requires manipulation of the landscape, from choice of suitable sites for growing particular crops to meticulous hard toil in preparing the ground and caring for them. It requires a deep consciousness of topography and climate, careful observation of what will grow where, of how much sun and water a site obtains, how well protected it is from storms or frost. (2016: 245)

However, such depictions of agriculture as vernacular often resort to a false distinction between romanticised 'traditional' agriculture and vilified 'modern' mass farming, in which crop variety, rituals and the tending of land by hand have been replaced by mechanisation, standardisation and functionalism. Showing a clear aversion for the latter, Blundell Jones suggests that 'all too often, farm builders are compelled by economic pressures towards the most repetitive building systems, "functional" in the most banal sense, and seldom given serious architectural consideration' (2016: 261). This somewhat myopic representation of

'modern' agriculture, at least in the forms I observed it in Almería, is mistaken. Certainly, industrial farming aspires to standardisation and efficiency, and is by definition oriented towards profitability, but to describe it as void of meaning—as placeless—is inadequate. Instead, it is necessary to understand the meaning of the greenhouse *in relation* to ideas of environment and landscape.

The inherent relationality of the greenhouse can be easily demonstrated. Firstly, greenhouses in southern Spain are premised on the natural light and heat of the Mediterranean *sun*. Their opaque and seasonally whitened plastics filter light, reflecting it in summer and capturing its heat in winter. With a relatively high number of annual sun-hours, and temperatures that do not match the extremes of the Spanish interior, Almerían greenhouses do not need artificial heating or lighting, and this provides them with a significant competitive advantage in the European market. Second, these greenhouses are built in relation to the coastal *wind*. Admittedly they have quite some winds to withstand. During my fieldwork, I was astonished on several occasions by the sudden burst of violence with which the wind could come up and die down, leaving the streets littered with displaced trash—a drainpipe, part of a chimney, cardboard boxes, plastic bags, chunks of palm tree bark, an overturned trash container. When I notified my landlady that one of her garden pots had been shattered on the patio floor, she wryly replied: 'The wind and Almería are old friends.' Besides being built to resist such meteorological forces, Almerían greenhouses are also designed to allow the wind to blow through their meshed windows. This is such an important element in the construction of greenhouses that land parcel prices in the area depend on how windy the location is. Typically, the windier parcels nearer to the coast, or at the edge of larger open spaces, are also the more expensive ones. This is because the wind supplies the plants with fresh air, thus encouraging the speedy growth of crops. Allowing wind to pass through also reduces humidity within the greenhouse.[12] The *dryness* of the air outside can be considered a further advantage to greenhouse cultivation in Almería, as it reduces the risk of mould and fungal infections in the plants.

Third, the seemingly mundane layer of *sand* on the typical greenhouse floor has become a symbol of landscape transformation in Almería, and is often brought up in tandem with the wind and sun. On one of my visits to Ivan's greenhouse, he walked up to a plant on the corner of a row and bent down to dig away the top layer of sand. 'Look,' he said, 'we have a cover of sand, and here below, the soil.' Below the light-brown sand—a layer of little more

[12] The popular assumption that the plastic sheets are used to collect condensation is incorrect.

than five, maybe ten centimetres—Ivan revealed a much darker, denser layer of earth. 'This holds the humidity better,' he said, pointing at the dark layer. 'If it were just this soil, with this heat, it would dry and crack. Having the sand on top, you realise, the humidity will be held underneath. And we spend less water as well.' The practice of covering soil with sand, which is referred to as *enarenar* or 'sanding,' is popularly considered to be a creative means of putting the infertile desert floor to productive use. Rather than obstructing cultivation, the desert is integrated into the greenhouse in the form of a protective layer.

A fourth and final example is found not in climatic conditions but in the integration of 'traditional' modes of production and livelihoods. I was surprised at first when I saw a goatherd entering the street from an alleyway between two greenhouses. The presence of goatherds had felt right, idyllic even, up in the mountains, but it seemed unusual to say the least to see goats here, foraging amid the plastic. But as it turned out, goats are as much at home in the new landscapes of the Plastic Sea as they are in the ancient mountain ranges. Goats, mainly profitable for their milk, are let into the greenhouse after the harvest has been completed. There, they eat the remainders of the plants and their droppings are introduced into the soil as fertiliser. As northern European consumers prefer straight cucumbers, several farmers explained, curved cucumbers that cannot be sold (which can amount up to a quarter of the harvest) are fed to goats in the region. Thus, to assume that 'traditional' economies have been eradicated with the advent of plasticulture is to overlook the nuances of landscape transformation. Without doubt, plasticulture has replaced many previously standard agricultural or pastoral practices: a testament to this would be the many abandoned farmhouses and threshing circles that can be found throughout the region, as well as the dynamics of depopulation I previously addressed in Chapter Two. But the economic model of the greenhouse is not homogenous, nor does it involve a total obliteration of alternative life forms.

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I have been focusing in this section on the environmental relations that emerge from the modernisation of agriculture in Almería. As my examples demonstrate, the architecture of the greenhouse as it appears in south-east Spain is intimately tied up with its socio-material environment. Over decades, greenhouses have been designed and re-designed to better make use of the local climate. At the same time, as I have outlined above, the architecture of the greenhouse is one that continually reinforces the dichotomy between inside and outside,

keeping the outside out and the inside in. In a dual relationship, the greenhouse both establishes a conceptual and material divide between environments, and directs flows of interaction between these through the restricted movements of air, water, insects and humans. The overwhelming scale of the Plastic Sea lends an absurdity to the landscape that seems to disconnect it from the level of immediate human experience, but a closer look at farmers' experiences also reveals the reflexivity and pride with which they tend to their greenhouses. In short, the Plastic Sea, with its standardised forms and potentially obliterating force, but also its intimate ties with its locale, appears as *both* profoundly placeless *and* firmly emplaced.

This resonates with Tim Ingold's view that 'things are their relations' (2011: 70), a view that discards the distinction between organism, object and environment in favour of an appreciation of mutual entanglement. Anna Tsing (2015) has pursued a similar view of multispecies entanglements in her attempt to make sense of the destruction that is seemingly countenanced by 'progress.' In her work, Tsing, among others, stresses the need to recognise the co-dependency of humans and non-humans. In keeping with this view, the greenhouse can be seen as an assemblage which, in bringing together a variety of species, exists as a node of environmental relations. It also produces meaning in terms of livelihoods, everyday engagements, and possibilities for imagination.

Greenhouses are their relations, but in other ways they are also the discursive-material rejections of such relations: indeed, the greenhouse becomes a meaningful emblem of modern progress precisely because it *denies* such relationality. In light of this, I ultimately find 'placelessness' and 'vernacular architecture' to be too narrow to understand the makings and unmakings that accompany modernisation processes. Where placelessness is employed to lament the loss of traditional ties to place, the cultural significance of modern spaces is overlooked and local creative engagement with such spaces is disregarded. And where vernacular architecture works as a counter-movement to modern architecture, it risks positing the vernacular as meaningful and the modern as meaningless. Taking both concepts together, however, can offer productive insights. After all, placelessness may help to identify the characteristics of those material forms produced in modernisation schemes that cut them off from human experiences, while a focus on the vernacular can contribute to the recognition of the local and environmental embeddedness of these same forms. Juxtaposing these perspectives reveals the paradoxical workings of modernisation in the making and unmaking of landscape. Modernisation, as I have been suggesting here, operates in terms of environmental relations and through the dynamics of embedding and disembedding, making

and unmaking environmental ties according to particular sets of convictions. Seeking ideological detachment from the local, it remains a local process. In this last sense, the Plastic Sea has obliterated the desert, yet it still *is* the desert. This is where frictions in the *temporal* projections of modernisation come in, and I now turn to these. While the transformation from 'desert' to 'orchard' is imbued with progressivist notions of linear time, I now aim to show that the proliferation of past forms and unachievable future horizons produces anachronisms in the juxtaposition of narratives and experiences. This reveals a second paradox of modernisation: one by which a landscape and its inhabitants appear stuck in innovation.

Temporal projections

Farming produces interweaving rhythms as it moves along with, and seeks to exploit, patterns of weather and climate. On a daily basis, the greenhouse farmers I met face tricky questions of when (and for how long) to irrigate or open the windows of the greenhouse, optimising the climate in terms of temperature, humidity and air circulation. These everyday rhythms resonate with seasonal ones, as daily responsiveness folds into long-term planning. When to plant seedlings and when to harvest their fruits? What crops, and how many, to plant in what months? When to whiten the plastic roof? This type of planning often occurs collaboratively, as farmers seek to balance their offer and predict demand throughout the year in their cooperatives. Then there are the financial commitments. Water bills and monthly salaries have to be paid and fertilisers bought. Income is generated through seasonal harvesting, while larger investments are carried over multiple years. Will the plastic last another year? Concerns with speed come in as farmers add manure to the water and additional sheets of plastic are placed over or above the younger plants, stimulating rapid growth. Farmers are also routinely concerned with the efficiency of their harvesting and sorting processes, aiming for speedy processing and transport. Time, in short, is of crucial concern in both everyday and long-term working patterns. Farmers must contend with the rhythms of the seasons, but also market fluctuations, crop diversity, and the vicissitudes of everyday labour. Planning, creativity and specific knowledge are all crucial in growing crops, countering the romantic notion of agriculture as place- and timeless.

The temporal projections of the greenhouse, however, go beyond the immediate implications it has for farming practices. This has to do with the futurity of progress and the troublesome distinction between modernity and tradition. As I outlined in the introduction to this thesis, then revisited in Chapter Two, the notion of 'becoming' is provocative in

understanding the dynamics of stasis and change, and of crisis and normality. João Biehl and Peter Locke have written that 'becoming occupies its own temporality that unfolds in the present […] characterized by the indeterminacies of human struggle and daily life' (2017: 6). In so doing, they place the idea of becoming firmly in the present, as a process that is always *here* and always *now*. Bridget Purcell adds to this that the temporality of becoming is not linear, 'but [is] punctuated by breaks, revisions, and redirections' (Purcell 2017: 145). While I consider these insights important, I am left wondering how they might relate to the inescapable sense that modernisation, often through one form or another of technological optimism, implies that progress is a good thing in and for itself. More specifically, the *now* of becoming, in the context of the Almerían landscape, seems infused with the directionality of future imaginaries, with 'progress' inscribed as the only legitimate goal. In its futurity, modernisation is normative, presenting goals to reach that, by default, *cannot* be reached as the norms themselves change and shift through time. It is this temporal projection that I will seek to interrogate in this section, asking what kind of temporal experiences the greenhouse produces—and to what possible ends. I will first discuss how modernisation in Almería has worked through a rejection of the traditional. This rejection, however, has been one through which forms and practices that were once considered modern have become outdated and are relegated to the past. Elaborating on this, I will show how modernisation continues quite literally to move on, with new technologies continuously being found that discredit the current ones. The modern, in this sense, is that which constantly requires modernisation. Finally, I will address the sense of 'stuck-ness' that such constant innovation elicits. The temporality of modernisation thus generates tension between futurity and endurance, always looking forward to a horizon it can never reach and a future it knows it can never sustain.

A traditional modern

'"Modern" must always have its other,' writes Lara Deeb (2006: 33), arguing that 'a person, community, place, or thing is always modern as compared to some other thing, an other that is defined in the comparison as not modern or less modern' (2006: 17). One such 'other' to modernity, Deeb highlights in reflecting on how Lebanese Shi'i women have sought to reconcile notions of piety and modernity, has been the religious Middle Eastern Arab. While Deeb's context is obviously different from mine, a central point can be derived from this. 'At its most basic, modern meant "better than"' (2006: 19), Deeb states, pointing out that discursive appeals to modernity make often implicit, but always hierarchical, comparisons with a perceived 'non-modern.' The ultimate non-modern is the 'traditional.' Deeb illustrates

how her interlocutors made appeals to modernity by setting themselves apart from practices and people they labelled as 'traditional,' even as these were associated with their own past way of life. Modernity becomes framed here as a form of life liberated from tradition.

One of the crucial characteristics of modernity is 'that one's primary orientation should be toward the future rather than toward the past,' David Gross (1992: 40) remarks. Gross traces the demise of tradition from the historical advance of empiricism and rationalism through the rise of modern capitalism, enlightenment and the industrial revolution, showing how each 'step' contributed in significant ways to the rejection of the traditional in the epoch of modernity. If modernity can be considered as a mode of thought that is characterised by favouritism of the present over the past, its discursive dismissal of anything 'traditional' has deep historical roots. In Almería, the transformation from 'desert' to 'orchard' can be narrated as a transition from traditional to modern, and from margin to centre—in both national and European terms. The development of greenhouses, as I noted in Chapter One, is viewed by many in the region as constituting an escape from an underdeveloped and poor society, thereby giving access to wealth and education: the fully formed assets of modern life. Miguel Centellas Soler et al., for example, write that Almería, once an 'arid territory at the peninsular periphery, associated with adjectives such as marginalization, misery and emigration, has now become a dynamic province, with high growth rates and a bright future' (2009: 12). Similarly, when Franco's INC initiated its colonisation programs of the rural south of Spain, mid-twentieth century, it aimed to imbue the Almerían landscape with an architecture of 'modernity and progress.' The clean, newly built towns in the desert were envisaged as being part of the 'regeneration' of the Spanish countryside—the gateway to modern life. Likewise, the introduction of mechanised wells that stimulated more intensive irrigation and, later, the development of greenhouses were changes explicitly framed as modernisation processes (Centellas Soler et al. 2009; Martínez Rodríguez 2018; Rivera Menéndez 2000). Traditional agriculture, by contrast, was actively dismissed.

The greenhouse today continues to materialise this forward-looking trajectory of modernisation, including its rejection of the traditional. This became particularly clear when I first visited Igor's greenhouses. I had previously met Igor during my fieldwork in Pizarra de Filabres when I went for an afternoon walk along the village terraces to look for interesting encounters, and he was doing the same to take a break from a weekend with his in-laws in the village. When I mentioned my research, he told me he was a farmer with his own greenhouses. While we walked between the only partly cultivated terraces, he lamented that water had become more expensive, and attributed this to the arbitrariness of the

comunidad de regantes and regional politics. We talked about how it had become increasingly difficult to set up a greenhouse and keep it *rentable,*[13] and how an increasing number of farmers were now subletting their greenhouses as opposed to building or cultivating them themselves. He returned to the high costs of seeds, plastic, pest control and water. I asked if, one day, I could come visit him in his greenhouse to see for myself. He immediately agreed, but then added: 'if you're not police.' He was only half joking.

Igor had inherited the greenhouse from his grandfather, and although it had been altered to some extent over the years, many of the original features were still in place. It was built on a terraced hill, and on each terrace stood about forty short rows of cucumber plants, accessible through a narrow walkway along the next terrace wall. The greenhouse was an older 'raspa y amagado' model, with a relatively low roof at about 2.5 metres that was supported by wooden beams. I had not expected to find concrete irrigation channels running along the terraces, just as I had seen on terraces in the mountains. In the past, Igor explained, water would come through an open roadside channel from the *comunidad de regantes* (irrigators' community) to the greenhouse, where it would be distributed through these gutters. Farmers, including Igor's grandfather, would use flood irrigation. By opening and closing holes in the channels, the farmer could inundate one terrace at a time in a controlled manner, allowing the water to sink into the soil before moving on to the next terrace. This type of irrigation can still be observed in non-industrial farming and bears close resemblance to irrigation in Pizarra de Filabres. The practice to inundate an entire terrace, as opposed to a confined area around watered crops or trees, seemed strange to me at first given the scarcity of water in the region. But villagers explained that the surrounding dry earth would soak up the water before the roots of the plants could reach it. Flooding the entire plot meant the trees actually got the water they needed.

Regardless of its continued use in the mountain villages, such flood irrigation has been completely replaced by drip irrigation in the greenhouses. Pointing at the black tubes that were placed on the ground along the rows of plants, Igor explained his irrigation system. As the name suggests, drip irrigation is a system whereby water is released drop by drop as close as possible to a plant's roots, with the main advantage of minimising evaporation, infiltration and runoff losses. Each nozzle can usually be adjusted individually, which allows for high levels of control on the part of the farmer. Igor's system was manually operated and it was up to him to decide, based on his observations of the plants, how long to open the various

[13] *Rentable* translates as profitable. However, while *rentable* can include profitability, it more generally refers to how viable, workable or liveable an operation is.

valves and how much manure to add to the water. As we walked along the greenhouse, Igor noted a problem in the irrigation system. The lower parts of the greenhouse had received water as they were supposed to, but the higher part had not and the soil around the plants was dry. I asked what the matter was, and Igor explained that the greenhouse was divided into zones that could each be irrigated separately—useful, for example, when crops were sown at different times and there were also significant temperature differences between parts located higher and lower on the hillside. In this case, there was something wrong in the highest irrigation zone. 'It's probably the pump,' said Igor, somewhat casually; he would attend to it later. The technology might not have been flawless, but there was no question as to its improvement over the old, 'traditional' open irrigation systems.

Fig. 3.4. A materialisation of temporal projections in modernisation: the 'Fuente Nueva' (literally 'New Source') *acequía*, constructed in Moorish times and modernised through concrete-reinforcement. Once used for the irrigation of terraces, a side-branch redirects to one of a dozen massive distribution basins for greenhouse agriculture. The channel was replaced by plastic tubes in 2010 to increase the 'capacity to regulate water resources,' the 'efficiency in energy consumption,' 'water quality control,' and 'reliability in distribution,' and to secure the 'minimisation of losses' (SEIASA del Sur y Este 2010), leaving the 'deteriorated' channel dry.

Extrapolating from this, modernisation is not a complete erasure of past practices and structures even as it ideologically replaces them with 'new' and 'better' ones. The traditional,

in other words, is not fully unmade, but continues to be visible and tangible in concrete forms (literally in the case of irrigation channels). 'As humans reshape the landscape, we forget what was there before […] Forgetting, in itself, remakes landscapes, as we privilege some assemblages over others,' Gan et al. (2017: G6) observe, reflecting on the transformative capacity of modernisation and its erasing effects. However, they continue, 'ghosts remind us. Ghosts point to our forgetting, showing us how living landscapes are imbued with earlier tracks and traces' (2017: G6). What these authors call 'ghosts' are the physical traces of forms of life that have been repressed then replaced, just as the material structures of traditional farming can still be seen in the present-day Plastic Sea.

Modernising the modern

Just as the greenhouse materialises a rejection of the 'traditional,' continued innovation also creates differentiation between greenhouses. I put 'traditional' between quotation marks here because what is now addressed as traditional irrigation (or farming, or technology) was once modern and innovative. In some ways, then, the greenhouse is also rendered 'traditional'. I first noticed this on one of my visits to Lola's greenhouses. With her company Clisol, Lola has been at the forefront of technological innovation. She has opened her greenhouses to the public with guided tours for schools, tourists and professionals. In addition to our conversations, I joined her on one of these tours of the farm.

After an introductory talk, the group (about twenty tourists and me) entered the first greenhouse, a typical 'raspa y amagado' model. After Lola had opened the first door, a metal one, the group squeezed into the hallway, waiting for her to close it before a second, plastic door could be opened and we could proceed inside. Once we were all safely in, Lola pointed out some of the features of the greenhouse. Between the many iron poles, some distinctly rusty, were tomato plants, most of them still young and not reaching above knee height. The black tubes resting in the sandy ground indicated that the farmer was using a drip irrigation system. Lola showed how to open and close the rooftop windows by manually turning a crank that connected with gears and chains to the window frames above our heads. She said these were usually opened every morning and closed every evening. Once back outside, she showed how to open and close the side windows by pulling on a series of ropes on pulleys that then drew up a plastic cover in front of the anti-trips mesh. This greenhouse, Lola further explained, in fact belonged to her neighbour. She took her groups here because she wanted to show the contrast between different types of greenhouses. She referred to this 'raspa y amagdo' model as 'traditional greenhouses.'

Her own greenhouses, which we visited next, were made of a hard white plastic. This model, known as 'multitúnel,' is significantly taller than the common Almerían greenhouse, with arched roofs at about five to seven metres in height, suspended on steel posts every eight metres. With its higher build, fewer support posts and a transparent roof, the greenhouse had a much more spacious and bright feel to it. With its hard plastic and a concrete floor, it also looked 'cleaner' in comparison. But the modernisation it spoke of was not only a matter of aesthetics. This particular greenhouse did not echo to the sound of wind rustling through plastic. At first it seemed to make no noise at all, but then started emitting a sound I might best describe as hollow creaking. The rooftop windows were fully automated, and they opened and closed depending on the temperatures inside the greenhouse. This was a matter of some pride to Lola, who also took pleasure in demonstrating her preferred mode of cultivation, where plants did not grow in the ground but were instead placed in rectangular trays with artificial soil, in this case coconut fibre. The plants were connected to an automated irrigation system that measured and responded in real time to the humidity of the artificial soil surrounding their roots. In this way, the system offered a direct nourishing of each individual plant.

A focal point in Lola's talk was the water-saving technology that had been implemented on the farm. As water that was not used by the plants could be collected again in the buckets underneath them, this type of growing allowed for water circulation, with about 30% of the water the farm used being recycled. This meant she used only two thirds of the water required for 'sanded' agriculture (plants grown directly in the soil). Capturing water from underneath the plants was also much better, Lola said, than allowing it to seep into the ground, thereby contaminating the soil and the aquifer below. Lola worked instead with a state-of-the-art water recycling system that collected water from underneath the plant's container and a system that mixed recycled water, collected rainwater and groundwater to achieve the desired conductivity and hardness. She explicitly criticised drip irrigation, as used by the majority of farmers in Almería, for being old-fashioned and inefficient. 'They still think it's the best,' she said of her fellow farmers, 'but there still is a large percentage of greenhouses that are very outdated and do not collect rainwater or do not optimize irrigation. There is still work to do. They are greenhouses from the seventies that have not renewed their structure and are not efficient. Then you can also do much more with the isolation of the greenhouse and having a better water cycle inside the greenhouse. More rain collection, and all that, can reduce the need to spend water.' Thus, while Igor and other farmers I met had proudly demonstrated

their use of drip irrigation, others like Lola discredited it, as well as the 'raspa y amagado' greenhouse model, for being 'traditional.'

Fig. 3.5. Cultivation in trays allowing for water circulation.

'Digitisation' (*digitalización* in Spanish), as the introduction of computer-operated systems in the greenhouses was known, was rapidly advancing in Almería, and was the subject of much debate among farmers. Some farmers, like Lola, and especially larger companies, had already adopted variants of these systems, and were on the lookout for new technologies to implement. Besides computer-operated systems, I also noted that there was increasing interest in the possibilities of big data for farmers' modes of production. For them, digitisation was a bridge to sustainability, especially when concerned with water use, and an essential step on the route to modernisation.

However, others, like Igor, still operated their greenhouses manually. A variety of arguments were used in favour of this. For one, farmers were concerned with the high costs of 'multitúnel' models and the incorporation of technology in their greenhouses. They had doubts about what type of greenhouse would be more profitable, or were unable to invest in the newer models. These newer technologies depended on human-input values, such as desired temperature or humidity, and some farmers preferred to trust their own responsiveness to changes in the weather above a computer's judgements. Related to this,

these technologies required computer programs, sensors, and motors to operate. While this reduced human labour in many cases, it was also considered unreliable. A motor might break down or a computer might freeze, requiring a new kind of labour: that of technicians to maintain the automated systems. Digitisation, these farmers argued, required a significant investment as well as a radical change in industrial practice, and many felt unable, or in some cases unwilling, to make this change. Some farmers also questioned whether 'multitúnel' greenhouses were suitable for the Almerían landscape. Andrés, for example, said: 'Those greenhouses are very expensive, and they have many problems here with the wind, because they are not aerodynamic.' He clapped his hands in demonstration of how the coastal wind would collide with the walls of the greenhouse. 'And they do not have steel wires on the roof, just a hard plastic layer. So, normally there is a lot of wind here, especially in February, and it greatly affects those greenhouses. They break more easily, and the damage is more severe.' Here, Andrés evoked the environmental relations of the greenhouse and its embeddedness in the landscape, to suggest that 'new' innovations might not always be inherently 'better' than existing forms.

Andrés and I had got in touch through a cooperative dedicated to ecological farming. His reservations with the 'multitúnel' model did not indicate that he shunned innovation altogether. On the contrary, he was actively following the latest developments in ecological farming. One innovation he had opted for was to install a system to collect and use rainwater, which is not something that many small-scale farmers in Almería have. 'Of the little that it rains, I have it collected in a basin,' said Andrés, pointing at the aluminium gutters suspended below the lowest points in the plastic ceiling. From the ceiling gutters, the rainwater would be channelled to underground piping and on to a small basin; if this basin were to fill up, it would then run through more piping to the main basin, and if *that* were to fill up, through to drainage in the narrow alley between the greenhouses. Although this system mostly relied on gravity to transfer the rain from rooftop to tomato roots, there was also a motor to assist in balancing the pressure differences in the pipes and basins. Looking out over the rainwater basin outside, I commented that 'there is quite some water in there.' A large PVC pipe, with a gaping mouth of at least 60 centimetres in diameter, hovered above the water. There must have been some surprise in my voice, since it had not rained for weeks. 'No, it was full!' Andrés exclaimed. 'It has filled up many times. A month ago, it rained a lot.' I understood that Andrés was referring to the storm of 18 October, just over a month prior, in the province of Almería. It had been a day of dark grey sky and continuous pouring rain. Several streets of the city of Almería, where I had been that day, had turned into water courses. It was a

heavy, soaking rain, but given my own experience—having grown up in the Netherlands and recently worked in the UK—I had not been taken aback by it. It struck me all the more that, a full month afterwards, Andrés was still using the water that had accumulated. 'The problem,' he commented, 'is that it either rains for only half an hour, or in a heavy storm.' Altogether, the construction of this system, including the new basin, had cost €15,000. I remarked that this sounded like a big investment, and he agreed. 'I have done this for my conscience, but not because it would be profitable. Because it does not rain here. The investment is greater than what you would be able to save up in water. But well, losing water while it rains? No! For example, in five years I do not spend fifteen thousand euros on water. You see? I have done it, but I knew that it would take me that much time to recover the money.'

How the imperative to modernise is put into practice can take markedly different forms depending on the means and ideological underpinnings (such as 'sustainability' or 'productivity') through which it is given material shape. The imperative itself, however, has remained dominant over decades of cascading innovations. I asked Andrés what his first greenhouse had been like. He pointed to the greenhouse behind us. It had been more or less the same as the ones he had now, he explained, only without the tubes for rainwater catchment, and with wooden poles instead of steel. Andrés confirmed that the basic principles of the 'raspa y amagado' model had not changed much over the decades. However, he added that it was true that 'the height has been modernised over time. That's something we did not realize. Its height is very important for the humidity. Having taller walls means more air enters, and having a higher roof means more air circulation. There is more space between the plantation and the plastic.' Drifting further into his memories, he continued: 'My parents had a small greenhouse, low, you could touch the ceiling with your hand. Well, that was a huge step, because they came from planting in the open air. And that does not work anymore. But of course, the Seat 600 was a good car, because before they travelled by donkey. But then the Seat 127 came, and then the next, and such is life.' Comparing the development of greenhouses with changing car models, Andrés made an important point: every time a newer model is introduced, older models gradually lose their status. And, as there is always an improved model to be released, the 'newest' is paradoxically bound to be surpassed by the 'new'.

Fig. 3.6. Different greenhouse models built next to each other: 'raspa y amagado' in the front and to the left; the taller 'multitúnel' in the back.

Stuck in innovation

Innovation is a loaded term, with extensive debates addressing it in virtually every academic field, most notably engineering, business studies and economics. Innovation has become an integral part of the vocabulary of progress, appearing regularly in business models and national legislation alike (Godin 2015). Criticising such overuse of the term, Godin writes that 'innovation is the panacea for every socioeconomic problem. One need not inquire into a society's problems. Innovation is the *a priori* solution' (Godin 2015: 224). In the context of my research, the term was often invoked in a similar manner. Usually it referred to the implementation of new technologies such as irrigation systems, but also sometimes to changing industrial practices, for example working with biological pest control. The development of the Plastic Sea can be attributed in part to the entrepreneurial skills of its farmers and their collective willingness to adopt 'innovation.' In official discourses, 'innovation' has framed the image of a modern, technologically advanced province. Through 'innovation', modern progress has been celebrated as the best—maybe the only possible—move to make.

But what is *unmade* in this dominant gaze towards the future? Innovation is a mode of what Relph calls futurization: 'the self-conscious making of futuristic landscapes and places

[…] apparent in any design that attempts to be innovative and ahead of its time' (2016 [1976]: 103). But this, he forewarns, 'is also continually destructive of place, denying even the degree of authenticity that time and tradition might lend to places' (2016 [1976]: 105). Where modern progress is appealed to as a driving force behind social change, we need to ask the question, as formulated by Lara Deeb: 'progress *from what?*' (2006: 19). What are the forms of life and technology that innovation discards? As noted above, modern progress is by definition a movement away from tradition. It means that, as Gross puts it, 'all the inherited guidelines must be either rejected or rethought. The modern individual must learn how to ground him or herself anew, without reference to the criteria of the past' (Gross 1992: 40). As modernisation continues apace, this means that people must break with the past not just once, but time and time again. This includes jettisoning those practices and technologies considered old even if they still exist—precisely because they exist—in the present. Igor, for example, relegated flood irrigation, the traces of which were materially present in his greenhouse, to the past, and praised the innovativeness of drip irrigation. Trumping him, Lola dismissed drip irrigation for being traditional on the basis of the introduction of digitised irrigation systems. Future innovations were already on the horizon. For many, 'digitization is the future', even if it remained unclear what something like 'big data' might contribute to agricultural practices. Several farmers were also looking to the possibility of generating solar energy generated in their plastic roofs.

The farmers I spoke to often made comparisons with other parts of the world, especially Morocco and the Netherlands. As they were only too well aware, the practice of cultivating 'below plastic' had been taken up across the Mediterranean, especially in the Moroccan Souss-Massa region. Several were concerned that, with its competitive advantage of lower wages, the European market might increasingly turn to northern African production, cutting out Almería. Consolation was found in EU certification and standards for the traceability of goods, but also in the perception that Almerían greenhouses would be 'more advanced.' Morocco thus served as an 'other' against which Almerían farmers could (and felt compelled to) differentiate themselves.

By contrast, the farmers' comparisons with production in northern European greenhouses, especially in the Netherlands, portrayed Almería as 'lagging behind.' The Netherlands, like Almería, has a large greenhouse industry dedicated to flowers as well as vegetables and fruits. It is commonly considered to be Almería's main competitor in Europe, but also an example to look up to or a source of inspiration. The Dutch greenhouses, in Almería referred to as the 'Venlo type' after the southern Dutch town, are usually taller and

made of glass, which gives them a more orderly, almost stately, look than the Almerían models I described above. Inside, they are commonly equipped with lights, heating and irrigation, and some have advanced climate control systems. Andrés told me he had visited the Netherlands as part of an excursion organised by his cooperative. 'When I was in Holland, I saw the production of a single hectare in a greenhouse is three times what we have here. They have everything more organised,' he said admiringly. Reflecting further on this, he added: 'Clearly the climatic conditions are not what we have here. In Holland, they have plenty of water, so they don't have the problems we do. Their problem is that they don't have enough space and sun. So they need to heat the greenhouses and add lights. Here, because the climate is good, we increase the productive surface. But I think this should be regulated, because it is better to have less surface and more efficiency.' 'How would you do that, increasing performance like that?' I asked. 'Having, for example, a style like in Holland, or Germany', was the reply. 'They now even have greenhouses with three floors, to save space. I have seen them. Three floors! The countries in the north are 50 or 60 years ahead of us.' In this way, images of progress were often evoked during my time in Almería to represent the possibilities of technological innovation, digitisation and increased productivity per hectare. Comparing between regions and modes of production in this way produces a hierarchical ordering that conforms to the ascending trajectory of modernisation. The 'other' against which progress is framed can be a set of local practices or technologies, as in the continued use of drip irrigation for Lola, or can be located at a distance in the Moroccan coastal plains and infused with exotic notions of the Moorish past. But the comparison also works to relegate *oneself* to the traditional, against the other who is 'more modern.' As I discovered, a certain inferiority complex seemed to be in place in Almería, as farmers vied with one another to appropriate the practices of those they portrayed as being 'advanced.'

In the process, new became old, which relates to the unmaking in modernisation, whereby links with the past need to be severed to keep up with the present in its 'proper,' modern form. This creates obvious tensions where the past is simultaneously present, and conventional temporal coordinates become scrambled as 'traditional' and 'modern' practices become entangled in one another and coincide. This continuous remaking of the 'new,' and unmaking of the 'old,' tends to produce a sense of insufficiency. As new times presented new technologies, farmers in Almería were repeatedly confronted with visionary possibilities that could not help but make the present circumstances inadequate. The more I looked into the experiences, practices and concerns of farmers, the more it seemed as if innovation was

not the visionary force driving society forward, but rather a paradoxical mode of 'catching up' and 'lagging behind.'

It is certainly not my aim to criticise these farmers. My point is that, contrary to what the terms 'innovation' and 'progress' might suggest, the modernising processes of which they spoke seemed less to herald the march into the future than to hold the present in a tight grip of insufficiency. Modern progress has no end; rather, it seemed to stumble over itself. When Andrés said 'we have come a long way, but there is still a long way to go,' he was putting Almerían farming practices and technologies, including his own, on a clearly outlined path from past to future. The present, however, was caught somewhere along the way, never fully fulfilling the need to 'catch up' with progress. Perhaps innovation is not so much a vehicle for producing progress as a way of enduring it. In a landscape brought into existence through innovation, innovation also comes to function as its primary form of maintenance (understood as I described it in Chapter Two): not as renewal but as a way to keep the current state of things going. Progress may proclaim a forward movement in time, but the lines of becoming that shape the transformation from 'desert' to 'orchard' are not so straight. Rather, they twist and loop, generating unsettling shifts in relations and experiences. These expressions of modernisation, as I will go on to discuss in the next and final section of this chapter, are mediated through technology and, more importantly perhaps, by the belief that technology can and will provide 'solutions' to the social and environmental dilemmas of the present.

'Techno-fixing' aridity

During our conversations, I asked Lola if using 30% less water than her 'traditional' neighbours meant that, compared to previous practices and to other farmers, she was producing more with the same amount of water or producing the same using less water. 'The point is to use less water,' she replied briskly. For her, her farming practice was a prime example of the 'desert'/'orchard' nexus (see Chapter One). It was perfectly possible, she said, to pursue the aim of sustainable and lucrative agriculture in the desert as long as the appropriate measures were taken and the maximum efficiencies maintained. And yet, in view of the steady expanse of plasticulture in Almería over the past half-century, I could not help but wonder: would more efficient water use not simply allow for further growth and intensification? The step from a strong belief in technological innovation to the fantasy of 'techno-fixing' is a small one. Here, I consider 'techno-fixing' to rely on a politics of radical simplification through which the complexity of culture, environment and economics is

reduced to a set of 'problems' and their corresponding 'solutions.' As outlined by Michael and Joyce Huesemann, 'techno-fixing' is a dominant aspect of modernisation that has infiltrated many if not all aspects of life, including the realms of medicine, military infrastructure and the environment. The basic premise of their 2011 book, *Techno-Fix: Why Technology Won't Save Us or the Environment*, is to debunk the pervasive illusion that technology can solve the pressing issues that humanity faces today all by itself. Rather, they claim that technology is part and parcel of the problem. To the Huesmanns, 'techno-fixing' contains a number of fallacies. Its proliferation is based on an uncritical popular acceptance of technology and a near-religious belief in progress. Superficial technological solutions to narrowly defined social problems end up addressing symptoms rather than causes and always have unpredictable negative side effects. 'Fixing' these shortcomings results in a set of cascading technological solutions to counter the negative side effects of previous solutions (so-called counter-technologies).

Fig. 3.7. The Plastic Sea continues to expand with the construction of new greenhouses in previously uncultivated areas.

The Almerían landscape transformation from 'desert' to 'orchard' is a moment in which a particular set of such 'techno-fixes' can be observed. This underlines my argument that narratives of temporal advance, innovation and modernisation can act as conservatisms in

disguise by keeping the imagination of, and material engagement with, landscape within the limits of existing paradigms. The constant drive of modern irrigation technologies towards greater efficiency is one example of such technological fixes. This relates to the general observation that technologically driven efficiency improvements do not decrease the consumption of limited resources, but rather stimulate its growth or acceleration (also known as the Jevons paradox: see Huesemann and Huesemann 2011). The other 'techno-fix' I want to pay specific attention to here is *desalination*: the technology used to process seawater from the Mediterranean so as to extract the salt and use it for irrigation and human consumption in an arid landscape where surface- and groundwater are under pressure.

Promises of desalination

Although desalination had been under development in Spain since the mid-1960s, the shift towards its large-scale implementation happened quite suddenly when, in 2004, the socialist party PSOE won the national elections from the conservative PP. Immediately, the PSOE cancelled the existing National Hydrological Plan, which had been premised on the extensive hydro-engineering of terrestrial waters, including the construction of new, much-contested river transfers, and replaced it with large-scale desalination plans to be implemented at a national level. In Almería, there are currently three main desalination plants in operation, one serving mainly agricultural purposes in the Campo de Dalías; a second in Carboneras, serving agriculture in the Níjar and Pulpí valleys; and a third in the city of Almería for domestic consumption. Two others, in the Lower Almanzora and Rambla de Morales, are currently out of commission. The Almanzora plant broke down after it flooded in 2012 and has been in a state of disrepair ever since, much to the frustration of farmers in the region. The Rambla de Morales plant has been subject to financial, legal and socio-political struggles—a less dramatic breakdown, but no less frustrating to the stakeholders involved.

These 'failures' notwithstanding, the promises of desalination have been pervasive. As outlined by Erik Swyngedouw (2013; 2014; 2015; Swyngedouw and Williams 2016), such promises in the Spanish context have been multiple (see also García Molina and Casañas 2010). Desalination, it has been claimed, offers a new 'solution' to the perennial 'water problem' in the arid southeast of Spain. Its promise is to replace century-old debates about existing and planned interbasin transfers that have long since become untenable. These fractious debates, sometimes dubbed as Spain's inter-regional 'water wars,' have generally been framed as the southern provinces' appeal to the north for a just distribution of the nation's water resources. By introducing an additional source of freshwater from the seas,

desalination technologies have been seen as taking the sting out of this conflict. Water from the sea, envisaged as uncontested and apolitical, as limitless and free, has thus been called upon to alleviate the demand on Spain's contested surface waters.

Desalination also carries the promise of sustainability. 'The greenhouses are factories that do not produce smoke. Rather, they consume it,' reads one of the witty slogans written on the walls in the entry hall of the office of the CUCN (*Comunidad de Usuarios de Aguas de la Comarca de Níjar*), the irrigators' community managing the distribution of desalted water from the Carboneras plant in the Níjar valley. The one-liner is a variation on an all-too-common theme about the sustainability of Almerían farming that is based on the consumption of carbon dioxide by the multiple plants (fruits, vegetables, flowers) that the province tends. While this does not address the use of desalted water per se, desalination is generally thought to contribute to more sustainable agriculture. Introducing an additional source of water, the argument goes, lightens the pressure on already overexploited aquifers, and even replenishes these. Farmers previously dependent on groundwater can then tap into these desalination infrastructures and irrigate their crops with an unbounded water source. The ecological dangers of interbasin transfers can also be averted—or so runs the socio-political and environmental claim.

Underpinning this, desalination has promised modernisation. Discursively, desalination is nearly always framed in terms of being technologically advanced. Being conspicuously innovative, it leaves behind the old talk of groundwater exploitation, interbasin transfer and political-regional compromise. The new framing is materialised in its architecture and infrastructure. The architecture of desalination plants leaves little doubt about their place and significance in the landscape: they are not there to be *with* the land, but to be *upon* it, to cut through it, to tower above it. Some have futurist designs, such as the decommissioned installation in the Lower Almanzora (northern Almería), which looks like a stranded spaceship. Meanwhile, Carboneras appears as a large industrial hall with long rows of large green tanks running along the sides of the building, twenty-two on each side. The plant is located on the east coast, on a piece of flattened land that has been mercilessly cut out from the rocky hills that overlook it. Seen this way, the desalination plants play their own role in the transformation of the desert landscape. Watering the desert, they disprove the arid conditions as well as other dominant features of the landscape. They are placeless in the sense that they seem detached from the local landscape, and are emplaced in the sense that this detachment is precisely the point.

Fig. 3.8. Inside the Carboneras desalination plant: promises of modernisation materialised in pipes, pumps and control systems.

This landscape transformation, the 'desert'-overcome-by-'orchard' trope, is substantiated through the celebration of advanced technology. The inside of a desalination plant like Carboneras, to the untrained eye, appears as a patchwork quilt of blue, green and grey pipes, tanks and basins. Seawater is directed in, pre-processed, treated through reverse osmosis (which extracts the salt), re-nutrified, and finally channelled towards the irrigators' communities, in this case the CUCN. The CUCN in turn supports this celebratory image of technological achievement. I was received at the CUCN by its president, Antonio López Úbeda, who invited me into an office space. Just as the entrance hall had been adorned with water-related decorations, so were the office walls: a conference poster, a map of the Níjar region with waterworks highlighted in blue lines, a few framed photographs of groups of people posing with waterworks. (On most of these, I recognised López's characteristic white goatee.) Before sitting down at his shiny desk, he turned the window blinds to block out some of the afternoon sun. Tapping distractedly with a pen on the edge of his desk, López began narrating a history of the community. Established in 1999, the CUCN had played a leading role in the construction of Carboneras and piping systems for distribution, both through political pressure and the actual management of works. Since then, the community had steadily grown, and López quoted it as having nearly 2300 members, accounting for a total of 9000 hectares of cultivated land supplied with desalted water.

With visible pride, López drew my attention to the technologically advanced water network under his supervision. He pulled up some pictures on his computer screen, which he then turned towards me so we could both look at them, and pointed out some of the features of the network. With over 700km of largely underground piping and seven main regulation basins located on the hillsides surrounding the Níjar valley, the network is a considerable engineering achievement. López said that its construction had been very complicated, with piping running partly underneath the greenhouses, but that farmers had been generally supportive of it, with many of them immediately seeing the advantages of the arrival of desalted water. Throughout the entire valley, López went on, the piping system had been fitted with meters that were monitored in real time. Every ten minutes, all of these meters were read and their data was collected in a central monitoring system. Should any irregularities occur, the system automatically closed the corresponding valves so as not to lose any water to spillage, and sent a text message to the responsible technician. In addition, valves were fitted with a sensor that sent an alert if water flowed that was not registered by the meter (indicating that the meter itself was broken). In this way, the CUCN could observe pressure variations through the network, monitor how supply and demand were distributed, and regulate its flows accordingly as well as act instantly when there was a breach or leak. He showed me a photograph of a pipe that had been compromised with an illegal tap drilled into the pipe just before a meter. 'Visually,' he commented, 'an intrusion like this would be impossible to locate. But with our control over the water it is very, very easy.' The tap had appeared as an irregularity in the organisation's monitoring systems. 'We have used the best materials, and so we have very low losses. Only 0.5%. This is truly exceptional for a network as complicated and extensive as ours,' López said, clearly satisfied with this accomplishment. At first, I read the emphasis López placed on the CUCN's use of state-of-the-art technologies as a form of presidential boasting—after all, in representing the *comunidad* from his position, he could be allowed some bombast. However, such a depiction, even if partially accurate, does not do justice to the underlying values at work. Rather, control over water by means of technology is *in itself* considered desirable, reflecting the modern ideal of human mastery of the environment and underscoring the ongoing project of modernisation in Spain.

Unfulfilled promises

Through its multiple promises, desalination keeps progress narratives intact. It is not, for all the arguments of its advocates, a radical shift in the Spanish hydro-modernisation trajectory (Swyngedouw 2013; 2015; Swyngedouw and Williams 2016). However, as much as

infrastructures hold promises of modernisation, they also structurally fail to fulfil their promises (Anand, Gupta and Appel 2018). As Hannah Appel, Nikhil Anand and Akhil Gupta (2018) point out, the futurity of infrastructures is challenged when demand begins to exceed capacity or when they are not as intensively used as was first promised; when the infrastructure starts decaying and needs maintenance, sometimes already before completion; and when the infrastructure as a whole is rendered out of place and time as cultural and political circumstances change. A critical stance towards the promise of technologies and infrastructures is no less appropriate in the case of desalination—and not only when considering those plants that have been decommissioned.

To illustrate, a number of critiques of desalination have been expressed in public and scholarly debates. For one, desalination does not seem to substantially alleviate inter-regional tensions in Spain. On the contrary, as Swyngedouw (2015) argues, regionalism might even be fostered by the increasing regional autonomy, and decreasing interdependence, that attends water supply as a result of desalination. The sustainability argument cannot be uncritically accepted either. Extracting salt from seawater generates waste in the form of brine, a concentrated salt solution. As the proper disposal of brine is costly, this brine is released back into the ocean and has been found harmful to marine ecosystems, which is becoming a pressing issue on a global scale (Jones et al. 2019). Furthermore, reverse osmosis is an energy-intensive process (Fuentes-Bargues 2014; Meerganz von Medeazza 2005; Swyngedouw 2013; 2015). Looking at the coal plant next to the Carboneras desalination facility, I realised that the 'smoke' of the greenhouses was not produced inside them, but had been displaced to their water factories. Not only does reverse osmosis cost a lot of energy, it also places a toll on its material structures. Because the system requires constant maintenance (especially the replacement of membranes at regular intervals), the engineers I spoke to at Carboneras asserted that the plant could never operate at full capacity. At all times, some of its components have to be cut off from the main process to allow for cleaning, replacement and repair. Once every three to five years, the entire plant has to be shut down for major maintenance work. Ultimately, the plant, which was opened in 2005, will have a lifespan of only 25 years before it needs to be fully renewed or rebuilt. This implies that significant periodic public investment is required to keep up current levels of water production, which is met in turn with resistance from beyond the farmers' communities.

Moreover, desalination does not replace groundwater use, but serves as an additional water source. First and most obviously, desalted water is used as an additional resource in regions where water is scarce. In the bowl-shaped valley of Níjar, dropping water levels mean

that some establishments on its higher edges are already facing dry wells. In this regard, López admitted to having personal stakes in the project: 'In the region where I irrigate, one well used to have a flow of forty litres per second. And now it has six litres per second. If we did not have desalted water in that area, we would not be able to cultivate at all.' Second, many farmers are continuing to complain about the cost of desalted water. Priced at €0.52 per cubic metre at the time of writing, desalted water in Níjar is about twice as expensive as extracted groundwater, which costs the farmer around €0.25. Hence, water from Carboneras is generally considered very expensive in Almería, and many farmers are resorting to groundwater extraction instead.

Third and finally, desalted water tends to be added to 'traditional' sources due to concerns with quality. While water scarcity is a main problem uphill, the lower regions of the valley, where groundwater can be reached relatively easily, is suffering from 'bad quality' as the groundwater is increasingly saline. Hence many farmers are concerned with the quality of the water. This quality is measured in terms of conductivity. Conductivity refers to the capacity of the water to transport an electrical current and is measured in Siemens per meter (S/m). A higher concentration of dissolved ions (including salts) corresponds to a higher conductivity, which allows farmers to put a number on the salinity of their water resources. Andrés, the farmer I introduced above, swiftly put the desalination debate into perspective: 'The water problem is bad, but not to such an extent that we don't have it,' he said. 'There is water, but it is not of the same quality throughout Almería. In the region of El Ejido, for example, its conductivity is much lower than here. One kilometre from here, there is a well that has a conductivity of six, and another that has eight. The farmer that has water from that source, well, he is going to have many problems. And we are right next to each other. We cannot irrigate with water with a conductivity of six in the same way we can with water of three.' I asked what conductivity would be best for his tomatoes. 'Less conductivity is better,' he answered, 'because you can increase conductivity [by adding nutrients]. But you cannot reduce it.' Like many regional farmers, Andrés weighed the value of desalted water in relation to both the price and the quality of different available sources. This runs contrary to commonly-held ideas in Almería that farmers who do not use water from Carboneras do so solely because they are unwilling, if not necessarily unable, to pay a higher price. Rather, the farmers' concern for 'good' and 'bad' water suggests that a more subtle consideration of options is at stake. It is up to the farmers, who have the option of using desalted water and groundwater from a number of local wells, to decide what particular resources they prefer. Often, farmers choose to use a combination of desalted water and groundwater in order to

reach the desired conductivity levels at maximum profit. That is to say, desalted water comes with a very low conductivity (lower than 1 S/m), and groundwater at some places with a very high conductivity (up to 8 S/m, which is saltier than seawater).[14] Mixing the two sources, the farmer can achieve the desired level of conductivity for their type of crop, which might be between 1 and 3 S/m. As desalted water comes at a higher price, this weighing of quality is as much about what best allows the crops to grow into valuable products as what is financially lucrative. Again, this is not to accuse farmers of using desalted water in irresponsible ways. Rather, the weighing of desalted water as a source of different quality reflects a central fallacy: that of desalination as a 'solution' to aridity by allowing for increasing water consumption—perhaps the most important criticism of desalination in terms of its role in the making and unmaking of Almerían landscapes today.

Fig. 3.9. Some 4,000 farmers gathered in front of the futurist Bajo Almanzora desalination plant on 16 October 2017 to demand its immediate repair.

The scarcity trap

By introducing new water and, importantly, water of a different quality, the intervention in historical patterns of water scarcity through desalination is quite impressive. Many in Almería see desalination as the future, and understandably so, as it promises liberation from the

[14] For reference, the European Drinking Water Directive stipulates a maximum conductivity of 0.25 S/m at 20°C, while seawater is generally considered to balance near 5 S/m (Council Directive 98/83/EC, 1998).

environmental constraints associated with aridity. Its success story, as told by CUCN president López among others, is based on offering guaranteed water of consistent quantity and quality: a reliable and controlled water supply (García Molina and Casañas 2010). However, this is arguably optimism of a cruel kind. Cruel optimism, Lauren Berlant remarks, occurs 'when something you desire is actually an obstacle to your flourishing' (2011: 1). She approaches this with a sense of astonishment: 'Why do people stay attached to conventional good-life fantasies,' she asks, 'when the evidence of their instability, fragility, and dear cost abounds?' (2011: 2). The good-life fantasy, in this chapter, is a society propelled by technological innovation into an ever-brighter future. But lest we forget that water scarcity is ultimately a question of supply and demand, several hydrologists from the universities of Almería and Cartagena whom I spoke to pointed out that as the supply of water grows, demand grows equally fast and in some cases even faster.

As I outlined in Chapter One, in the early twentieth century the INC instigated access to groundwater by introducing new technologies for digging wells and extraction, and in so doing set off the rapid development of intensive agricultural practices in Spain as in many different parts of the world. In its perceived abundance, groundwater allowed for practices that exceed environmental capacity, and any sense of abundance would be short-lived. 'While scarcity plays a starring role in many important problems, abundance sets the stage for it,' write Mullainathan and Shafir (2013: 'Conclusion'). More recently, the twenty-first century has seen the rapid expansion of desalination, which in many ways repeats the same pattern. An additional source of water is tapped into, and this allows for, even stimulates, the continuing expansion of the Plastic Sea. In this sense, Almería seems to have worked itself into what Mullainathan and Shafir call a 'scarcity trap' that occurs when 'an initial scarcity is compounded by behaviors that magnify it' (2013: 'Introduction'). Similarly, Meerganz von Medeazza identifies 'a generalised deflection towards what can be seen as a social scarcity pathology' (2005: 65) in the urge to increase water supplies. Supply creates demand. Interventions that increase supply—groundwater extraction, interbasin transfers, desalination, and so on—but do not address consumption growth cannot alleviate scarcity in the long term. In this way, desalination appears to be more of a temporary patch than a viable long-term solution—a 'quick fix' to the much more fundamental issue of intensive water consumption in an arid region (Swyngedouw 2013; 2015).

I am therefore inclined to agree with Meerganz von Medezza's conclusion that 'although the "dry Spain" lacks significant naturally present water resources, believing that the desalination technology might definitively eliminate this handicap constitutes a dangerous

myth' (2005: 68). However, such statements also resort to a normative framing of the landscape—the desert as a 'handicapped' place. Desalination is an unsatisfying fix, not just because it fails to account for the social dynamics that produce scarcity, but also because it fails to address an underlying dismissal of the desert landscape itself. The belief that the arid south of Spain is somehow defunct, not fit for purpose, and that its aridity is an injustice, is not challenged by desalination. Rather, the specific conditions of the desert landscape are framed as a general environmental problem, which is then deployed politically to justify investment and to substantiate progress narratives that turn out to be repetitive and unsatisfying at best. Desalination cuts through this landscape in a dismissive, almost violent way through its imposing architecture and infrastructure, and through the short-term forms of capital expansion it supports.

Conclusion

It is hard to write against modern progress. Who, after all, would *not* want to benefit from the advance of technology? Modernisation has been, and continues to be, awe-inspiring in many different ways and to many different people. While many current feats of technological innovation were once unimaginable, they also inspire the imagination of new worlds to come. Thus, I understand and admire the pride of the Almerían farmers I have spoken with, and respect their efforts to build and maintain their greenhouse farms to make a decent living for others as well as themselves. Writing against progress also risks implying that the past must have been better. Such romanticism is misplaced. Of course, the past was *not* better, at least not inherently. And the question becomes even more complicated when considering progress in tandem with progressive thought—with the idea that change should work to improve social and environmental conditions for us all. However, and this is the hub of my critique, progress can also be conservative. The linearity it presumes can easily become circular, and the futurity it promises can easily harden into a twice-told tale. And as I have shown, reducing progress to technological innovation can also inspire dubious forms of 'techno-fixing,' finding ready-to-hand solutions for complex societal concerns.

In this chapter, I have shown how the Plastic Sea works to reflect some of the dominant values that underpin the making and unmaking of landscape. This also draws us to the many different possibilities of life we create: to the livelihoods that are supported through the greenhouses, including those of farmers, truck drivers, construction workers, lab technicians, and many others; to the lives of the insects that thrive in the thousands of water basins, and the rare species of birds that feed on them; and to the present realities and future imaginaries

of global food production. It simultaneously points to forms of life that are unmade: traditional agricultural practices, summarily relegated to the past; or slow-growing breeds of tomatoes, remembered nostalgically for their taste but abandoned in the never-ending search for greater efficiency. I have presented a narrative of how our society works against the grain of its environment: problematizing a landscape, opening it up to a cacophony of 'solutions'; building capsules to liberate from the constraints of the environmental, the local, and the present. Yet, as I have shown, this liberation is hardly what it proclaims to be. The greenhouses that comprise the Plastic Sea, and the contemporary modes of production and consumption they represent, are necessarily embedded. The futurity of the progress narratives that are attached to them fails to escape the present, just as the modernisation of environmental relations fails to overcome the vernacular. But perhaps hope lies precisely in this persistence of the present and the vernacular. For as much as humans have sought to unmake local environmental conditions and temporal limitations as justifications for taking the high road to modernity, they have also demonstrated their capacity to adapt their narratives of progress to the landscape rather than the other way round.

Conclusion

In this thesis, I have presented a story of growth and decline, renewal and decay, making and unmaking, and, in between all of these, of endurance, maintenance and stagnation. I have been intrigued by the transformation from 'desert' to 'orchard' in Almería, Spain, as materialised in the vast areas of plastic greenhouses known as the Plastic Sea; by the optimism that this transformation entails; and by the pride and satisfaction that many of my interlocutors have gained from it. But I have also been drawn to the various forms of decay that this modernisation streak has involved. I have paid attention to the debris that modernisation produces, visible in the ruins of social systems, physical structures, and forms of life that cannot fulfil the perpetual drive to renew. The disintegrating social and material structures of the mountain village of Pizarra de Filabres to me form a prime example of this.

I have placed these developments in light of popular landscape representations, which reveal that they have been far from accidental or arbitrary. Rather, they resonate closely with the dominant images of a desert landscape. That the landscape in question is arid, or perhaps more accurately, is framed as a (semi) desert and particularly so in relation to the relative humidity of the European continent (as in 'the desert of Europe'), is fundamental to how people relate to it—how they engage with it through imagination and representation, as well as how they act upon and intervene in it materially. Further, experiences of water scarcity are not distributed equally among communities and mostly affect the question of (further) agricultural expansion. My concern, then, has not been primarily with how the people who live and work in this landscape cope with water scarcity, but with how the perceived lack of water is apprehended in relation to normative notions of desirable, modern and European landscape, and with how this lack gains political potential in discursive and material interventions in the landscape.

Throughout this thesis, I have wanted to underline the creativity of those involved in the transformation of landscape. With my focus on the making and unmaking of landscape, I have employed a design analytic that takes design not just as a professional activity, but as a key feature of everyday life and mundane human-environment interactions. This analytic

asserts that people engage in design activities and processes of making as they go about their daily lives and actively take part in the formative processes of the world (Appadurai 2013; Gunn, Otto and Smith 2013; Murphy 2016). Design as an everyday process occurs in the critical engagement with existing social and material forms, as well as in the creation of new ones. As a process of intentional change, it involves the cultural inscription of meaning in relation to the material world. However, by drawing attention to unmaking, rather than just making, I have stressed that this analytic must also be attentive to the destructive capacity of design. As humans co-produce the landscapes they dwell in, they are also involved in unmaking them. In un/making, I have suggested, making and unmaking are entwined to the extent that one implicates the other.

Moreover, I have shown that the making and unmaking of landscape also intervenes in its temporalities. Being a process in itself and thus ever-changing, the landscape connects the large temporal scales of the earth's continuous formation to the small scales of everyday rhythms and habits (Ingold 1993; 2011). As such, it frames experiences and projections of time. In other words, landscape is a device through which to tell time, to 'read' the rhythms of movement and becoming, as well as to locate self and society in relation to time. Engaging with the landscape so as to transform it, regardless of whether the projected changes are considered desirable, also offers different temporal orientations. Un/making landscape, I have argued, is also a process of time-making.

Understanding the making and unmaking of landscape is important at a time when the human impacts on the environment—from the smallest organisms to global climate systems—are increasingly subject to critique. The concept of the Anthropocene, as well as the repetitive (and perpetually disappointing) climate summits at the highest political levels, are symptomatic of this trend. We are potentially at a turning point in environmental history where global public debates address the ways in which the human species should go forward in its use of, and impact upon, its environment. Understanding the making and unmaking of landscape forms a small but central piece in this puzzle, as it provides a focus point for how relations between the urban and the rural, nature and culture, and the modern and the traditional are reproduced. This allows for a perspective that neither submits to the proliferation of technological optimism, nor descends into paralysing nostalgia and grief, but offers a more nuanced view of how environmental changes occur. Landscape change, and the public debates addressing it, form strong indicators of how different people relate to their environment what they find important in that relationship, and with what motives, experiences, and narratives they enter into the discussion.

In this way, landscape also offers an alternative entry point into environmental debates that have mostly been dominated by climate models. In 1976, Edward Relph wrote that:

> Much of the recent discussion on environmental issues I have found both unsatisfactory and disquieting. Unsatisfactory because the analyses of behaviour or of particular problems are so frequently mechanical and abstract, simplifying the world into easily represented structures or models that ignore much of the subtlety and significance of everyday experience. Disquieting because these simplified structures often then serve as the basis for proposals for the design of environments and the manipulation of people and places into patterns that are supposed to be more efficient. (2016 [1976], preface, unpaginated)

Today, four decades later, I often feel the same unease when it comes to environmental debates. So called 'hard' science continues to be the main informing source for policy, even though it only provides partial insights. It is a mistake to value scientific data as 'more true' than experience or narrative, climate science more valid than ethnography or cultural analysis, yet it is a mistake I have also made myself. At some point during my research, I found myself anxiously trying to find quantitative data, such as weather records or recorded groundwater levels, that could verify the perceived increase in water scarcity that interlocutors shared with me. When such data appeared unavailable, simply because it did not exist or because I failed to find the right access points, I felt frustrated. It was as if only with this data would I be able to substantiate the ethnographic encounters I was jotting down in field notes, the experiences people were sharing with me, and the claims I was hoping to make about environmental relationships, imaginations and experiences. I realised that I had been stuck in my own thinking of what counts as reliable or valid information. Positioned as I was at the intersection of anthropology and the humanities, my mandate was never going to be to work magic with numeric data, but rather to engage with stories and experiences. Hence, I wish to stress the power of story; to reiterate that the complexity of environmental relations in today's world cannot be reduced to 'hard' scientific facts or engineered 'solutions'. Something happens in these stories that cannot be captured in scientific models, and it is up to the ethnographer and cultural analyst to unravel the purpose behind the stories and what they might reveal about the landscape and people's experiences today. Environmental science is incomplete if it does not embrace interdisciplinary views and exchanges, where, as others have already argued, social sciences and humanities must play a fundamental role (see, for example, Emmet and Zelko 2014; Holm et al. 2015).

Imagination and the process of un/making

A basic premise of this thesis is that the desert, because of its material and climatological characteristics and its historical and popular imaginaries, allows for particular ways of making and unmaking that intervene at this intersection of imagination and materiality.

The films, TV series, and documentaries that I analysed in Chapter One revealed various ways in which the desert landscape has been imagined, but also highlight dominant tropes in this desert imaginary. Most notably, the desert landscape was characterised as lacking civilisation and modernity, as being exceptional to Europe, and more generally as challenging the possibilities of human and other forms of life. This is a negative image of the desert, which is countered by narratives of its modernisation, and by counter-narratives in defence of its historically rich cultural and ecological forms of life.

The various modes of material engagement with the landscape that I described in Chapters Two and Three indirectly reflect this imaginary and the stories told about it. The inhabitants of the shrinking village of Pizarra de Filabres (Chapter Two) told me how difficult life had been in the past and how this had improved with the advance of modernisation, but also experienced on a daily basis the difficulties of sustaining life itself. They experienced severe water scarcity that may or may not have been related to depopulation, but in any case added to the existential problem of living in a shrinking village at the margins of the Tabernas desert. In the Plastic Sea (Chapter Three), the modernisation narrative materialised in plastic greenhouses and the supposed 'improvement' of the landscape through access to groundwater and continuing technological innovations in water management. Effectively going against the dominant desert imaginary, modernisation—or so I was told—involved eradicating poverty and enhancing human habitability as well as allowing selected nonhuman species to thrive in a controlled environment. This connected in turn to the perceived Europeanness of the landscape by establishing direct links with the European market. But the transformation from 'desert' to 'orchard' also suffers from a bad image, not least due to rumours of lawlessness, which suggests that the landscape imaginary has not been transformed to the same extent as its materiality.

This is not to say that imagination and experience influence one another in a direct or necessarily reciprocal manner. I would certainly not suggest that spaghetti westerns, or any other films produced in Almería, have had a direct impact on the way the landscape has been materially transformed. Rather, in my approach I have sought to bring somewhat polarised conceptions of landscape as *either* a cultural image *or* as embodied experience closer together. The material transformation of landscape inevitably engenders new ways of imagining and

representing it, and as I have reasoned, in part through the mediating role of intentionality, the images that circulate of the landscape give direction to how landscape may be experienced and transformed. This directional impulse to the 'lines of becoming' of people and landscape can be tied to particular characteristics of the landscape itself, primarily its aridity, but it also relates to more broad-based beliefs in progress and technological innovation, fatalistic views of the future, or a general (dis)regard for the possibilities of life in the desert as a whole.

To those scholars who take landscape to be a locus of embodied experience, a standpoint defended primarily in environmental anthropology (see, for example, Ingold 2011; Tilley and Cameron-Daum 2017), I have stressed the potency of the imagination—as located in those stories told about the landscape that frame and ascribe meaning to it—in shaping the ways in which people experience and physically alter it. The landscape imaginary creates, but also confines, possibilities for design activities. To those who take landscape to be a cultural image, a perspective shared mostly in the environmental humanities and cultural geography (see, for example, Schama 1996; Daniels and Cosgrove 1988), I have underlined the indispensable importance of physical experiences of the landscape and the possibilities and limitations of its material un/making—including the forms of mobility the landscape allows, the embodied and sensory experiences it generates, and the shapes, structures and paths that are inscribed within it. These all matter to the extent that landscape cannot simply be 'rewritten' (as in represented and imagined differently) irrespective of material engagement. Un/making, in short, intervenes in the experience *and* the imagination of the landscape.

Futurity and endurance in modernisation and decay

Perhaps the best answer to the question I have been asking myself as to why we human beings keep believing in, or holding on to, the idea of modern progress, is because it is a narrative that offers direction, promising clarity and guidance in a chaotic world by showing where we came from and where we should go. To cite Ilja Pfeijffer:

> Life becomes meaningless without stories. […] People yearn for a narrative, because a narrative places the unbearable and unmanageable sublunary chaos in a human perspective, reducing it to a chain of initiatives and consequences that a human being is able to comprehend. A narrative gives an idea of control, provenance and destination, origin and direction. (2018: 370)

In light of this, modernisation narratives are an effort to make sense of the infinite intricacy of reality—the world in all its forms and movements and meanings—and to find one's own

position in it, by reducing it to understandable categories and pathways. However, the peculiar characteristic of such narratives (unlike for example religious or nationalist narratives of origin, genealogy and destiny that similarly anchor societies in time), is that they reject origin and seek to turn the human gaze as much as possible to the future—an open future in particular, typified by presently unimaginable renewal. My thesis has focused, however, not so much on this supposedly unimaginable future, but on the rejection of the past that it implies. Modernisation, as I have employed the term here and as I have outlined in the Introduction to this thesis, is based on three main pillars: setting the 'modern' apart from the 'traditional' through temporal othering; separating 'nature' from 'culture', thereby stimulating human dominance over the more-than-human world; and fostering belief in technology so as to achieve the first two aims. The first aim or pillar refers to the temporal work of modernisation, which I have sought to disentangle further, juxtaposing it with the popular imagination of the desert landscape and the lived experiences of my interlocutors.

More specifically, I have demonstrated how my interlocutors were implicated in upholding a status quo, either through 'maintenance' or through 'innovation.' Both, I have argued, are ways to keep life going and to grapple with challenges that often arise at a much larger scale than individuals can have a direct impact on. Stagnation, endurance, and uncanny experiences of a prolonged present (what I have referred to as 'stuck-ness'; see also Baraitser 2017; Bryant 2016; Navaro-Yashin 2009), are by definition negative in progress narratives, which point ever and only forwards, narrowing the present down to a fleeting moment in service of the future. And yet modern progress itself produces such conditions. I have shown that the logic of modernisation remains unfulfilled and can even provoke self-defeating narratives in which one's own social and material conditions are framed as subordinate and backward against images of 'more modern' others. In some instances, modernisation even spirals into outright decay, which means people will have to find ways to live with—to endure—the prospect of further disintegration.

My research has also demonstrated the futurelessness that may be disguised in stories of innovation and progress, or that may surface as nostalgia. It seems that, following their initial optimism regarding the 'improvement' of the desert landscape—which resonates closely with the characteristic narrative of the western genre—many of my interlocutors faced the challenge of formulating a follow-up story: one that might, at least to some level of satisfaction, be able to replace the old, over-chewed tale of modernisation. Because while innovation preaches renewal, and the answer to innovation is always more innovation, it does not offer a new story in itself. It therefore also fails to offer new insights or answers to

the question, 'now what?'—a question that my interlocutors implicitly seemed to be asking themselves, and one I have also been asking in this thesis.

On the other hand, the incomplete transformation from 'desert' to 'orchard' that has occurred in Almería, despite many justified critiques, some of which I have voiced in this thesis, also offers some positive prospects. The belief in technological innovation that I encountered among many of my interlocutors is historically qualified: for technology has been a driver of tremendous improvements to the quality of life of many inhabitants of the desert landscape, both in Almería and elsewhere. Technological interventions in Almería have centred on access to water, and have thus directly addressed the most fundamental of basic needs. Furthermore, the Plastic Sea has come into being through technological innovation. Continuing innovation remains the most compelling and legitimate way to maintain the landscape and project its continued existence into the future. From this perspective, it is understandable that my interlocutors, and I would argue society at large, hold on to the narrative of modernisation: it may be the best story we have precisely because it keeps things going and at least offers the promise of future improvements.

The question 'now what?' also came up in the case of Pizarra de Filabres, discussed in Chapter Two, an exemplary case of depopulation and decay. Here too, modernisation may be seen as both illness and cure, and often both of these simultaneously. There is little doubt that modernisation has been a fundamental force in the process of depopulation, gnawing away at the social cohesion, material structures, and modes of production of this particular community by temporally distancing it from the centres of the modern world, which are seen as more 'advanced.' The choice is painful. Either submit to the chronopolitics of modernisation and allow the temporal breach—a breach that has already been set in motion—to proceed that separates the village from the present and from any imaginable future so that it appears to be a ruin of bygone times; or, alternatively, try to conform to the high demands of modernisation by raising initiative after initiative, maintaining existing social and material structures and constructing new ones, and shielding the future from fatalism so that the village might continue to take part in the modern world.

Further research

Building on the un/making nexus I have presented in this thesis, I would be interested to see what forms this might take in different contexts: how it plays out in different landscapes where aridity does not take central stage, but where other environmental concerns and relations are in focus; how its dynamics might change in sudden, disruptive circumstances;

how its conceptual framework might be adapted beyond environmental studies; and, finally, how un/making may be pursued and politicised, highlighting underlying interests.

One theme I have not addressed, at least in any detail, is sustainability. Sustainability plays an increasing role in nearly every aspect of modern life and is taking on increasing importance in understandings of human-environment relations. The research presented here has the potential to open up questions on how sustainability infiltrates the everyday transformation of landscape—how it changes material engagement and embodied experiences. Conversely, future research might ask how un/making plays a role in efforts to achieve sustainability, and what new imaginaries, structures and socialities are constructed in its pursuit.

Can sustainability become a story—a grand narrative—to replace modernisation? Or will it continue to work in tandem with modernisation narratives, so that to be more sustainable is to be more advanced, 'more modern'? Sustainability, after all, is normative, directive, and future-oriented. Given the empirical observations supplied in this thesis, a follow-up question might be how the temporal orientations of sustainability relate to *non*-normative temporal experiences such as those captured in terms such as the uncanny present, emptiness, or 'stuck-ness'. Sustainability, like modernisation itself, involves a play of incompatible temporalities. Exploring these might unravel a more nuanced image of both.

Finally, even though it was rather daunting at the start, I have also very much enjoyed this exercise in interdisciplinary work. Bringing environmental anthropology and the environmental humanities together has allowed me to explore questions I otherwise would not have asked, research methods I would not have explored, and insights I would not have accessed. Throughout the thesis, it is the landscape that has tied these different approaches together. Hence, I would like to recommend to others to look beyond the boundaries of their disciplinary backgrounds and to seek out the synergies that connecting with other disciplines has to offer, just as I have sought out these synergies myself.

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