

‘Planting Seeds/’The Fires of War’: The Geopolitics of Seed Saving in Jumana Manna’s *Wild Relatives*

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Introduction: Wild Relatives

The opening sequence of Jumana Manna’s feature-length film *Wild Relatives* (2018) moves between two landscapes; the camera lingers motionless, close to ground level, upon a pile of slag (leftover matter from mining coal) before switching to a heady journey along a road carved out in the darkness beneath the surface of the earth, accompanied by a fast, rhythmic and suspense-laden soundtrack.¹ The appearance of heavy machinery, flashlight-clad workers and layers of rock soon confirms that we are immersed in a world of mining, of the extraction of the earth’s natural resources for energy and, with this, the fuelling of industry and potential profit. Essentially, this is a scene of taking things out of the earth – a motif that recurs throughout the film – in order to capitalise upon Earth’s resources and provide sustenance for human life. Moments later, we are above ground again and the camera is pointed upwards towards the archetypal source of natural energy that is the sun. As the camera continues to switch perspectives – from looking upwards from ground-level to moving horizontally through a field of crops; to back down towards the crops’ source, the earth; to a close-up of the surface of leaves – a voiceover (by the artist) provides some geographical and temporal coordinates. The mine is located on Svalbard, a remote Norwegian archipelago in the Arctic Ocean; the sun-drenched fields in the Bekaa Valley in Lebanon. As the voiceover tells us, the film follows a ‘transaction between two distant geographies’ (Norway and Lebanon), what Manna elsewhere names a ‘folding’ or ‘entanglement’ of landscapes.²

* The present article is an expanded and revised version of an earlier essay that was first published in Jumana Manna’s exhibition catalogue, *Wild Relatives*, co-published by the Jeu de Paume, Paris, the CAPC musée d’art contemporain de Bordeaux and the Fondation Nationale des Arts Graphiques et Plastiques in 2017. I would like to thank the Jeu de Paume and Jumana Manna for the original commission to write about *Wild Relatives*, and Manna for sharing her thoughts and materials and for the elucidating conversations about the work and her research since September 2017. My thanks also to Ros Gray for editorial input.

¹ An earlier version of *Wild Relatives* was shown as part of the Jeu de Paume’s Satellite exhibition, The Economy of Living Things, at CAPC Musée d’art Contemporain de Bordeaux and Maison d’Art Bernard Anthonioz, Nogent-sur-Marne, Paris, between November 2017 and February 2018. Following this, the 2018 final version was premiered in the 68th Berlinale Film Festival. This was followed by screenings at CPH:DOX where it was awarded the New:Visions Award; Cinéma du reel in Paris; Art of the Real in New York City; Sheffield Doc/Fest in the UK; Art of the Real, Lincoln Center, New York, and more. In the present article, I refer to the 2018 version.

² See the sections ‘Folding Landscapes’ and ‘Entanglements’ in Manna’s essay that accompanied an earlier version of the film: Jumana Manna, ‘A Small/Big Thing’ in *Wild Relatives*, Paris and Bordeaux: Jeu de Paume; CAPC musée d’art contemporain de Bordeaux; Fondation Nationale des Arts Graphiques et Plastiques, 2017, pp 47–59.

The catalyst for *Wild Relatives* – that which brings to light this ‘transaction between two distant, semi-arid geographies’ that seemingly have nothing to do with each other – is a particular event, which the voiceover announces sparingly at the outset. In September 2015, in a move that garnered much international media attention, the International Center for Agricultural Research in Dry Areas (ICARDA) – which had been founded in Lebanon in 1976 and subsequently moved to Syria in 1977 due to the Lebanese Civil War that had begun in 1975 – requested the return of part of its genetic materials that had been duplicated and stored at the Svalbard Global Seed Vault.³ Located on the island of Spitsbergen near Longyearbyen, the administrative centre of Svalbard, this ‘Noah’s Ark’ that ‘represents the world’s largest collection of crop diversity’ was opened in 2008 as a ‘long-term seed storage facility, built to stand the test of time – and the challenge of natural or man-made disasters’, with the aim of safeguarding duplicates of seed samples from crop collections around the world and with this their genetic information.⁴ In somewhat sensational language, the website of the Crop Trust (one of the three managing bodies) describes the vault, which literally freezes seeds, as ‘the ultimate insurance policy for the world’s food supply’, ‘the final back up’.⁵ Due to the ongoing Syrian civil war that began in 2011, the Aleppo branch of ICARDA came under threat, with equipment looted and staff forced into exile.⁶ As such, ICARDA became the first organisation to request to withdraw their duplicate ‘accessions’ from the so-called Doomsday Vault. It was decided that the ‘reconstruction’ of the original collection from Syria was best carried out across various locations in the similar climatic conditions of Morocco and Lebanon, where existing ICARDA premises were expanded.⁷

³ For instance, ‘Syria War Spurs Opening of “Doomsday” Arctic Seed Vault’, *Al Jazeera*, 23 September 2015, <https://www.aljazeera.com/news/2015/09/svalbard-arctic-seed-vault-syria-150922214321666.html>; Olivia Alabaster, ‘Syrian Civil War: Svalbard “Doomsday” Seeds Transferred to Lebanon to Preserve Syria’s Crop Heritage’, *Independent*, 10 October 2015.

⁴ The Svalbard Global Seed Vault was initiated by conservationist Cary Fowler, together with the Consultative Group on International Agricultural Research (CGIAR), and is managed by the Norwegian government, the Crop Trust and the Nordic Genetic Resource Center (NordGen). For a brief history of the Global Seed Vault at Svalbard, see Sophia Roosth, ‘Virus, Coal, and Seed: Subcutaneous Life in the Polar North’, *Los Angeles Review of Books*, 21 December 2016, <https://lareviewofbooks.org/article/virus-coal-seed-subcutaneous-life-polar-north/#!>. With thanks to Marleen Boschen for this reference.

⁵ <https://www.croptrust.org/our-work/svalbard-global-seed-vault/>.

⁶ Somini Sengupta, ‘How a Seed Bank, Almost Lost in Syria’s War, Could help Feed a Warming Planet’, *New York Times*, 13 October 2017, <https://www.nytimes.com/2017/10/13/climate/syria-seed-bank.html>. The branch contained 155,000 varieties of the crops from the region.

⁷ Accessions were subsequently returned to Svalbard in February and September 2017. See ICARDA, ‘Protecting ICARDA’s Unique Seed Collection’, 10 September 2017, <http://www.icarda.org/update/protecting-icarda’s-unique-seed-collection#sthash.4qjOzygJ.vc0bPIdA.dpb>; and Liat Clark, ‘Syria returns its mass of seeds to the Arctic “Doomsday vault”’, *Wired*, 23 February 2017, <http://www.wired.co.uk/article/svalbard-seed-bank-syria>.

Later in the film, crates of seeds from Lebanon are seen arriving at the airport at Longyearbyen, where they are unloaded from a car and taken into the vault.⁸ Following this, in the only media story included in the otherwise meditative film, we witness a press conference welcoming ICARDA staff and the returned accessions to the vault, celebrating the ‘historical moment’ and recalling the circumstances of 2015 that led to their initial withdrawal – a withdrawal that, it was hoped, would never be necessary.⁹ But this is just one part of the story, one that proved all-too enticing for the media. *Wild Relatives* provides just some of the many other stories that need to be told. The film is ‘the account of twelve months in the lives of people from Lebanon, Syria and Norway who engage with the land in various ways.’ As Manna writes:

‘the categorisation into scientific knowledge and the rescuing of cultural heritage objects always seems to entail a certain erasure, be it of narrative and/or material nature. [...] What has been erased in this process, and in whose hands are these seeds today? What are the negotiations involved in placing so-called Syrian seeds in the public domain?’¹⁰

Wild Relatives recounts a journey, at times from the perspective of the seed, that follows its annual life-cycle. Manna’s camera takes us from the Global Seed Vault from where the duplicates that had been ‘frozen alive’ are dispatched, to the fields, laboratory and gene bank in the Bekaa Valley where the seeds are ‘reawakened’ from their frozen lapsus, cultivated and duplicated, then sent back into exile at Svalbard. The aim of this is the conservation of the genetic integrity of the seeds through ensuring that more than one ‘copy’ of each variety is accessible. What is vital to note here is that frozen seeds stored in *ex situ* vaults such as Svalbard serve as ‘proxies’ for actual crops.¹¹ Seed banks were originally developed precisely in order to ‘archive’ or preserve genetic crop diversity at a moment in which countries worldwide were adopting a small number of high-yielding crop varieties and forsaking the diversity of local varieties (‘landraces’), which are the domesticated, locally adapted, ‘traditional’ varieties of seeds cultivated over time to suit a natural and cultural environment. From the late 1960s onwards, the dream of ‘progress’

⁸ The façade of the Svalbard vault includes a commissioned artwork, *Perpetual Repercussion*, by Dyveke Sanne, which illuminates the exterior part of the building day and night by using highly reflective stainless steel triangles of various sizes.

⁹ As Ahmad Amri, head of genetic resources for ICARDA states at the press event, they will be continuing this cycle of withdrawal, reproduction and return for roughly 15 years in order to regenerate the entire ICARDA collection at Svalbard.

¹⁰ Manna, ‘A Small/Big Thing’, op cit, p 56.

¹¹ Sara Peres, ‘Saving the Gene Pool for the Future: Seed Banks as Archives’, *Studies in History and Philosophy of Biological and Biomedical Sciences*, vol. 55 (2016): 96–104. Referenced in Rodney Harrison, ‘Freezing Seeds and Making Futures: Endangerment, Hope, Security, and Time in Agrobiodiversity Conservation Practices’, *Culture, Agriculture, Food and Environment*, vol 39, no 2, 2017, pp 80–89, at p 85.

inadvertently entailed the loss of biodiversity and cultural diversity. During this period the notion of ‘genetic erosion’ (a concept that gained traction through its resonance with the by-then well-known concept of soil erosion, itself a product of agricultural modernisation programmes) came to underpin global drives to archive seeds.¹² An institution such as ICARDA holds a wide genetic pool that is based upon farmers’ cultivation and selection processes, and this stock is used to cross genotypes that would not cross naturally, in order to create high-yielding, disease-resistant and drought-tolerant seeds that might contribute to its aims of maintaining food security, reducing poverty and combating climatic challenges.¹³ As such, the paradox at the heart of global seed banking is that the dissemination of ‘improved’ varieties has the effect of eliminating the ‘landraces’ that derive from ‘wild relatives’: the wild species that are untended by humans and continue to evolve in the wild, developing traits such as drought tolerance and pest resistance that can in turn be used to strengthen cultivars.¹⁴

By following the seed on its journey from Svalbard to the Bekaa Valley and back again, the film reveals various infrastructures that support and make possible the seed’s movement and the transaction between the distinct landscapes: roads, airports, borders, fields, laboratories, databases and archives, as well as ever-looming media machines and institutions such as science, big business, the UNHRC (the UN refugee agency), international law and even religion. *Wild Relatives* presents a chorus of stakeholders including agroecologists, lab technicians, receptionists and field labourers, and their daily interactions with the land and seeds, as well as the policies, often hierarchical and exclusionary, which determine the plight of human and non-human life. Among the protagonists is Youssef, the son of a Lebanese farmer no longer able to make a living from farming, who taxis schoolchildren and goods, including the crates of vacuum-packed seeds that arrive from Svalbard from the airport to the ICARDA bank and back again, as well as smuggling Syrians and renting his land to refugees. Walid, a Syrian refugee living in the Bekaa valley, tends to a plot of land using organic methods and preserves ‘landraces’ in glass jars and paper bags in a makeshift seed library. Further notable characters include an unnamed priest and scientist who discuss the idea of doomsday and the future of the earth while clambering over a ruined structure on the slopes of Svalbard.

¹² Rodney Harrison, ‘Freezing Seeds’, op cit, p 85.

¹³ Manna, ‘A Small/Big Thing’, op cit, p 54.

¹⁴ See ‘Crop Wild Relatives’, Biodiversity International, <https://www.biodiversityinternational.org/cwr/>; and Harrison, ‘Freezing Seeds’, op cit, p 85.

In what follows, I will extend the paradoxical logic of seed banking – i.e., the improvement of cultivars to the detriment of naturally-adapting and naturally resilient varieties – through the logic of the *pharmakon*: the drug (itself derived from a plant) that hovers indeterminately between poison and cure.¹⁵ Here, the *pharmakon* is that which might be instrumentalised, often with the best intentions, as a mode of safeguarding against or ‘curing’ the threats of climate change, extinction, loss of biodiversity, food scarcity, and so on, but that in fact often serves to worsen (‘poison’) the situation and the quest for ‘resilience’. This logic is traced back to a longer history of (neo)imperial developmentalism and humanitarianism, as well as practices of heritage, biodiversity, preservation and sustainability – cultural and agricultural. I read *Wild Relatives* through earlier works by Manna that deal with orientalist representation and cultural heritage, and in turn bring this to bear upon the cultural and epistemological assumptions of hegemonic practices of biodiversity and their narratives: firstly, through the temporal logic of both Orientalism and cryopreservation (preservation through freezing); secondly, through ‘environmental orientalism’.

Planting Seeds/The Fires of War

One scene early in the film is of particular importance. A group of Syrian women, refugees, are working in ICARDA’s fields. The camera follows their arrival, from their makeshift living quarters that bear the logo of the UNHRC on interior walls, via a truck that transports them to the arid landscape where they harvest crops. From beyond the image, with the Arabic translated into subtitles, we hear the voice of a local poet who was commissioned to create a poem for the inauguration of the newly opened ICARDA gene bank in Terbol, in the Bekaa Valley, in 2016. I will return to this scene below, but for the moment wish to linger upon the poem’s ending: ‘A seed is like love in the hearts of humans; planting hearts will put out the fires of war.’ In Arabic, the word for ‘love’ (hubb حُب), ‘seed’ and ‘grain’ (habb حَب) are written with the same letters (ح and ب), albeit with different pronunciation. In the poetic play, hearts and seeds become interchangeable and seeds inseparable from war, as if to say that ‘planting seeds will put out the fires of war’. Certainly, in this case, certain seeds were taken out of ‘storage’ and planted *because* of war. But in what ways, beyond rhetoric or poetic flourish, might the planting of seeds – and with this the control over and access to seeds – be related to the halting of war? If such a

¹⁵ See Jacques Derrida’s reading of the undecidability of the *pharmakon* in ‘Plato’s Pharmacy’ in *Dissemination*, trans. Barbara Johnson, Chicago: University of Chicago Press, 1981, pp. 61–171.

question regarding the extinguishing of war seems too ambitious, naïve or far-fetched, what does planting seeds have to do with the onset of war in the first place, or with revolution (for instance, the Syrian revolution, or the so-called Arab Spring)? And, by extension, what might this have to do with preservation (ICARDA's genetic resources are repeatedly described as 'world heritage')? Or even – however pre-emptive such a question may seem in the context of the ongoing civil war in Syria, with seemingly no end in sight – with repair, re-growth and reconstruction?

To begin to unpack these questions, we may recall that planting seeds has always been associated with the formation of the state. James C. Scott argues that fire was the original tool for the 'landscaping' that paved the way for permanent settlement and the domestication of humans, animals and plants that characterises states at least 400,000 years ago.¹⁶ In other words, fire paved the way for agriculture – especially the cultivation of grains – the labour of which was, and so often continues to be, carried out by slaves or those bereft of full 'human rights' or due financial return.¹⁷ In the context of the Syrian civil war, rather than indulge in the 'figure' of the eventful spectacle of conflict, Manna's film instead takes a side step – both geographically and temporally – and instead focuses our attention on the 'ground', both literal and figurative: in this case, the broader geopolitical history of the practices and politics of cultivation as but one of many backdrops against which this particular conflict continues to unfold, and the earth itself, both as surface and underground, source of and host to life.¹⁸ This geopolitical backdrop stretches back at least to the early twentieth century and, in particular, the period of the Cold War (echoes of which can still be heard today in geopolitical responses to the Syrian civil war, and in particular US and Russian intervention)¹⁹ and the attendant 'Green Revolution': that seemingly benign 'public relations term' that stands in for the changes brought about after 1960 with the exportation of high-yield crops and 'progressive'

¹⁶ James C. Scott, *Against the Grain: A Deep History of the Earliest States*, New Haven, Yale University Press, 2017.

¹⁷ Ibid.

¹⁸ With regard to the figure/ground dyad and the 'eventfulness' of conflict, my reading here is informed by Rob Nixon's conception of 'slow violence' as that which is typically not even perceived as violence (i.e., the 'figure' or event) and is not time-bound (i.e., a longer-term 'ground' from which figures might emerge). Slow violence elides narrative closure and remains largely unobserved and undiagnosed. In my reading, *Wild Relatives* responds in part to the representational challenges of slow violence, precisely in its insistence on including multiple temporal and geographical grounds, rather than focus on the Syrian conflict itself. See Rob Nixon, *Slow Violence and the Environmentalism of the Poor*, Cambridge, Mass., Harvard University Press, 2011.

¹⁹ See for instance, 'Syria crisis: UN chief says Cold War is back', BBC, 13 April 2018, <http://www.bbc.co.uk/news/world-middle-east-43759873>.

agricultural practices from the US to less modernised countries, including the dry region of the Middle East.²⁰

As the voiceover informs us: ‘There was a time when farmers never thought about buying seeds. They saved grains from season to season, selecting and adapting their own varieties. Then, in the early twentieth century, the development of industrial agriculture transformed farming practices and seed circulation.’ The Green Revolution was the context in which global networks of seed banks such as ICARDA emerged, supplanting traditional, local seed-saving practices, and the legacies of this ‘revolution’ can be traced through Syria’s agricultural policies of the late twentieth century to the mismanagement of natural resources during the droughts that preceded the current Syrian civil war. By drawing attention to the geopolitics of seed saving and modes of relating to, nurturing, ‘saving’, ‘improving’, storing and capitalising upon (i.e., ‘banking’) the natural world around us, *Wild Relatives* not only seeks to trace the entanglement between these seemingly disparate but nonetheless enfolded landscapes but also, implicitly, between two revolutions: the current Syrian revolution and the Green Revolution of the Cold War period.

Orientalism as Cryopreservation

The politics of seed saving, and in particular the Svalbard Global Seed Vault, have in recent years been the subject of growing artistic attention.²¹ In the case of *Wild Relatives*, however, the initial impulse to engage with the global vault was somewhat contingent, and can be read as a development of themes that Manna had explored in earlier work. Perhaps most notable in terms of continuity is *The Post Herbarium* (2016), which explores the organisation, classification and preservation of vegetal life in the nineteenth century by George E. Post, an American missionary, botanist and surgeon who set out to document and classify the biodiversity of Syria, Palestine and Sinai. Archives had already been the focus of Manna’s works prior to *Wild Relatives*; however, Manna had come to notice that in both her own work and that of others, these had predominantly been urban, with artefacts related to

²⁰ John H. Perkins, *Geopolitics and the Green Revolution: Wheat, Genes, and the Cold War*, New York and Oxford, Oxford University Press, 1997, p v. See also Vandana Shiva, *The Violence of Green Revolution: Third World Agriculture, Ecology and Politics*, London, Zed Books, 1991.

²¹ Examples dealing with the Svalbard Global Seed Vault include Alice Creischer and Andreas Siekmann’s exhibition, ‘In the Stomach of the Predators’ at BAK (basis voor actuele kunst), Utrecht in 2014; Pia Rönicke’s *The Pages of Day and Night* (2015); Ali Kazma’s *Safe (Resistance)* (2016); and Magali Daniaux and Cédric Pigot’s interactive platform, *Devenir Graine (To Become a Seed)* (2014). This is not to mention the cultural activity at Svalbard itself, especially following the Norwegian government’s decision to invest in culture, following the decline of the mining industry. The Norwegian foundation, Artica Svalbard, runs an active residency programme in Longyearben, and the Northern Norway Art Museum has established the Kunsthall Svalbard within the Svalbard Museum on Longyearben.

crafts, music and other cultural forms from rural traditions more often than not being relegated to ethnographic collections, as opposed to the supposed modernity of urban archives.²² Likewise, the geopolitical relationship between Norway and the Middle East was explored in the semi-satirical 2013 film *The Goodness Regime* (made in collaboration with Sille Storihle), which examined in particular the diplomatic role of Norway in the Arab–Israeli Oslo Peace Accords (and hence in the plight of Palestinian refugees across the region, including in Lebanon) and, more broadly, the cultural construction of Norway as a benevolent, peace-making nation – as a ‘humanitarian superpower’ that assists in conflict resolution in ‘lesser developed’ areas such as the disputed Palestinian territories. In the context of *Wild Relatives*, Norway’s benevolence is extended to that of the conservation of global agricultural and cultural heritage, in particular that of war-torn Syria, and this ‘goodness regime’ is expanded to the seemingly benign world of biodiversity. What the film quietly suggests is that the political stakes in the conservation of biodiversity and heritage are in fact often as high as in the world of international diplomacy and peace-making, involving policies that contribute to the slower erosion of the ‘ground’, in the senses evoked above. Understood as such, ‘the goodness regime’ (of the Green Revolution and the Global Seed Vault) is but another iteration of the logic of the *pharmakon* with which we began.

Most crucial for understanding the conceptual premises of *Wild Relatives* is the 2015 feature-length film *A Magical Substance Flows into Me*, in which Manna re-animates (or ‘re-seeds’) the *Oriental Music* broadcasts of ethnomusicologist Robert Lachmann, aired by the Palestinian Broadcasting Service in the 1930s during the period of the British Mandate in Palestine (1920–48). Lachmann, who studied ‘Oriental’ music in Palestine at the time (as practised by Palestinians and eastern Jews), was against what he saw as the ruination of Arabic music through its adoption of ‘Western’ systems of notation and its embrace of radio or the circulation of records. Instead he believed that ‘emotional’ Arabic music could only be preserved if memorised and passed down unchanged through generations, as if to preserve the music’s ‘authenticity’ entailed ‘freezing’ it.²³ Such a view was not left uncontested by local voices, however, and Manna’s interest is in the possibility of notation, which functions both as a means of preservation and advancement, functioning to

²² Manna, ‘A Small/Big Thing’, op cit, pp 49–50.

²³ As Joanna Radin shows, a similar logic is at play in the ‘latent futures’ of conserved human blood and tissue samples, extracted from the bodies of indigenous people, who are understood historically by anthropologists as representing a ‘frozen’ or arrested sense of humanity. Joanna Radin, ‘Latent Life: Concepts and Practices of Human Tissue Preservation in the International Biological Program’, *Social Studies of Science*, vol 43, no 4, 2013, pp 484–508, as cited in Harrison, ‘Freezing Seeds’, op cit, p 82.

fundamentally transform the ways in which oral traditions are taught, passed down between generations and performed. Arguably, the cataloguing and cryopreservation of plant varieties involves comparable contestations concerning the conservation of both cultural and agricultural memory and authenticity. Here, then, is a classic post-colonial task: the undoing of false dichotomies between these Orientalist constructions – between the myth of supposedly ‘pure’, ‘authentic’, unchanging heritage and culture on the one hand, and the embrace of modernisation, hybridisation, commercialisation and technological inscription on the other. The supposed ‘timelessness’ of oriental culture, vital in the representational machinery of Orientalism, is also engaged with and interrupted in an earlier work. As Nisa Ari reminds us in a reading of Manna’s twelve-minute video, *A Sketch of Manners (Alfred Roch’s Last Masterpiece)* from 2013, Orientalist visual cultures entail a notable lack of historical development and human progress.²⁴ As art historian Linda Nochlin writes in her seminal essay, ‘The Imaginary Orient’, ‘time stands still’ and the Oriental world is ‘untouched by the historical processes that were “afflicting” or “improving” but, at any rate, drastically altering Western societies at the time.’²⁵

Translate this into the present film – in particular its foregrounding of the loss of ‘wild relatives’ and ‘landraces’ in the drive to cultivate and develop more advanced crop varieties – and the analogy is clear. Albeit with a twist: it is the mastery of hi-tech, internationally funded, *ex situ* scientific methods that allows for genetic information to be conserved (literally frozen, at -18°C , in the case of Svalbard),²⁶ and the ‘traditional’, local (*in situ*) methods of cultivation that, through a broader ecological receptiveness, allow traditional varieties of crops (landraces) to adapt to changing environmental conditions.

Between the constructed binaries set out above, each of which already contradicts the other in *A Magical Substance* and *Wild Relatives*, Manna chooses neither. Instead, she seeks to question the cultural and epistemological border that separates each. Across both films, the question is: what if heritage and the so-called traditional or authentic were that which is living, adaptable and open to advancement or technological modification? Does

²⁴ *Sketch of Manners (Alfred Roch’s Last Masquerade)* (2013) is a video reanimation of a 1924 group portrait of affluent and politically engaged Palestinians dressed as European clowns, as such reversing the typical orientalist gesture of Europeans posturing as Arabs. The portrait was taken by one of the Jewish Rachman Brothers at the home of Alfred Roch, a wealthy Arab Christian. See Nisa Ari, ‘Orientalism Repeated: Shifting Time in Jumana Manna’s *A Sketch of Manners* and the Politics of Photography in Palestine’, *Third Text*, vol 30, nos 5–6, 2017, pp 331–345.

²⁵ Linda Nochlin, ‘The Imaginary Orient’ in *The Politics of Vision: Essays on Nineteenth-Century Art and Society*, Harper & Row, New York, 1989, pp 33–59, at pp 35 and 35–36. Cited in Ari, ‘Orientalism Repeated’, op cit p 338.

²⁶ Power for the refrigeration units is provided by the coal that is mined locally, with which the film begins.

maintaining the ‘authentic’ have to entail modes of identity, belonging and self-determination that are premised upon the exclusion of others, or indeed of *otherness* in general? In other words, what if both inheritance and identity entailed a necessary betrayal instigated through an opening to alterity, be this technical modification or, more generally, diversity and plurality? As Manna puts it in the case of *A Magical Substance*, her aim was to retrieve the lost political space of historical Palestine, not by seeking to replicate it but by ‘going beyond the logic of separation and segregation’, ‘to provide a space from which another Palestine can be imagined’.²⁷ *Wild Relatives* prompts us to translate this desire for an emancipation that is based on a careful, non-Orientalist reconstruction of multiple ‘modernities’ to the complexity of Syria. It is an invitation to at once study the tumultuous history of Ba’athist reform through to the present-day civil war and its broader, post-Cold War geopolitical axes, *and* to think beyond logics of nationalism, ‘belonging’ (ethnic, religious or otherwise) and ‘authenticity’, as well as their (often neo/colonial) epistemological bases, in order to conceive of possible futures that resonate with other global struggles, above all where such endeavours centre upon ecologies that are social and environmental.

With regard to the Syrian context, the scene that combines images of the Syrian female refugees and the poet’s words is particularly telling in its evocation – even if this is only subconscious on the part of the poet – of Syria’s tumultuous history, in particular the rhetoric of Ba’athist reform of the Syrian peasantry, which is here superimposed upon the present.²⁸ The full poem, translated from the Arabic, reads:

Behold
 The peasant and the worker
 a nation, what a beautiful one
 The peasant plants authenticity in his nursery
 And the worker makes civilization in his factory
 One created our history with his tool
 And the other planted our dignity with his sickle
 ICARDA bore the dream of all nations
 It cares for the improvement of seed varieties
 From Aleppo to Beirut it has travelled many roads
 Reaching the planes of the Bekaa Valley and the South
 Oh flowers of Terbol sprinkle your guests with lavender!
 ICARDA sows passion between hearts
 A seed is like love in the hearts of humans

²⁷ Jumana Manna interviewed by Katie Guggenheim, exhibition brochure, *Jumana Manna: A Magical Substance Flows into Me*, Chisenhale Gallery, London, 18 September–13 December 2015.

²⁸ See Hanna Batatu, *Syria’s Peasantry, and the Descendants of Its Lesser Rural Notables and Their Politics*, Princeton, Princeton University Press, 1999, referenced in Manna, ‘A Small/Big Thing’, op cit.

Planting hearts will put out the fires of war.

Manna's research for *Wild Relatives* was partly inspired by the late Syrian filmmaker Omar Amiralay, in particular his documentary *The Chickens* of 1977, which charts the plight of villagers in Sadad (south of Homs) under state incentives to replace their weaving industry with chicken farming.²⁹ Having borrowed capital to finance this new industry, sudden overproduction and disease meant that farmers quickly descended into bankruptcy. In both Amiralay's and Manna's films, the seemingly authentic (revolutionary, even) bond between the peasant and the nation forged through farming is revealed to be a utopian dream, one that is shattered precisely by state policy. ICARDA's Aleppo gene bank was set up in the context of the foreign-sponsored Green Revolution but was instrumentalized as part of the Syrian state's agrarian reform. Hafez al-Assad, who came to power in 1970, set about modernising what appeared to him to be a 'backwards' peasant system. This was in the context of agrarian reform laws that, begun in 1958 but only put into stringent effect in 1963 following the seizure of Ba'ath power, limited the size of landholdings in accordance with productivity and, in the proclaimed socialist spirit, expropriated land in order for it to be redistributed. However, in seeking self-sustainability, in particular through wheat, both crops and their custodians were brought under state control. Fast forward through recent decades and, while ICARDA's speeding up of breeding processes is undoubtedly of huge benefit in many respects, varieties become limited over time, thus gradually killing local varieties. Part of the problem is that local strains have been cultivated to suit a global market, rather than varieties having been developed in accordance with the local climate, and, since the 'modern' varieties require chemical inputs and irrigation that harm the soil, ICARDA's varieties are often more beneficial to industrialised nations that have the necessary infrastructure to be able to benefit from these new varieties. Once again, the *pharmakon* looms large. As Manna writes:

This entangles them and their soil in a system of dependence on the state, companies who sell seed, and the chemical inputs they require. Caught in a cycle where diverse landraces are replaced by comparably uniform modern varieties, few farmers considered the dangers, including health hazards, of the system they were buying into. They had few alternatives to make a living anyway.³⁰

²⁹ Manna, 'A Small/Big Thing', op cit, pp 48–49.

³⁰ Ibid, p 54.

Many have noted the influence of climate change on the Syrian revolution (an ‘urban and rural Intifada’) that began in March 2011 and the so-called Arab Spring more broadly.³¹ The severe drought that took place in Syria between 2006 and 2010 caused rural resource scarcity that ‘is thought to have contributed to rural-urban migration, swelling the ranks of the urban poor, eventually fuelling a revolutionary potential to the point that protests broke out.’³² However, some argue against placing too much emphasis on the drought itself, or on what has come to be discussed as ‘climate conflict’.³³ Firstly, to do so would be to run the risk of ‘obscuring political culpability for the ongoing violent oppression’.³⁴ Secondly, this would be to overlook that Syria has long suffered droughts, something that plant conservationists previously working at ICARDA in Syria know all too well; hence the quest to safeguard the wild relatives that may withstand the tests of a future world in which many parts of the globe might end up being as hot and arid as in Syria.³⁵ Furthermore, a straightforward cause and effect relationship between climate change induced drought and conflict risks underplaying the role of neoliberal agricultural policies in the intensification of land use and, crucially, of soil exhaustion – policies that are here being read against the longer backdrop of the imperial agricultural engineering programme that was the Green Revolution.³⁶ While ICARDA had indeed helped Syria to become self-sufficient in wheat production, Syria’s underground water was drained by thirsty crops and the dams built for irrigation caused devastation.³⁷ Francesca De Châtel stresses the need to contextualise the drought within the economic reforms and market liberalization that were initiated in the 2000s as part of Syria’s transition to a social market economy, as well as the large-scale

³¹ See for instance Francesco Femia and Caitlin Werrell, ‘Climate Change Before and After the Arab Awakening: The Cases of Syria and Libya’, in *The Arab Spring and Climate Change*, eds. Caitlin E. Werrell and Francesco Femia, Washington, D.C., Center for American Progress, Stimson Center, and The Center for Climate and Security, 2013, pp 23–32; Clemens Hoffman, ‘Environmental Determinism as Orientalism: The Geo-political Ecology of Crisis in the Middle East’, *Journal of Historical Sociology*, vol. 31, issue 1, special issue: ‘War, Revolt and Rupture: The Historical Sociology of the Current Crisis in the Middle East’, 2018, pp 94–104, at p 94 (with thanks to Chowra Makaremi for sharing this special issue); Francesca De Châtel, ‘The Role of Drought and Climate Change in Syria in the Syrian Uprising: Untangling the Triggers of the Revolution’, *Middle Eastern Studies*, vol 50, no 4, 2014, pp 521–35, at p 522 (with thanks to Jumana Manna for sharing this latter article with me).

On ‘climate wars’ more broadly, including ‘climate fascism’, see Christian Parenti, *Tropic of Chaos: Climate Change and the New Geography of Violence*, New York, Nation Books, 2011. See also Eyal Weizman ‘The Conflict Shoreline: Colonization as Climate Change in the Negev Desert’ in Fazal Sheikh and Eyal Weizman, *The Conflict Shoreline*, Göttingen and New York, Steidl, 2015.

³² Hoffman, ‘Environmental Determinism as Orientalism’, op cit, p 94.

³³ Ibid, and De Châtel, ‘The Role of Drought and Climate Change in Syria in the Syrian Uprising’, p 522.

³⁴ Clemens Hoffman, ‘Environmental Determinism as Orientalism’, op cit, p 95.

³⁵ See Sengupta, ‘How a Seed Bank, Almost Lost in Syria’s War, Could help Feed a Warming Planet’, op cit.

³⁶ As Hoffman notes, ‘it may very well have been pricing developments that led to the alleged migration-inducing shortage of resources.’ Hoffman, ‘Environmental Determinism as Orientalism’, op cit, p 95.

³⁷ Sengupta, ‘How a Seed Bank, Almost Lost in Syria’s War, Could help Feed a Warming Planet’.

mismanagement of resources (especially water) over the last 50 years.³⁸ For De Châtel, the recent Syrian Revolution can be read as ‘the dead end of the Syrian government’s water and agricultural policies’.³⁹

Wild Relatives points towards not only the impact of the recent Syrian conflict on neighbouring Lebanon but also the longer-term geopolitical entanglement between the two countries, notably the Syrian army’s occupation of Lebanon between 1976 (during the Lebanese Civil War) and 2005 (when Lebanese Prime Minister Rafic Hariri was assassinated). This is evoked through pro-Assad graffiti on an abandoned dairy barn near to the ICARDA headquarters, themselves formerly a Syrian military base, in which remains of pro-Assad material was found. And the demise of adequate state-supported farming infrastructure does not escape Lebanon. In a scene in which Youssef, the bus driver, is speaking with Khaled, a local farmer who works at the Lebanese Agricultural Institute,⁴⁰ Youssef laments that, due to the predominance of imported produce, ‘people nowadays prefer opening refugee camps than farming [*siz*]. The refugee business makes more profit than agriculture.’ Read with this in mind, the scene with the poet’s words not only asks us to reflect on the Syrian refugees’ plight, tending to the displaced or exiled ‘Syrian’ seeds, but also at least implicitly poses the question of how the history of the region might have unfolded otherwise.⁴¹

Agribusiness and Apotropaic Filmmaking

At stake in Manna’s practice is how one relates both to the archive (in general) and the bodies that populate it – to the objects around and through which assemblages of power coalesce, with the object in the case of *Wild Relatives* being life itself. Here ‘the archive’ takes multiple forms: at best, an ecology of ‘living’ cultural heritage that testifies to human–nonhuman alliances and co-nurturing; at worst, the preservation, management and enhancement of genetic material as yet another form of (now neoliberal) biocapital or biopower. Here, the Global Seed Vault and its smaller, local partners exemplify giant archives in the service not only of the conservation of biodiversity but also, through the

³⁸ De Châtel, ‘The Role of Drought and Climate Change in Syria’, op cit, p 529. Furthermore, she provides ample evidence of the Syrian government’s failure to respond to the humanitarian crisis fuelled by the 2006–2010 drought in the region. In this sense, we might argue that there is no such thing as a ‘natural disaster’ – that the level of disaster is managed by state infrastructure and policy.

³⁹ Ibid, p 522.

⁴⁰ The Lebanese Agricultural Institute is the government body that certifies and multiplies ICARDA seeds.

⁴¹ In terms of the ‘nationality’ of the seeds, in a discussion included in the film with a man working on the database of the contents of the ICARDA gene bank, we learn that the information about each variety is called ‘passport information’.

reframing of so-called nature and the greedy logic of agribusiness, of natural resources as commercial return. Despite *Wild Relatives* being a meditation on more-than-human co-cultivation, if there is a main protagonist it is the seed itself. While in her sculptures Manna explores the relationships between objects and bodies, here the ‘object’ (if we can ever call a seed a mere object) is both the object of study but also the active subject: often it is through the seed’s perspective that the film unravels. As archaeologist Marijke van der Veen writes, rather than being considered passive objects, seeds are sites of entanglement that bear witness to reciprocal relationships of co-evolution.⁴² Seeds, Rodney Harrison suggests, function as a form of ‘biosocial archive’ – archives of the evolutionary histories of crop varieties, of ‘inter-generational, inter-species, human/plant kinship relations’.⁴³ In *Wild Relatives*, it is the seed tells a story of birth, growth, death and rebirth, and as such of human attachment and everything that is projected into this other-than-human yet no less vital body – all kinds of systems of value and mastery, not to mention poetry. Or, we might say, magic: both in the sense of mastery-as-trickery *and* as un-masterable wonder.

But what does all this – magic, scientific mastery, agribusiness and archives – have to do with filmmaking? Here we might turn to the anthropologist Michael Taussig who, in the aptly titled book *The Corn Wolf* (2015), writes of the relationship between the anthropologist’s fieldwork and their subsequent ‘writingwork’, with the latter ‘[involving] magical projections from and through words into people and events’.⁴⁴ Further to this, he introduces what he calls ‘agribusiness writing’, which ‘knows no wonder’ and ‘wants mastery’ – a ‘mode of production (see Marx) that conceals the means of production, assuming writing as information to be set aside from . . . the art of the storyteller’.⁴⁵ And yet, as above, let us not indulge in oppositions: before we too quickly presume that agribusiness writing is the simple opposite of the magic of art and storytelling, we read: ‘I have long felt that agribusiness writing is more magical than magic ever could be.’⁴⁶ In other words, the supposed rationality of science and the capitalist mode of production have managed to demystify the wonder and magic of the world around us to the point of

⁴² Marijke van der Veen, ‘The Materiality of Plants: Plant–People Entanglements’, *World Archaeology*, vol 46, no 5, 2014, pp 799–812, at p 799. The seed can be understood as a site of culture, one that is never quite fully translatable or objectifiable through language. Here, as van der Veen relates, ‘materiality’ becomes a useful prism through which to view the seed, designating less what the seed as object ‘means’ and more what it ‘does’ and ‘is’, above all as part of a meshwork of relationships (p 799).

⁴³ Harrison, ‘Freezing Seeds’, op cit, p 85. Harrison draws from Thom van Dooren, ‘Terminated Seed: Death, Proprietary Kinship and the Production of (Bio)Wealth’, *Science as Culture*, vol 16, no 1 (2007), pp 71–94.

⁴⁴ Michael Taussig, ‘The Corn Wolf: Writing Apotropaic Texts’ in *The Corn Wolf*, Chicago and London, University of Chicago Press, 2015, pp 1–11, at p 2.

⁴⁵ Ibid, p 5.

⁴⁶ Ibid, p 10.

this demystification or mastery itself being a form of magic – a techno-scientific wizardry, if you will. Therefore: ‘what is required is to counter the purported realism of agribusiness writing with apotropaic writing as countermagic, *apotropaic* from the ancient Greek meaning the use of magic to protect one from harmful magic.’⁴⁷ Unlike agribusiness writing, if there is a ‘mastery’ that such apotropaic writing aims for, it is ‘the mastery of non-mastery’: a mastering or endless perfecting of the art of conveying that there are some things that cannot – and should not – be mastered or captured.

In this vein, Manna’s film – based as it is upon extensive research trips, archival foraging and numerous interviews – might be read as both her (ethnographic) fieldwork and its apotropaic, countermagical (re)composition. In fact, the title of *A Magical Substance Flows into Me*, which explores the magical elements of music that enter uncontrollably into our bodies and psyche despite our intentions, was inspired by a chapter title from Taussig’s earlier book, *What Color is the Sacred* (2009) and the discussion therein of William Burroughs’ ingestion of hallucinogenic *yagé* plant in Columbia in 1953.⁴⁸ Similarly, the subsequent work, *The Post Herbarium*, brought to the fore the religious fervour that infused the rational-scientific logic of (imperial) cataloguing (Post and others believed that scientific study of the plants of the Levant, the ‘land of the Bible’, would unlock Christian theology) and what Manna identifies as the ‘imaginary aspect of empiricism’.⁴⁹ Fast-forwarding to the present film, the relationship between scientific rationality and religious fervour is evoked in a strikingly cinematic scene involving a priest and a researcher who climb upon a structure from the cable car system that used to carry coal from the mines at Svalbard down to the old port.⁵⁰ Against the backdrop of the sparse landscape and abandoned mining infrastructure, the two debate religious and scientific conceptions of doomsday or the finitude of the world, as well as humans’ capacity for evil. In *Wild Relatives*, the rhythmic, cyclical storytelling of the film both reveals individuals’ relations to and fluency in techno-scientific practices and serves as a means by which to convey a visceral, intimate, even desiring and spiritual, encounter with our surrounding landscape and plant life that might transcend mastery.

⁴⁷ Ibid.

⁴⁸ See the chapter ‘A Beautiful Blue Substance Flows into Me’. The title is a quotation from William Burroughs’ *Naked Lunch*. Michael Taussig, *What Color is the Sacred?*, Chicago and London, University of Chicago Press, 2009, pp 62–68.

⁴⁹ Artist’s statement, *The Post Herbarium*.

⁵⁰ The disused mining infrastructure, as with the local flora, is now part of Svalbard’s designated cultural heritage. On Svalbard, all flowers are protected and it is forbidden to pick any. The priest and researcher also discuss the potential threat of invasive plant species.

Imperialist Nostalgia and Magical Techno-Fixes

Despite often involving good intentions and important work, enterprises such as seed vaults are exemplary of precisely this attempt to master nature. They hold out a promise of techno-fixes premised upon and extending the logic of imperial botanical taxonomy in order to ‘freeze’ nature, and as such function within the frame of ‘cryopreservation’.⁵¹ As Sophia Roosth writes, here on Svalbard, ‘at the ends of the earth, time seems out of joint’.⁵² For Elaine Gan, the Svalbard Global Seed Vault ‘is a stark underground bunker with multi-layered enclosures that freeze change, a dead end that locks out life and landscape in order to reconfigure their future iterations indefinitely’. According to Harrison, the temporal orientations of conservation practices, including seed vaults, and their underpinning sociotechnical and biopolitical processes reveal the manner in which conservation practices are not normative but, in varying manners, ‘actively shape different kinds of future worlds’.⁵³ A specific form of anticipatory latency is at play: while *in situ* practices such as the Terbol ICARDA branch work *through* time in continuing to produce new forms of agrobiodiversity, *ex situ* conservation vaults – for instance Svalbard’s global ‘insurance policy’ – maintain older diversity, holding this in abeyance for the future.⁵⁴ When these practices are combined, global diversity is increased. Taken alone, the temporal logic of the Svalbard archive repeats the orientalist gesture outlined above. As Gan writes, the vault can also be seen as the epitome of what anthropologist Renato Rosaldo names an ‘imperialist nostalgia’: a mourning of the loss of something while disavowing our own complicity in destroying it, a double erasure.⁵⁵ Besides its latency, the Svalbard Global Seed Vault bears witness to a desired (techno-magical) capacity not only to freeze but also to turn back time, to programme a command to ‘undo’ the damage done by human error or environmental catastrophe and revert to an arbitrary level of crop diversity.⁵⁶ If the seed itself can be conceived as an archive, the global seed vault is the ‘agribusiness archive’ par excellence: one that disavows the lively, un-masterable magic or wonder of the seed as it interacts with its environment and local traditions of cultivation and custodianship, all the while

⁵¹ On cryopreservation, see Roosth, ‘Virus, Coal, and Seed’ op cit. See also Joanna Radin and Emma Kowal, eds, *Cryopolitics: Frozen Life in a Melting World*, Cambridge, MIT Press, 2017; Sophia Roosth, ‘Life, Not Itself: Inanimacy and the Limits of Biology’, *Grey Room*, no 57, Fall 2017, pp 56–81; and Nicola Twilley, ‘The Coldscape’, *Cabinet*, issue 47, Fall 2012.

⁵² Roosth, ‘Virus, Coal, and Seed’ op cit.

⁵³ Harrison, ‘Freezing Seeds and Making Futures’, op cit, p 80.

⁵⁴ *Ibid*, esp pp 84–86.

⁵⁵ Elaine Gan, *Time Machines*, forthcoming, unpublished manuscript. See also Elaine Gan, ‘Seed Vault: Freezing Life for Doomsday’ in *Elemental: An Arts and Ecology Reader*, ed. Krista Lynes, London, Cornerhouse Publications, 2016, pp 119–21.

⁵⁶ *Ibid*.

summoning agribusiness notation (the vault's database) and techno-capitalist 'sorcery' to protect it, restore it and capitalise upon it.⁵⁷

But in order to fully understand the philanthropic-slash-extractive premise of 'green banks' or 'deposits' such as Svalbard and the double binds of the 'goodness regime' of repair and preservation, we need to rewind to the Green Revolution. Against the backdrop of the Cold War and fears of communist ascendancy in the Third World (i.e., a 'Red Revolution'), this programme of agricultural developments was developed with political and economic benefits for the capitalist countries of the West in mind, particularly the US.⁵⁸ Although conversations that enabled its possibility took place as early as 1941,⁵⁹ this 'revolution' is best known through the work of Norman Borlaug, who was awarded the Nobel Peace Prize in 1970 for his work in developing high-yield varieties (HYVs) of wheat. (Note this further connection with Norway: this time Oslo's City Hall, the venue for the increasingly less-esteemed peace prize that was also awarded jointly to Yasser Arafat, Shimon Peres and Yitzhak Rabin in 1994 'for their efforts to create peace in the Middle East').⁶⁰ With the Green Revolution came the denigration of 'traditional' modes of cultivation (such as those practised in the film by Walid, the Syrian refugee) in favour of high-tech, high-yield, market-oriented quick fixes exemplified by the 'miracle seeds' (yet more sorcery) that were supposed to 'fix' world hunger and launch the Third World into modernity and prosperity – a 'magic bullet' solution. But in many cases the result was the opposite.⁶¹

⁵⁷ See Philippe Pignarre and Isabelle Stengers, *Capitalist Sorcery: Breaking the Spell*, trans and ed by Andrew Goffey, London: Palgrave Macmillan, 2011.

⁵⁸ For a discussion of the Turkey Red Wheat that provided the literal seed for the Green Revolution in the American Midwest, see Courtney Fullilove, *The Profit of the Earth: The Global Seeds of American Agriculture*, Chicago, University of Chicago Press, 2017. See also Sigrid Schmalzer, *Red Revolution, Green Revolution: Scientific Farming in Socialist China*, Chicago, University of Chicago Press, 2016.

⁵⁹ Jack Ralph Kloppenburg, Jr., *First the Seed: The Political Economy of Plant Biotechnology, 1492–2000*, 2nd ed. (Wisconsin: University of Wisconsin Press, 2004), p 158.

⁶⁰ https://www.nobelprize.org/nobel_prizes/peace/laureates/. See the publication that accompanies the film: Jumana Manna and Sille Storihle, eds, *The Goodness Regime* (2016), <http://www.thegoodnessregime.com/Texts>.

⁶¹ As Taussig writes: 'by the early 1970s, it was becoming obvious that the miracle seeds proved to only be a fix for rich farmers who could afford the irrigation and chemicals that such seeds require. The pauperisation of the peasant and enrichment of the large farmers evolved into giant agribusiness concerns and government-sponsored bio-power megaprojects.' Michael Taussig, 'Let Us Now Praise Famous Seeds' in *Ecologising Museums*, ed. L'Internationale Online with Sarah Werkmeister, 2016, available online at http://www.internationaleonline.org/bookshelves/ecologising_museums, pp 8–14, at p 14. Taussig's essay was commissioned as part of his role as 'on-board Anthropologist' with *Seed Journey*, a public art project by Future Farmers in the former port of Bjørvika in Oslo, Norway. The seafaring voyage sought to transport ancient grains collected and grown in Oslo back to their geographic origins in Jordan. See <http://futurefarmers.com/seedjourney/>.

Green Banks

Here the notion of the seed bank as ‘green bank’ takes on a more sinister inflection (the poisonous side of the *pharmakon*), one that must be understood in a broader context in which the political economy of plant biotechnology goes hand in hand with forms of ‘green capital’, which can itself be read as part and parcel of what Naomi Klein names ‘disaster capitalism’.⁶² Although marketed as protecting nature, ‘green capital’ more often than not involves practices of ‘green grabbing’ – of the financialization of nature as a further means of appropriation, for instance through the grabbing of land in order to create conservation reserves, and with this the dispossession of local populations.⁶³ While the aims of ICARDA (for instance, to alleviate poverty and bolster food sovereignty) are undoubtedly laudable, the origins of the organisation cannot be divorced from those of the Green Revolution. Likewise, the international funding structure of ICARDA and the broader network of which it was a part (the Consultative Group on International Agricultural Research, CGIAR) was a precursor to that of the present-day Global Seed Vault with its international donors (or ‘beneficiaries’ of green or moral ‘credit’).⁶⁴ In other words, despite the necessary work carried out by many local gene banks, the shadow of the original motivations behind and funding for the creation of such banks and their international networks looms large. Where local seed vaults have been shown historically to have been used as vehicles through which to transfer plant genetic resources from the then Third World to the gene banks of Europe, North America and Japan,⁶⁵ it would not be amiss to say that conserving biodiversity in the ‘agribusiness’ sense described above might be less about ecological sustainability and more about the conservation of the ‘raw materials’ that in turn produce the monocultures (cultural and agricultural) upon which agribusiness is premised.⁶⁶

⁶² See Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism*, London, Allen and Lane, 2007.

⁶³ See James Fairhead, Melissa Leach and Ian Scoones, ‘Green Grabbing: a new appropriation of nature?’, *The Journal of Peasant Studies*, vol 39, no 2, 2012, pp 237–61.

⁶⁴ The CGIAR was created in 1971 by the Rockefeller and Ford Foundations, among other agencies, to coordinate and extend the earlier-established network of international agricultural research centres (IARCs), a network established in the Third World and funded by donors from advanced capitalist nations. See Kloppenburg, *First the Seed*, op cit, pp. 158–61. Norway and the Crop Trust finance the running of the vault, and funding for the Crop Trust comes from a range of governments, civil society organisations and philanthropic organisations. For further information on the funding of the Svalbard Global Seed Vault, see <https://www.croptrust.org/wp-content/uploads/2014/12/Crop-Trust-Fundraising-Strategy-2014-2018-sml.pdf> and <https://www.croptrust.org/about-us/donors/>. CropLife International, one of the donors, includes the following in its list of partners: Bayer, Dow AgroSciences, Du Pont, Monsanto, Sumitomo Chemical, Syngenta. <https://croplife.org/about/members/>.

⁶⁵ Kloppenburg, *First the Seed*, op cit, p. 161.

⁶⁶ See Vandana Shiva, ‘Biodiversity, Biotechnology, and Profits’ in *Biodiversity: Social and Ecological Perspectives*, ed. Vandana Shiva, New Jersey, Zed Books, 1991, pp. 43–58.

Central to the force of *Wild Relatives* is Manna's refusal to cast a simplistically judgmental gaze, despite opening up a vital space for a critique. Throughout, the characters in both Norway and Lebanon are treated sensitively and openly, with a quiet suspicion lying not with individuals but with global, institutionalised narratives, more often than not orientalist and neo-imperial even if inadvertently. In the context of Syria and Lebanon, despite the necessary critique of the lack of adequate state infrastructure, the empty rhetoric of socialism in the case of Syria and the increasing neoliberalization of policy and pandering to global markets in both countries, what is vital is to avoid the trap of what Clemens Hoffman names 'environmental orientalism'. As Hoffman writes, the drought preceding the Syrian civil war starkly reveals a long-standing tendency, on the part of Western states, to treat 'already dysfunctional Middle Eastern and African postcolonial social formations' as the most affected by climate change and yet the least prepared. As a pretext for (neo)colonial rule in the name of 'rescuing the environment' (yet another *pharmakon*), the environmental and geopolitical fragility of such states is viewed as being due to two factors: 'the presumed mismanagement and environmental overexploitation by "native", technologically 'primitive' environmental governance'; and the attempt to emulate colonial rule rather than managing scarcity.⁶⁷ *Wild Relatives* dispels the former presumption, instead demonstrating the need to combine 'traditional' environmental stewardship with technological advancement. Furthermore, the space given to certain figures – in particular Walid – is vital for bearing witness to local, ground-up practices of ecology and conservation that, given the institutional critique set out above, appear notably progressive.

Key here is access and ownership – who gets to perform the 'magic', and based on what and whose knowledge. While the Crop Trust website states that depositors to the Svalbard vault 'will retain ownership rights over the seeds sent to the facility',⁶⁸ concerns have been raised in seed savers' forums about seeds entrusted to the global vault being placed under the control of the United Nations' FAO Treaty, which facilitates access by corporate breeders.⁶⁹ Likewise, despite many local gene banks' aims for information to be 'public property', more often than not it is institutions, rather than individual farmers, who

⁶⁷ Hoffman, 'Environmental Determinism as Orientalism', op cit, p 95.

⁶⁸ See <https://www.croptrust.org/our-work/svalbard-global-seed-vault/faq-about-the-vault/> and <https://www.croptrust.org/our-work/svalbard-global-seed-vault/>.

⁶⁹ See, for instance, Food Freedom, 'Svalbard Doomsday Vault: Biopiracy by UN Treaty', posted on 3 August 2011, <https://foodfreedom.wordpress.com/2011/08/03/svalbard-doomsday-vault-biopiracy-by-un-treaty/> and Vandana Shiva, 'The Great Seed Piracy', *Toward Freedom*, 21 June 2016, <https://towardfreedom.com/archives/environment/vandana-shiva-the-great-seed-piracy/>. With thanks to Åsa Sonjasdotter for these references.

are able to access and develop this information.⁷⁰ The debate between (profit-driven) privatisation or intellectual property rights (IPRs) over genetic materials on the one hand and preservation or heritage as a ‘public good’ on the other extends way beyond the film, but the scenes with Walid offer a succinct line through the complexity. Rather than being premised upon ownership and profit, Walid’s domestic seed collection, which is more akin to an unofficial open-access ‘library’ than a ‘bank’, is a site of improvised, grass-roots custodianship that is practiced *in spite of* the policy of the nation-state. This can be read as suggestive of practices of ‘commoning’ (and hence of ‘common good’), which function outside the logic of ownership, and hence beyond the distinction between public and private.⁷¹ Walid, who used to live not far from ICARDA’s Aleppo station, practises permaculture and makes natural pesticides (he speaks of soil in terms of its life cycle, and as having ‘a world of its own’), as well as overseeing an organic garden that multiplies landraces from the region and abroad and forms a hub for farmers’ experiences and knowledge.⁷² As such, he aims to bring back control to farmers and simultaneously maintain diversity of threatened landraces. Furthermore, he dreams of sending seeds and instructions for organic farming back to rebel-held Syria. In this regard, the scenes with Walid, together with those of the refugee field labourers, are vital for bearing witness to practices of cultivation and political imaginaries that transcend the false exclusions of nationalism and the limitations of the nation-state.

⁷⁰ In the film, Manna is told that the ICARDA database is in the public domain, so that farmers or private sector companies would be able to access the information.

⁷¹ An exemplary project in this respect is the Palestinian Heirloom Seed Library, run by Vivian Sansour in the Palestinian West Bank, which seeks to preserve traditional seeds and agri-cultural heritage.

⁷² Walid’s practice is similar in many respects to that of Italian agroecologist Salvatore Ceccarelli, who worked for ICARDA for three decades and in the 1980s established a participatory plant-breeding programme in Syrian villages that set out to develop seed types according to farmers’ needs. As Ceccarelli notes in an interview with Manna, this breeding technique allows crops to be adapted to environments, rather than changing the environment to suit the crops, as in the case of the Green Revolution. The Syrian government eventually closed his programme, fearing losing control over farmers and the market and instead preferring to stick to uniform crops. Manna, ‘A Small/Big Thing’, p 54, n 6. Ceccarelli has published extensively; see for instance, Ceccarelli et al, ‘Participatory plant breeding to promote Farmers’ Rights’, *Bioversity International*, October 2007. Ceccarelli’s ‘participatory evolution’ model, which he subsequently brought back to Italy, has inspired artist Luigi Coppola’s participatory practices in Castiglione d’Otranto, southern Italy.

Since leaving Syria with seeds from Syria, Ceccarelli has worked with a network of NGOs to successfully lobby EU ministers to amend a provision that requires all seeds sold in Europe to be registered as single seeds with uniform, distinct and stable characteristics (which often paves the way for patenting), arguing that this uniformity leaves varieties unsuited to increasingly hot and arid conditions. See Mark Shapiro, ‘Syrian Seeds Shake up Europe’s Plant Patent Regime’, *Food and Environment Reporting Network (FERN)*, 13 September 2017, https://thefern.org/ag_insider/syrian-seeds-shake-europes-plant-patent-regime/. By taking seeds with him on his return to Italy and allowing them to successfully adapt to local climatic conditions, Ceccarelli’s practice elides what we might name a ‘botanical nationalism’.

Conclusion

Returning to the opening questions regarding planting seeds and war, neither Manna's film nor this commentary purport to provide easy responses. Planting seeds alone will of course not put out the fires of war, but questioning dominant modes of cultivation, valuation and epistemological framing is but one step towards understanding the backdrop against which conflict unfolds as well as possible reconstructive futures.⁷³ Reading Manna's filmmaking as apotropaic – as a form of 'countermagic' that at once celebrates the wonder of the nature-culture embrace *and* seeks to expose and warn us of the techno-scientific, appropriative-slash-extractive dream of mastery – prompts us to tread carefully between the easy binaries entailed in development and peacekeeping, including distinctions between right and wrong that might feed the 'goodness regime' and its global media outlets. This would neither be simply to denigrate techno-science, whether employed locally or at the behest of internationally funded organisations, or explicitly to endorse local, 'traditional' actors (the twisted fate of Youssef's father's olive tree, for instance, bears witness to an imprecise, haphazard method of planting – to the necessary risk of situated knowledge not being transmitted or implemented 'correctly'). Rather, the film points to yet another classic post-colonial question: that of access to and involvement in scientific development – to the hierarchical structures through which science and technology are implemented, and to the question of who holds the right to make claims towards conservation and preservation, whose voices are amplified by sensational media stories and the attendant 'greenwashing' of 'the goodness regime' – to the institutionalised, globalised image and rhetoric of peace-making and preservation. 'Apotropaic countermagic' might here be located somewhere between the faith in techno-science of the local ICARDA employees and Walid's 'mastering' of a symbiotic relationship between nature and culture, understood here as an endless perfecting of the art of *working with* nature, of a 'technique' that was never free of technics and adaptation in the first place.

⁷³ Regarding epistemology, the work of Portuguese sociologist Boaventura de Sousa Santos is instructive, especially in its focus on 'epistemologies of the south'. See for instance the emphasis on biodiversity within a discussion of the reinvention of social emancipation, which itself must be premised upon replacing the 'monoculture of scientific knowledge' by an 'ecology of knowledges', in the collection *Another Knowledge is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, London, Verso, 2008.