5. Conserving (Hi)Stories, Cultivating Futures

> It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories. (Haraway 2016: 12)

Seeds do not exist irrespective of the ecological and more-than-nonhuman relations in which they come to matter, that is, in which they assume both significance and materiality. It is in this sense that the diversity of seeds conserved inside the Svalbard Global Seed Vault comes with a diversity of ways of life – or of worlds and worldings. Throughout this book I have argued that by conserving seeds, the Seed Vault assembles the worlds and worldings that come with these seeds, thus creating an arena in which what the Seed Vault is and does is negotiated. In the previous chapter I contrasted the *ex situ* world of conservation, which the Seed Vault has emerged from and serves as a safety net for, with the world that the Potato Park in the Peruvian Andes, the first-ever Indigenous depositor to the Seed Vault, is situated in. I have shown that while these worlds meet and overlap in certain practices as well as in the collaborative spaces they have created, they also fundamentally differ with regard to the world(ing)s they enact and seek to conserve. Whereas the *ex situ* world knows, uses, and conserves seeds as extractible units of "life itself" and as "plant genetic resources" that farmers, breeders, and scientists use to cultivate food and biocapital, in the Potato Park humans know and live with plants and seeds as relatives and neighbours in an agri-food system built on relations of mutual care.

Despite these fundamental differences and partial incommensurability, both worlds know that they are also interdependent. In the *ex situ* world of conservation, *global interdependence* is considered an asset insofar as global collaboration promises access to a broad range of agrobiodiversity. Discussing the issue of global interdependence through the Potato Park and understanding the latter as a specific mode of knowing, being in, and enacting the world rather than merely an environment harbouring a great plant genetic diversity, I have shown that interdependence is not merely a question of global access to PGRFA but an existential vulnerability and responsibility arising from a globally shared earthboundedness of all forms of human and more-than-human life. I have therefore proposed the notion of *earthly interdependence* as a way of grasping interdependencies both across and with the earth. The Potato Park has served as an instructive example of what agrobiodiversity conservation under conditions of earthly interdependence can look like. For one thing, it is a world and mode of worlding in which humans and other-than-humans live in relations of mutual care. It is also committed to cultivating mutually beneficial relations of cross-fertilisation with other worlds and modes of worlding it interdepends with, such as the *ex situ* world of conservation. The juxtaposition of these interdependent worlds and modes of worlding has served as a pertinent example of how it matters – to phrase it in a Harawayian manner – through what ideas, experiences, knowledges, cosmologies, and worlds issues such as agrobiodiversity loss and conservation are understood, addressed, discussed, and tackled.

The present chapter turns to some of the stories, narratives, and imaginaries the Seed Vault assembles. The underlying assumption is that worlds are not only (porously bounded and fluctuating) assemblages of actors and the concerns, practices, and technologies they share. They are also what Situational Analysis calls "universes of discourse" (Clarke/Friese/Washburn 2018: 18, referencing Strauss 1978) or, to put it in terms of decolonial theory, "universes of meaning" (Mignolo 2018: 196) that come with specific, historically situated sets of stories, narratives, and imaginaries. These are indicative of the relations that make those worlds and at the same time means of ongoing world- and (hi)story-making themselves. Attending to stories, narratives, and imaginaries, therefore, is a way of attending to how specific relations come to matter, to how worlds are made, and to the figurative or political potential of conceiving worlds and relations as achievements.

The first section turns to a persistent set of stories and imaginaries about the Svalbard Global Seed Vault as a "doomsday vault" or a "Noah's Ark" for

the world's seeds. I discuss how these biblical and apocalyptic imaginaries co-emerge with technoscientific promises of salvation associated with the Seed Vault, which the people behind it both seek to dispel and co-produce. In the second section, I contrast the *ex situ* conservationist promise of undoing agrobiodiversity loss with a different set of stories and imaginaries assembled by an art project drawn to Svalbard by the Seed Vault. Through an analysis of this art project as a performative challenge to what *ex situ* conservation environments conserve and what future world(s) they serve, I develop a reading of the art project's experimental form of conservation as a commemorative means of mourning and learning to live with ecological loss.

5.1 "And No, It's Not About the End of the World!" Apocalyptic Imaginaries and Technoscientific Promises of Salvation

"'Doomsday Vault' Opens" (Nature 2008)
"Preparing for Doomsday" (Scientific American 2008)
"The (End of the) World Seed Vault Opens" (Wired 2008)
"Barroso to Open 'Noah's Ark' for Seeds" (EU Observer 2008)
"The Safe of the Apocalypse: Noah's Ark where all the Seeds of the World are Saved" (Le Monde 2010)

Newspapers around the world reported on the opening of the Svalbard Global Seed Vault in February 2008 with headlines such as the above. In doing so, they contributed to an emerging salvationist narrative that continues to dominate the international media coverage of the Seed Vault to this day. Next to media reporting, according to the environmental anthropologist Can Dalyan (2021), this narrative goes back to words uttered by the honorary guests at the Seed Vault's opening ceremony. José Manuel Barroso, then President of the European Commission, solemnly declared the Seed Vault a "frozen Garden of Eden" (Dalyan 2021: 184); Jens Stoltenberg, at the time Prime Minister of Norway, referred to it as "the Noah's Ark for securing biological diversity" (ibid.). Referencing the first book of the Christian Old Testament or the Hebrew Bible, these metaphors evoke an imaginary of the seed diversity conserved in Svalbard as God's creation and of the people behind the Seed Vault as its devout custodians. This biblical and salvationist imaginary also informs the more popular and widespread story of the doomsday vault, which alludes to the story of the Apocalypse in the last book of the New Testament in the Christian Bible. The dooms-

day narrative suggests that the Seed Vault guards a salvific collection of seeds securely preserved in the Arctic permafrost until after any possible apocalyptic event in the future, when they will serve to restore agricultural production and food security.

Ever since the Seed Vault was opened on February 26, 2008, the partners behind it have unceasingly been striving to counter this image by underlining the Seed Vault's pragmatic purpose of securing ongoing conservation efforts in the present. In a short paper published as early as March 2008, Cary Fowler, the founder of the Seed Vault, commented: "Popular press reports about the 'Doomsday Vault' […] typically mask the complexity of the endeavor and, if anything, underestimate its practical utility." (2008a: 190) Nevertheless, countless press reports and various other sources of knowledge about the Seed Vault published over the course of the years that followed, including by and in cooperation with the partners behind the Seed Vault, upheld the doomsday narrative.[1]

The global media coverage of the international seed summit and seed storing ceremony held in Svalbard on the occasion of the Seed Vault's twelfth anniversary in February 2020 (see chapter 4.2) used the biblical metaphors in approximately fifty per cent of the headlines.[2] This is surprising, insofar as the partners behind the Seed Vault repeatedly attempted to dispel the doomsday narrative throughout the summit. During a press briefing on facts and figures about the Seed Vault on the opening night of the three-day event, Hannes Dempewolf from the Crop Trust accentuated its very mundane and practical role within the *ex situ* world of conservation. He emphatically repeated the appeal

1 Despite counterclaims such as the one by Fowler quoted here, the partners behind the Seed Vault also played their part in reproducing the doomsday narrative in the early years after its opening. A possible reason for this is the international attention needed to attract further financial resources and seed deposits, which the narrative certainly helped raise. This narrative was also discernible in public relations activities of the Crop Trust such as the tagging of early pictures of Seed Vault posted on *flickr* (an online community for sharing amateur and professional high-resolution photos and videos) with "doomsday vault" as a caption – an observation I owe to Marleen Boschen.

2 According to a media coverage overview provided by the organisers to all attendees after the summit, out of 95 news pieces published in the international press by March 2, 2020 (two of which are unintelligible to me language-wise), 39 refer to the Seed Vault as a "doomsday vault", six as a "Noah's Ark", eight characterise it as preparing for an "apocalyptic" scenario, whereas only five present it as responding to "climate change fears" or an impending global catastrophe or disaster, and two as a measure against "extinction".

in his talk at the summit the next day, this time undergirded by a presentation slide reading: "And no, it's not about the end of the world!" (Dempewolf 2020: 12) Instead, he said, the Seed Vault serves the "many, many genebanks around the world that need attention and support" and that "[i]n the end it's all about food and those who grow it" (Dempewolf 2020: 13).[3] Throughout the summit, other speakers reiterated the message that the Seed Vault ultimately serves to sustain food production in the here and now, focusing attention on the challenges associated with this task. Nevertheless, these efforts were not able to dispel the popular story of the Seed Vault as a reservoir of resources for (post)apocalyptic times.

While the excessive embrace of biblical metaphors in reports on the Seed Vault can certainly be explained at least in part through economically motivated strategies of the global media industry (such as the clickbait logic of the internet era), it is not restricted to media reports and therefore not reducible to media logics. A significant number of the social scientists and cultural studies scholars who have written about the Seed Vault uncritically reproduce the doomsday narrative in their accounts (Qvenild 2008; Fava 2013; Gan 2015; Pellegrini/Balatti 2016; Nadim 2018; Grigoli 2024). Others mention the biblical metaphors the Seed Vault is often narrated through without adopting them, yet do not subject them to critical scrutiny either (van Dooren 2009b; Roosth 2016; Heatherington/Perley 2017; Kroløkke 2019; Dalyan 2021). To this day, to my knowledge, there exists no comprehensive analysis of the Seed Vault's biblical storying and the implications of these popular narratives. Following Donna Haraway's argument that "it matters what stories we tell to tell other stories with" (2016: 12), this chapter aims to address this gap and scrutinise the ways in which the biblical stories around the Svalbard Global Seed Vault matter, that is, become not only means of accessing worlds but also modes of world-making.

Foregrounding the doomsday narrative in particular, which is by far the most frequently adduced metaphor, I bring into view how the partners behind the Seed Vault reject it in their narrative accounts of the Seed Vault but nevertheless performatively embraced and invoked religious storytelling in the religiously-symbolically saturated mise-en-scène of the Seed Vault during a seed storing ceremony on the occasion of its twelfth anniversary. I begin by developing an interpretation of this event, which I attended as a participant observer,

3 For a discussion of the implications of such arguments, see chapter 4.

through Roy Rappaport's (1979, 1999) sociological theory of the performativity of rituals. I show that the ritualised character of the event enacted a kind of collective commitment to the cause of agrobiodiversity conservation that a scientific context such as the preceding summit cannot evoke in the same way. I argue that the event contributed to the persistence of these stories insofar as the ceremony not only symbolically invoked religious interpretations but also enacted a relation to the nonhuman world – here represented by the seeds deposited in the Seed Vault – that deeply resonates with the biblical stories about the Seed Vault. Through a closer engagement with the biblical story of the Apocalypse, I show that the rejection of the "doomsday vault" narrative is based on a simplistic, literalist understanding of the trope of the apocalypse that universalises the world assumed to come to an end and depoliticises that end. This conception of the rejected apocalypse, I conclude, is connected to a techno-optimistic salvationism infusing the *ex situ* conservationist endeavour of extending the present of the *ex situ* mode of world-making. In this sense, the Seed Vault is very much "about the end of the world", albeit the looming end of a particular world.

The Religious Performativity of a Seed Storing Ritual

The day of the 2020 Svalbard Seed Summit, which I have addressed in the previous chapter, culminated in an anniversary ceremony in front of the Seed Vault. It mainly revolved around the ceremonial storing of the largest quantity of seeds since 2008. 35 genebanks, including seven first-time depositors, brought 188 boxes containing 65,119 new seed samples into the Seed Vault, thus increasing the total number of accessions inside the vault to 1,050,000 (see Crop Trust 2020). After one and a half days in the familiar setting of a scientific conference with talks, slide shows, Q&A sessions, and networking in coffee breaks, and especially after the repeated efforts to disambiguate the conception of the Seed Vault as a pragmatic conservation facility, I was struck by the ritualised ceremonial character and religious aesthetic of this event. The following vignette illustrates my experience of the seed storing ceremony:

The ceremony begins at 5 p.m. The temperature is -20°C. The dress code is snowsuit.

In the darkness of the Arctic night, the artwork embellishing the top of the Seed Vault's concrete entrance glows and glistens in a turquoise light. The snowy hillside behind the entrance building is bathed in blue spotlights, the area in front of it divided and illuminated by ice cube-shaped lanterns forming a semi-circular line on the snowy

ground assigning spectators their place. When I enter the crowded scene, one of the ice cubes is already broken, presumably by an inattentive snow boot.

The ceremony is opened by an all-male choir dressed in sailors' uniforms marching up to the site singing and forming a line on the right of the Seed Vault's entrance; on the left, the SDG advocates, as honorary guests, overlook the ceremony from a little podium that is covered in dead animals' skins. A van backs up to the crowd slowly coming to a halt at the top of a line formed by the genebank representatives who are here to make a deposit.

When the doors to the Seed Vault open, I hear a humming sound, and it takes me a moment to realise that this is not a technical buzz coming from inside the vault but a hum coming from the choir. It will last throughout the seemingly endless row of one genebank representative after another taking their box out of the van, carrying it to the entrance of the vault, handing it over to NordGen staff who carry it inside the vault, being loudly announced and solemnly handed a certificate by the Norwegian Minister of Food and Agriculture, accompanied by thickly gloved muffled applause and a flurry of camera flashes, all under the eyes of the honorary guests and other spectators who appear increasingly uncomfortable in the freezing cold unrelentingly creeping under no matter how many layers of warm clothing.

Thirty-five ceremonial deposit-handovers later, the Seed Vault's doors close and the freezing crowd quickly disperses. The way back to the buses that have brought us here from the summit venue and will now take us back into town leads through a guard of honour formed by the still-singing sailor choir. I cannot help but sweep a curtsy at the end. While the childish and frisky energy that arises within me towards the end of the ceremony might also just be an effect of the staggering cold, I am much more inclined to attribute it to the mise-en-scène of the event. Overcome by childhood memories of sitting through seemingly endless church services in unheated cathedrals where I can see my breath condense before my eyes as I sing, choking siblingly laughter under the severe eyes of older family members and other churchgoers – memories that evolve, as soon as the ceremony is over, into the disenchanted sense of surrealism my childhood recusancy equally evolved into – I cannot help but feel that what I experienced here is not a pragmatic technoscientific conservation procedure so much as a religious service.

Lights, choral singing, ritualised offerings – the dramaturgy of the event temporarily seemed to turn the illuminated Seed Vault entrance into an altar and the storing of boxes of seeds into a ritual reminiscent of Christian rites such

as Holy Communion or Thanksgiving.[4] Against the backdrop of the efforts throughout the summit to dispel the popular religious narratives the story of the Seed Vault is often cloaked in, two questions arise that will guide my discussion of the meaning of the event in what follows. First, I ask what the symbolically saturated rituality of the seed storing ceremony means, and does, in the technoscientific context of the seed summit and agrobiodiversity conservation more generally. Second, venturing the hypothesis that the ritualised and symbolically charged seed storing ceremonies occasionally conducted on anniversary events such as the one described here performatively co-produce the salvationist stories of a doomsday vault or a Noah's Ark for seeds, I raise the question of how it matters that the technoscientific story of the Seed Vault is told, as it is, with the help of biblical stories.

The study of rituals has a long tradition in the sociological analysis of social action. The most fundamental and oft-cited work in this context is Émile Durkheim's *The Elementary Forms of Religious Life* ([1912] 2008), in which he explores how these forms "permeate not only traditional but modern societies as well" ([1912] 2008: vii). Durkheim argues that rites are equally crucial as beliefs in constituting religion and religious communities, and social action and social communities more generally ([1912] 2008: 36). As the religious studies scholar Catherine Bell observes in her instructive introduction to ritual theory, in the first two parts of his book Durkheim develops an analytical perspective that considers belief (thought) to precede and inform ritual (action). In the third part, however, which focuses on cult, he "reintroduces ritual as the means by which collective beliefs and ideals are simultaneously generated, experienced,

4 The description of my experience of the ceremony in the vignette is certainly no innocent description of what I observed, nor is it the only possible experience and interpretation; it has a lot to do with me being the experiencing subject. Since I was socialised in Catholic and Ecumenical Church environments, the stories, symbols, and rituals I am reminded of in such a context will most likely be those of the Christian Church. Building on the Harawayian paradigm of situated knowledges (Haraway 1988), I want to stress here that recognising this does not relativise so much as contextualise my experience and interpretation as well as the questions I deduce from it.

and affirmed as real by the community" (Bell 1992: 20).[5] The performative understanding of rituals crystallising here has become dominant in ritual studies and ritual theory since the 1970s, and has been paralleled by a broadening of the analytical focus beyond religious and spiritual rites in the narrower sense to "ritualised action" more broadly, which is also referred to as "performance" (see Bell 1992: 37–46; Belliger/Krieger 2008). These approaches aim to replace the classical dichotomic and consequentialist understanding of thought and action, theory and practice, or script and performance with a co-constitutive understanding of action and meaning (see Belliger/Krieger 2008: 9–10).[6]

An important representative of the performance approach to ritual(ised action) theory is Roy Rappaport (e.g. 1979, 1999). He proceeds from a broad definition of ritual as "the performance of more or less invariant sequences of formal acts and utterances not entirely encoded by the performers" (Rappaport 1999: 24).[7] Unlike other prominent scholars in performance theory who analyse ritual(s) by analogy with performance(s) in theatrical drama (e.g. Goffman [1967] 1989; Grimes 1982; Turner 1982, 1995), Rappaport conceives of ritual(ised action) as *performative* in the sense of performative speech, that is, as not merely

5 Bell goes on to argue that the latter perspective is closer to the understanding of ritual developed in Anthropology and at the intersection of Sociology and Anthropology, which tends to give analytical primacy to social action rather than thought (e.g. Hubert/Mauss [1898] 1981, quoted by Bell 1992: 15). More recent research on ritual in Cultural Anthropology proceeds from this perspective, which "coincides with the emergence of culture as a category of analysis" (Bell 1992: 15).

6 In a more critical reading of performance theory as basically reiterating J. L. Austin's (1975) speech act theory, which many accounts of ritual(isation) as performance proceed from, Bell (1992: 43) questions whether these approaches actually succeed in overcoming the primacy of thought over action if they ultimately understand ritual as communication. Identifying "a general tendency in the social sciences to 'textualize' the objects of its [sic] concern" (Bell 1992: 45) in this approach, she criticises the purported turn to action in ritual studies and ritual theory as potentially illusionary.

7 Rather than understanding ritual as an element of religion, Rappaport focuses on rituals' form (and what they perform). He proposes to analyse ritual/ised action on a continuum "of increasing formality and decreasing spontaneity" (1999: 34). Religious phenomena, which his study nonetheless focuses on, "lie toward the more formal, less variant end of the continuum [and involve] rituals sufficiently elaborate to include what may be called 'liturgical orders': more or less invariant sequences of formal acts and utterances of some duration repeated in specified contexts" (1999: 35). My analysis of the ritualised seed storing ceremony in Svalbard lies towards the other end of the continuum insofar as it is much less formal and more variant than rituals with a liturgical order.

saying, but doing or *enacting* something (Rappaport 1999: 107; see also Bellah 2003: 37–39).[8] His performative conception of ritualised action has a number of implications that are instructive with regard to analysing the meaning and effects of the ritualised seed storing ceremony in Svalbard described above.

First, Rappaport (1979: 177) argues, while dramas (in the classical sense) are staged for a passively consuming audience, rituals involve an actively participating congregation. Second, the acting in dramas (or plays) is not serious whereas rituals are characterised by a seriousness that is crucial for the durability and momentousness of that which is enacted beyond the confined time-space of the performance. For Rappaport, this does not mean that rituals are ultimately instrumental, though. Instead, he defines ritual as "the non-instrumental aspect or component of events that may also include an instrumental component" (Rappaport 1979: 177).[9] Third and resulting from the former, ritual performance is (potentially) transformative for those who participate in it on a deeper, more durable level than the temporary assumption of a role in a play (see ibid.).

Summarising Rappaport's argument, the sociologist of religion Robert Bellah argues that "[t]he sheer act of participating in serious rituals entails a commitment with respect to future action, at the very least with one's fellow communicants" (2003: 38). Against this background, the active involvement of the depositors participating in the event in a ritualised act of depositing their seeds in the Seed Vault can be interpreted as a means of *committing* them to the cause of agrobiodiversity conservation on a level other than that of merely rationally *convincing* someone of something. The collective ritual performatively does something to the group of depositors (and probably to other participants as well) that exceeds the instrumental or pragmatic act of backing up a seed collection in one's responsibility by depositing a duplicate collection in the Seed Vault. It performatively entangles this individual act in a collective cause or belief that is part of the fabric of the *ex situ* world of conservation.

For Bellah, what is most interesting about both Rappaport's and Durkheim's sociological analyses of ritual is not only their contribution to the sociology

8 Nevertheless, Rappaport sticks to characterising ritual as "performance".

9 Bell (1992) astutely cautions against a simplistic dualist distinction between instrumental action and a non-instrumental notion of ritual as mere symbolic action. This, she argues, "can easily collapse into a distinction between the rational and the irrational or the logical and the emotional" (1992: 71) and thus reify the power relations these dualist categories are situated in.

of religion but also the insights they offer into what he calls "the ritual roots of society" (2003). Rappaport understands ritual as "*the* basic social act" (1999: 138, emph. in orig.) insofar as it does not merely symbolically represent but enacts a social contract. Invoking this assertion, Bellah argues that "the most important implications [of Rappaport's study of ritual; FV] have to do with the creation of social conventions, a moral order, a sense of the sacred, and a relationship to the cosmos" (2003: 38).

Considered through this lens, the religiously-symbolically charged ritualisation of the act of storing seed deposits performatively enacts a morally charged convention of saving endangered agrobiodiversity through *ex situ* seed conservation as well as a sacrality pertaining to both what is conserved and the act of conservation. Through the ritualised storing ceremony, agrobiodiversity conservation thus becomes something more (note: more, not other) than a pragmatic technoscientific procedure – something transcending that which the seed summit performed and is able to perform, given its form. The ceremonial storage ritual adds a layer of meaning to agrobiodiversity conservation that has to do with enacting a relationship to the cosmos, as Bellah puts it, more than with the specific, mundane why and how of conservation.[10]

I have shown in previous chapters that the more-than-human relations the *ex situ* world of conservation is built on and enacts are shaped by a "resourcist cosmovision" (Fenzi/Bonneuil 2016: 78). The cosmorelation enacted in the seed storing ceremony, in contrast, is one in which the Human assumes the role of the preserver, caretaker, and guardian of a Nature under threat. While this may seem contradictory, what becomes discernible here are different manifestations of one and the same relation to the natural/ised world, within which the latter can take on different forms but is always defined in a subordinate relation to the human. Following the ecofeminist philosopher of science Carolyn Merchant (1980), they can be read as different manifestations of a patriarchal relation to the natural/ised world, which simultaneously imagines Nature as nourishing resource (embodied by the figure of the mother), powerful threat (embodied by the figure of the witch), and powerless protégé (embodied by the figure of the virgin or girl). In chapter 3.1, I showed how this relation has come to matter throughout history in different forms of frontierism – as

10 The notion of the cosmos is not defined any further by Bellah. I understand and use the term in the anthropological sense introduced earlier, as the world/s as understood and lived according to the plurality of cosmologies existing in the world.

territorial appropriation (nation-making frontier), technologically driven resource extraction (resource or technofrontier), and selective conservationism (salvage frontier). All of these can be discerned in the history of human activity on Svalbard. In the following, I discuss how this relation comes to matter in the salvationist imaginaries associated with the Seed Vault.

"Noah's Ark for Seeds" and the "Doomsday Vault" as Secular Salvation Stories

The idea of the Svalbard Global Seed Vault as a custodian of a Nature under threat of extinction is what makes the metaphor of a Noah's Ark for seeds seem like an apt characterisation. This role, as ascribed to the Seed Vault, corresponds to the role God assigns Noah in the biblical story of Noah and the Flood as told in chapters six to nine in the Book of Genesis, the first book of the Old Testament in the Christian Bible.[11] The story of Noah takes place in the ninth generation after Adam and Eve, according to the Bible the first humans created by God, who were banished from the Garden of Eden God had created for them because they ate from the forbidden Tree of Knowledge instead of humbly shepherding the creation as God had commanded them (Genesis 1–3).[12] Nine generations later, the story continues, God sees the depravity of the human race, regrets the creation of Man, and decides to annihilate life on earth through a great Flood. Because God considers Noah a pious man, God tells him to build an Ark, which will save him from the Flood along with his wife and sons and their wives, as well as one male and one female of every animal species. Noah and those he saves survive the Flood on the Ark and repopulate the earth afterwards.

The metaphor of the Svalbard Global Seed Vault as a Noah's Ark for seeds allegorises the promise that those who devoutly honour and save creation will survive the local and global disasters of this time and age and rebuild the world with the help of the diversity saved in the Seed Vault – which is also metaphorized in Barroso's characterisation of the Seed Vault as a frozen

11 Genesis is also the first of five books of the Torah in the Hebrew Bible. In what follows, where I recount the biblical stories discussed here, I take them from the Christian Bible in the Catholic tradition, which also comprises the New Testament and therein the story of the Apocalypse in the Book of Revelation.

12 For the original biblical stories quoted here and throughout this chapter, see https://www.bible.com/bible/ (last accessed July 18, 2025).

Garden of Eden (see above). Although these metaphors themselves were repeatedly rejected throughout the 2020 Svalbard Seed Summit, their promissory message was echoed in the story of the Syrian crop diversity rescue mission (see the book's introduction), which was not left untold as the most salient example of the Seed Vault's value. Even more significant in terms of reproducing salvationist imaginaries, however, was the seed storing ceremony, which seemed to embrace and invoke the biblical stories and metaphors – on the one hand through religious and maritime symbolism and on the other hand by performatively enacting a humility before creation, which in the biblical story of Noah and the Flood prompts God to save Noah and his kind from his wrath. Thus interpreted, the seed storing ceremony appears to be an enactment of a secular story of salvation. "Secular salvation history", according to Haraway (1997: 10), "depends on the power of images and the temporality of ultimate threats and promises to contain the heteroglossia and flux of events." Put differently, secular promises of salvation need powerful symbols and apocalyptic stories in the same way as religions do, to mobilise hope and trust in the promised means of salvation (see also Haraway 1997: 41). The most prevalent and powerful apocalyptic story told around the Seed Vault is the story of a "doomsday vault", which references the biblical story of the Apocalypse.

The Apocalypse (from Ancient Greek: *apokálupsis* for "disclosure") is the subject of the Book of Revelation, the last book of the New Testament in the Christian Bible. It takes the form of a letter written by John of Patmos to seven nascent congregations in the province of Asia (see Keller 2021: viii). Encompassing twenty-two chapters, this story is much longer than the previously mentioned ones, which are restricted to a few chapters within the Book of Genesis. Very briefly summarised: Through a series of prophetic visions, John announces the coming of God, whose wrath will descend on the earth in the shape of several dreadful creatures and cataclysms destroying "those people who destroy the earth" (Revelation 11:18). At the end of the book, John prophesies the coming of "a new heaven and a new earth" (Revelation 21:1) awaiting those who have remained humble and faithful. Alluding to this story, the notion of the doomsday vault construes the Seed Vault as a protective bunker for the world's plant genetic resources securing them from whatever apocalyptic catastrophe might befall the earth.

It is noteworthy that the first two metaphors, the Seed Vault as a frozen Garden of Eden and a Noah's Ark for seeds, reference the first book of the Christian Bible (Genesis) whereas the doomsday narrative references the last

book (Revelation). In the dramaturgy of the Bible, the two books, which tell of the creation and its demise, narratively represent the Alpha and the Omega – which is also a cipher for God. In this sense, according to the feminist theologian Catherine Keller, they do not mark and tell the beginning and the end of a linear story. Rather:

> "The God who had spoken in the first chapter to say 'I am the Alpha and the Omega' now speaks again in the end: 'I am the Alpha and the Omega, the first and the last, the beginning and the end.' So in this insistently nonlinear temporality, Genesis and Apocalypse seem to name the two edges of one being, one becoming, one process of creation. But the first and the last do not become the same. They *coincide*. At its omega point the creativity of genesis (the Greek word for 'becoming') reveals itself as *re*genesis." (Keller 2021: 172, emph. in orig., quoting Revelation 22:13)

It is in this insightful remark that I recognise one of the crucial ways in which it matters that the story of the Seed Vault is told with these (and not other) biblical stories: where the seeds of the disappearing world become the seeds of a reappearing world, the biblical metaphors of Genesis and Apocalypse become the perfect frame narrative for the Seed Vault's purpose and promise. In what follows, I interrogate the doomsday narrative in the story of the Seed Vault through the biblical story of the Apocalypse, conceiving the latter as an allegory of contemporary global crises. In doing so, I follow Keller's allegorical approach to contemporary apocalypticisms, which she develops in her monograph *Facing Apocalypse: Climate, Democracy, and Other Last Chances* (2021; see also 1996).

Keller unfolds a demystifying reading of the biblical story of the Apocalypse that counters literalist interpretations by historicising the story. This approach offers valuable insights for a sociological engagement with contemporary apocalyptic storytelling, which is currently thriving vis-à-vis ever-escalating global social-ecological threats. Keller discusses the biblical Apocalypse as a historically situated prophetic parable, not in the sense that it predicts contemporary global crises but in that it has analytic value due to its potential to reveal fatal transhistorical patterns:

> "The ancient text reads the crisis of its own historical context. It does not know or predict ours. But it discerns certain patterns in its own world deep enough to persist, dangerously, and perhaps disclosively, into our own. To

> *mind* those patterns without literalizing them means to dreamread collective crisis now, by way of the metaphors – the metaforce – of the Apocalypse then." (Keller 2021: 3, emph. in orig.; see also xiii)[13]

Based on her method of "dreamreading" contemporary crises through persisting deep historical patterns, Keller proposes an analytical strategy she calls "apocalyptic mindfulness" (2021: 3). It allows for mobilising "the metaphors – the metaforce" of the Apocalypse without succumbing to the more common apocalyptic sentiments of "optimistic denialism and pessimistic nihilism" (2021: 17; see also Haraway 2016: 3–4). For Keller, being mindful of the Apocalypse means "fac[ing] the unspeakable catastrophes that may become inevitable *if* we do not speak" (Keller 2021: 17, emph. in orig.). It means taking seriously the persistence of apocalypticism (in societies with a Christian tradition or influence), recognising its various overt and covert, both spiritual and secular forms, and neither literalising nor ridiculing them (see Keller 2021: xii–xiii, 15–19).

Apocalyptic mindfulness, thus, allows for becoming aware of the cultural force that the biblical text has to this day, not only where it is explicitly referenced but also as an interpretive frame of reference in "the political unconscious" (Keller 2021: 18, quoting Jameson 1981). This is crucial not least because, as Keller argues, it is where apocalyptic sentiments are unconsciously enacted that they are most dangerous. Minding the Apocalypse and bringing to the surface its subliminal metaforce in technoscientific salvation stories and projects, then, makes it possible to disentangle apocalyptic narratives and sentiments from the forces that doom specific worlds, and thus to develop meaningful responses to the latter (see also Keller 2021: xii).[14]

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13 Keller emphatically distinguishes between prophecy and prediction, defining the former as the analysis of "potent pattern[s] of human civilization" (2021: xiv), which may or may not repeat themselves throughout history. In this sense, "[p]rophecy then or now *dreamreads* a collective context. Within the patterns of what has already become, it attends to what might yet be." (Keller 2021: xiv–xv, emph. in orig.)

14 Keller's approach to facing the crises of the present through apocalyptic mindfulness resonates, to a certain degree, with Haraway's call to stay with the trouble(s) of our times rather than losing track of the present through abstract futurisms. Although Haraway, unlike Keller, is not interested in apocalypticism, which she conceives as the equally passivating counterpart to the contemporary "comic faith in technofixes, whether secular or religious" (Haraway 2016: 3), very like Keller, and as unfolded in chapter 4.2, she seeks and calls for responses to the devastations of the present that

An important observation Keller makes in this regard is that today, apocalypticism is no longer restricted to religious literalist traditions and the religious-political wing of reactionary conservatism, as was long the case (at least in the US context, which her research focuses on; see Keller 1996; see also 2021: 7). Instead, varieties of apocalypticism permeate contemporary crisis discourses across all kinds of societal groups and movements, whether religious or political, reactionary or revolutionary (Keller 2021: xiii). This observation is also reflected in a growing academic discourse on contemporary apocalypticisms. Scholars from a variety of disciplines and research fields[15] have been developing an ever-expanding index of the ways in which apocalyptic and post-apocalyptic narratives, sentiments, politics, and cultures shape climate, environmental, nuclear, and other existential discourses and struggles of the present. For Keller, what is particularly noteworthy in the contemporary inflation of apocalypticisms is the "mounting chorus of voices secular, sober and scientifically tuned who make use of the rhetoric of the apocalypse" (2021: 9; see also Riesch 2021). Among these are alarmist voices rather explicitly predicting the Last Days, such as "'the Insect Armageddon,' 'the Uninhabitable Earth,' 'Climate Doom' – and of course the 'Anthropocene Apocalypse'" (Keller 2021: viii). In other cases, the apocalypticism is more implicit and ambiguous. The popular story of the doomsday vault ties in with the first type of doomism. While the official story of the Seed Vault rejects this perception, it does nonetheless exemplify the second, more subtle type of apocalypticism, as I show in the following. It is here that I recognise the complicity of the partners behind the Seed Vault in the lack of success in dispelling the doomsday narrative.

The crux is that defensive statements arguing that the Seed Vault is "not about the end of the world" (Dempewolf 2020; see above) presume and reject a very particular understanding of 'doomsday' as a singular apocalyptic event in the (varyingly distant) future that will bring *the* world to *an* end. This conception

lie beyond the simplistic alternative of techno-optimism and "bitter cynicism" arising from "a position that the game is over" (ibid.).

15 These range far beyond theological research areas to sociology (e.g. Bröckling 2023), philosophy (e.g. Žižek 2022), anthropology (e.g. Danowski/Viveiros de Castro 2017), environmental humanities (e.g. Higgins 2021), postcolonial international relations (e.g. Mitchell/Chaudhury 2020), affect studies (e.g. Grillmayr/Hentschel 2024), and feminist theory (e.g. Zylinska 2018).

has three implications worth problematising. First, understanding the apocalypse as a singular and all-encompassing destructive event universalises and dehistoricises both *the* world and *the* assumed end awaiting it. For one thing, doing this obfuscates and depoliticises the powers that are bringing about the anticipated end. For another, it fails to see that there are worlds in this world that have already experienced or are currently experiencing the devastation or end of their known worlds. To put it in the words of philosopher Marina Garcés: "assum[ing] that the end of one world is the end of *the* world is a terrible way of forgetting that this world we now see shaking has risen on the destruction of others and on much death, as is happening again" (Garcés/Hentschel 2023: 1, emph. in orig.; see also Whyte 2017; Yusoff 2018).

Among the most cataclysmic examples of this in recorded human history was the eradication of around 95 per cent of the Indigenous population of the Americas during the two centuries following the arrival of Columbus in the Caribbean in 1492 and the ensuing colonialist destruction of the world they had previously cultivated and lived in (Danowski/Viveiros de Castro 2017: 104–105; see also Lewis/Maslin 2015: 174–175). According to philosopher Déborah Danowski and anthropologist Eduardo Viveiros de Castro, while the European colonisers conceived the American continent "as a *world without humans* – be it because they objectively depopulated it or be it because the humans they found there did not fit the category of 'humans' – the surviving Indians [sic] […] found themselves as *humans without world*" (2017: 105, emph. in orig.). They were forced to learn how to survive the end of their world and adapt to the new world imposed on them. Insofar as this was but one of a horrific diversity of historical and contemporary examples of worlds' ends, Danowski and Viveiros de Castro describe "the end of the world [as] a truly *fractal event*" (2017: 105, emph. in orig.).

Second, understanding the A/apocalypse[16] as 'the end of the world' also dehistoricises and depoliticises the biblical story of the Apocalypse, based on (and reproducing) a simplistic literalist understanding of the Bible that political theologians such as Keller firmly oppose. According to her reading of the

16 Keller (2021: 2) distinguishes between the biblical Apocalypse and the apocalypse as a trope in current crisis metaphors by capitalising the former and lowercasing the latter. She also introduces the notation "A/apocalypse" (2021: 7) for arguments referring to both stories at once. I follow her in both the distinction and the conjunction of the Apocalypse (biblical story) and the apocalypse (trope) insofar as this notation emphatically illustrates the argument I develop in this chapter.

Apocalypse, which resonates with the first point of criticism of the 'end of the world' narrative, the story the Book of Revelation tells neither conceives the catastrophe as singular nor the world or its end as absolute:

> "John's letter literally, to the letter (Lat. *littera*), does *not* announce 'the end of the world.' It does depict a symbolically supercharged spiral of catastrophes, vividly amping up the destruction of a *particular* world: a specified global civilization and its planetary ecology." (2021: 6, emph. in orig.)

The popular idea of the Apocalypse as the story of a more or less exogenous shock brought upon the world as a whole by a chastising God discontent with humanity as a whole, then, obscures a tone in John's letter Keller reads as "profoundly critical of the empire that had colonized what for him counted as the known world" (2021: viii). John's prophecy, she argues, anticipates a backlash against the Roman Empire's violence exerted through colonialism, imperialism, and economic injustice, as well as against the more-than-human world (2021: 30). Insofar his letter is addressed to a readership living under the rule of the empire he criticises, this criticism is encoded in an ancient symbolism, which makes it less evident to modern readers (Keller 2021: xix).

These first two problematisations show that interpreting the story of the A/apocalypse as being about a singular doomsday that amounts to 'the end of the world' is based on a double depoliticisation: it depoliticises historical and contemporary forces of doom by invoking a religious narrative that is itself depoliticised insofar as it is treated as a myth rather than a historically situated story of a specific, destructive and therefore doomed world. This idea of the A/apocalypse as a doomsday myth that has nothing to do with real world problems underlies the rejection of the 'end of the world' narrative in the story of the Seed Vault. As Fowler puts it,

> "[t]he major threats and the principal causes of loss of diversity in genebanks have to do with institution-specific management, infrastructure, and funding problems. They are not catastrophic or apocalyptic; they are not the stuff of newspaper headlines. But they are deadly nonetheless." (Fowler 2008b: 12)

At the same time, stories like that of the Syrian seed collection, lost in the course of the Syrian civil war and rebuilt from the duplicates stored in Svalbard (see introduction), or that of the Potato Park, collaborating with the

Seed Vault to secure their unique biocultural heritage against the threats climate change poses to the Andean social ecology (see chapter 4.2), show that agrobiodiversity loss is connected not only to mundane problems but also to catastrophic and, for those affected, potentially apocalyptic scenarios as well. More in line with this, Fowler argues elsewhere:

> "I'd say doomsday is happening everyday for crop varieties […]. Lots of people think that this vault is waiting for doomsday before we use it. But it's really a backup plan for seeds and crops. We are losing seed diversity every day and this is the insurance policy for that." (Fowler quoted in Handwerk 2012; see also Wallace 2016: 115–116)

Both arguments quoted here show that Fowler *rejects* the doomsday narrative based on a notion of the A/apocalypse that corresponds more to the popular imagination of a singular and somewhat exogenous apocalyptic event than to the more politicised version of the story unfolded above. At the same time, the idea he *articulates*, namely that doomsday is an everyday fate for crops, distinctly resonates with Keller's above-quoted description of the A/apocalypse as a "spiral of catastrophes" (2021: 6) emerging from the world they threaten to destroy. However, these catastrophes (in the biblical story: war, famine, pestilence, and death, symbolised by the four horsemen of the Apocalypse riding the earth one after another) do not wipe out *the* world all at once but reach apocalyptic magnitude only in their accumulation and intersection. Similarly, the everyday threats that natural and man-made disasters as well as more mundane technological, infrastructural, and financial limits pose to plant genetic diversity result in extinction-level events and the loss of an existentially critical mass of agrobiodiversity only when local losses globally accumulate and intersect in their consequences. The everyday doomsday for crops Fowler describes, then, is not at all dissimilar to the biblical Apocalypse. Both are distributed not only spatially but also temporally; or as the literary scholar Molly Wallace puts it, they are "at once future and present" (2016: 115).

This brings me to the third problematisation of the popular 'end of the world' narrative. It is an expression of a world whose imagination of a contemporary apocalypse is shaped by the twentieth century nuclear age. The nuclear threat is that of a "fast apocalypse" (Wallace 2016: 7) occurring on a specific doom*sday*. The ecological doom*sdays* (in plural) that have arisen on the horizon of the twenty-first century, however, are better described as a "slow apocalypse" (Wallace 2016: 17, quoting McMurry 1996). Although Wallace

barely elaborates the notion of the slow apocalypse, it can be read in line with a body of literature elaborating on the slowness of violence (Nixon 2011; Masco 2017), disaster (Knowles 2014), and emergencies (Anderson et al. 2020). All these approaches challenge an understanding of violence, disaster, and emergencies as something extraordinary, instantaneous, and immediately perceptible. Instead, they emphasise their ordinariness, temporal and spatial dispersal, and therefore imperceptible, incremental unfolding.

This perspective is crucial insofar as the slowness of apocalyptic social-ecological threats such as large-scale (agro)biodiversity loss and climate change may make them seem less dangerous than the nuclear threat because there is still time to act. However, it is precisely their slowness that makes the social-ecological apocalypses of the present all the more dangerous. As the anthropologist and STS scholar Joseph Masco puts it, they exert "a slower violence that is treacherous precisely because it is so incremental that it is difficult in any given moment to sense a change in the environment or to connect discreet issues" (2017: 70). According to Wallace, the iconic metaphor of the "doomsday clock" of the Bulletin of the Atomic Scientists (2025) ticking towards midnight as the moment of nuclear annihilation

> "might better be conceived, then, not only as a countdown to some potential future annihilation, but also as [...] a 'metronome of threat,' syncopating a present that contains multiple catastrophes, historical and to come, simultaneously. In the second nuclear age, we seem to find ourselves inhabiting rather than anticipating the end" (Wallace 2016: 17, quoting van Wyck 2005: 20).[17]

In summary, becoming aware of the slowness of the A/apocalyptic is crucial because it unfolds in multiple spatially and temporally distributed forms that can make the apocalyptic effects of their intersection indiscernible.

Following Keller's reading of the A/apocalypse, recognising the slowness and spatio-temporal dispersal of the A/apocalypse is also essential because it

17 This distinction must be read as a genealogical typification of apocalypses rather than a sequential development, as not least the current trend towards militarisation and warfare as a response to international geopolitical conflicts underlines. Even more, insofar as the competition for access to energy sources and other natural resources is one of the (surprisingly little debated) drivers of current wars and territorial conflicts (see e.g. Sánchez Cedillo 2023), the divergent existential threats of the present must be considered as intersecting and the contemporary apocalyptic threat as multiple.

opens up "a space where late chances, last chances, remain nonetheless real chances" (Keller 2021: xiii). While popular accounts of the A/apocalypse usually focus on its destructivity, Keller highlights the "*constructive* potential" (2021: 9, emph. in orig.) inherent in the alarm of the A/apocalypse. She argues that this is a core message of the Book of Revelation: "*Apokalypsis*, the Greek word for 'revelation,' means literally the 'removal of the veil.' It means not closure but dis-closure – that is, opening." (2021: 5) Without questioning the fact that the story of the Apocalypse incontrovertibly tells of the destruction of a world, Keller points out that "contrary to general presumption and Christian literalism […] neither the book nor its world ends there" (2021: 6). As mentioned above, John's prophecy, while by and large indulging in visions of devastation, is not restricted to these. It ends with a promise of salvation and a new world awaiting the faithful, which refers to those "who [do not] destroy the earth" (Revelation 11:13; see above). This revelation of a new world to come, Keller argues, comes with a hope that "eschatologically tuned" (2021: 8) progressive movements – historically Christian ones but today including secular movements – have translated into visions and demands of "social transformation" (ibid.). Crucially though, she points out, "for any biblically sound eschatology, it is not that something new will 'take the place of the old'; 'it is the same "old" itself which is going to be created anew'" (Keller 2021: 8, quoting Moltmann 1996: 88).[18]

Against this backdrop, the Seed Vault's promise to safeguard the largest possible diversity of plant genetic resources in order to open up options for adapting agriculture to unknown future ecologies and continuously (re)creating an abundance of thriving food crops reads like a hopeful promise of salvation in the face of a slowly unfolding social-ecological apocalypse. Although the apocalyptic tone I recognise in the rationality of *ex situ* conservation encapsulated in this promise certainly has little to do with biblical literalism, it does conform to a type of apocalypticism Keller distinguishes from the former, which she calls "modern *'can do' optimism*" (2021: 16, emph. in orig.).[19] The understanding of the A/apocalypse that modern 'can do' optimism enacts embraces

18 Following the theologian Jürgen Moltmann, Keller makes a similar argument with regard to the tradition of eschatology as she does about the Apocalypse. She argues that it has "misleadingly [been] read as 'doctrine of end things,' [whereas it] is about a hope that is 'revolutionizing and transforming the present'" (Keller 2021: 8, quoting Moltmann 1967: 16).

19 Keller's (2021: 16–17) typification of contemporary apocalypticisms encompasses four variants: biblical literalism, catastrophist nihilism, its flipside: modern 'can do' opti-

the constructive potential of John's revelation through the belief in human exceptionalism, technological progress, and economic growth as the means to save the modern world from doom (note: the modern world, not *the* world).

Through the promise that the Seed Vault will make it possible for creation to survive the coming catastrophes, this mode of resisting the destructivity of the A/apocalypse also promises to avert the need for any radical transformation of the social (human and more-than-human) relations from which these catastrophes emerge. The 'can do' optimism that informs this promise is inscribed into the conviction that conserving plant genetic resources *ex situ* can do what cultivating agrobiodiversity *in situ* cannot do, namely save as much plant diversity as possible from going extinct while also organising global agriculture in a way that is able to feed the entire world population (irrespective of whether it does or not). It is further inscribed into the conviction that the Seed Vault can do what local genebanks cannot do on their own, namely guarantee the survival of plant genetic diversity and thus secure nothing less than "the future of agriculture" (Fowler 2008b) amidst the many catastrophes and local losses of diversity happening every day. Finally, it is also inscribed into the religious aesthetic and ritualised character of the seed storing ceremony conducted in Svalbard in February 2020, which, against this background, appears as a celebratory enactment of the salvationist promises of and belief in putting seeds on ice to survive the looming agrobiodiversity doomsdays.

What I have attempted to show throughout this discussion is that although the Svalbard Global Seed Vault is not "the doomsday vault [preserving] the seeds that could save a post-apocalyptic world" (The Guardian 2015) that popular media accounts persistently make it out to be, it does embody a promise to its depositors that it will help them survive their own respective doomsdays. Ritualised events such as the seed storing ceremony analysed above enact and, by doing so, commit its participants to the secular salvation story of the Seed Vault. Despite the persistent rejection of the doomsday narrative, the Seed Vault's secular promise of salvation is infused with a quite biblical apocalypticism insofar as it is the conservation of creation and the belief that lost worlds can be recreated that underlies the promise of salvation from doom. This type of apocalypticism does not address the forces of doom, assuming that they lie outside of anyone's sphere of responsibility or influence. Instead, hope emanates from the belief that the regeneration of creation as securely

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mism, and the apocalyptic mindfulness she proposes as a strategy that resists the fallacies of the other three.

conserved in the Ark (be it the biblical one or the Seed Vault) will enable it to survive the coming catastrophes. In the secular technoscientific context of the *ex situ* world of conservation, this apocalypticism takes the form of a technoscientific 'can do' optimism that comes with a depoliticisation of contemporary agrobiodiversity doomsdays.

Considering *ex situ* conservation practices and the Seed Vault not in themselves, but as performative parts of the *ex situ* world and its mode of world-making, makes this depoliticisation all the more notable. As I have argued in previous chapters, the *ex situ*ating mode of world-making that the *ex situ* world conserves and that the Svalbard Global Seed Vault reinsures seeks to extend the present of a world valuing and striving for a form of technoscientific and economic progress that is built on exploiting nonhuman/ised life as a resource available and extractible for the flourishing of that world. Insofar as this world and its mode of world-making are complicit in the slow ecological apocalypse that has appeared on the horizon of the twenty-first century, saving it means saving its apocalypse, too. The way in which the Seed Vault and the *ex situ* world of conservation currently act on the space of late and last chances unveiled by the apocalyptic threats of the present, then, is a mode of worlding trapped in a vicious cycle of loss and salvation.

Nevertheless, some of the other worlds that the Seed Vault assembles show that other modes of knowing, making, and being in the world exist and persist in spite of loss and destruction. Based on my analytical approach to the Seed Vault as an arena of world-making that is not determined by the world it has arisen from and following Danowski and Viveiros de Castro's appeal that other worlds "have something to teach us when it comes to apocalypses, losses of world, […] and ends of History" (2017: 104), the section that follows shifts the focus to other responses to the contemporary social-ecological catastrophes emerging in the space of the late and last chances they unveil.

5.2 Conservation as Commemoration: The Art of Mourning Agrobiodiversity Loss

> "Longyearbyen is home to the most biodiverse room in the world. Housing over 1 million seed samples from all around the world, the Svalbard Global Seed Vault is an incredible achievement of science and diplomacy. However, the Vault contains no information about the cultural significance of seeds; no stories about how they are cultivated, by whom, for what purposes, using

> what rituals, etc. The seeds in the Vault are frozen in isolation from all the social practices, ecological relations and cultural histories that give them life. The Agri/Cultures.Seed-Links exhibition is a reminder that seeds live within rich webs of human/nature relations and celebrates these connections as also worthy of preservation." (GenØk – Centre for Biosafety 2019)

The passage quoted here comes from a poster announcing the *Agri/Cultures.Seed-Links Exhibition: Conserving Cultural Connections with Seeds*, staged in Svalbard on June 8, 2019, at Huset, a conference venue just outside Longyearbyen. I happened to come across this art exhibition, which lasted for this one day only, during my first field research trip to Svalbard. It was part of the public outreach of the Agri/Cultures Project, a research project funded by the Norwegian Research Council aiming to create publicly accessible knowledge about the diversity of agri-food systems and cultures of agriculture.[20] In line with this goal, the exhibition in Svalbard was curated around the cultural contexts of seed life that *ex situ* agrobiodiversity conservation efforts deprioritise. As the text on the poster announcing the exhibition illustrates, it is a direct response to the Svalbard Global Seed Vault and the *ex situ* approach to agrobiodiversity conservation, as well as to the shortcomings of this kind of conservation as identified by the Agri/Cultures Project. This art project represents one of the actors and activities the Seed Vault less evidently assembles in the political world-making arena it has created. This section shows that extending the focus of analysis beyond the more obvious practices and environments of agrobiodiversity conservation to cultural and artistic interventions into the world of conservation makes it possible to articulate a critique of the *ex situ* world of agrobiodiversity conservation that is productive insofar as it draws attention to other possible worlds and modes of worlding.

To do so, I develop a twofold argument that emerges from two distinct levels of intervention I identify in the art project. Insofar as it consists of an exhibition of artworks illustrating what I call agrobiocultural diversity, on the one hand, and a performance in which these artworks are deposited inside the permafrost for long-term conservation, on the other hand, I read it as a challenge to both the *what* and the *how* of the kind of agrobiodiversity conservation

20 The findings of the project are published on an interactive website visualising the relations between agri-food systems and everyday food choices, which is meant help consumers make informed decisions: https://seed-links.com/ (last accessed July 18, 2025).

practised by the Seed Vault and the *ex situ* world of conservation. First, by assembling, exhibiting, and conserving a collection of agrobiocultural diversity alongside the Seed Vault, the art project draws attention to the endangered "social practices, ecological relations and cultural histories" (see above) that come with seed diversity and from which it comes. Second, by depositing the collection through the performance of what appears to be a burial rather than a conservation procedure, which comes with a different set of affects and imaginaries, the art project allows for rethinking how to deal and learn to live with past, present, and future losses of agrobiodiversity.

Insofar as the first argument deeply resonates with the discussion of the Potato Park in chapter 4.2, I develop it rather briefly here through some of the artworks assembled in the exhibition. I then go on to unfold the second argument through a film shown during the exhibition, which documents a first iteration of the art project carried out the year before. The documentary provides deeper insights into the act and affective context of burying the artworks in the mountain than I was able to get during my visit of the *Agri/Cultures.Seed-Links Exhibition* in 2019. I interpret the performative act of burying the collection of artworks in the permafrost mountain, through the affective atmosphere it creates, as a practice of mourning the loss of agrobiocultural diversity. Based on a discussion of a body of scholarship on mourning beyond the human that has emerged in the wake of the vast ecological devastations and losses of the present, I develop a reading of the art project as a productive critique of *ex situ* conservation; one that performatively opens up new perspectives for rethinking conservation as a practice of becoming with loss rather than conserving the seeds of a world that perpetuates ecological destruction and agrobiodiversity loss.

The Agri/Cultures.Seed-Links Exhibition: Assembling Agrobiocultural Diversity

The Agri/Cultures Project and the *Agri/Cultures.Seed-Links Exhibition* both spring from a central line of criticism voiced against the *ex situ* approach to agrobiodiversity conservation and the Svalbard Global Seed Vault as its international flagship. While decades of incessant efforts to collect and conserve the largest possible amount of plant genetic diversity in genebanks all over the world and 16 years of extra security provided by the Seed Vault have successfully secured a diversity of PGRFA from loss and destruction, agrobiodiversity loss and destruction remain global social-ecological problems that

have not become less existential in any way. Critics of the *ex situ* approach to conservation and of its hegemonic status within the larger world of agrobiodiversity conservation attribute the inability of *ex situ* conservation efforts to alleviate ongoing agrobiodiversity loss and destruction to, among other things, the bio-centred understanding of agricultural biodiversity underlying *ex situ* conservation efforts.

This conception of biodiversity is narrow insofar as it reduces plants and seeds to biological lifeforms and ignores the diverse biosocial and biocultural relations within which plants and seeds come to matter (see e.g. van Dooren 2009a, 2009b; Harrison 2017; Boschen 2022; and critically Laboissière 2019).[21] To borrow a terminological differentiation introduced by the anthropologist Stefan Helmreich, the notion of biodiversity and the *ex situ* approach to biodiversity conservation primarily focus on a diversity of "*life forms* – embodied bits of vitality like organisms and species" (Helmreich 2011: 673, emph. added), while disregarding the diversity of "*forms of life* – social, symbolic, and pragmatic ways of thinking and acting that organize human communities" (ibid., emph. added). In addition, as I have shown in previous chapters, by preserving a diversity of life forms in order to retain the biological and associated economic potential recognised in them, the *ex situ* world of conservation not only reduces agrobiocultural diversity to biological diversity, but in fact preserves a particular, *ex situ*ating, resourcist, capitalist form of (more-than-human) life.

The *Agri/Cultures.Seed-Links Exhibition* responded to this narrow conception of agrobiodiversity by assembling a range of artworks displaying an intriguing diversity of biocultural practices, knowledges, and contexts, in which seeds and plants exist and persist. Examples that particularly caught my attention were a photo gallery illustrating the current reality of biodiversity loss and other post-war challenges farmers are facing in northern Iraq, part of the region called The Fertile Crescent where agriculture first developed (Laurent 2019); a foldout life-sized illustration of a crocodile killed in the nineteenth century and exhibited in a museum in Singapore, in whose carcass taxidermists found a preserved wheat seed, which the artists interpreted

21 Social scientists and cultural studies scholars use the notions of the "biosocial" (Rabinow 1996; Gibbon/Novas 2008) and "biocultural" (Frost 2016) to describe the interrelatedness or hybridity of biological and social or cultural life and to dissolve reifying dualisms like nature and culture. In this chapter, I take up the notion of the biocultural rather than the biosocial following the focus of the *Agri/Cultures.Seed-Links Exhibition* on the diversity of cultural relations with seeds.

as a metaphor for entangled colonial histories of violent more-than-human relations (The Migrant Ecologies Project 2019); and a leaflet in the shape of the Seed Vault's exterior entrance structure made of hand-crafted paper bags each filled with the seeds of the plant it was made of, which the artist duo saved in their own urban gardens (Seeds InService 2019), conserved alongside a copy of the self-created book *An Illuminated Feminist Seed Bank* illustrating the traditional gardening practices and knowledge the artists engage (Potter/Puckett 2019).[22] All of these artworks illustrate an agrobiocultural diversity that is not reducible to the seeds extracted from these diverse entanglements and that is not represented, let alone conserved, in *ex situ* conservation environments, least of all in the Svalbard Global Seed Vault.

In contrast to scholarly criticism of *ex situ* conservation emphasising the limited scope of a genebanking approach to the conservation of agricultural diversity "in any full sense of the term" (van Dooren 2009a: 373),[23] as an art project with more creative options than are generally open to technoscientific projects the *Agri/Cultures.Seed-Links Exhibition* ventured to embrace the *ex situ* approach to conservation and extend it to agrobiocultural diversity. Rather than merely challenging the Seed Vault's bio-reductionist praxis of collecting the seeds of agriculturally relevant plants by assembling a counter-collection of a diversity of agricultural practices, knowledges, and traditions, the exhibition pursued a dialogical approach and offered the Seed Vault a biocultural addendum to its seed collection.[24]

At the end of the single day that the artworks were on display, as a last item on the exhibition's agenda, the artists were asked to pack their artworks into storage boxes such as the ones used in the Seed Vault. After a silent, solemn, and somewhat mournful packing ritual, the group went the next day to deposit the collection of agrobiocultural diversity alongside the Seed Vault's seed

22 Pictures of all the artworks assembled in the exhibition as well as video interviews with some of the artists, in which they elaborate on their exhibits and their work more generally, are accessible through an online "Seed Cultures Archive": https://www.seedcultures.com/svalbard-2019#/2019/ (last accessed July 18, 2025).

23 Van Dooren (2009a) argues that genebanks should be reimagined as crucial components of larger networks of growing, circulating, and sharing rather than conserving plant diversity in the current geneticised sense of the endeavour. Sheryl Breen (2015) unfolds a similar argument in her contrasting study of Native American seed saving projects and the Svalbard Global Seed Vault (see also chapter 2.1).

24 As part of a literal dialogue, the Seed Vault coordinator contributed a presentation about the Seed Vault to the exhibition's accompanying programme.

collection. The boxed artworks were deposited inside one of Longyearbyen's disused coalmines near the Seed Vault – whose management did not agree to storing them inside the vault. Inside the mine, under 150 metres of rock and permafrost, they now sit in a room referred to as Fröyhall (old Norwegian for "room for seeds"), which also houses the container that served as the Nordic countries' backup seed repository before the Global Seed Vault was built. "There they will rest forever, archived as cultural memories of the forgotten stories linked to these frozen seeds" (GenØk – Centre for Biosafety 2019), as the exhibition poster states.

This last passage from the poster is indicative of a crucial difference between the art project's co-collection of agrobiocultural diversity and the Seed Vault's seed collection regarding not only what is conserved, but also when and how the conserved collections come into effect. The Seed Vault promises to securely store backups of working collections of seed diversity that can be retrieved from Svalbard at any time if they are lost in the original genebank. Against this background, it works like a bank or an insurance policy rather than constituting an eternal archive in the sense of a library of seeds.[25] As I have discussed in previous chapters, while the Seed Vault is built to endure as far into the future as possible, its goal is not to sustain biological memories for eternity (or for after 'the end of the world'; see section 5.1), but to conserve plant genetic diversity for use (see chapter 4.1). The diversity conserved in the Seed Vault is not there to be remembered, but to be retrieved and regenerated if its original source is lost. Hence, the vault's temporal orientation may be long-term, depending on when genebanks ask for their deposits back, but it is emphatically this-worldly.

The frozen art collection, in contrast, expressly establishes an archive of agrobiocultural diversity that is not meant to be retrieved in the here and now. While there may be a future in which the "cultural memories" archived in this collection will be recollected, they are not deposited for any kind of anticipated

25 In contradistinction to this claim, Peres (2016), Harrison (2017), Harrison et al. (2020), and Grigoli (2024) analyse the Seed Vault as an archive of seed diversity. Insofar as they conceive archives as actively producing rather than merely representing the diversity they comprise, the approach that these authors pursue resonates with the claim that the Seed Vault is a bank more than a library. According to Harrison, practices of biobanking collect and archive diversity to "generate and accumulate latent forms of biocapital" (2017: 80).

future use. Instead, the artworks are explicitly put on ice "forever" as an eternal archive of the social, ecological, and cultural relations, practices, and histories they embody.[26] However, there is something to the *act* of conservation performed by the art project that exceeds that which it conserves (in a similar way as in the seed storing ceremony described in the previous section). In what follows, I extend the focus from the artworks – the *what* of conservation – to the performativity of the art project as a whole, meaning the process of assembling, exhibiting, packing, and depositing artworks – the *how* of conservation. I interpret the latter as an act of remembering what the *ex situ* world and mode of worlding dismembers and thus as an act not primarily of conservation so much as of commemoration.

Offerings: Conserving and/as Commemorating Agrobiocultural Diversity

Part of the accompanying programme of the *Agri/Cultures.Seed-Links Exhibition* was a screening of the short film *Offerings* (Prescott 2019) documenting an art project of the same kind called the *Svalbard Ark* that took place in 2018. Like the 2019 art project, this predecessor exhibition and storage event was organised by Fern Wickson, one of the researchers in the Agri/Cultures Project, as part of her previous research project biodiverSEEDy, also funded by the Norwegian Research Council. In the first iteration in 2018, the project began with an exhibition in Tromsø in Northern Norway (and not in Longyearbyen as in 2019), followed by a journey to Svalbard where the artworks were deposited in the same place as in 2019. The documentary follows five international artists participating in the *Svalbard Ark* from the exhibition to the storing of their artworks in Longyearbyen. In addition to documenting sequences of the events and the journey, the film is a collage of interviews with the curator and the artists accompanied by images of the Arctic landscape set to tranquil music. It provides insights into the processes mentioned above preceding and following the exhibition which I was not able to gain in person during my visit to the second exhibition in Svalbard in 2019, since my schedule did not allow me to attend the storing of the artworks in the coalmine the day after the exhibition.

26 Of course, the Seed Cultures Archive makes the collection accessible to a certain degree beyond its storage in the Arctic permafrost and the one-day exhibition that preceded this. However, these are digital copies whereas the originals remain on ice. While this raises an interesting question about the respective relation between original and duplicate in the art and the seed collection, these are a subject for a different paper.

To discuss the ritualised and remarkably affectively charged process of exhibiting, packing, transporting, and depositing the artworks, I now shift the focus to the documentary film of the 2018 *Svalbard Ark* project. While the film is certainly not a neutral document of the art project insofar as the way it is structured, narrated, and iconically set is already an interpretation of what it depicts, the tone and atmosphere it portrays, where not explicitly stated otherwise, resonate with my experience of the 2019 exhibition. In what follows, I unfold a reading of the art project's performance as a process of sharing, celebrating, entrusting to a beyond (beyond one's own reach as well as one's own world and time), and mourning the carefully crafted works of art embodying social and cultural relations with seeds.

The film begins by elaborating the idea of the project it documents: to complement the Svalbard Global Seed Vault's collection of decontextualised frozen seeds with a collection of artworks illustrating "the beautiful life of seeds" (Wickson in Prescott 2019: 1:08), meaning the life seeds lead in their biocultural entanglements outside genebanks. As in the 2019 exhibition described above, the artworks in the first exhibition in 2018 too embody a variety of practices, knowledges, and cultural traditions as well as personal experiences associated with seeds. They range from drawings of seeds to embroideries made by Indigenous peoples depicting their history and culture and to a shrine that used to protect seeds an artist's Hungarian grandmother took with her when migrating to the USA to bring along and continue to cultivate a piece of her home (see also Seed Cultures Archive 2018).

The film shows the exhibition itself in a lively and conversational ambience. The atmosphere changes when it comes to the packing ritual at the end of the exhibition. At the moment of packing their artworks into storage boxes, viewers see the audience silently standing by while they hear one of the artists describing the extraordinary affects that come with this peculiar experience: "That this is the first and last time this work is going to be shown was humbling and had this solemnity to it or had this seriousness to it that I hadn't felt in an exhibition before." (Sara Schneckloth in Prescott 2019: 4:18) The anticipation of letting go a carefully crafted work of art exhibited for no longer than a single day and "burying" (Schneckloth in Prescott 2019: 4:33) it in a mountain, "presumably for eternity" (Schneckloth in Prescott 2019: 2:11), as the film depicts it, comes with a suspense that is contemplative and mournful rather than resembling the optimistic and hopeful suspense of the seed storing ceremony described before. The impending storage procedure appears as a burial more

than a conservation procedure, as is reflected in the way the artists talk about the project as well as in their rituals shown as the film progresses.

The affective atmosphere characterising the end of the exhibition resonates intriguingly with the way some of the artists describe their experience of the Arctic environment upon arrival in Svalbard – where, in the case of the first iteration of the art project, they did not arrive until after the exhibition, then held in Tromsø. In a voice-over to a series of images of the environment around Longyearbyen, one of the artists states: "Just getting off the plane, I was practically moved to tears by the landscape; it's really stunning and so strange, it's just really strange" (Mollie Goldstrum in Prescott 2019: 5:52). Another participant comments on the scenery as follows: "There is something about this landscape also that is kind of perfect for contemplation because it's kind of a world in suspension. I mean things are alive and the earth moves and the glaciers move and the ice moves, but there's also an awareness of stillness, a kind of silence." (David Voros in Prescott 2019: 5:24)

These passages illustrate the intensely affective, contemplative, and nearly spiritual atmosphere that *Offerings* portrays. Moreover, they introduce Svalbard as the perfect environment for putting in suspension a decontextualised collection of diverse forms of more-than-biological seed life, endangered and at the same time insufficiently conserved all around the world, because Svalbard itself appears to be "a world in suspension". As a landscape that is at once "still" and "moving", at once far removed from all that is associated with culture and civilisation and marked by the remnants of past and present extractive, frontierist cultures (see chapter 3.1), Svalbard evokes an ambiguous "affective atmosphere" (Anderson 2009) characterised by both "presence and absence, […] the definite and indefinite" (Anderson 2009: 77). Thus experienced, it invites ambiguous kinds of contemplation or suspense.

An intriguing description of the ambiguity of "[t]he suspense generated through suspension" (Hoeyer 2017: 207) can be found in an essay on the use of cryopreservation technologies in medical contexts by the STS scholar Klaus Hoeyer. The ambiguous potentiality of life suspended in cold storage, he argues, comes with a suspense that is both promising and threatening insofar as the question of whether or not the preserved biomaterial will survive and fulfil its envisioned potential remains open as long as the material rests in suspension. Through this ambiguity, Hoeyer argues, practices of suspension and the suspense they produce open up spaces – or rather spatio-temporal situations – for action, in which meanings and social relations become matters of dispute.

In his own words: "Suspense is what drives a drama, and dramas work on the social settings in which they unfold." (2017: 211)

In medical care as well as in many other contexts employing technologies of cryopreservation (see e.g. Kowal/Radin 2017; Braun et al. 2023), including the conservation of plant genetic resources, the suspense of suspension is lifted as soon as the frozen biomaterial is reanimated, whatever the outcome. In the case of the artworks embodying a collection of agrobiocultural diversity put in suspension by way of being deposited in the Arctic permafrost for ultra-long-term conservation, the suspense that comes with the act of suspension is a different one. Here, the act of suspension is not anticipatory in the sense of being oriented towards a this-worldly future in which the potentiality of the suspended is expected to be reactivated.[27] The particular kind of suspense connected to the "burying" of artworks inside the permafrost to rest there "forever" arises from the suspension of the future itself, from an anticipation of eternal suspense. This creates a different kind of drama than the hopeful and optimistic suspense characterising seed conservation and thus yields a different kind of contemplation of the social setting, or of the form of life or world within which the drama unfolds. Here, the suspense is both hopeful and mournful. It *moves* differently (affectively speaking) and therefore comes with other kinds of imaginaries and practices.

This becomes discernible, first, in the highly affective and spiritual atmosphere that the artists and the curator evoke through the way they speak about the project – which is especially noteworthy considering that the art project is part of the public outreach strategy of a scientific research project. On the bus ride to the coalmine where the artworks will be buried, the film quotes Wickson reflecting on the project as follows: "What impact does it have to bury boxes of artwork high in the Arctic and inside a mountain? It was the gesture that felt important; the reaching out to a far distant future unknown; this offering, that nature and culture are bound, that felt like enough." (Wickson in Prescott 2019: 10:26) This passage illustrates that the act of depositing artworks embodying a diversity of social and cultural relations, giving life to the biological life of seeds inside the Arctic permafrost with its capacity for long-term conservation, is not a procedure of putting something on ice for long-term conservation in the

27 This has to do, not least, with the fact that much of the value assigned to frozen seeds is economic whereas much of the value assigned to art is aesthetic. It is not that which is suspended, however, that I am interested in here so much as the act of suspension and the suspense that comes with it.

sense of conservation as practiced in the *ex situ* world. The act of "reaching out to a far distant future unknown" that Wickson describes is not an act of *conserving* a biocultural diversity considered endangered in the present so that it will not be lost and can be regenerated. It appears more like an attempt to "offer" the conviction that "nature and culture are bound" to a future world in the hope that this ontological reality, which the present world does not sufficiently recognise or conserve, might be regenerated. Insofar as it is "the gesture" that counts, for her, and the future that will decide the artworks' fate, as the artists quoted above state, the group experiences the act of burying as "a hopeful act" that needs no resolution. In other words, it is an act of collective *commemorating*, remembering relations that have been severed by the modern form of life: biological and cultural life, but also rationality and affectivity, science and art.

A second way in which the art project *moves* differently than an *ex situ* conservation procedure becomes tangible in the ritual the artists conduct before entering the mine to deposit their artworks in the permafrost mountain. The film shows the five artists standing in a row with the boxes containing their artworks lined up beside their feet in front of the coalmine they are about to enter, with Svalbard's fjord- and mountainscape behind them. One after the other, each artist reads out a personal statement they will add to the artwork inside the box, as collectively decided the night before. While three of the five statements focus on the deposited artwork and describe its meaning as intended by the respective artist, two focus more on the performative aspect and felt meaning of the art project as a whole. Two of these statements are particularly noteworthy, both buried alongside a collection of drawings. The first shows the plants and seeds in the Syrian seed collection lost in the civil war and recreated from the duplicates stored in Svalbard; the second shows early-stage germinating seeds. The two statements read as follows:

> "By burying the originals, the drawings themselves, and not their echoes, I want it to be a hopeful act, that when, if there is future contact with the images, it is one of flesh to flesh, making to seeing, material from my hand to yours. And if there is no contact and if they meet no fate other than the darkness in the mountain, the act of making remains in memory, for a while, a ripple in the experience of a life, a moment marked by wonder, gratitude, and in feeling both humbled and hopeful." (Schneckloth in Prescott 2019: 12:13)

> "I offer these drawings, an insufficient expression of all of this, to the permafrost, and to whatever befalls them. In a climate of uncertainty and unrest, may they be points of illumination to anyone to view them." (Goldstrum in Prescott 2019: 13:18)

As opposed to the others, both of these statements are more than mere additional information on the artworks; they are part of the performative enactment of depositing, burying, offering the artworks to a beyond. They illustrate that in the moment the artists are about to let go of their crafts, it is the act that matters more than the artworks themselves and their fate. The experienced meaning of the art project, previously predominantly ascribed to the artworks, now primarily lies in the act and process of making an artwork, exhibiting it for one day only, and then burying it forever in a mountain. Here, the project becomes about the performance more than about the exhibition.

The performativity of this performance is somewhat paradoxical insofar as it enacts two antithetical things at the same time. On the one hand, by expressly *burying* and not *conserving* a collection of marginalised forms of life, it performatively reiterates the reality of global agricultural cultivation and conservation, which prioritises the form and diversity of 'life itself' (see chapter 4.1) at the expense of the diversity of other (agri/cultural) forms of life. On the other hand, by performing a burial that comes with rituals of commemoration and mourning, rather than a conservation procedure that comes with the *ex situ* world's technoscientific 'can do' optimism (see section 5.1), the art project performs a different kind of drama in the ambiguous spatio-temporal situation that the practice of suspension opens up. What it performatively offers is a multi-layered "otherwise" (Meek/Morales Fontanilla 2022) of responding to agrobiodiversity loss in the broad, biocultural sense of the term. Imitating, yet subverting the practice of conservation, it offers a different mode of dealing with the loss of the diversity of life – lifeforms as well as forms of life – that rearticulates conservation as the celebration and commemoration of agrobiocultural diversity.

In what follows, I read this performative art of conservation-as-commemoration, enacted through the practice of burying a carefully crafted work of art and entrusting it not to an anticipated this-worldly future but to an afterlife that is out of one's hands and reach, as an articulation of an emergent praxis and discourse increasingly arousing scholarly attention in the context of the contemporary social-ecological transformations: the mourning of ecological losses.

Mourning More-Than-Human Loss

In Western culture, mourning the loss of a life is traditionally an individual or family affair reserved for human lives, especially the lives of relatives and close friends. The more closely related the deceased are to the mourner(s) and the more tragic the death (e.g. early, unexpected, or violent), the more accepted are the grief and an extended period of mourning. Mourning nonhuman lives is common and accepted, if at all, primarily for household pets that have lived as quasi-related members of a human family. The dying of non-pet animals, plants (inside and outside the house), and other nonhuman lives, while it can elicit an affective response, is not usually mourned (see e.g. Braun 2017). The anthropocentrism of this understanding of loss and mourning is rooted in the dominant Western idea of the human as ontologically distinct from the rest of nature, which is seen as resource rather than kin. From the assumption that the human is distinguished by (and distinct from other animals through) his conscience rather than his natural instincts arises a predominant conception of grief as a state of mind and therefore a matter of psychology.[28]

The psychological understanding of grief and mourning dominant in much of Western thought to this day goes back to Sigmund Freud. In his seminal essay "Mourning and Melancholia" ([1917] 1957), Freud first described mourning as the "normal" (Freud [1917] 1957: 243) process of grieving the loss of a loved person or abstraction (such as one's country or ideals). According to this conception, a loss disrupts a libidinal attachment which the Ego seeks to preserve or reestablish by internalising the lost other, by making the attachment a part of the self. The process of mourning allows the Ego to work through the loss, eventually let go of the attachment, and move on as a re-integrated Ego. Freud distinguished the 'successful' work of mourning from melancholia, which he conceived as the pathological state of being entirely consumed and inhibited by the loss, unable to let go and resolve the loss and the attachment. In melancholia, he argued, the narcissistic Ego turns inward and against itself, holding on to the attachment but also to the pain caused by its loss, thus remaining trapped in depressive mourning. This early understanding of mourning and

28 The gendered language is intentional insofar as this notion of the human is modelled on a male (as well as white, European, bourgeois, able-bodied, heterosexual, etcetera) prototype – an "overrepresentation" of "Man [...] as if it were the human itself" (Wynter 2003: 260).

melancholia remains influential to this day, although Freud revised the original differentiation in *The Ego and the Id* (1923). On the basis of a reconceptualisation of the self as co-constituted by the losses and mourning processes experienced in the past, he rearticulated his understanding of melancholia as a particular narcissistic form of mourning rather than a divergent and detrimental response to grief (see also Clewell 2004; Cunsolo/Landman 2017a: 8–9; Barnett 2022: 16–18).

Freud's conceptions of grief, mourning, and melancholia have shaped much contemporary psychological and popular knowledge. However, they have also been widely subjected to critical discussion throughout the past century. A psychological strand of argument highlights that the Freudian conception of mourning hinges on an Enlightenment understanding of bounded individualism (Clewell 2004) and a separation of the emotional (grieving self) from the rational (reintegrated self) (Dodds 2011). A strand of critique rooted in Gender and Queer Studies emerges from the work of Judith Butler (2004, 2020), who critically discusses "the differential allocation of grievability that decides what kind of subject is and must be grieved, and which kind of subject must not" (2004: xiv). In contradistinction to Freud, Butler understands melancholia – which they discuss, first and foremost, as a collective sentiment – as a form of "disavowed mourning" (ibid.). Disavowed mourning refers to the mourning of lives whose loss is rendered "ungrievable" (2004: 35), for example through discursive dehumanisation, which often begins well before the loss. This most notably applies to racialised groups of people whose deaths in the context of colonialism, war, and unwanted migration tend to remain publicly unacknowledged as grievable losses.[29] Reflecting on queer experiences of differentially allocated grievability, Sara Ahmed (2004: 156) further draws attention to what psychologists refer to as "disenfranchised grief" (Doka 1989; Thompson/Doka 2017), meaning grief over losses not recognised as significant losses. Queers often experience this form of grief, according to Ahmed, not because queer losses are rendered ungrievable but rather because they tend

29 Butler developed the notion of un/grievability in reflections on the USA's "war on terror" unleashed in the aftermath of the attack on the World Trade Center in New York on September 11, 2001 (Butler 2004). Sara Ahmed pointedly observes that "the distinction between lives that are grievable and ungrievable is necessary if the 'war on terrorism' is to be justified as a recovery from terror, rather than a repetition of terror. The legitimacy of the war is inferred from the 'legitimacy' of some losses over others." (Ahmed 2004: 191–192)

to be publicly unacknowledged as losses due to a lack of acknowledgement of the relationships and forms of life within which these losses occur. What both Butler and Ahmed demonstrate is that grief and mourning are not merely personal and psychological issues but embedded in socially and politically contested forms of life.

The ungrievability or lack of public acknowledgment for losses of racialised, queer, and other marginalised lives illustrates the differential valuation of lives within the dominant form of life in Western modernity. This is also reflected in a related body of post-, decolonial, and Indigenous scholarship highlighting the ways in which egocentric and anthropocentric notions of loss, grief, and mourning are situated within "Western modernity and its colonial matrix of necropower" (Molina Vargas/Marambio/Lykke 2020: 186; see also Mbembe 2019). These authors criticise "the coloniality of mourning" (Molina Vargas/Marambio/Lykke 2020: 188) that confines grief over the loss of other forms of life to a "white humanist melancholia" (Molina Vargas/Marambio/Lykke 2020: 197), which nostalgically grieves for the disappearance of cultural diversity. This form of melancholia, they argue, ignores the necropolitics this de-diversification is entangled in and, by doing so, continues to deny non-hegemonic worlds (e.g. Indigenous and postcolonial worlds) "access to futurity" (2020: 188). This critique comes with a call for decolonising mourning by "reclaiming […] indigenous rights and philosophies of death and mourning" (Molina Vargas/Marambio/Lykke 2020: 186; see also Braun 2017; Cunsolo 2017) and by practicing other, marginalised, resistant forms of "communal" (Muñoz 1999) or "decolonial mourning" (Gutiérrez Rodriguez 2023).

In the past two decades, a multi-disciplinary debate has arisen in conversation with these critical lines of engagement with loss, grief, mourning, and melancholia beyond the disciplinary confines of psychology that discusses questions of grief and mourning with regard to the vast more-than-human and ecological losses in the wake of global climate change and the currently unfolding mass extinction. Much of this scholarship builds on empirical research with people and communities that have a lived experience of losing their form of life or world as a consequence of ecological and environmental loss and destruction. An affect-oriented strand of this research investigates emotional patterns arising in the context of ecological stress, change, and devastation, such as "environmental grief", "eco-anxiety", and "climate change worry" (for an overview see Cunsolo/Ellis 2018; Ojala et al. 2021; Pihkala 2024). Another, more discourse- and practice-oriented strand of research explores forms of "mourning beyond the human" (Cunsolo/Landman 2017a), "posthumanist

mourning" (Ryan 2017; Lykke 2019, 2022), and "multispecies mourning" (Chao 2023). As part of this second strand of the debate, animal studies scholars and scholars in the environmental humanities focusing on human-animal relations investigate how animals mourn (King 2014) and what it means to mourn the loss of (animal) species (Rose 2011; van Dooren 2014, 2019, 2022). Another body of knowledge, which resonates with the latter question and which I am interested in here, explores what it means to mourn the loss of vegetal life or of the ecological foundations of human and more-than-human life (e.g. Head 2016b; Cunsolo/Landman 2017b; Barnett 2022; Mihai/Thaler 2023).

These authors tie in with feminist, post- and decolonial, and Indigenous approaches to loss, grief, and mourning such as the ones sketched above for two main reasons. Firstly, the respective approaches are often rooted in a lived experience of ecological and environmental loss and unacknowledged or disavowed mourning. This applies in particular to Indigenous perspectives, which are often situated in deeply environmentally embedded naturalcultural ways of life particularly affected by environmental change and loss (see e.g. Cunsolo/Ellis 2018; Mihai/Thaler 2023; see also chapter 4.2). Secondly, focusing attention on the structural analogies between human and more-than-human forms of denied grievability, these approaches challenge the way in which "the more-than-human world often falls within the economic relations of late capitalist society and, as such, must remain ungrievable so that it can be used as a resource without consideration for its irreplaceable intrinsic value" (Mark/Di Battista 2017: 240). In contradistinction to the established resourcist approach to the more-than-human world complicit in the social-ecological devastations of the present, these authors develop a perspective on more-than-human loss built on the argument that "the ability to mourn for the loss of other species is […] an expression of our sense of participation in and responsibility for the whole fabric of life of which we are part" (Burton-Christie 2011: 30, quoted in Cunsolo/Landman 2017a: 22). Substituting the ego- and anthropocentrism and the modernist conception of subject-object relations underlying classical understandings of grief and mourning with an attentiveness to shared and entangled lives and vulnerabilities in more-than-human communities, this body of knowledge proposes a fundamentally different understanding of the meaning and mourning of more-than-human death and loss.

A foundational and notable work in this context is Ashlee Cunsolo and Karen Landman's anthology *Mourning Nature: Hope at the Heart of Ecological Loss and Grief* (2017b). In light of the tremendous contemporary losses of species and ecosystems, which fundamentally change and challenge naturalcultural

life on earth, and based on the painful awareness that humanity is implicated in these losses, both by having unleashed the destructive forces producing them and by being faced with a world that no longer sustains the dominant forms of life these forces fuel, Cunsolo and Landman ask:

> "[W]hat – politically, ethically, and theoretically – can the work of mourning do if extended beyond the human, and what might this tell us about ecological ethics, politics, and action? How does grief help us live better with others? How do we understand, think, and feel the meaning of all the ecological loss?" (2017a: 6–7)

Before I address these questions and consider how they resonate with the questions about agrobiodiversity loss and conservation raised by the art projects discussed above, the notions of grief and mourning require some explication.

There is no set definition or consistent use of these terms in the scholarly debate on grief and mourning in relation to ecological changes and losses. According to Joshua T. Barnett's synopsis of the relevant existing literature in *Mourning in the Anthropocene: Ecological Grief and Earthly Coexistence* (2022), grief often denotes a person's visceral and internal emotional response to the loss of an other or of a relationship significant to the self. Mourning, in contrast, is commonly understood as the outward expression of grief through "culturally specific practices, rituals, ceremonies, and other activities through which we adjust to the new conditions created by the loss" (Barnett 2022: 4–5). To put it in a nutshell: "If grief is a response to loss, mourning is what we do with it." (Menning 2017: 58)[30] This distinction implies a sequentiality as well as an interiority of feeling and exteriority of action that Barnett counters with an understanding of grief and mourning as "achievements", that is, "emotional, ethical,

30 The delineated differentiation between grief and mourning is rooted in the classical psychological conception of emotions as internal subjective states preceding their outward expression and social enactment. In the sociological and anthropological debate, this "'inside out' model of emotions" (Ahmed 2004: 9) is contrasted with an "'outside in' model" (ibid.) conceiving emotions as a social form and cultural practice first, which then infuses the individual body and consciousness. Criticising both models and their reification of "the very distinction between inside and outside, the individual and the social" (ibid.), Ahmed develops a relational theory of emotions and bodies as co-constitutive effects of encounters (see 2004: 5–10). This theoretical perspective, which is satisfied with neither biological (over)determinism nor social constructivism, resonates with the understanding of grief and mourning unfolded in the following.

and political capacities that must be cultivated" (2022: 5). This means, for one thing, that understanding why some losses commonly elicit grief whereas others do not requires analysing the grounds that allow for some feelings rather than others to be cultivated. To put it in Butler's terms: it demands an analysis of socio-cultural conditions of unequal grievability. For another, it implies that grief for currently ungrievable and unacknowledged losses, including more-than-human losses, *can* be cultivated. Mourning practices, which "create, nurture, or draw attention to connections" (Menning 2017: 58), can be a way to cultivate (achieve) emotional attachment where there is ontological attachment that might be known but not (yet) felt and therefore, if lost, remains unacknowledged as a loss.

The question certainly arises why feeling and grieving the vast amount of currently unfolding and impending ecological losses should be something to strive for. Let's go back to the Freudian conception of grief dominant in Western culture, according to which there are two paths in grieving: successfully working through and healing after a loss (which Freud called mourning), or being coopted by sorrow and unable to heal, thus losing oneself in one's grief over the loss of the loved other(s) (which he identified as melancholia). Despite Freud's own revision of this original theorisation, an implication of it that tenaciously persists to this day is the idea that grief is an inhibitive state of being and that "becoming 'uninhibited' is superior to remaining mired in relations with the ones we have lost" (Barnett 2022: 18). From this viewpoint, ecological grief may appear as a distraction from the struggle for social-ecological transformation and justice and the political action that needs to be taken against the destructive forces causing the current forms and dimensions of ecological loss.

In opposition to such an understanding of ecological grief and mourning as an impediment or capitulation to ecological politics, Barnett, Cunsolo and Landman, and others develop a more politicised and productive interpretation of "mourning beyond the human" (Cunsolo/Landman 2017a) or "mourning in the Anthropocene" (Barnett 2022).[31] Rather than employing a curative logic,

31 Based on a similar line of argument, Endre Dányi (2020, 2022) embraces the notion of melancholia to propose a form of politics he calls "melancholy politics". Departing from the Freudian notion of melancholy, however, Dányi develops his understanding of melancholy politics along the Hungarian term "búskomorság", which "comes close to the English word 'melancholy' but has other theoretical and political connotations" (Dányi 2020: 360). By "[r]eclaiming melancholy" (Dányi 2022: 6–27), Dányi rearticulates melancholy as a collective and resistant rather than individual and inactive sen-

they approach (ecological) grief with an affirmative perspective that highlights the ways in which grief exposes ontological relationality and interdependence (Cunsolo/Landman 2017a: 12–14; Barnett 2022: 16–19). In other words: insofar as grief makes us realise that the loss of a significant other involves the loss of a relation that was constitutive of our own life and self, grief also makes us realise our relational entanglement in the world, including our interdependent existence with the others that remain.

The work of mourning, then, involves both grieving for the lost relation(s) and strengthening other as well as fostering new life-sustaining relations that help us work through and learn to live with loss. It is important to note that "working through" a loss is not the same as "resolving" a loss in the original Freudian sense of letting go of the lost connection, restoring an integrated self by disintegrating the lost other, or striving for "full substitutability" (Butler 2004: 21; see also Cunsolo/Landman 2017a: 12). Mourning a loss and healing from it, as understood here, does not mean ceasing to feel the loss and the pain arising from it. Instead, it means integrating the loss, adapting to the pain, and finding solace, care, and endurance in the existing and potential relations that remain. Rather than restoring a prior state of stability, it means "reorient[ing] to a relatively secure and stable life in the absence of what was" (Menning 2017: 42) – "relearning our world" (Lussier 2021; see also Attig 1990) in companionship with the others that remain.[32] Mourning beyond the human, then, not only involves cultivating the grievability of more-than-human life and learning to let ourselves be affected by ecological losses. Doing so also means and, more importantly, can be a path towards, acknowledging our ontological implication in the more-than-human world and fostering life-sustaining attachments with that which remains. This, in turn, can help us work through and learn to live with the inevitable reality of ecological loss.

Following this line of argument, allowing ourselves to be affected despite the vulnerability that comes with emotional attachments, as loss painfully

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timent that does not boil down to tristesse but can be a means of cosmopolitics. Despite the different terminological choice, Dányi's understanding of melancholy politics strongly resonates with the argument unfolded in this chapter. This illustrates the contingent use of the relevant terms.

32 Building on Haraway's notion of "becoming-with" (Haraway 2008), Lussier (2021: 145) proposes "mourning-with" as a relational and transformative practice of learning "to live and die well" with one another, emphasising that it describes "not merely an extension of 'sympathy' or 'empathy' toward the other, but the practice of rendering the other capable of mourning (without appropriating the other's grief)".

teaches us, forging caring relations by cultivating unexpected grievability and the capacity to grieve for unexpected others, is transformative both individually and collectively. As Barnett puts it: "Not only do we mourn for those we care about […]; we in turn care about and for those whose loss we know in advance we would grieve" (2022: 20). Cultivating "anticipatory grief" (Cunsolo/Ellis 2018: 278), in other words, can be a way of relearning our world(s) and learning to foster caring kinship relations rather than extractive resource relations with the other-than-human (see chapter 4.2). Ashlee Cunsolo and Neville Ellis provide empirical evidence for such a form of grief over "anticipated future losses of place, land, species, and culture" (2018: 277). In doing so, they point out that it is an ambiguous form of grief in that it is more difficult to articulate and less likely to be publicly acknowledged than grief over something or someone already lost.

There are at least two other important ambiguities concerning anticipated and already unfolding ecological loss as well as the grief and mourning arising and practised in response to this loss. First, as I have shown throughout the course of this book, most of the ecological losses of the present are a result of centuries of resource overexploitation and environmental destruction facilitating the prosperity and progress of the modern world. Accordingly, they are more likely to be met with denial and inattention within the modern world than with grief and mourning (see e.g. Norgaard 2011). Ecological grief "in the affluent West" (Head 2016a: 81; see also 2016b), therefore, needs to be cultivated more adamantly while at the same time, its cultivation is likely to be complicated by intertwining with feelings of sorrow and guilt (see Menning 2017: 39–40).

The second additional ambiguity is that although grief is not necessarily inhibiting, it can certainly be. Against this background, anticipatory grief has a greater potential to stimulate transformative action than grief in the face of losses already experienced, not least because its trajectory is not entirely decided yet. Insofar as anticipatory grief arises from a deeply felt emotional attachment to an other, a relation, or an environment one wishes to preserve, it can become a powerful incitement to do everything in one's power to prevent the anticipated loss as well as the associated pain. Although it is certainly not possible to prevent all loss, if we feel that we can prevent a loss we would grieve we will usually aspire to prevent that particular loss. Herein lies the political potential of mourning and of extending ideas of grief and mourning beyond the confines of the current dominant order of grievability.

As can be seen, it is not the cultivation of ecological grief and the practicing of mourning for more-than-human loss as such that is the goal of a politicised understanding of ecological grief and mourning. Rather, it is the world and worlding or "reworlding" (Lussier 2021: 145) they can help cultivate (see also Butler 2004: xviii–xix). Interpreting the act of commemorating the biocultural diversity excluded from *ex situ* conservation environments such as the Svalbard Global Seed Vault, such as performed by the art projects discussed above, as a practice of mourning for more-than-human loss, opens up a political perspective on the performativity of conservation practices and rituals that harbours a transformative potential. The act of remembering biocultural connections that the art projects perform is an act of resisting the dismembering of biocultural connections in the *ex situ* world of conservation; of recollecting biocultural relations already lost as well as remaining ones that might sustain us as long as we sustain them. Rethinking conservation as commemoration, then, especially for ecologically destructive worlds, holds the potential for ecological mourning to become a political act of learning to relearn our world(s) and worldings in different and unexpected ways.

It is crucial that all this should not be understood as a 'can do' optimistic, progressivist promise of resolving the agrobiodiversity losses occurring in the wake of the unrelenting ecological destruction that comes with the current globally dominant form of more-than-human life. Where there is grief and mourning, there is pain and loss; and while mourning is a way of learning to live with loss and ease the pain that comes with it, it will never undo the loss or the pain. The mourning of ecological losses as delineated here cannot and does not serve to undo these losses, nor is it meant to ease feelings of sorrow and guilt that arise in view of perpetual destruction in order to continue with business as usual. Rather, learning to notice, acknowledge, feel, and mourn agrobiodiversity loss and other ecological losses is about learning to live with these losses and live less ruinously in the ruins of capitalist modernity so as to prevent perpetual loss. It is about a mournful welcoming of "'the end of progress' [as] not a conclusion, but a starting point" (Dányi 2022: 10) that arises from the burying of a destructive form of life that has become the greatest threat to itself. This inevitably involves the loss of ways of being in the world that are destructive but nevertheless familiar and, for many, associated with positively connotated promises of prosperity and progress. Burying and mourning destructive ways of life requires cultivating more-than-human grievability, as well as feeling rather than fearing the shared vulnerability and responsibility that comes with the interdependence of more-than-human life (see also Butler

2004: 29–30). It means fostering life-sustaining connections with that which remains; tying new ties for worlding otherwise. Then, mourning can be transformative.

Cultivating Mournful and Resistant Forms of Hope

The *Agri/Cultures.Seed-Links Exhibition* and the *Svalbard Ark* project preceding it, as documented in the film *Offerings*, perform what I conceive to be an art of mourning losses of agrobiocultural diversity. As unfolded above, both iterations of the art project are about the artworks deposited in the Arctic permafrost and the relational biocultural forms of life they represent as much as they are about the performative enactment of exhibiting, bringing to Svalbard, burying in the permafrost, and mourning these artworks. The performative art of mourning agrobiodiversity loss is an act of remembering, celebrating, and (re)connecting with the agrobiocultural diversity excluded from seed collections such as those conserved inside the Svalbard Global Seed Vault. It is an effort to remember dismembered and endangered connections between the world's seed diversity and the diversity of worlds that come with seeds, i.e. the worlds from which they emerge, in which they live, and to whose flourishing they contribute. And it is an act of collective (re)connecting with what is put in suspension, with what is around, and with one another, by sharing mourning. Unlike in the case of the Svalbard Global Seed Vault, putting something on ice, here, is not about progressivist conservationism aiming to preserve the (literal and figurative) seeds of a world on the brink of extinction so as to be able to perpetually resow it. Rather, if the art of mourning agrobiodiversity is interpreted in terms of the act of conservation it imitates, what it conserves – in the Arctic permafrost and even more so in the collective memory and repertoire of living – are naturalcultural connections (embodied by the artworks deposited in the permafrost mountain) as well as the ability to (re)connect with what has been severed (enacted through the performance that the project is), to recollect forms of life driven to the brink of extinction by the destructive forces inherent to the hegemonic form(s) of more-than-human life in the modern world.

Connected to this performative practice of mournful conservation is a hope for future recuperation. A similar form of hope is also observable in *ex situ* conservationism, though these are two different kinds of hope. In contrast to the anticipatory hope of this-worldly salvation inherent to the 'can do' optimism of *ex situ* conservation, the hope expressed in the context of the art project documented in *Offerings* remains passive. Insofar as it arises from suspending con-

trol over what one has crafted, from burying what one wishes to preserve and offering it to an unknown future, it is a form of cathartic hope for future salvation. It resembles the classical, spiritual faith that there is an afterlife beyond the confines of this world and the agency one has in it. Inherent in both the secular and the spiritual form of optimistic hope, although they differ in kind, is a lack of recognition on the part of those who experience this hope of the responsibility that comes with their entanglement in the more-than-non/human web of life, which includes their entanglement in the destructive forces continuously producing agrobio(cultural)diversity loss. Both forms of optimistic hope do not seem geared towards what Haraway (2008: 70–73, 89) calls "response-ability", that is, the ability to meaningfully respond to all this loss and destruction through one's political agency.

Importantly, as I have shown above, this lack is not inherent to *ex situ* conservation or to ecological mourning as such. It is a feature of specific performative manifestations of these practices. To give a contrasting example: In his ethnographic study of snail conservation in Hawai'i, Thom van Dooren (2022) observes a form of hope that is neither passive, nor transcendental, nor techno-utopistic. The conservationists' "mournful hope" (van Dooren 2022: 179) he describes is modest and non-utopian, but also decisive in acknowledging the increasing and often irreversible ubiquity of loss while at the same time "refusing to give up care and responsibility in the face of escalating and inevitable destruction, and to keep working toward the best relationships and possibilities that are still available to us and others" (ibid.). Van Dooren argues that this kind of "hope that is woven through with grief" (2022: 193) is the kind of "hope we need now, […] or at least the one we get, and need to learn to live well with" (ibid.). A characteristic of this non-utopian mournful hope for ongoing life in the ruins of the past is its resistance to surrender to the reality of loss and destruction. While such a mournful, decisive, and resistant hope for and commitment to social-ecological transformation is mostly impalpable in the 2018 art project documented in *Offerings*, it resonates with the atmosphere I experienced in the *Agri/Cultures.Seed-Links Exhibition* in Svalbard in 2019. A number of the artists assembled in this second iteration of the art project exhibited works of art representing decisively non- or counter-hegemonic more-than-human ways of being in the world to which they returned after the event in Svalbard. The following two cases exemplify the resistant dimensions of their art of mourning agrobiocultural diversity loss.

The first example is the art collective *Seeds InService: A Papermaking Institute*, an ecofeminist urban gardening and papermaking art project based in Chicago

(Seeds InService 2019). The two artists, Melissa Potter and Maggie Puckett, thematically curate their gardens around ecological and feminist issues such as "heirloom seed preservation, food justice, and traditional women's healing practices" (GenØk – Centre for Biosafety 2019). By organising educational and participatory events in the gardens, they share their knowledge, experience, and practice with the public. The idea behind their gardening project, as the duo elaborates in the video interviews conducted for the Seed Cultures Archive, is to create a space in which the shared manual labour of gardening and papermaking makes it possible to experience a more-than-human process of learning and producing something in the interplay of one's own labour with that of plants, soil bacteria and microorganisms, insects, pollinators, and other more-than-human beings (see Seeds InService 2019).

The two artists describe their work as being more about the generative and potentially transformative practice and process of experiencing more-than-human relationality and interdependence through practices of gardening and papermaking than about the products of this labour. Even so, burying such products – hand-crafted paper, hand-picked seeds, and the carefully designed book *An Illuminated Feminist Seed Bank* (Potter/Puckett 2019) – for indefinite conservation in the Arctic permafrost is a mournful act of letting something go. Crucially, though, and unlike in most of the offerings of the 2018 project, this act commemorates the fruits of a processual and ongoing artistic labour that exceeds the material artwork buried in Svalbard. In this way, the hope that infuses this act and performative art of mourning what is being deposited is not a passive spiritual hope for an afterlife of that which has been buried. Rather, it is a hope that springs from the active and ongoing commitment to cultivating what could be called an "alterlife" (Murphy 2017). Alterlife describes a form of life that performatively accepts the responsibility that comes with the relationality of more-than-human life to realise one's agency in a way that cultivates less harmful more-than-human relations and futures in the harmful web of life that has come to matter in and through colonial capitalism.[33]

33 The research of M. Murphy (2017), from whom I borrow the notion of alterlife, focuses on chemical exposure, and more precisely on the often harmful relational becoming of human and more-than-human bodies with industrial chemicals. Building on and contributing to Indigenous, decolonial, and feminist STS, Murphy unfolds a decolonial feminist reading of what it means to live responsibly and persist within chemical relations. The concept of alterlife describes a figuration of life that acknowledges the relational and interdependent more-than-individual and more-than-organismic condition of life including its inescapably harmful, hurtful, and deadly manifestations. Acknowl-

A similar commitment to alterlife is discernible in the second example I wish to single out from the diversity of artworks and artists I encountered in the *Agri/Cultures.Seed-Links Exhibition*: *The Migrant Ecologies Project* founded by Singapore-based artist and educator Lucy Davis and conducted in association with the National University of Singapore Museum and the transdisciplinary master's programme Visual Cultures, Curating and Contemporary Art at Aalto University, Finland. The artwork Davis and her collaborators exhibited and deposited in Svalbard illustrates the story of a single grain of wheat found conserved in the belly of a Southeast Asian saltwater crocodile that had been dead for as long as 133 years when museum taxidermists found its gastro-intestinal tract stuffed with a large amount of wheat. *The Migrant Ecologies Project*, Davis elaborates in the video interview for the Seed Cultures Archive, traced the path of the seed from the belly of the crocodile – "this 'monster' of the tropics that has been driven out [of its habitat; FV] by colonial capital" (Davis in The Migrant Ecologies Project 2019: 3:58) – through sea routes between Singapore and India, where the wheat came from, to colonial histories of domesticating and pastoralising the tropics and supplanting Indian subsistence agriculture with export-oriented cash crop plantations. By telling the story of the more-than-human violences of colonial capitalism through the story of a kernel of wheat accidentally found in a taxidermised Southeast Asian saltwater crocodile, *The Migrant Ecologies Project* highlights that "a seed […] isn't necessarily a benevolent representative of a benevolent history" (Davis in The Migrant Ecologies Project 2019: 6:13). It shows that more-than-human relations and the ideas they are cultivated to facilitate, such as prosperity and progress, are historically situated; that more-than-human relations, while generative for some, can be violent and devastating for others.

Through the artwork exhibited and deposited in Svalbard, *The Migrant Ecologies Project* illustrates that there are different stories and histories to tell with the stories of seeds, and that remembering and conserving seeds

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edging that life is "entangled within community, ecological, colonial, racial, gendered, military, and infrastructural histories that have profoundly shaped the susceptibilities and potentials of future life" (Murphy 2017: 497), alterlife embraces this exposure to alteration. In a decisive openness to alteration, Murphy argues, alterlife recognises and seizes "the potential to become something else, to defend and persist, to recompose [more-than-human] relations […], to become alter-wise in the aftermath" (2017: 500). I admit to bending the authorial intent to a certain degree here by transposing the category into a very different context. The reference is an inspiration more than an analytical argument in the narrower sense.

and their stories is not an innocent act but entangled in political choices. Remember Haraway: "it matters what stories we tell to tell other stories with" (2016: 12). The choice to bury and conserve the violent and destructive more-than-human (hi)stories of colonial capitalism embodied in the crocodile, and the artwork representing it, illustrate a form and performance of commemorating and mourning violent more-than-human relations that is resolutely resistant. What distinguishes such "resistant mourning" (Cunsolo/Landman 2017a: 14–15), as Cunsolo and Landman describe it, is that it is not future-oriented but stays with the past and present by working to expose and protest the injustices and oppressive structures that cause loss in the first place.[34] Resistant mourning decisively seeks more than finding hope in learning to "live well with" loss. It is a form of mourning committed to alterlife. It strives not for consolation, compensation, or catharsis, but for the recognition of losses as losses and for accountability and response-ability vis-à-vis the destructive forces that turn forms of life into forms of loss. Resistant mourning thus also makes remembering these forces part of the commemoration, as a way of ensuring that the loss and devastation they unleash will not fall into oblivion.

In light of the devastating reality and ever more existential threat of global agrobiodiversity loss, the Svalbard Global Seed Vault and the genebanks around the world it reinsures have created a safety net that is able to secure a large and constantly growing diversity of vegetal lifeforms from extinction. While this work is invaluable in the given reality of ongoing loss and destruction, it fails to recognise the equally endangered and disappearing diversity of forms of life that (agro)biodiversity is rooted in. Aside from the fact that cultural de-diversification is a manifestation of the imperialist and violent one-world worldism of colonial capitalism and worthy of critique for that reason alone, much of the biological diversity persevering and continuing to evolve *in situ* today exists in and depends on spaces cultivated by non-modernist agri-food-systems. As I showed through the discussion of global interdependence in chapter 4.2, the *ex situ* world of conservation is well aware of this. However, instead of accounting for the structural entanglement of modern agriculture in the losses with which it is confronted, and adapting the system to the naturalcultural realities it faces rather than the other way around, for example

34 Cunsolo and Landman adopt the notion of resistant mourning from the work of Clifton Spargo (2004) and Patricia Rae (2007), who introduced it to describe a form of AIDS activism that has sought to ensure recognition of AIDS-related losses by convening public mourning ceremonies to resist stigmatisation.

by broadening the scope of agrobiodiversity conservation, the *ex situ* world promises to conserve modern agriculture by technologically circumventing its systemic destructiveness. Inasmuch as the conservation of endangered agrobiodiversity does not entail the conservation of agrobiocultural diversity and forestalls social-ecological transformation in the centres of modern agriculture towards cultivating more diversity and de-cultivating the de-diversifying forces that endanger and destroy agrobiodiversity, it ultimately conserves not only agrobiodiversity but the roots of agrobiodiversity loss as well.

To understand the tenacity of this vicious circle of loss and conservation and learn how to break out of it, it is important to recognise that the *ex situ* world's techno-optimistic approach to agrobiodiversity loss and conservation, just like the passive hope for an afterlife as its spiritual equivalent and game-over-apocalypticism as its defeatist counterpart, is a characteristic affective response to "the horrors of the Anthropocene and the Capitalocene" (Haraway 2016: 3). The problem with these affects, as I argued in chapter 4.2, is their "abstract futurism" (Haraway 2016: 4) and the concomitant lack of attention to the troubles, responsibilities, and response-abilities of the "complex worlding […] game of living and dying well together" (Haraway 2016: 29) in the present. Crucially, this does not mean, either for Haraway or for me, condemning technoscientific approaches to agrobiodiversity loss and the *ex situ* world of conservation altogether. My critique targets the adherence of the technoscientific project of *ex situ* conservation to the world and the destructive worlding practices it has grown out of.

As I have shown throughout this chapter, recognising these destructive entanglements of the *ex situ* world of conservation, burying them, and mourning the familiar ways of life that will be lost in this process can be a way of learning to feel rather than fear agrobiodiversity loss and of learning to live with it. It can be a performative path towards cultivating less destructive forms of shared more-than-human life. The practice of conserving seeds *ex situ* is not a techno-futuristic project per se, nor is it determined by its currently hegemonic context. The world of conservation comprises other worlds and modes of worlding that can – and do already, as in the case of the collaboration of *ex situ* conservationists with the Potato Park (see chapter 4.2) – inspire ways of doing conservation and dealing with loss differently, beyond the *ex situ* world(ing).

Inspired by the *Agri/Cultures.Seed-Links Exhibition* and the *Svalbard Ark* project, which the Seed Vault has assembled on the margins of the *ex situ* world of conservation, I have proposed to rethink agrobiodiversity conservation through the performative art of mourning agrobiodiversity loss. Mourning is

a practice that allows for processing the experience of loss and adapting to an altered reality while also inspiring hope, transformative action, and resistance to persevering destructive forces. Thus understood, a collective practice of mourning the vast ecological and social-ecological losses of the present and future can be a performative and transformative path towards learning to live with them rather than enduring despite them. It can incite a hope that is mournful and resistant and hence comes with a commitment to ongoingness not in spite of the social-ecological troubles that come with agrobiodiversity loss but by way of staying with these troubles.