Resurrecting the Past to Save the Future?
Mobile Afterlives of the Thylacine

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> I might [...] renew life where death had apparently devoted the body to corruption.
> *Victor Frankenstein in Mary Shelley's Frankenstein; or, The Modern Prometheus (2017, 10)*

The history of Frankenstein and his monsters is anything but unknown. Since its publication in 1818, the story has been adapted and interpreted countless times in popular culture but has also become a touchstone cautionary tale of technological progress. The narrative centers on the inquisitive Victor Frankenstein, whose obsession with the idea of eternal life and immortality drives him to the cemetery to search for spare parts in a quest to create life. Eventually, he is able to patch together a creature out of animal and human remains, bringing it to life on a dreary November night. Frightened and disgusted by the creature's appearance, Frankenstein flees. Seeking affection, empathy, and responsibility, the nameless creature is disappointed by its creator, whose initial descriptions of a "monster" or "devil" (Shelley 2017, 43, 58) turn into a self-fulfilling prophecy. Shelley's novel warns of the unbridled hubris of modern science and technological advancements.[1] Its cautionary message can also be considered all too relevant for today's biotechnological

1 For the connection between the novel's warnings of the unbridled hubris of science and technology with race and imperial anxieties in the Victorian era, see Chude-Sokei (2016).

progress. In the vein of Victor Frankenstein, researchers and biotech companies aim to resurrect extinct species. Also referred to as de-extinction, the reanimation of specific animals through new biotechnologies attempts to counteract current mass extinction as a means to save biodiverse ecosystems. At the intersection of biology and medicine, recent de-extinction efforts try to lift the boundary between life and death and mobilize specific beings to live in the future.

This chapter inquires into the possibilities, consequences, and meanings of attempts at resurrecting extinct species. Drawing on the example of the eradicated thylacine, also called Tasmanian tiger or wolf, this contribution will show the multilayered material and immaterial mobilities of the animal after its death and make visible its entanglements with different temporal, historical, and spatial dimensions. The attempt to (re-)mobilize the thylacine started in 1999 when scientists at the Australian Museum in Sydney began to examine preserved remains of the animal in order to clone and resurrect it (see Fletcher 2008). In addition to investigating the spatial movements of the remains, this chapter turns to the symbolic processes of transformation in so-called resurrection programs. As Mimi Sheller and John Urry argue, "Mobilities involve complex 'hybrid geographies' […] of humans and nonhumans" (2006, 215). Being mobile or becoming immobilized, as the colonial history underlying the extinction of the thylacine makes visible, is closely connected to colonial domination, power structures, and the commodification of life. The ability to be mobile is unequally distributed and is also complicated by current climatic upheavals and species extinctions (see Glick Schiller and Salazar 2013; Sheller 2018). This chapter offers a critical examination of the mobility of these non-human remains, which de-extinction seeks to bring back to life through new biotechnologies. While terms such as back-breeding, reanimation, and resurrection imply the possibility of restoring these extinct animals as authentic beings, this chapter will trouble this assumption by exploring their hybrid status between nature and culture, death and life, copy and original as well as body and code.

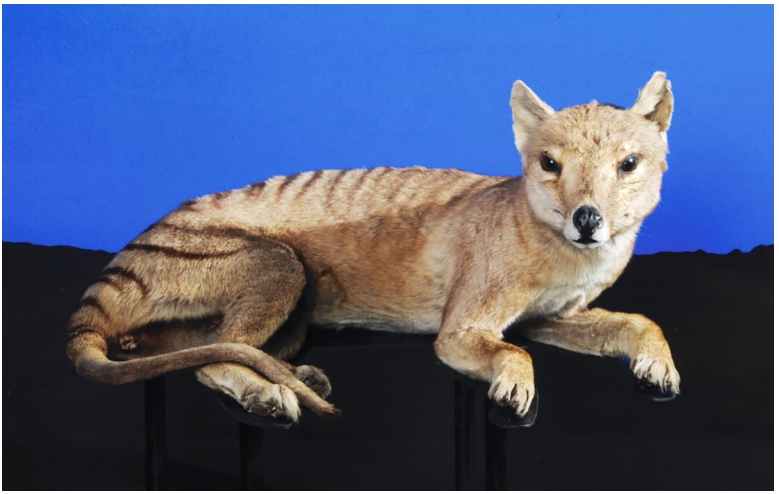
I. Extinction between Ecocide and Genocide

A wolf-like marsupial with brown-black transverse stripes at the back of its body, the thylacine was originally native throughout the Australian continent and parts of New Guinea, though it eventually could be found only on the

island of Tasmania. Like the thylacine, the Indigenous names for Tasmania, *Trouwunna* or *Lutrawita*, were erased when the island was first sighted and later colonized by Europeans beginning in the 17th century. With the establishment of colonial settlements and large-scale sheep breeding, the thylacine lost its habitat and was deliberately hunted. The British wool industry portrayed the animal as a bloodthirsty sheep hunter and paid bounties for each animal killed: "It wasn't a tiger, at least not in the biological sense. But in the cultural imagination of British and Irish sheepherders transplanted to […] the south-eastern coast of Australia in the early nineteenth century, the carnivorous, striped creature with the stealthy nature certainly fit the bill" (Minteer 2018, 97). The last known thylacine, named Benjamin,[2] died in 1936 in the Beaumaris Zoo in Hobart, the colonial capital of Tasmania. As the thylacine population was being increasingly decimated, the remains of the animals were comprehensively collected and exhibited. Nowadays, all that remains of them is their furs, bones, and bodies stuffed or preserved in liquid.

2 As has since been shown, Benjamin was not a male animal, as the name would suggest, but a young female animal. The name was most likely not an attempt at subverting the gender binary but a result of Eurocentric patriarchal knowledge production, which conceptualizes progeny and heads of families as masculine (see Paddle 2002, 197–201). In addition to the story of Benjamin the thylacine, similar tales exist of Lonesome George the Pinta giant tortoise, Martha the passenger pigeon, Cecilia the Pyrenean ibex, and Toughie the tree frog. The search for and individualization of last animals of a species has also been subsumed in the term 'endlings': "The endling label puts extinction on the human scale – it gives an animal a name, recognizes its worth, and asks for the human to empathize with the imminent end of a whole animal's line" (Jørgensen 2017, 121; see also Pyne 2022).

Figure 1: Tasmanian tiger, thylacine (NMW ST 132). A specimen of the extinct thylacine is also part of the Natural History Museum's collection in Vienna.



Courtesy of the Natural History Museum Vienna.

An understanding of the possibility that species can become extinct emerged in the modern era. At the beginning of the 19th century, Georges Cuvier proved that vanished species had not moved to other continents but rather disappeared from the surface of the earth completely. By comparing different fossils, he opened the way to past landscapes, lifeworlds, and immeasurable temporalities (see Rudwick 1997; Kugler 2013). Cuvier introduced an unknown history of the planet, which also necessitated a renegotiation of the position and exceptionality of humans. White European men, who had long viewed themselves as the pinnacle of creation, had to recognize that they represented only part of a history that stretched back millions of years and were, like their environment, finite. With the discovery of extinction and species finitude, it became apparent that time, as Michel Foucault writes in *The Order of Things*, "comes to [man] from somewhere other than himself" (1994, 369).[3] Additionally, new forms of exploitation and oppression were introduced against those human and nonhuman beings which colonialism had deemed

3 For more on the temporalization of human and natural history, see Lovejoy (1996).

inferior. The history of the idea of extinction is therefore linked to the obliteration of particular animal and human groups, extending scientific claims on the finitude of life into violent hierarchies of who gets to live and who must die. For this reason, the notion of the "genocide-ecocide nexus" (Short and Crook 2002) is used in recent research to illustrate how species extinction is directly tied to the extermination of certain human communities. Against this backdrop, Joshua Schuster's *What Is Extinction? A Natural and Cultural History of Last Animals* (2023) convincingly connects the destruction of nonhumans to the extermination of Indigenous peoples and languages as well as the Holocaust.[4] Following Schuster, extinction can be said to represent more than biological decline and is centrally tied to global histories of power and domination: "Yet extinction is not just a biological event and is not knowable only biologically; it also is a concept and a historical event that involves multiple agencies, documentations, metaphors, and cultural forms that solicit multiple kinds of awareness" (Schuster 2023, 8).

This link between species extinction and the exploitation and extermination of certain human communities is also evident in the history of the thylacine, which is closely related to the subjugation and killing of Indigenous peoples of Tasmania. Dutch expeditions came upon the island in 1642, and in 1803, the first British settlers occupied the southeast of the island. Members of the Leenowwenne and Pangerninghe most likely represent the first victims of British settlement. In the course of the 19th century, the British increasingly conquered native land, built colonial settlements, and suppressed countless rebellions of different Aboriginal communities, who were progressively dispossessed of their lands. Tasmanian Aboriginal peoples were forced to labor in agriculture, housekeeping, and transport, abducted, deported to reservations, and subjected to countless massacres (see Clements 2014; Breen 2011). Truganini (or Trucanini), a Nuennonne woman who died in 1876, is storied incorrectly as the last of all Aboriginal peoples in Tasmania. The assumption that Tasmania's Aboriginal populations were extinguished is part of a colonial myth propagated in the course of British settlement and persists to this day. The British writer James Bonwick recorded and disseminated the history of Tasmania's Aboriginal inhabitants in *The Last of the Tasmanians* (1870), placing it within a Eurocentric history of discovery and science. As Bonwick's book shows, motifs of finitude as represented through depictions of last members

4 In his novel Beatrice and Virgil (2010), Yann Martel similarly shows the connection between animal eradication and the Holocaust.

of a kind are thus to be found not only in narratives about animals but also about certain human groups.[5] While the thylacine's status as extinct has led to efforts to mobilize the animal by reanimating and reintegrating it into the Tasmanian flora and fauna through biotechnologies, descendants of Indigenous peoples in Tasmania still have to fight to recover their material and immaterial heritage. As Emma Lee writes, this colonial vestige impedes the political, financial, and cultural self-empowerment of Aboriginal communities to this day:

> As an extinct person and *trawlwulwuy* Black female body, the former has always taken precedence over the latter as the characterization of my being. The very existence of my body has had to be defended throughout my life and guarded against accusations of extinction through white annihilation. Our supposed extinction was, and still continues to be, taught, historicized, researched and claimed as fact by the colonizers. (Lee and *tebrakunna* country 2022, 140)[6]

Despite the joint disappearance of Aboriginal peoples and animals, the exclusive reanimation of the thylacine shows that not all beings are equally mobilized or expected to live in the future. Rather than representing an innocent practice to protect and preserve biodiversity, the resurrection of some animals is deeply embedded in the desire to control life. The attention paid to the extinction of entire species serves to raise awareness for the shared finitude of life on earth but is also steeped in violent hierarchies. The history of the extermination of Tasmania's Indigenous and animal inhabitants shows how some – certainly not all – lives are mobilized for future generations.

5 Shelley's *The Last Man* (1826) can be viewed as one of these narratives, for it, too, thematized the human species' vulnerability. While this novel subscribes to the Romantic vision of reconquest by nature (see also Horn 2018, 21–54), the story of Truganini shows how communities can be deprived of their right to live.

6 For further important texts, methodologies, and centers on indigenous self-empowerment against the omnipresent colonial myth of the non-existence of indigenous communities in Tasmania, see Smith (1999) and Lee (2019).

II. Mobilizing the Thylacine through Cloning and Digital Archives

The mobilization of extinct life forms generally takes place with the help of biotechnological practices. Currently, the three most promising strategies that can be used to bring species back to life are cloning, back-breeding, and genome editing. These approaches are simultaneously related to the digital storage, classification, and translation of bodies into letters and codes. The initial method chosen to resurrect the thylacine was cloning. In this procedure, referred to as somatic-cell nuclear transfer in genetics research, the nucleus of a preserved cell, such as might be found in a museum specimen, is introduced into a denucleated egg cell and implanted into a closely related surrogate mother to carry to term. If the fetus survives, a genetically identical copy of the respective animal is born. Already in the late 1990s, the Australian Museum announced a research project devoted to achieving this goal using a female thylacine pup that had been preserved in alcohol (see Stark 2018). It is no coincidence that the team around Don Colgan, the head of the Australian Museum's research group on evolutionary biology at the time, chose this de-extinction method for the thylacine. Originating in the field of plant science, the concept of cloning became linked to images of reproducing and creating artificially manufactured human bodies with Aldous Huxley's novel *Brave New World* (1932) (see Marek 2012). Since then, this concept has inspired ideas and fears about the power of the artificial reproduction of human and nonhumans. Drawing on Hans Blumenberg's "metaphorology", literary and cultural Studies scholar Sigrid Weigel has discussed "the constructive importance of the metaphor of 'readability' to the discovery of the genetic code" (2000, 22; translation ET). At the same time, she argues that the "metaphorical origins of genetic terminology are forgotten" (2000, 22; translation ET)[7] when words such as *program*, *information*, or *code* are used in an unambiguous manner that conceals the blind spots of biological knowledge (see also Kay 2000). In contrast to *Brave New World*'s narrative and the idea of artificial reproduction through the splitting of embryos, the research project was suspended after six years due to lack of results. Although genetic material was extracted and information about the animal's DNA was gained, the DNA was too defective to be implanted into a surrogate mother (see Fletcher 2008, 194–97). While the

7 German originals: "die konstruktive Bedeutung der Metapher der 'Lesbarkeit' für die Entdeckung des genetischen Codes"; "das Vergessen des metaphorischen Ursprungs der genetischen Terminologie" (Weigel 2000, 22).

thylacine remains extinct for the moment, not all biotechnological attempts at cloning are mere wishful thinking. Indeed, the artificial reproduction of animals has been a reality since the birth of the sheep Dolly. Even though attempts to reanimate extinct animals are still subject to failure, the genetic duplicates of deceased animal companions are already living among us.[8]

De-extinction is based on organized and categorized collections of information in electronic or digital databases. The translations and orderings of bodies into and within digital catalogs also play a significant role in the case of the thylacine. Despite the failure thus far to genetically reanimate the animal, the thylacine's popularity has highly increased, and its remains have become downright hyper-mobilized. Whether as a helpless farewell ritual or as an actual tool of resurrection, several attempts have been made over the past two decades to conserve the thylacine by translating it into codes and letters. The Australian Museum's research project led to the creation of the International Thylacine Specimen Database.[9] The aim of the database was to collect and place all preserved specimens, including whole bodies, furs, bones, and further remains in a digital archive. The thylacine was thus entirely transferred to the cultural sign-world of linguistic codes. In a repeat of its inclusion in Carl Linnaeus's system of taxonomy and classification according to his binary nomenclature as *Thylacinus cynocephalus* at the beginning of modernity, the extinct animal yet again became a sign. In 2009, an international research group decrypted the thylacine's mitochondrial DNA (Miller et al. 2009) and, in 2018, the entire genome was finally decoded (Feigin et al. 2018). As the research results, an accumulated series of numbers and letters, were shared via the network of the internet, the thylacine is no longer restricted to individual museums or other institutions. Rather, it has become available worldwide, apparently saved for eternity. This process of translating and securing bodies in digital databases likewise can be read as an attempt to counteract extinction. While the body of the thylacine remains immobile, its collected symbols and codes are mobilized and can be accessed globally. This increasing transformation of life forms into data creates the impression that human and nonhuman organisms

8 One notorious example is Barbara Streisand's dog, Samantha, a clone of one of the singer and actor's previous dog. Companies that clone pets in exchange for large sums of money include the Texan firm ViaGen Pets and the South Korean Sooam Biotech.

9 Unfortunately, not all information in the database about thylacine specimens is (yet) available online. Instead, it is stored on a DVD at the Zoological Society of London (see Sleightholme and Campbell 2018).

are infinitely shapeable and that death itself is deferrable, fostering "the belief that the body is essentially a computer made up of overwritable data and updatable apps" (Friend 2017, n.p.).

Biodiversity databases and lists of endangered species are also important tools in the handling of endangered species. Registers such as the Encyclopedia of Life (EOL), the Biodiversity Heritage Library (BHL), and the International Union for Conservation of Nature's (IUCN) popular Red List of Threatened Species seek to inventory and classify all life on earth. Any attempt to inventory all of life is, however, doomed to fail, since it is impossible to record all species. In addition, as Katherine Hayles emphasizes, the creation of different analog or digital catalogs cannot be viewed as a neutral endeavor: "Because database can construct relational juxtapositions but is helpless to interpret or explain them, it needs narrative to make its results meaningful" (2007, 1607). Inventorying life is thus not only about documenting and describing a given nature but is significantly shaped by culture, politics, and technologies. In addition to enabling the classification and evaluation of threatened species, these databases also represent important tools to plan and implement concrete protection measures and are directly involved in managing the survival of entire species. Even though non-threatened species are increasingly being incorporated into these lists of endangered species, this particular organization of beings seems to follow the capitalist principle of scarcity. According to these catalogs, plant and animal species are defined as worth protecting if only a few individuals of their kind remain (see Heise 2016, 55–86). The focus lies not on those beings that stand a chance of actually surviving, but rather is given to species that are already or almost entirely lost. This makes it all the more vital to not view individual species in isolation, but to generate habitats, ecosystems, and ultimately sensitivities for complex, multispecies relations.[10] The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) includes factors such as changing climatic conditions and ecosystems in its Studies. In IPBES's biodiversity assessment report, endangered species are described as "dead species walking" (2019, 207). This descriptor is applied to species whose final disappearance as a result of the destruction and decrease of habitats is assumed to take place in the foreseeable future. A conspicuous reference to the figure of the revenant or zombie, it evokes the sense of an already

10 For a critical assessment of the approach to disappearing species as well as loss, grief, and living together in multispecies worlds during our era of mass extinction, see van Dooren (2014) and Rose, van Dooren, and Chrulew (2017).

irrecoverable species death. In doing so, it produces a state of immobilizing gloom instead of generating awareness and agency to preserve disappearing species and complex ecosystems. In this way, the tragic stories in the databases condense cultural longings, fears, experiences of loss, and painful memories.

III. Breeding Back the Past for the Future

The longing for past eras, places, and value systems also figures prominently in the protection and desired reanimation of animals on the verge of extinction. This emotional orientation towards the past is especially apparent in practices of so-called back-breeding. Based on the millennia-old practice of selectively breeding domesticated animals, back-breeding programs seek to imitate the anatomical and phenotypic characteristics of an extinct animal and create a visual copy with the help of closely related species. In this case, authenticity is defined not as genetic correspondence but outward appearance. Since back-breeding has not been attempted to resuscitate the thylacine, this method will be illustrated with the help of the extinct quagga, a subspecies of the South African plains zebra. The quagga – whose stripes, in contrast to zebras, disappear in the back part of the body – was hunted to extinction by colonial settlers in the late 19th century. In order to reverse this irretrievable loss, the Quagga Project was initiated in 1986 by the German-born animal taxidermist Reinhold Rau, whose motivation for this endeavor can be traced back to the Third Reich. Rau became interested in the quagga when he started working at the South African Museum in Cape Town in 1959. He was inspired by the breeding attempts of the brothers Heinz and Lutz Heck (Rau 1999, 1). During the Nazi era, Lutz Heck had been the director of the Zoological Garden in Berlin and closely connected to Hitler's regime. As he later wrote in his memoir *Animals: My Adventure* (1954), he and his brother had wanted since the 1920s to breed back extinct animals that were part of the Germanic mythology of 19th-century Wagnerian Romanticism (see also Wang 2012):

> In my youth my imagination was caught by the famous description in the Nibelungenlied of Siegfried's hunt in the forest of the Vosges. […] I was interested above all in the two huge wild oxen, which […] are regarded as the most powerful representatives of primeval German game – the European bison and the aurochs. (1954, 154)

The results of the Heck brothers' experiments can still be found today in the form of heck cattle and heck horses. Yet neither these species nor Rau's later attempts at back-breeding quaggas closely resemble the animals on which they were modelled. Instead of reviving the aurochs, tarpan, or quagga, the experimental crossbreeding of different breeds created entirely new species that do not look like their extinct counterparts.

The quagga back-breeding program reveals how the notion of a seemingly authentic nature is based on idealized visions of lost pasts. Rau's quagga demonstrates that questions of naturalness and authenticity are shaped by the imaginations of a minority and are historically constructed. In "Zombie Zoology: History and Reanimating Extinct Animals" (2015), Sandra Swart traces the history of the quagga's back-breeding. Referring to the figure of the undead in the article's title, Swart questions the seeming neutrality of scientific practices. Instead, she situates the bred creatures and ideals that back-breeding programs seem to reanimate in the past. Similarly, Dolly Jørgensen argues "that the recovery of nature […] is a nostalgic practice that looks to a historical past and relies on *belonging* to justify future-oriented action" (2019, 4). The word 'nostalgia' consists of the Greek words *nóstos* ("return" or "homecoming") and *álgos* ("pain"). Nostalgia thus describes the longing for a home that has disappeared or never existed. It is connected to the feeling of loss of origins and includes romanticized images of the past. This state of painfully looking back becomes problematic when essentialized belonging and identity are framed as means "to repair longing" (Boym 2001, xv).[11] For Jørgensen, models of belonging are a significant driver of back-breeding experiments. Rau's quagga and the Heck brothers' cross-bred animals reveal the way in which a present believed to be decaying draws on images of the past to influence and restore future biodiversity. Turning back to the thylacine, it becomes clear that this animal never entirely disappeared from colonial memory and in

11 The definition of this term draws primarily on Svetlana Boym's discussion of nostalgia in her book *The Future of Nostalgia* (2001); see also Fredric Jameson's concept of "nostalgia mode" and his critique of postmodernity (1991). In this context, Renato Rosaldo has also written about "imperialist nostalgia": "Imperialist nostalgia thus revolves around a paradox: a person kills somebody and then mourns his or her victim. In more attenuated form, someone deliberately alters a form of life and then regrets that things have not remained as they were prior to his or her intervention. At one more remove, people destroy their environment and then worship nature. In any of its versions, imperialist nostalgia uses a pose of 'innocent yearning' both to capture people's imaginations and to conceal its complicity with often brutal domination" (1989, 108).

fact significantly contributed to the creation of Tasmania's colonial identity. This is illustrated by its depiction in the logo of the local Cascade Brewery or in Tasmania's coat of arms, which was granted by King George V in 1917. Shortly before its final disappearance, the animal became Tasmania's national symbol, once again reflecting colonial boundaries.

In addition to hiding colonial violence and strengthening national identities, longing for a long-gone or nonexistent past also enables the significant growth of capital. This is the case because if de-extinction succeeds, it promises to make risky aspects of birth, life, and death malleable, marketable, and upgradeable. It is thus no wonder that early attempts to resurrect the thylacine at the Australian Museum were financed not only by government funds but also through private donors (Fletcher 2008, 197). In the case of the Quagga Project no government support has been given. Instead, the project website points to companies such as Gordon Verhoef & Krause and Mondi Paper Waste as well as advocacy groups such as the Confederation of Hunting Associations of South Africa, the Detroit Chapter of Safari Club International, the Friends of the South African Museum and anonymous private donors as sponsors. In both cases, it becomes apparent that back-breeding programs and de-extinction in general provide fertile ground for commodifying and marketing life forms.[12]

IV. Genome Editing and the Quest for Future Immortality

At the moment, the most promising and most funded method for reviving extinct species is genome editing, also known as the CRISPR/Cas system. While CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) is an acronym for stretches of repeating DNA, CRISPR-Cas9 refers to a technique for the targeted alteration and manipulation of genetic material. This technique is relevant for reviving extinct species because genetic material extracted from preserved specimens is often too defective to be manipulated, as was the case with the cloning attempts undertaken in the Australian Museum in the early 2000s. By allowing genetic material to be cut, deactivated, and modified as desired, CRISPR-Cas9 promises to restore damaged genomes of extinct species. The idea here is that such genomes could then be carried to

12 For a critical reading of biotechnologies and the collapsing of nature and culture in concrete techno-scientific constellations and products such as the transgenic OncoMouse™, a patented organism created in a lab, see Donna Haraway (1997).

term by a surrogate mother, making the fantasy of directing life and death a reality.

The thylacine is among the species that researchers are trying to reanimate with CRISPR-Cas9. In March 2022, the Thylacine Integrated Genetic Restoration Research Lab (TIGRR) was founded at the University of Melbourne thanks to a generous private donation of five million Australian dollars. In collaboration with the US biotech firm Colossal Biosciences, the lab aims to create "a de-extincted thylacine-ish thing" (Evans 2022) within a decade. The necessary genetic material will be obtained from remains preserved in liquid at the Victoria Museum in Melbourne. Headquartered in the US state of Texas, Colossal Biosciences specializes in genetic engineering for protecting and restoring biodiversity. One of its co-founders is the Harvard University molecular biologist George M. Church, a leader in contemporary genome research and a part of various other past de-extinction projects. One of Church's major ambitions is to reanimate and rewild the wooly mammoth, which is believed to have largely disappeared from the surface of the earth more than 10,000 years ago. According to Colossal Biosciences' website, the company's projects are supported by numerous private investors, including billionaire businessmen such as Thomas Tull and James W. Breyer or celebrities such as the actor Chris Hemsworth. Before Church took over the wooly mammoth reanimation project after founding his own company in 2021, he had collaborated with the organization Revive & Restore to use biotechnological processes to raise the animal from the dead and release it into the wild. Not by coincidence, Revive & Restore is headquartered in Silicon Valley, where the attempt to reanimate dead bodies and optimize living ones has already mobilized billions of investor dollars. Countless reports demonstrate that the Silicon Valley billionaire and co-founder of the payment service PayPal Peter Thiel has invested in wooly mammoth reanimation and has funded firms that sell blood transfusions from young donors to supposedly enhance longevity (see Solon 2017; Ward 2022). If such practices evoke associations with the vampire, they pale in comparison to the offerings of firms such as United Therapeutics or the SENS Research Foundation. Drawing on literary and cinematic models such as Michael Bay's *The Island* or Kazuo Ishiguro's *Never Let Me Go*, these companies aim to produce organs from human DNA or completely eliminate aging processes through targeted interventions in the body. All of these attempts at technological optimization share the goal of rendering death either a matter of choice or – if the resurrection programs are to be believed – reversible.

V. Conclusion: Mobile Afterlives, Biopolitics and Necropolitics

Thiel and the aforementioned organizations within and beyond Silicon Valley illustrate that programs for reanimating extinct animals represent merely the beginning of a much larger quest for immortality. The attempted (re)mobilization of extinguished species for the future must be interpreted as a strategic project for perpetuating colonial superiority and oppression. Reanimation attempts can be read as epitomizing the transhumanist fantasies of a small community that seeks to determine future life on earth with its resources and capital. At the same time, biotechnological methods of cloning such as CRISPR-Cas9 serve as an optimal breeding ground for transhumanist beliefs in the technical optimizability and domination of human and nonhuman life. Yet the history of breeding life forms is anything but a modern idea. For millennia, domesticated animals have constituted a major influence on everyday human life, and, to this day, they continue to be tamed, trained, and bred to be close human companions. While pets have become increasingly adapted to the indoor human environment, other domesticated animals were long indelible fixtures in human transportation, agricultural work or in warfare.[13] Similar to the breeding and domestication of animals for purposes of care or physical labor, contemporary attempts to reanimate extinct species also reveal that the authority over life and death is in the hands of a privileged minority. As shown above, individual firms and actors of the Global North are currently defining biotechnological competition and the race for survival. At the start of 2023, Colossal Biosciences raised more than 200 million dollars to reanimate the dodo. While the aim is to reintroduce the famed flightless bird to the island of Mauritius where it lived before going extinct, the company's plans for the wooly mammoth are even more spectacular. If successfully reanimated, the animal is to be settled in its very own nature reserve, the so-called Pleistocene Park in northern Siberia. A team of scientists based in Germany is working to fill this section of tundra with flora and fauna from geological times long past

13 Among other places, the desire to artificially produce life forms was present in the so-called freak shows of the 19th century. Exploiting the formerly religiously motivated interest in monsters and prodigies, these shows did not simply present humans, animals, and objects as metaphors for otherness, ugliness, or foreignness. Entrepreneurial businessmen and circus directors also sometimes took it upon themselves to intentionally breed figures as monsters on the margins of acceptability (see Garland-Thomson 1996; Macho 2005).

in order to counter global warming (see Hunt 2023; Zimov et al. 2012). Yet, the question is whether the ecological niches that the wooly mammoth or the dodo filled still exist and whether it is actually necessary to revive these animals in service of protecting and preserving biodiversity. Even though promoted as projects to address ecological and climate challenges, the potential commercial and economic benefits through corporate investment and tourism cannot be denied as a main motive for species de-extinction.

Experiments in de-extinction may yet provide a path for reversing species extinction. However, as the previously mentioned examples illustrate, these experiments also subordinate these beings and their environments to colonial and capitalist control. Though performed in the name of care and ecological diversity, they protect the survival of some life forms while immobilizing, marginalizing, and exploiting others. Following Michel Foucault, these projects ultimately should be understood as biopolitical practices. Describing processes of social and political regulation of life and whole populations, Foucault's concept of biopolitics can provide insight into why some lives are preferred while others are suppressed and eliminated. In a decolonial critique of Foucault's concept, Achille Mbembe goes so far as to claim that biopolitical practices even turn marginalized and oppressed groups into "living dead" (Mbembe 2019, 92), what he refers to as necropolitics. Mbembes recurring references to the figure of the undead not only recall the term "walking dead", as applied to endangered species in reports on biodiversity, but also underscore the central significance of colonial practices in contemporary structures of dominance and rule. Histories of extinguished species such as the thylacine reveal that the oppression and killing of certain animal and human communities go hand-in-hand. The extermination and attempted reanimation of nonhuman species is thus closely tied to the management and control of human populations. The violence inflicted on human and nonhuman species in the history of extinction makes visible that only select lives are mobilized and bred, while others become "disposable" (Mbembe 2019, 80).

As this chapter has shown, the thylacine and its translation into specimen, national symbol, or genetic code stay mobile after its extinction, oscillating between culture, nature, and technology. In other words, resurrection projects attempt to reverse the environmental changes wreaked by colonial and capitalist interventions by trying to (re)fill the holes punched in ecosystems through the biotechnological reanimation of species. At the same time, the resurrection and (re)settlement of extinct species can also conceal the very reasons for their disappearance. In this way, it becomes possible to promote the notion of

animals' lack of history, ultimately making previous exploitation and violence invisible. Examining the mobile afterlives of extinct species' remains thus unveils de-extinction as more than an innocent practice of saving extinguished and endangered animals. The attempts at resurrecting the thylacine and other extinct creatures, such as the ones exemplified in this chapter, are linked to a quest for control over future life and are deeply rooted in nostalgic fantasies of an unspoiled nature and authenticity. This chapter has thus shown the importance of a critical examination of actual extinction and de-extinction efforts by trying to make their violent implications visible.

Translated by Adam Baltner and Eléonore Tarla.

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