Resilience in the Radioactive Habitat:

Precarious Management of Human and Nonhuman Actors in a Post-3/11 Japan

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Abstract

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The current media and scholarly discourse surrounding the management of the perilous nuclear-laced landscape of post 3/11 suggests that this discourse benefits the neoliberal state but fails to adequately address the key role played by nonhuman actors, specifically animals and plants. Perched at the intersection of media ecology, Japan, cultural, and animal studies, this project zooms in on the relations between these actors and reveals them as objects of biopolitical management—manifest through withdrawal (of care)—played out against the green screen of resilience-thirsty *neoliberal states of precarity*. The first chapter questions the notion that a group of refuseniks looking after abandoned animals in the Fukushima exclusion zone represents a new sociality in opposition to the neoliberal state and demonstrates instead how their defiance may be recuperable by that very state. The chapter's main critique lies with the media and academic discourse's failure to bring nonhuman actors into the picture of precarious life while exposing the fallacy woven into the human/animal kinship. The exclusion zone is thereby framed as a modern zoo whose inhabitants (both human and nonhuman) are observed and turned into natural history museum exhibits. The second chapter looks at the *Miracle Pine* (a lone tsunami survivor in the town of Rikuzentakata) and examines its subsequent bionic resurrection as a government-curated attempt to create the illusion of sovereignty and empowerment so that citizens see themselves as agents responsible for their own future while obscuring the inadequacies of postdisaster governance. The *Miracle Pine* is thus presented as a symbiotic composite of its infrastructure whose existence is dependent on affective labour.

Résumé

Le discours médiatique et scientifique actuel entourant la gestion du périlleux paysage nucléaire de l'après-11 septembre suggère que ce discours profite à l'État néolibéral mais néglige le rôle clé joué par les acteurs non humains, particulièrement les animaux et les plantes. Situé au carrefour de l'écologie des médias, du Japon, de la culture et des études animales, ce projet se concentre sur les relations entre ces acteurs et les considère comme des objets de gestion biopolitique—manifeste par le retrait (de toute assistance)—s'animant devant l'écran vert de la résilience des États néolibéraux assoiffés de précarité. Le premier chapitre interroge l'idée qu'un groupe de refuseniks s'occupant d'animaux abandonnés dans la zone d'exclusion de Fukushima représente une nouvelle socialité en opposition à l'État néolibéral et démontre plutôt comment leur acte de défiance peut être récupéré par cet État même. La principale critique de ce chapitre porte sur le fait que les médias et le discours académique n'ont pas réussi à faire entrer des acteurs non humains dans le tableau de la précarité tout en exposant le présumé lien de parenté homme/animal. La zone d'exclusion est ainsi encadrée comme un zoo moderne dont les habitants (humains et non humains) sont observés et transformés en objets d'exposition d'un muséum d'histoire naturelle. Le deuxième chapitre se penche sur le "pin miraculé" (un survivant isolé du tsunami dans la ville de Rikuzentakata) et examine sa résurrection biologique comme une tentative du gouvernement de créer l'illusion de la souveraineté et de l'autonomisation afin que les citoyens se considèrent comme des agents responsables de leur propre avenir, tout en masquant les lacunes de la gouvernance après une catastrophe. Le "pin miracle" se présente ainsi comme un composite symbiotique de son infrastructure dont l'existence dépend du travail affectif.

Acknowledgements

The fact that succinctness is clearly not my forte makes writing this page a real challenge. I am also paradoxically lost for words for another reason. It seems impossible (after this long and insightful journey) to fully express in only a few words the gratitude due to those that stood by me and made reaching the final destination possible.

First, I would like to extend my deepest gratitude to my supervisor, Prof. Yuriko Furuhata for her patience and—fittingly, given this thesis' key preoccupation—resilience in staying with me to the end. I have learnt a great deal from you and really appreciate all the advice given and time devoted. I feel as well I need to acknowledge all the financial support granted to me by Prof. Furuhata and McGill. It would not have been possible for me to even dream about pursuing graduate studies without it and I feel I must do everything to prove this investment was worth it.

I would also like to thank Prof. Thomas Lamarre for the kind attention and encouragement he offered me and whose doors seemed always open when I needed to ask questions.

And now to all those other lives (past and present) without whom there would be no me, no need to return to Fukushima, and no point in the fight to succeed at this enormous task this thesis proved to be:

Maciej, I really wish you were here. I cannot think of Spring 2011 without remembering you. Wynnpaul, the only true friend I have ever had and the best one I could have wished for. My loving parents who didn't really have to do anything but just be there for me. And finally, since this thesis strives to embrace all ways of being in the world, a certain grey eminence who (unbeknownst to him) reminds me daily how simple it can all really be.

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Introduction

If 3/11 were the result of an equation, it would not signify the mere sum of a few numbers but the horrific product of a complex range of terms and operators, some environmental and some man-made, stacked up against each other in a way so powerful they would upend the lives of tens of thousands of people. As of March 11, 2019, the combined human death toll is reported to hover somewhere around 20,000. This includes the countless unrecovered bodies that are now part of the earth's crust, but does not account for the additional 3,701 deaths resulting from postdisaster stress and illness. As late as February of this year, 52,000 people nationwide are still in temporary accommodation, and the Fukushima Daiichi Nuclear power plant's cooling system remains damaged beyond repair. Indeed, in Fukushima alone, 9,322 people are still unable to return home. Accordingly, the Abe administration is reported to have "acknowledged the plight of those forced to endure "uncomfortable" lives" but reassures the nation that the 3/11 recovery is nearing completion.[1]

As often occurs in the wake of such tragedies, individuals have needed to make sense of the situation. Some have sought solace in the state and media curated symbolic beacons of hope and resilience. Others have turned to acts of desperate dissent. In the case of the former, one of these symbols presented itself in the very midst of the destruction: a single, defiant pine tree which had somehow survived the terrifying onslaught. The latter was exemplified by how some individuals reacted to the situation within the exclusion zone of Fukushima. Abandoned by their human guardians who fled or were evacuated from the disaster-stricken area, some animals roamed free in search of food while others perished of starvation tied to their pens. A handful of "refuseniks,"[2] meanwhile, decided to stay behind and care for the abandoned nonhumans, exposing themselves to the invisible peril of radiation and binding

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[1] All statistics are found in https://www.japantimes.co.jp/news/2019/03/11/national/eight-years-abe-says-3-11-reconstruction-nearing-final-stages-though-half-public-unconvinced/#.XPKfZy2ZNsO
[2] The term "refusenik" is discussed in greater detail in Chapter 1, in the section "Towards a new sociality: Refuseniks, animals and the state."

their lives in a precarious coexistence. In what follows, therefore, I will explore that perilous landscape of communal dwelling, look at the instances of human and nonhuman management of life within, and unearth the infrastructure that allowed it to exist and remains its building block.

A disaster of a magnitude such as that of the Great East Japan Earthquake cannot come without a serious re-examination of disaster preparedness, the government's associated policy and its ability to weather a crisis, as well as the country's future direction. It is also unlikely that the national psyche can remain unscathed after such an event. However, a crisis can also be an opportunity for the neoliberal state to strengthen control and reinvigorate its growth. Ample scholarship exists theorising about such issues. Samuels (2013), for example, focuses on the impact of the disaster, assessing political responses and examining implications for the future of nuclear policy, but also looks at the idea of disasters as opportunities for change, which can sometimes mean "staying the course" (Samuels, 2013, p. 26). Baldwin and Allison (2015) interpret the March 2011 disaster as yet another layer of daily precarity characterizing twenty-first-century Japan. While outlining the challenges ahead, they praise the archipelago's supposedly unique resilience and national cohesion. Essays in *When the Tsunami Came to Shore* (Starrs, 2014), in turn, look to culture and religion as factors in determining the shape of disaster responses, while acknowledging the role played by social media.[3] Burgess (2011) is similarly preoccupied by the media's stereotypical descriptions of Japanese identity and the role the media played in propagating beliefs about Japanese uniqueness when it comes to disaster response. Notwithstanding the rich tapestry of research of which the above are only a few examples, the majority deals with its subject matter from an anthropocentric perspective while focusing on consequences of

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[3] In particular, Twitter and its role in the dissemination of information after the disaster preoccupied scholars [e.g., Doan and Collier (2011); Acar and Muraki (2011)].

actions taken (e.g., *how* the national psyche is reforged) and inquiring into their underlying causes (e.g.*, why* the reforging was necessary, to *what* ends and *what* determined the shape it took).

In contrast, this thesis stands at the intersection of the human and nonhuman and perceives of a reality shaped by interrelations between these. It extrapolates what has been brought into relief as a result of nonactions or purposeful omissions (such as the lack of adequate inclusion of nonhuman actors in postdisaster management and the popular as well as academic discourse), withdrawals (of responsibility and care on the side of the state), or nonresponses (of citizens who refuse to follow the government's agenda, and of the government to the calls for greater transparency and a recognition of its role in the creation of precarious modernity heightened by 3/11), all in the face of efforts to reconstitute the country's identity and mould it to fit in with the neoliberal state's progress agenda.

In other words, on the following pages I examine both the instances of (human actors') impermeability (i.e., resistance) *and* susceptibility (i.e., buying into or falling prey) to the interpellation of national identity through the official narrative of the essentialist concept of what it means to be Japanese, particularly at times of adversity and crisis. This interpellation is exemplified by the state-sponsored and official media-reinforced nomination and the subsequent harvesting of resilience as a national resource—declared to be especially abundant among the Japanese—which works for the neoliberal establishment.

Furthermore, by focusing my lens on (marginalised) humans and nonhuman agents, I contest the normative understanding of the Japanese subject position vis-à-vis both the disaster and the neoliberal state, in order to avoid easy tropes of essentialism. This allows me to draw a more inclusive picture of the precarious post-3/11 living within which human and nonhuman animals, as well as plants, are positioned as stakeholders. Consequently, and in line with the title of this thesis, what follows constitutes an examination of *a* Japan, seen as a

set of conditions of existence shaped by all the actors involved, whether directly or by association.

While attending to the cases of susceptibility to the interpellation of national identity (e.g., the elevation of the *Miracle Pine*), I also probe into instances of resistance (i.e., impermeability) when defiant subjects reject the state-suggested itineraries and prescribed forms of (Japanese) selfhood, and attempt to follow their own path instead. Rather than ask questions about how individuals' identities have been reforged as a result of the management of the disasters brought on by the Great East Japan Earthquake, or simply consider the fate of the left-behind animals and plants of Fukushima, I analyse the interdependencies between them vis-à-vis the techniques utilised by the state to (re)shape selfhoods. Hence, this thesis' intervention takes stock of what it means to be both human *and* nonhuman in a human-governed world, how these entities interact and depend on one another, how (and if) a new counternormative personhood[4] is forged, and whether this personhood allows for (re)imagining ways of being in the world *outside* of the neoliberal system of existence with its raison d'être (i.e., the very logic of market exchange), and *with* all forms of life that it contains.

One of the core concepts of my thesis—and the invisible frame that holds it together—is that of *infrastructure* and the instances when this infrastructure falls apart. However, my focus is not infrastructure in the traditional sense (to wit, physical systems allowing for the operation of a nation such as communication networks, sewage system,

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[4] My use of the term "personhood" loosely draws on modern theories of what constitutes a person as expressed by Singer (cited in Gruen, 2017), where the nonhuman animals' sentient nature (exemplified by their ability to experience pleasure and pain, as well as seek it and seek to avoid it respectively) qualifies them as worthy of a moral consideration that has traditionally been the privilege of human beings and is what makes some beings a "person." Consequently, philosophers such as Singer see no moral justification in privileging human interests over that of nonhumans based solely on the fact they are biologically different. For my part, I apply the term "personhood" to both human and nonhuman entities to signal the preoccupation of this thesis (i.e., the necessity for a broader and more inclusive understanding of humans' place in the world). Furthermore, my use of the term highlights my argument regarding the interrelatedness of all the actors involved.

energy grid, transportation and so on). Rather, the concept is extended to include both bodies and actions of human and nonhuman animals, plants and radioactivity. Consequently, I view human infrastructure as a synergetic extension of material infrastructure. It is an assemblage of human bodies engaged in labour supporting the material infrastructure in a coactive relationship with the dead bodies on which it stands, as well as the nonhuman life forms which shape the affective (and action precipitating) responses of those human bodies. Thus, I explore the "human infrastructure" surrounding the above-mentioned *Miracle Pine* of Rikuzentakata and the animals left behind in Fukushima as an embodiment of disintegrated infrastructures. The human infrastructure supporting the *Miracle Pine* includes not only those labouring to support the tree or profiting from it but also the dead bodies that form the bedrock on which it stands. Equally, the Fukushima exclusion zone's recovery takes place over the remains of countless animals. In both cases, this infrastructure is visible or material, and invisible or human, nonhuman and social, against the background of the pervasive radioactivity which escaped the Fukushima power plant.

As shall become apparent, my understanding of infrastructure is informed by a number of intellectual traditions devoted to it. When discussing the human infrastructure supporting and being supported by the *Miracle Pine* of Rikuzentakata, my main interlocutor is Starosielski. For Starosielski, infrastructure is symbiotic in nature and when discussing communities that sustained the on-land cable stations of the underwater cable infrastructure in her *The Undersea Network* (2015), she proposes that infrastructure bears resemblance to a living organism or sets of organs which reach out to interconnect with the bodies of workers who maintain them (Starosielski, 2015, p. 105). Put in another way, according to Starosielski, in order to understand infrastructure, it is necessary to look past its conspicuous material manifestations—namely, the cable network for example, and perceive of it as an integral part

and a result of the cultural and natural environments which forms its background (Starosielski, 2015, p. 28).

Infrastructures are built against a particular historical moment (Starosielski, 2015, p. 29), determining its present as well as its future. While imagined as invisible (e.g., "the cloud") and therefore often ignored, infrastructure is better characterised through its materiality (e.g., its wireless nature depends on a physical cable network), territorial fixity (e.g., the undersea cables transmitting huge volume of data depend on the physical existence of cable stations), and the human infrastructure necessary to support its operations. It is the human bodies, through their labour, that connect infrastructure to its sociohistorical environments. And it is infrastructure that shapes the living experience of those bodies. As will become further apparent, this view fits well with how I perceive the interconnectedness of the material and human infrastructures underpinning the existence and maintenance of the *Miracle Pine* of Rikuzentakata.

My views of infrastructure are also influenced by Berlant (2016) and her discussion of infrastructure's relation to the world. Berlant suggests there is a clear distinction between what we know as infrastructure and system or structure. For her, "structure" is "*that which organizes transformation*" while "infrastructure" is something which connects us to "the world in movement and keeps the world practically bound to itself" (Berlant, p. 394; original emphasis). To wit, infrastructure stands between us and the shifting conditions of structure, be it temporal or material, and "organises life" (Berlant, p. 393).

As I proceed, while not engaging with radioactivity directly, I shall remain mindful of that distinction and position my main argument vis-à-vis the view that post-3/11 life is *bound* to radioactivity though the affective labour we have to perform to coexist with it. The neoliberal state's *structure* collapse (exemplified by the malfunctioning of power generators and cooling systems) reveals radioactivity's infrastructural role and its interrelatedness with

human and nonhuman agents. Echoing Parks (2012), it could be argued that the structural extensions (i.e., the power generators) of this radioactive infrastructure are "affective stand-ins or physical manifestations of massive, dispersed systems that cannot be seen or touched" (Parks, p. 69). Indeed, a lot of the infrastructure in this thesis is invisible, complicating any engagement with it. According to Parks, because infrastructure is intelligible, human actors become aware of it through their encounters with it, and when infrastructural failure occurs, "hierarchies of knowledge" (pp. 68–69) are exposed, and this has a bearing on the relationship between all actors involved. The coming-into-visibility of infrastructures, however, is intertwined with them failing because their malfunction triggers a string of other malfunctions (p. 68) and has the power to permanently alter the conditions of life.

In this thesis, radioactivity appears as a force of *slow violence*—to use Nixon's words, (Nixon, 2011)—which nonetheless penetrates the environment and the bodies within it at different speeds. This mixed temporality of radioactivity's effects also reinforces hierarchies, revealing some lives as in more urgent need of care while others are disposable and thus forgotten. While radioactivity can be framed as a slow event, it is in constant movement and cannot be contained in space and time. As such, radioactivity mediates our relationship with our understanding of history as something following an unbent path and creates a rupture with our sense of linear time (Thouny & Yoshimoto, 2017, p. 6). Radioactivity, therefore, constitutes an "everyday eventfulness" (Thouny & Yoshimoto, 2017) necessitating a response on the part of the actors involved.

To further ground my inquiry and avoid viewing the disaster and its management as an isolated and unconnected event, a section of Chapter 2 is devoted to the history of nuclear power generation in Japan. I shall thus introduce a Japanese historical perspective and present the March 2011 disaster as a moment which brings down the curtain on Japan's postwar affluence (Yoshimi, 2012). In so doing, I will highlight parallels between the post-

Hiroshima and Nagasaki efforts to introduce nuclear energy to the Japanese public and to make it palatable to them, as well as similarities to the current neoliberal government's attempts to normalise the disaster through an essentialist rhetoric of national uniqueness in dealing with crises. However, my own goal is to *de-localise* 3/11 and to give it back to the world as a catastrophe befalling *all* life, what Thouny and Yoshimoto (2017) have described as a planetary event.

In Chapter 1, I question the notion that a group of refuseniks returning to the Fukushima exclusion zone represents an alternative way of being in the world that is in opposition to the modern neoliberal state. I will demonstrate how their resistance and subsequent siding with the abandoned animals renders itself recuperable by the neoliberal apparatus of power and results in an additional layer of precarity to the one already present as a consequence of everyday existence within the nuclear-laced neoliberal logic. While unequivocally radical, the refuseniks' dissent—as manifest by their decision to jeopardise their physical well-being and defy evacuation orders, for example—fails to herald any ontological shift at the level of perceptions pertaining to human/nonhuman relationships, necessary for the creation of genuine ripples of change, allowing instead for prevailing hierarchies (i.e., human vs nonhuman animals, refuseniks vs the state) to stay in place. Moreover, the refuseniks' actions towards animals seem to be primarily ruled by a kind of rationality wherein market value, or lack thereof, becomes the driver. Such a position negates the possibility of truly beholding animals as fellow stakeholders in the building of a new sociality while ensuring that the refuseniks (perhaps unwittingly) continue marching to the neoliberal drum.

Chapter 1 also frames the exclusion zone as something akin to a modern zoo whose inhabitants are observed much like specimens in a lab and who, through the media of photography, are turned into unwitting natural history museum exhibits: animals placed

alongside their human stewards. I examine this relationship between the experimental specimen/exhibit status of animals and humans vis-à-vis the material conditions of precarity they together inhabit within the exclusion zone. This precarity, I further propose, is intensified beyond the somewhat obvious consequences of daily exposure to nuclear pollution post the Fukushima meltdown. Instead, a new layer of harmful complexity is provided, one in which all inhabitants of the zone (human or nonhuman) are observed, exhibited, and left behind to a common fate. This elicits some uncomfortable questions. What is the inhabitants' kinship based upon? What are this kinship's motives and how are both sides affected? For whom are its consequences graver? Does it represent the start of a new off-the-grid way of being in the world that lies outside the market of exchange? An attempt at finding some answers will be made by paying close attention to the particularities of the Fukushima no-go-zone and what it renders visible.

In Chapter 2, I shift my attention from Fukushima's abandoned animals and their guardians to the *Miracle Pine* of Rikuzentakata. I frame the tree as a seat of animist investment invoked to inspire resilience and encourage citizens to assume responsibility for their own postdisaster fate, all the while helping the state relieve itself of responsibility. I further posit that this is facilitated by the essentialist symbolism with which the tree is inscribed. In this vein, I argue that the *Miracle Pine* not only dominates the postdisaster landscape but also impedes the possibility of grasping the consanguineous nature of our relationship to our environment.

Moreover, by drawing a comparison between the undersea cable station communities (Starosielski, 2015), the material and humans these depend on, and the *Miracle Pine*, I suggest the pine is a symbiotic composite of its infrastructure growing in and out of the affective labour necessary for its continued existence. Hence, the pine is sustained by the unrecovered bodies of the victims it stands upon as well as all the bodies participating in the

physical and affective labour necessary for its maintenance, securing these bodies' visibility on the map of communal imaginings and consciousness. This composite is further linked to and dependent on the broader infrastructural network, namely the invisible yet pervasive and uncontrollable clout of radioactivity seeping out of the collapsed Fukushima nuclear power plant and into both human and nonhuman existences within the region, the country, and beyond.

The chapter also argues that the various mediatic incarnations of the *Miracle Pine*, while strengthening and complementing the tree's role as a mediator between human agents in the disaster-affected areas and the government in its abdication of responsibility are benefiting the (neoliberal) economy. The newly harnessed resilience, which enabled individuals to take acts of self-assertion against the backdrop of the precarious postdisaster landscape, represents a valuable resource for the (neoliberal) state. For the individual actors involved, taking action represents a gesture of not only accepting the above-mentioned responsibility but also claiming visibility and making a mark on their environment and the unfolding situation. For the state, however, allowing or inviting assertive behaviour in citizenry post 3/11 can be seen as a purposeful omission. In other words, by withdrawing (care), the state activates not only resourcefulness (i.e., resilience) in its citizens but also reasserts its own power. Finally, I propose that the *Miracle Pine* is a vessel emptied of life and subsequently turned into the Foucauldian *dispositif* of the Japanese government, a nexus of (inter)relations between both human and nonhuman agents and forces that are able to create, expunge, or alter the communal imaginings of the reality they constitute.

In both Chapter 1 and 2 ample attention is given to the concept of care. Whether this care is given by individuals (i.e., by the refusenik farmers to the abandoned animals in Chapter 1 and by human agents labouring to support the *Miracle Pine* in Chapter 2) or withdrawn by the state, care is a tool of (biopolitical) management and control which

invariably ends up benefitting the neoliberal state. In the first chapter, the analogy between the exclusion zone and the zoo frames the farmers' care as management, revealing the infrastructure upon which the existences of all the actors involved rest. In the second chapter, care is presented as labour, whether to support the *Miracle Pine* or to maintain the connection between the labouring bodies and those which remain unrecovered. In both chapters, care is also a tool of visibility. It guarantees the victims' presence in common consciousness while casting a shade over the inadequacies of the government's response to disaster.

Finally, it is imperative to briefly address the rationale behind the order in which the objects were analysed. As already mentioned, both chapters examine the aftermath of the Tohoku disaster from the perspective of management of life and care. While there is no significant temporal discrepancy between the events in the evacuation zone and Rikuzentakata where the subjects of this inquiry reside, the order of the chapters was determined by their analyses' usefulness to understanding how precarity was harnessed by the state. Consequently, this thesis first pauses to make sense of the conditions and politics of containment affecting and managing the lives (and deaths) of both the human and nonhuman inhabitants of the exclusion zone. This *containment* is understood as conditions for restoring stability, assessing and limiting or obscuring the levels of criticality of the nuclear spill, and moving towards remediation, which is meant to focus on the well-being of the (human) population. Later, in Chapter 2, my analysis moves outside the zone and beyond containment to see how disaster shocks are productively absorbed, paving the way for mediatic and infrastructural proliferation. It should be noted that the concepts of *containment*, *criticality control, remediation* and *the well-being of the human population* feature prominently in the disaster management literature (e.g., International Atomic Energy Agency, 2013). Adopting these concepts has not only allowed me to reveal dissonances between proclaimed intent and actual outcomes. It has also proved methodologically purposive: Moving away from the

zone's broken infrastructural core is necessary for new infrastructure to come into being and this inquiry, therefore, follows a similar path.

This thesis forms an ecology of voices and relations that are nonbinary, attempting to make each equally responsible for the shape they give to the precarious reality they all share.

Chapter 1: Animals and Guardians

The deadly, magnitude 9.0 temblor of March 11 struck off the north-eastern coast of Japan and shook the surrounding area by as much as 50 metres to the east-southeast, thrusting it upward by about 10 metres.[5] The tsunami which followed covered an estimated 561 square kilometres, severely damaging the nearby Fukushima Daiichi Nuclear Power Plant and causing its cooling system to experience a possibly irreversible failure.[6] As a result, evacuation orders for the surrounding areas were issued. Not everyone obeyed and no provisions were made for nonhuman animals residing within the exclusion zone. Remaining or reentering the zone necessitated an acceptance of the precarious conditions within.

This chapter begins by grounding the concept of precarity in a broader historical and scholarly context. Next, it provides an outline of general animal rescue practices pre- and post-3/11—drawing parallels between Fukushima and Chernobyl—and introduces the concept and technicalities of creating exclusion zones. This is followed by a discussion of the interrelationship between the Fukushima refuseniks, their animal charges, and the neoliberal state, using modern zoos and natural history museums as a lens through which to understand the exclusion zone's operational dynamics. The chapter also contains a detailed analysis of two photographic images of two refusenik farmers, thereby illustrating the major themes discussed in the chapter.

Becomings of Precarity: Historical Perspective and Relevance

Following the 3/11 disaster, ample research on its natural and man-made causes has been published.[7] Given the amount of time elapsed since the disaster, it would be foolhardy

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[5] https://www.britannica.com/event/Japan-earthquake-and-tsunami-of-2011
[6] https://www.livescience.com/39110-japan-2011-earthquake-tsunami-facts.html
[7] Indeed, Shukin (2016) has argued that the term "3/11" echoes the terrorist atrocity of 9/11 and consequently positions the March 2011 disaster as an act of horrific inevitability (p. 1). Meanwhile, Iwata-Weickgenannt (2014) refers to the term *sōteigai* (exceeding all expectations) being frequently attached to 3/11 and thus

to hope to provide an exhaustive account of all that has been written about this event. Rather than focus on the situation as it is now, my inquiry plunges back into the narrative of 3/11 in its continued unfolding. To an extent, the different temporality resulting from the varied nature of the Tōhoku disaster dictates which questions can be asked and what has a chance of making sense. Specifically, the horrifically tangible and immediate aftermath of the earthquake and tsunami, with its 18,000 or so deaths[8] and disappearances, stands in stark contrast to the reaching-out-into-the-future opacity of the nuclear contamination that followed the Fukushima meltdown, a contamination that adumbrates the ongoing perniciousness affecting human and nonhuman residents alike.

Perhaps unsurprisingly, the word Fukushima has entered our common lexicon. It may have overshadowed Chernobyl and even eclipsed the thousand atomic suns of Hiroshima and Nagasaki. While we may be forgiven for "excusing" Chernobyl as a to-be-expected consequence of the Soviet regime's scant regard for life and staggering incompetence, it is immeasurably harder to make peace with Fukushima, considering Japan's modern-day technological powerhouse status. After all, Japan was not so long ago hailed as a new superstate, "a post-industrial success story" (Allison, 2015, p. 125).

Although the notion of precarity has long been of interest to scholars, its entry into the common consciousness can in part be credited to Hardt and Negri's publication of *Empire* in 2001, a text that inspired the EuroMayDay movement and its wave of angry young fists raised against the neoliberal state's economic instability. It can also, however, be traced back to Butler's (2004) early theorisations on the ontological conditions of the term in *Precarious Life: The Powers of Mourning and Violence*. To situate my own take on precarity, I shall also outline how it is framed and situated within Japan-related debates of recent years.

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allowing it to "obscure or at least relativize human responsibility" (p. 189) for the catastrophe. For Iwata-Weickgenannt, the term may also create an illusion of it having "an equal impact on everyone" (p. 189).
[8] https://www.japantimes.co.jp/news/2018/03/11/national/japan-marks-seven-years-since-devastating-3-11-disasters/#.XFtK1y2ZPwc

Academic discussions relating to precarity seem to have intensified—in particular in the English-speaking world—at the cusp of the twenty-first century. Nonetheless, precarity has figured in academic discourse on the European continent ever since Bourdieu first used the term's French form, *précarité,* to describe the conditions of Algerian workers in 1963 (Waite, 2009). According to Marxist thinkers like Hardt and Negri, precarity is, at least in part, considered to be a result of a late-capitalist shift to immaterial labour forms (Allison, 2015), the neoliberal deregulation of employment (Gill & Pratt, 2008), and the resulting creation of an all-encompassing existential uncertainty, coupled with a sense of social and economic exclusion.

For Butler (2010), precarity is experienced by all human beings, regardless of class and origins, and stems from the self-realisation of our fragility in light of the fact that we are all reliant on one another "in the face of oppressive everyday governmentality" (as cited in Waite, 2009, p. 416). Precarious life thus implies interdependency both with those we know as well as beings we have never had interactions with before (Butler, 2010). More importantly, however, Butler sees precarity (or "precarious life") as an ontological category "founded in questions about who counts as human" and whose existence merits being perceived as "a grievable loss" (as cited in Gill & Pratt, 2008, p. 16). By extension, I propose that precarity could be applied to nonhuman animals[9] due to what Butler describes as its ability to cut across identity categories (as cited in Allison, 2013, p. 66). Once categories are embraced, according to Butler, "an alliance focused on opposition to state violence" (Butler, 2010, p. 32) can be achieved. This alliance constitutes an alternative way of being in the world, *through* and *with* unexpected kinships, whereby the key to sustenance of our physical selves lies within and outside ourselves.

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[9] A similar idea of extending precarity to nonhuman animals was suggested by Shukin (2018) but due to the fact that it was published after I had completed research for this thesis, it is not included in my discussion. Consequently, Shukin's ideas have no bearing on mine, as presented in this chapter.

Among Japan scholars, however, the notion of precarity became a central topic of debate after the nation's slow economic downturn in the late 1990s[10] and was only further intensified after the triple disaster of 3/11. Apart from the extreme suffering caused by the immediate loss of lives and the ensuing quality of existence of those who survived, the Tōhoku Disaster has added something potentially even deadlier to the already precarious conditions of life in the country. Precarity has come to signify more than the sum of economic and existential uncertainty. Indeed, radioactive fallout represents a highly internalised, opaque layer of precarious physicality with no expiration date.[11] That is to say, it penetrates exposed individuals' bodies, metabolising or lying dormant until its effects start to manifest themselves in (physically) undesirable ways.

As a result of the excessive nuclear testing carried out during the Cold War especially, practically every organism on the planet has already been laced with some small amount of radiation.[12] Hence, the post-Fukushima radioactive cloud hovering over Japan is arguably not as alarming as all that. Many experts also concur, however, that there can be no certainty as to what amount of radiation, if any, is safe to consume. Indeed, it is believed "internal exposure likely poses more health risks than low-level external exposure" (Iwata-Weickgennant, 2014, p. 190). In Japan, this is further complicated by the reality that not everybody is exposed to the dangers of nuclear power generation in equal measure. Rather, there is a marked tendency to construct nuclear power stations in underprivileged areas where the prospects of employment opportunities and tax cuts encourage sceptics to go with the flow and accept the benefits along with the dangers (Allison, 2015). Post March 11, this string of events has actually helped create yet another layer of inequality, namely, *hibaku-*

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[10] https://www.japantimes.co.jp/news/2009/01/06/reference/lessons-from-when-the-bubble-burst/#.XGNlhS2ZPwd

[11] Scholars such as Allison, Shukin, and Nancy have called for a discussion of Fukushima in relation to Japan's nuclear past (i.e., a "peaceful" use of nuclear technology for power generation in the wake of Hiroshima and Nagasaki) and its impact on the very specific form of neoliberal precarity as a lived-in reality.

[12] See Shukin's (2016) discussion of Nancy's writing on the issue (p. 2) and later that of Masco (p. 5).

kakusa in Japanese. The term can be translated as *radiation exposure disparity* and signals not only the disparity enhanced by the uneven distribution of radioactive waves due to meteorological and geographical attributes, but also "different levels of vulnerability" (Iwata-Weickgenannt, 2014, p. 190) of a more political nature.[13]

So, what is this new vulnerability and what are its specific conditions? And how does it impact the individuals living it? In the face of an ongoing crisis, in particular one with ill-defined physical or temporal perimeters, it is not a stretch to expect those affected to take a route of withdrawal. This is in surplus of the actual forced evacuation and voluntary withdrawal from areas that were respectively either officially designated as "affected" or unofficially perceived to be so. Indeed, in addition to conflicting information from both domestic and international sources,[14] the government's changing orders regarding just how large an area should be forcibly evacuated, did not inspire confidence in the citizenry.

Consequently, the officially promoted discourse of *kizuna* (i.e., bonds)[15] was not unanimously embraced, even though the discourse was supposed to help unite people, awaken resilience within them, and galvanize them into action where the authorities refused to. The aforementioned regional disparities, paired with an increased sense of physical "uprootedness" and "social homelessness" (Allison, 2012, p. 354), may have spurred an even deeper sense of disenfranchisement than that of the radiation-exposure disparity (i.e., *hibaku-kakusa*). Scholars like Allison and Butler suggest such conditions can create new ways of existence in the world. Furthermore, these conditions can incite collective action capable of

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[13] Iwata-Weickgenannt (2014) expands further on the issue of *kakusa* (i.e., disparity) by explaining that "since its coinage in 2004 the term *kakusa shakai* (unequal or gap-widening society) has become one of the most powerful signifiers of contemporary Japan's socioeconomic malaise. All sorts of empirical or perceived inequalities have since been framed by the *kakusa*-discourse—we read of *keizai kakusa* (economic inequality), *chi'iki kakusa* (regional disparities), *iryō kakusa* (medical inequality), *kyōiku kakusa* (educational inequality) and *jōhō kakusa* (unequal access to information), to name just a few of the most frequent usages" (p. 190).

[14] As an example, according to Iwata-Weickgenannt (2014), the 20 km exclusion zone around Fukushima Daiichi was far smaller than the 80 km radius recommended by the US authorities.

[15] This government/media corporations' sanctioned concept of *kizuna* has often been countered with *tsunagari* (i.e., connections or links), a notion used primarily by activists and grassroots organisations (Fujiki, 2016).

building what Berardi describes as "social zones of human resistance" (as cited in Allison, 2012, pp. 362–363). That is to say, assertive social involvement in the creation of novel, therapeutic, and autonomous models of existence that foster solidarity whilst relying on antiestablishment power. As such, precarious conditions of life can create "conditions for social change" or even "political revolution" (Allison, 2012, p. 349).

However, framing precarity as some sort of a light at the end of the tunnel either misses the point of the somewhat sinister side effects of precarious conditions for life or does not fully take into account the realities of radioactive contamination. Indeed, as Allison and Kitagawa have argued,[16] the post-Fukushima landscape—if there can even be a "post"—requires a new lexicon that could give justice to its complexity, suggesting that the word precarity (and what it stands to mean) may be no longer fit for purpose. The complexity of the precarious post 3/11 resides, at least to some degree, in its lack of spatial and temporal boundaries.

While it is possible for bodies to distance themselves from the epicentre of contamination, a definitive extraction and clean break is a physical impossibility. Indeed, leaving the contaminated area creates an absence and thus cannot herald change. Therefore, the only available routes to creating new ways of being in the world are a form of recoil: defying orders by remaining or returning. In both cases, refusal is at the core of change. In both, citizens have to take responsibility for their well-being. This act of individual responsibility, or *jiko sekinin* in Japanese, constitutes a neoliberal notion in which each and every person—as opposed to the state and its institutions—assumes responsibility for their

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[16] Kitagawa (2015) is one of several Japan-based scholars who, responding to Allison's *Precarious Japan*, propose the term precarity may no longer be valid as a description of post-3/11 Japan and suggests "the need to create new, more appropriate words, ideas, and poetics" (p. 118) with which the reality of radioactive contamination of the country can be described.

lives.[17] Hence, while precarity hurts those subjected to it, it can also be productive to the state in that it removes some of the state's burden of care towards its subjects.

Indeed, the link between precarity and care management, as well as the different ways in which care manifests, will be a significant subject of inquiry in this chapter. As the state withdraws care from within the exclusion zone, it manages the refusenik farmers by passing on to them the burden of (self) care-provision. To wit, the chapter argues that the refuseniks' labour of care becomes a tool for the biopolitical management of the abandoned animals, while simultaneously acting as self-care. This "allowing" the refuseniks to provide care for both the animals and themselves represents a biopolitical contrivance by the state whereby it is no longer the neoliberal state but the refuseniks themselves who "make live and let die" (Foucault, 2003, p. 241).

Those who refuse to "fit in" with what is expected of them[18] (i.e., the refuseniks) are hence making a doomed gesture towards "alternative sociality" (Allison, 2015, p. 126). For while their protest may seem an act of strength, it cannot be seen as a sign of a full-blown resilience in its own right. Rather, as will be discussed in greater detail later, though the refuseniks perform certain actions which carry characteristics of resilience, it is through their alliance with the abandoned animals that they appear most resilient. Indeed, I suggest that wildlife in postnuclear meltdown sites such as Chernobyl or Fukushima may appear to be thriving, but only within a vacuum of oversight where semblance is mistaken for scientific fact. Thus, the often-glorified act of solidarity with animals may appear to be an act of courage, when it is actually a reaction to the loss of agency over uncertain existence which

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[17] Like others, Allison (2012) touches upon the notion of *jiko sekinin* in *Precarious Japan,* tracing its origins to the 2001–2006 administration of former Prime Minister Koizumi. The notion implies self-reliance, self-independence, and self-sustainability, in which individuals relieve the state from any responsibility towards them. The term's usage further intensified in the wake of 3/11.
[18] Allison (2015) responding to Kitagawa.

propels those affected by it to "cling to life" (Shukin, 2016, p. 3) or the apparent resilience of others (in this case, nonhuman animals).

Moreover, I argue that incorporating animals into the narrative of post 3/11 is paradoxically one way of giving a human face to the handling of the aftermath of catastrophe. To wit, distressed or dead animals form the super-layer of the precarity-as-opportunity phenomenon. Attending to them is also what turns the refuseniks' disobedience and disruption impermeable to reproach by the authorities or those who may see their actions as irresponsible. In the face of an uncertain and perhaps inexorably bleak future, the (post) Fukushima humans turn to animals and their universe of being in the world for much-needed hope, vitality, and redemption which, at least superficially, the animals seem capable of offering. As already mentioned, however, this interspecies kinship further impairs the refuseniks' stab at escaping precarity and imagining a new way of inhabiting the world.

Animal Rescue Pre- and Post-3/11

Before delving any further into the chapter, it is perhaps necessary to briefly outline the situation regarding the animals of the Fukushima exclusion zone, specifically in terms of animal evacuation efforts or lack thereof. As will become apparent, doing so will afford a clearer view of the physical conditions shared by both the human and nonhuman animals within the zone.

Interestingly, when inquiring into the fate of animals in disasters, the focus tends to be on what animal rescue means to humans' well-being rather than to the animals themselves. This is perhaps due to the obvious link that exists between the well-being of people and their prospective productivity for the state, in which compliance with official rules and regulations plays a part. Reportedly, disaster evacuation efforts can be thwarted when pet owners are denied the chance to take their nonhuman companions with them or when no pet evacuation

measures are in place.[19] Indeed, such cases abounded during Hurricane Katrina and other

disasters, where pet owners were known to disobey official orders and returned to disaster-

stricken areas, thereby risking their own lives, in order to attend to their pets (Thompson,

2013).

Post-3/11 Japan has generated similar tales. When evacuation orders were issued for

the most affected areas, the authorities reportedly did not encourage the evacuation of

animals along with their guardians.[20] This may have partly been due to the fact nobody knew

how long the orders were going to hold (Yamazaki, 2015). In addition, those who *did* bring

their companions with them found their pets were not allowed to enter evacuation shelters

and had to be taken to different locations away from their humans. This being unacceptable

to them resulted in many individuals sleeping in cars so that they could stay with their pets.[21]

According to the World Society for the Protection of Animals (WSPA), the Tōhoku

disaster resulted in 350,000 people being placed in evacuation centres and about 30,000

animals requiring emergency shelter.[22] These numbers do not, however, include the farm

animals residing in Fukushima at the moment of the meltdown, an estimated 3,500 head of

cattle, 30,000 pigs, and 630,000 chickens (Itoh, 2018). Unfortunately, according to Itoh in

Animals and the Fukushima Nuclear Disaster (2018), the Japanese government failed to

carry out a swift and comprehensive animal evacuation of Fukushima's nonhuman residents,

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[19] Following Hurricane Katrina—where pets were not evacuated causing many pet owners' refusal to be brought to safety—the U.S. Congress passed the Pet Evacuation and Transportation Standards (PETS) Act, allowing the Federal Emergency Management Agency (FEMA) to assist state-level bodies in making evacuation plans and assisting in shelter building for companion and service animals (Hunt, Bogue, & Rohrbaugh, 2012). Regarding 3/11, reports talk of cases of pet owners being stranded at home and refusing to leave when no reassurances of their pets' well-being were being offered (Chadwin, 2017, p. 1413).

[20] Some researchers, notably Itoh (2018)*,* contradict such findings by stating that "the Japanese government forbade residents to take their companion animals with them" (p. 6).

[21] https://www.bbc.com/news/blogs-news-from-elsewhere-37550978

[22] According to the Veterinary Record (2011), the WSPA vowed to work towards setting up 30 temporary shelters for pets accompanying families evacuated as a result of the catastrophe. The shelters were supposed to offer tents, feeding bowls, pet food, veterinary services and other equipment necessary to give the pet owners a chance to continue to walk, clean, feed and care for their animals. At the time of publication, the WSPA also estimated that 30,000 animals needed emergency shelter in Japan.

prompting the deaths of over 22,000 companion species and 660,000 livestock (p. 8).[23] With

human guardians unable to return,[24] most of the left-behind cattle and companion animals

had died of starvation and dehydration by the end of May 2011, either stranded indoors

(mainly cats) or tied to their kennels (dogs) (Itoh, 2018, p. 12). According to Itoh, of all the

animal evacuation and rescue efforts undertaken by the government, the prefecture, and

private organizations, those of the government were the least successful. Overall, the

allocated budget and creation of two temporary animal shelters notwithstanding, the success

rate of the government animal rescue operations is estimated at roughly 4%, translating to a

total of only 1,008 companion animals being saved (Itoh, 2018), with the rest relying on

themselves, volunteer efforts, and a handful of refuseniks for survival.

Fukushima: Another Chernobyl?

Despite their wretched fate, the animals of Fukushima have nothing on their

Chernobyl counterparts. Not only have the radiation levels in Chernobyl been estimated to be

greater than the sum of those unleashed on Hiroshima and Nagasaki,[25] much has arguably

changed (for the better) since 1986 with regards to how animals are perceived and

accommodated. *Voices of Chernobyl* by Alexievich (2006), a harrowing read on many levels,

recounts stories of hunters sent into the exclusion zone to eliminate pets and other domestic

animals whose owners were neither allowed to evacuate with them nor return to tend to their

needs. Still trusting humans and therefore confused by the situation, dogs and cats would

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[23] Itoh (2018) points out that the residential area housing the TEPCO employees of the Fukushima Daiichi
Nuclear Power Station was the only place where no animals were left behind, implying that the plant operator
knew about the pending evacuation order before the other residents and evacuated their staff with their pets
prior to everybody else (p. 6).
[24] Itoh (2018) also talks about the government allowing a few short visits per year to the contaminated exclusion
zone but adds that those originally residing in close proximity to the nuclear power plant were not allowed the
same privilege (p. 13).
[25] https://www.britannica.com/story/nuclear-exclusion-zones

often run to the hired hunters and soldiers who would shoot them on the spot (Alexievich, 2006, p. 118). Some animals escaped and their descendants continue to live in the zone, alongside the Przewalski horses and Belarusian bears who were (re)introduced at a later date.[26]

Much has been made of the possibility that Chernobyl and Fukushima could be seen as animal sanctuaries due to the apparent thriving of species formerly resident in both areas. However, as Itoh points out, when it came to Chernobyl, such perceptions arose because the robustness of a species tended to be measured against overall headcounts rather than the health conditions of specific animals (Itoh, 2018, p. 181). Citing the work of Moller and Mousseau, Itoh (2018) further reminds us that many of Fukushima and Chernobyl's surveyed species showed reduced fertility rates, shortened lifespans, and genetic abnormalities, which may be passed on to offspring and spread to adjacent areas.

Setting the Perimeters of the Zone

Positioning postcatastrophe precarity as an almost unmissable chance to regain control and generate growth for the (neoliberal) state would be an apt vantage point from which to proceed with my inquiry. However, my key concerns incline towards the issue of human/nonhuman alliance, its frequently misinterpreted motives, and its subsequent staging within the post-3/11 exclusion or evacuation zone surrounding the Fukushima Daiichi nuclear power plant. While large parts of the zone have been decontaminated and/or had their exclusion/evacuation zone status lifted, as of July 2018, nearly 45,000 people continue to live

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[26] According to the *Guardian* newspaper (2018), about 300 stray dogs, believed to be native to the area, roam the 2,600 km² exclusion zone. The dogs are believed to have shortened lifespans as a result of prolonged exposure to radiation and are cared for by some sympathetic guards, visitors as well as a US nonprofit organization helping areas affected by industrial disasters.

in the vicinity as evacuees,[27] the majority of returnees being elderly.[28] Consequently, the zone represents a container, a set of spatial conditions determining outcomes for those enclosed within it. It is also a highly figurative concept in that it attempts to delineate the boundaries of an ethereal entity within: radioactivity.

In the case of a nuclear disaster, an evacuation/exclusion zone can be broadly defined as an area where entry and/or lodging is prohibited or very strictly controlled due to ongoing dangers resulting from radiation. Bounding an area in this manner lends itself to the exercising of control, supervision, and management. Such a dynamic is not divergent from that found in a zoo, even if in a zoo a clear didactic rationale underpins its exhibitionary nature.[29]

Contrarily to a zoo, however, rules and regulations within an exclusion zone are meant to apply to people, and the presence of nonhuman animals may impair efforts to maintain control. Naturally, a zoo's nonhuman residents have to be contained in order to be managed by human guardians that are themselves subject to rules and regulations. While human withdrawal from the zone in the immediate aftermath of the disaster created a vacuum of control and the concomitant collapse of order within its borders, all of this stands in contrast with the intended aim of an exclusion zone. This is because the zone's relative success in regulating comings and goings only has any bearing on the human (former) residents. Indeed, when it comes to nonhuman animals, drawing boundaries proves a futile endeavour. Left to fend for themselves (domestic animals) or free to roam (resident wildlife), the exclusion zone's animals will only be controlled, in relative terms, by those who

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[27] The website (http://www.pref.fukushima.lg.jp/site/portal-english/en03-08.html) contains detailed information about the different categories into which the area around the power plant has been divided, which have been lifted, which shifted, and which are considered "safe." In itself, this proposition is controversial to many within and outside of Japan.
[28] https://www.britannica.com/story/nuclear-exclusion-zones
[29] My understanding of the term "exhibitionary" is indebted to Bennett's "exhibitionary complex" as discussed in Bennett (1995). I will return to Bennett in greater detail at a later stage of this chapter.

themselves dissent (by returning or remaining) in order to wrest control of their and other animals' existence outside the all-embracing neoliberal state.

To a certain degree, this complex web of dynamics revealed with regards to control within the zone is not dissimilar to the hopeless task of trying to contain radioactivity, with its porous (if any) confines and elusive temporality. In that light, the lifting of the exclusion zone's evacuation orders and the erasure of borders from the areas' maps are less a sign of triumph of resilience-born reconstruction than an act of surrender in the face of uncontainable force: an admission of failure. Similarly, controlling animals inside the zone presents itself as a daunting task, with continued animal presence posing a threat. Those that have been left behind constitute a mirror in which the human failings vis-à-vis disaster management and responsible stewardship are clearly reflected. And those that reappeared and started to take over the area as a result of human withdrawal represent a danger to the presumed, taken-for-granted way of life within society. Furthermore, humans who refuse to comply and remain within the exclusion zone (or else return to it)—whether driven by a sense of solidarity with the abandoned animals, other personal motives, or a desire to defy the state through their unruliness and blatant disregard for safety—arguably reify a disruption to the neoliberal engine's politics of recuperable precarity.

Escape From the Zone: A Photographic Representation of a Fugitive

So, who are those disrupters breaching state-imposed controls? What spurs them on? And what happens when they leave the enclosure of the exclusion zone? The picture shown in Appendix A is a photo taken by Associated Press photographer Sasahara Koji in 2014. The shot features one of Fukushima's most recognizable refusenik farmers, Yoshizawa Masami, arriving with a white-speckled black bull in front of the Agriculture Ministry in Tokyo to demand an inquiry into the origins of his cattle's skin affliction. While reportedly not the

only protester at the scene, Yoshizawa's near-celebrity status resulted in him being the only one focused on in a widely-seen photo which, along with the accompanying report on the protest and refusenik farmers, went on to appear in *The Washington Post*.[30]

Before exploring the photograph, some background about the farmer pictured is warranted. Yoshizawa, a 65-year-old bachelor cattle farmer, had for several years been a lone rancher in Namie, a town located in the vicinity of the Fukushima Nuclear Power Plant and within the evacuation zone. Soon after the disaster, fearful for his livestock and angered by the authorities' attempts to conceal the truth about the nuclear meltdown,[31] Yoshizawa decided to return to the zone and take care of his animals. He subsequently renamed his farm "Ranch of Hope" and started looking after not only his own cows but also those abandoned on other farms in the area.[32] Two months later, the Ministry of Agriculture ordered a comprehensive slaughter of farm animals within the zone—an edict Yoshizawa refused to obey. By then, in fact, it was already certain his livestock had lost its estimated market value of ¥450 million, prompting him to start staging protests in front of TEPCO[33] headquarters in Tokyo, raising awareness, demanding compensation, and urging that his cows be studied.[34] His first such protest is said to have taken place mere days after 3/11.[35] For Yoshizawa, his cows now had a new mission. They *became* protesters in a "nuclear rebellion" that would

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[30] https://www.washingtonpost.com/news/in-sight/wp/2016/03/11/caring-for-fukushimas-abandoned-animals/?noredirect=on&utm_term=.b9bdf09e3170

[31] https://www.nytimes.com/2014/01/12/world/asia/defying-japan-rancher-saves-fukushimas-radioactive-cows.html

[32] https://www.japantimes.co.jp/news/2016/03/10/national/rancher-near-fukushima-tending-herd-act-defiance/#.XK5oMC2ZPaZ

[33] Tokyo Electric Power Company: the Japanese utility holding company that operates the Fukushima Nuclear Power Plant as well as many other facilities in the Kanto and Tōhoku regions of Japan.

[34] https://catapult.co/stories/the-rancher-who-refused-to-leave-a-fukushima-story

[35] https://metropolisjapan.com/the-mayor-of-nowhere-namie-fukushima/

lead to a "nuclear-free society,"[36] and this rebellion was to be carried out from his very own ranch, now a veritable hub for journalists, animal lovers, and ecologically-minded activists.[37]

Both guardian and cows have also turned into an ongoing experiment in nuclear living. The animals are fed contaminated feed donated by farms in the area, a practice Yoshizawa sees as an ecological way of eliminating nuclear waste. They are also regularly tested for abnormalities. While the cows have developed white spots on their bodies, there is no conclusive evidence that links these spots to exposure to nuclear waste and radiation.[38] Although it is clear that Yoshizawa's return to the zone was motivated by his indignation at the government's handling of the crisis, as well as a sense of responsibility towards animals who represented his livelihood, he was already a veteran of antiestablishment resistance. Indeed, Yoshizawa—who recently ran for mayor of Namie in 2018 on a platform called "Organisation for a Hopeful Namie"—had been president of the university student body during the protests against the Vietnam War and the American military use of Japanese ports, not long after Japan's violent student movement in the 1960s and 1970s.[39] He had subsequently participated in an antinuclear power plant building movement in his prefecture and had long been associated with the Japanese Communist Party.[40] Hence, his activities post 3/11 cannot be viewed in isolation.

With respect to Appendix A, there is nothing remotely stationary about this photograph of Yoshizawa and his black bull at the doors of the Agriculture Ministry. The piercing white sky forces the viewer to focus on the photo's protagonists and the events which are unfolding. In the background, buildings and trees form an inconsequential, barely

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[36] https://www.japantimes.co.jp/news/2016/03/10/national/rancher-near-fukushima-tending-herd-act-defiance/#.XK5oMC2ZPaZ

[37] https://metropolisjapan.com/the-mayor-of-nowhere-namie-fukushima/

[38] https://www.japantimes.co.jp/news/2016/03/10/national/rancher-near-fukushima-tending-herd-act-defiance/#.XK5oMC2ZPaZ (In addition, Yoshizawa too undergoes regular check-ups for any signs of adverse effects radiation has on his body and he has reportedly been in good health so far.)

[39] https://catapult.co/stories/the-rancher-who-refused-to-leave-a-fukushima-story

[40] https://metropolisjapan.com/the-mayor-of-nowhere-namie-fukushima/

visible layer on top of which the dynamism of the main image has been grafted. The glare of day could well be a result of the tussle-and-strain-induced steam rising from the overheated bodies of the participants struggling in the ring-like enclosure of Yoshizawa's van. Centre stage, Yoshizawa and the visibly agitated animal he is trying to restrain, appear in their near entirety, with several other bodies forcing their way in and out of the frame. The photographer, meanwhile, seems to have been standing in the direct line of vision of two other journalists perched perilously atop the metal enclosure of the vehicle's deck. To the right of the frame, a police officer appears to be propped up by an anonymous arm. By contrast, Yoshizawa is protectively stretching out his own arm, posing it against the animal's side. The intention of the anonymous arm is ambiguous, however. Does it belong to another eager journalist trying to clear his own field of vision? Or is it urging the understandably reluctant officer to somehow block Yoshizawa and the white-speckled bull from stepping onto the pavement below? To the left of the frame, we see a tightened human leg belonging to someone in an apparent position of defence. The body is struggling against some invisible force pressing against it from outside the frame. Immediately behind Yoshizawa, another police officer can be made out, pushing against the animal with his back. However, it is Yoshizawa who is the only human in direct, close contact with the bull: his body in clear alignment with the animal, visibly unafraid of the bull's tethered force or of its mysterious skin condition.

Particularly striking, besides the obvious incongruity of a live bull in the metropolis, is the scene's nervous urgency. In opposition to all other bodies in the picture, Yoshizawa is simultaneously leading and shielding the animal, much like a cautious zoo handler might. At the same time, however, Yoshizawa also represents a threat. He is, after all, *armed* with the animal, and his closeness to it only adds to his self-evident *persona non grata status*, hundreds of miles away from the exclusion zone and right in front of the Agriculture

Ministry's doors. It is in this way that the duo's presence becomes an act of refusal to be

contained. It is also an affirmation of their intertwined fates, their pragmatic interdependency,

and the outside world's attitude towards them.

What the photograph seems to be saying, therefore, is that this alliance—and that of

any other similar bonding—is best seen from within the safe distance of the exclusion zone,

from where the hazard it poses is easier to manage by the state. The duo's attempted descent

from Yoshizawa's four-wheel, red metal enclosure epitomises the inevitability and force of

an uncontrollable spill. It also symbolises the often-voiced bitterness[41] among many

Fukushima residents who begrudge Tokyo's TEPCO, not only for mishandling the crisis but

also for creating pollution and significant disadvantage for the local people by building a

nuclear facility whose benefits are enjoyed by Tokyo and its residents, distant metropolitans

who are often unaware of or uninterested in this blatant injustice. While the scene may also

call to mind the moment an unruly beast breaks free of its zoo cage, it is no longer clear in

this photograph where the beast starts and where it ends, hence the palpable unease of the

other participants as they swerve away, find a perch above, or simply leap out of the frame.

Towards a New Sociality: Refuseniks, Animals and the State

The use of the word refusenik by the English-language media and scholars such as

Shukin (2016, p. 26) to describe the defiant farmers of Fukushima is an interesting choice and

due to its implications deserves at least a sliver of attention at this point. The word came into

use in the 1970s and is, in fact, a neologism and most likely a partial translation of the

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[41] As already mentioned earlier in this chapter, the issue of the unfairness implicit in the construction of nuclear power plants in underprivileged areas (i.e., *hibaku kakusa*)—of which Fukushima is but one example—is well-known and often discussed by scholars and activists. However, it is the interviews with the former residents of the exclusion zone that drive the message home with the greatest force. Notable examples can be found in films such as Atsushi Hunahashi's "Nuclear Nation" (2012) or in Yoju Matsubayashi's "Fukushima: Memories of a lost landscape" (2011).

Russian word *otkaznik* (derived from *otkazac* which means *to refuse*) and the English verb to refuse.[42] Presumably, to make the word sound reminiscent of its Russian origin, the suffix -nik was added on later. Most people have perhaps heard of the Soviet refuseniks (i.e., Jews who were initially denied exit visas to Israel during the Soviet regime and then turned into devout observers of Judaism once their visas were granted). However, refuseniks are, in fact, rather a motley crew. There are Israeli soldier refuseniks (army recruits who refuse to serve in the Occupied Territories out of fear they will be contaminated and thus threaten the purity of Israel), cancer patient refuseniks (individuals who refuse perfectly efficient treatment options against the recommendations of their doctors, wishing instead to maintain the life they had at the time of diagnosis), Basel swimming refuseniks (Muslim pupils in Switzerland objecting to compulsory coed swimming lessons at schools that undermine their religious values), and even computer refuseniks (individuals who reject the notion of technology as merely instrumental and instead promote technology's artistic, emotional, and reflexive capabilities).[43]

While the list goes on, even these few examples reveal a set of common traits. Apart from an obvious refusal to toe the party line, refuseniks share an almost mystical and idealistic urge to reclaim something undisputedly valuable that has either already been lost or is under threat. This is doubly interesting when we take into account the notable absence of an equivalent to the word *refusenik* within the Japanese language discourse on the issue of Fukushima farmers. The implications of this are not to be dismissed when considering the preoccupations of this chapter. That is to say, it appears that the romanticised image and elevation of the refusenik farmers' actions in the English-language media and scholarship

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[42] As suggested by dictionary sources such as the *Merriam-Webster* or *Oxford Dictionary*.
[43] The above-mentioned examples were retrieved from Google Scholar search results.

holds no place in Japanese. Such connotations are practically superimposed on the farmers, lifted out of their lived-in context and thus projected into global visibility.

What, then, is at stake when it comes to the refusenik farmers of Fukushima? Clearly, they are resisting or refusing to accept something: the government's inability to fix the broken world, the feeling of being left behind, their perceived unproductiveness, and the very uncertainty of their future. However, it is the animals, or the refuseniks' kinship with them, that provides what is necessary for their actions to be elevated to a place where an almost untouchable layer of validity is added, where what they do begins to be perceived as pure intention, the mystical seed from which a new sociality could be born.

Unable to reflect on the perilous future into which they proceed, the animals are at once vulnerable and resilient, a reminder of humankind's (soon-to-be or already) lost connection with the world. While the refuseniks' solidarity with the animals may be well-intentioned, their stance needs to be recognised as a strategy of sorts. Perhaps it is instinctive rather than calculated and self-serving, but it carries consequences. For one, it acts as a buffer between the refuseniks' defiance and the state. Aligning oneself with the animals provides an unquestionable reason to resist and take action. It offers absolution for any trespasses against the authorities' prescribed order. Also, as mentioned above, it aids in almost apotheosising the refuseniks in the eyes of the world, as can be seen in the way they are portrayed in both the media and scholarly work.[44] With the abandoned animals at their side, the refuseniks

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[44] Some examples of glorification of the refuseniks can be found on the following sites: https://www.dailymail.co.uk/news/article-2292273/Radioactive-man-The-Japanese-farmer-living-crippled-Fukushima-nuclear-plant-care-animals.html; https://www.theguardian.com/environment/2012/feb/28/fukushima-rebel-farmers-feed-cattle; and https://sippo.asahi.com/article/11419458. In the English-language examples, words such as "loving care" are used and emphasis is put on the heroic act of putting refuseniks' own life in danger in order to take care of the left-behind animals. In the Japanese-language example, Matsumura's (one of the refuseniks) actions are compared to *bearing the cross* or carrying a heavy burden *on this heart* (i.e., *kokoro ni seotta juujika*) 「心に背負った十字架」. In the academic discourse, one example is the already mentioned Shukin (2016).

become much more than rebel farmers, and their plight gains the almost unassailable

sympathy of the outside world.

Unwittingly, however, the refuseniks also end up helping the government's cause.

While highlighting the state's failings, they simultaneously muddy the view of other issues in

need of attention. Moreover, the humanitarian lens through which the refuseniks' solidarity

with animals is framed in the popular discourse may possess a soothing (or *iyashi*, in

Japanese) effect on the rest of the troubled populace and thereby become one of the "arenas

for the soul to work out its pain" (Allison, 2012, p. 363) and restore its faith in humanity in

the face of the ongoing disaster. In this sense, the kinship's effects could be seen as planetary,

for anyone who sees the refuseniks and their charges braving the radioactive landscape of

post-Fukushima may feel their anxiety and helplessness soothed (or *iyasaremashita*).

Indeed, it is not insignificant that 3/11 took place in the midst of Japan's healing

boom, a trend which started with the burst of the economic bubble in the 1990s. Naturally,

the heightened precarity which appeared as a result of the Tōhoku disaster gave the healing

(*iyashi*) boom a new momentum. As discussed in Plourde (2014), of particular importance to

the trend has been the notion that direct contact with animals (especially cats) has healing

(*iyashi*) potential, with another buzz word, *fureai* or contact (between two parties, human and

nonhuman alike) becoming an additional reason for fostering interactions with animals. In

this light, the arrival (i.e., through the media) of supposedly selfless refusenik animal

saviours gains in potency and relevance.

Consequently, while only a handful of Fukushima refuseniks exist, their individual

defiance is reclaimed under the umbrella of already-mentioned "social zones of human

resistance" (Berardi, 2009, p. 219). Any participation in such zones, whether in the form of

online following, donations, or other types of activism, may create conditions whereby "the

soul can be soulful again" (Allison, 2012, p. 364). Hence, it may be tempting to view the

refuseniks' stewardship of animals as a selfless act of comradeship and/or a start to a new "social possibility" (Berardi, as cited in Allison, 2012, p. 351). However, this is problematic since the refuseniks' relationship with the animals seems to rely upon animality acting as nothing more than a metaphor for humanity.

This formulation of animality is regressive and is in line with Foucault's use of the notion (in *Madness and Civilisation*), where it appears to be "largely symbolic and imaginative, and has little or no contact with animals understood as living biological organisms" (as cited in Palmer, 2004, p. 82). Indeed, scholars such as Shukin criticise Foucault and other philosophers inspired by him for their view and application of animality. Shukin (2009), for one, deplores the fact that for them, "animality functions predominantly as a metaphor for that corporeal part of "man" that becomes subject to biopolitical calculation" (pp. 9–10). This means that as long as man can be reduced to a biopolitical body—a body that is subject to and exposed to death—there must a priori exist a species-based distinction (i.e., a species divide) between that body and nonhuman animals. This distinction, in turn, allows for the indiscriminate termination of the life of animals (Shukin, 2009, p. 10). Biopolitics, she contends, depends on this division (2009, p. 11) against which animality serves as an object of political contrivance.

Moreover, the refuseniks and animals share the same fate, not just because the former decided to stand up and remain by the latter's side but because both were deemed unproductive by the state. Their solidarity is borne out of the realisation that to the market of exchange, both the farmers and their animals represent just one variable in the profit-making machine of capitalism. However, from the point of view of the refuseniks, all is not lost. Thus, though their plight may appear desperate, they seem to be embarking on a quest to validate their own existence as well as that of their animal charges. Here, the preceding discussion of animality comes to the fore.

The existing species divide permits the refuseniks to see themselves as champions of a *change of perception*, one in which the abandoned animals' lives are unproductive and, therefore, disposable. On the one hand, looking after devalued animals becomes a form of protest and a raison d'être for the refusenik farmers. On the other hand, their doing so represents an act of biopolitical management of animal life, for example, by extending animals' lives and deaths given their exposure to radioactivity. However, the refuseniks' actions are a management of the perception that their lives need to carry a certain productive weight in order for them to be justifiably maintained and prolonged. Moreover, one should not forget that positioning (and managing) animals in this manner fails to take into account the possibility of perceiving them as active participants, the aforementioned fellow stakeholders in the creation of the "alternative sociality"[45] discussed by Allison. Consequently, nonhuman animals constitute pawns in the refuseniks' own game. After all, the animals' lives (and deaths) remain within the purview of biopolitical management at the hands of the humans, which is particularly apt with regards to farm animals whose lives' value is directly commensurable with the interest of the state (Shukin, 2016, pp. 10–11). Refuseniks' attempt to effect a change of perception is undertaken from the premise of the previously mentioned species divide and thus fails to create a *dissensus* (i.e., a disagreement) that could constitute a "fissure in the sensible order"[46] of subject position vis-à-vis animals. This indeed is a missed opportunity and exactly why I believe the refuseniks' defiant acts are incapable of offering a way out of the trappings of the neoliberal state.

Not all would agree with such a position, however. Shukin (2016), for instance, holds the opposite view. In her discussion of the Fukushima refuseniks, she frames their act of defiance as an "art of dying" and pits this act against the neoliberal nuclear state's sponsored

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[45] Allison (2015) responding to Kitagawa.
[46] Shukin (2016, p. 6) here quotes Ranciere's concept of *dissensus*, which she positions as "a stark challenge to the ontological compliance" (i.e., a sense of perception in the face of catastrophe). For her, Fukushima's refuseniks are champions of such *dissensus*.

resilience. Such resilience, to extrapolate from Shukin, forms part of a biopolitical resource, and the defiance of the refuseniks (whom Shukin *does not* consider to be resilient) significantly undermines its potency and usability. More importantly, for my argument at least, she calls on Foucault (again) and his formulation of animality "as an exercise" (Shukin, 2016, p. 10)[47] capable of offering a glimpse at a possibility of postcapitalist existence.[48]

For practical reasons, however, it is impossible to entirely disentangle oneself from the market of exchange. Therefore, the only way of creating a true alternative to the current mode of capitalist existence would be through a complete reshaping of a hierarchical order of value-governing general consensus on who matters and how much. This would have to be accompanied by a major reshaping of the scope of human responsibility with and towards the natural world, which in turn would necessitate a shift in a general sense of perception (i.e., how humans view themselves in relation to the ecosystem they are a part of). In addition, the notion of economic productivity or lack thereof is complicated by divisions that exist among the broad category of animals inhabiting the exclusion zone alongside the refuseniks, notably the aforementioned affective labour of companion (and other) animals[49] and the question of whether this labour cannot be seen as profiting both the refuseniks and the neoliberal state in its hunger for resilience.[50]

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[47] Shukin (2016) recounts Foucault's discussion on the "cynical mode of life" in *The Courage of Truth* (1983–84) where he suggests that by being "indexed to nature, and only nature, [it] ends up giving a positive value to animality" (p. 282). Shukin continues: "More than just a "material model of existence" (p. 283), Foucault proposes, "[a]nimality is an exercise. It is a test for oneself, and at the same time a scandal for others." For Shukin, the refuseniks' kinship with animals in the face of deadly radiation (i.e., the art of dying) equals a "practice of animality" and constitutes a suggestion of a new mode of existence outside the neoliberal economy.
[48] All the while, Shukin (2016) is acknowledging that such a proposition would have to grow out of a nuclear wasteland (or "nuclear ruins") into a radioactivity-laced future (p. 1).
[49] This is referring to my argument about the soothing that can arise from observing refuseniks looking after the abandoned animals, regardless of whether they are farm animals or companion species. The latter, it could be argued, presents an even greater scope for affective labour performance due to their actual physical closeness with their human guardians.
[50] As I mentioned earlier, the well-being of humans is linked with that of their pets, which in turn would bear on their productivity for the state.

Containment and Spectacle: The Zone, Zoos, and Natural History Museums

While the economic aspect of the human/nonhuman animal relationship is noteworthy, in what follows I will emphasize the chapter's main critique, namely that the discourse surrounding refuseniks fails to challenge the ontological hierarchy between humans and animals, and thus cancels the possibility of the previously-mentioned new sociality, while exposing a layer of fallacy woven into the human/animal kinship. To that end, I will now examine the specificities of the zone by drawing parallels with the modern-day zoo and exhibitionary complexes such as natural history museums.

The conditions of the exclusion zone surrounding the Fukushima Daiichi Nuclear Power Plant—in particular within the first several years after the disaster—were such that both the left-behind animals and the humans who chose to return there became (in)voluntary experimental specimens. This has allowed the refuseniks to justify their continued existence within the zone. Permitting the de-valued animals of Fukushima to live is therefore beneficial to the state and knowledge because it furthers human understanding of the effects of radioactivity.[51] Although defying evacuation orders and returning to the contamination zone has permitted the refuseniks to regain some sort of agency, such civil disobedience carries risks that are potentially far greater than those resulting from continuous exposure to radiation. The refuseniks' defiance creates a situation in which humans and animals become objects of knowledge production: a biopolitical experiment observable from outside the zone

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[51] Acting as stewards of other specimens (i.e., nonhuman animals) allowed refuseniks to justify their rebellion in the name of a greater good and ensure that the animals fulfilled their presumed role in the cycle of (neoliberal) life. For this to happen, the animals needed to continue being trapped in the Agambian state of exception where, simply for being animals, their lives can be controlled and "noncriminally ended" (Shukin, 2009, p. 10). Just as the operation of the neoliberal machine is contingent on the biopolitical management of life, "discourses and technologies of biopower hinge on the species divide" (Shukin, 2009, p. 23). This is the same divide that continues to exist between the refuseniks and the animals (in which the former control the lives of the latter) and between the outside world looking in at the refuseniks and the animals enclosed (within a zone in which their shared precarious life is staged).

in which the human and nonhuman animals are exhibited alongside one

another, scrutinized like specimens (whether through the media or in academic

discourse) and thus made visible for outside consumption.

In some ways, this mirrors the pedagogical relations embodied in museums and zoos.

Natural history museums provide the public scientific community with "current and historical

specimens for their research."[52] Their collections of specimens have been repurposed for

exhibitory aims, in which death is a necessary step for knowledge creation and a crucial node

of value extraction. Thus, if something can lead to the production of knowledge, its life has

value and can be indiscriminately taken (or sacrificed). Similarly, with their regimes of

classification, registration, and regulation, modern zoos make a strong claim to being not

only stewards of conservation but also didactic bodies that shape "the right" understanding of

animal life. They educate the public and provide essential data in aid of protecting animals in

the wild.

In Bennett's (1995) *The Birth of the Museum: History, Theory, Politics*, museums are

framed as central to the relationship between government and culture. [53] According to

Bennett, the culture found in museums is capable of altering behaviours and disciplining the

public. In receiving culture, he argues that the viewing public of the museum is exposed to

knowledge and power, but rather than placed in opposition to it, the public is both its

"subject" and "beneficiary" (Bennett, 1995, p. 67). Power channelled through cultural

institutions is thus able "to organize and co-ordinate an order of things," effectively imposing

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[52] https://en.wikipedia.org/wiki/Natural_history_museum

[53] Bennett (1995) grounds his analysis in the work of Foucault, in particular with respects to his definition of disciplinary or governmental power. As means of contextualisation, it is worth outlining what is at stake in the volume. Bennett's discussion is put to work against the backdrop of the 19th century museum's rise to prominence, and his overarching purpose is "to provide a politically focused genealogy for the modern public museum" (p. 5), through examining them alongside other cultural institutions. According to Bennett, public museums grew in importance as part of a trend in which culture was, at the hands of governments, "fashioned as a vehicle for the exercise of new forms of power" (p. 19).

a certain order on people as well as influencing "tastes, values and norms of conduct" (p. 30). By using culture as a way of "winning hearts and minds as well as the disciplining and training of bodies" (p. 62), museums become "vehicles for inscribing and broadcasting the messages of power" (p. 61). In other words, the object of museums is to grow "self-regulating citizenry" which sees itself "from the side of power" (p. 63).[54]

Similarly, Braverman (2012)—whose ideas rely heavily on Foucauldian theories of governance—argues that zoos are first and foremost a project of knowledge production which relies on two distinct forms of visibility. The first creates a spectacle for the visiting public, while the second is indexical or bureaucratic in nature, and is as such devoted to the generation of practical knowledge through classification, naming, dossier creation, signing, and monitoring of animals' global accession numbers. All of these strategies render zoos easier to control. In addition, however, zoos are sites of panoptic surveillance,[55] adopting the dynamic of an exhibitionary complex where both viewers and animals are supposed to be managed and disciplined (in human/animal relations, for one). They are also places operating through the "ethics of care" (p. 42).

Of particular importance to zoos' operations here is Foucault's concept of "pastoral care," seen as a "managerial model" and applied in "the hybrid human-animal setting" (p. 188) which reveals strong interrelatedness between power and care and asserts that "to exercise care one must necessarily exercise a certain degree of power over the subject of care" (p. 42). That is to say, the promise of welfare protection for a species involves an implicit decision of sacrifice: first and foremost, a sacrifice of the freedom of those animals that are kept in captivity and studied, but also a sacrifice of life itself since for the good of the entire species, some individuals' lives are deemed a necessary price to pay. Thus, care of zoo

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[54] Bennett talks about the public "internalising [its] gaze."
[55] Braverman (2012) applies both Foucault's and Bentham's articulation of the term but extends its use to nonhuman animals within the less commonly discussed notion of panoptic surveillance as "an instance of the power of care" (p. 20).

animals and indeed care of any other life necessitates keeping watch over it in order to ensure its well-being but also presumes an understanding of what that well-being represents and the justifying actions needed to achieve it.

Not unlike the modern zoo, the Fukushima exclusion zone presents itself as a "carefully constructed, insular, and collectively administered ecosystem" (Braverman, 2012, p. 186). While the zoo's ecosystem is sustained and managed by the zoo's operating bodies through a determined dispensing of care "intertwined" (Braverman, 2012, p. 21) with disciplinary and pastoral power, the care within the zone is unreliable due to its finiteness.

Following the disaster, the burden of animal care relied almost entirely on the efforts of refuseniks who, in turn, relied on donations and support of volunteers. In contrast, the government focused on containment by drawing demarcation lines and issuing cull orders instead of offering any life-preserving alternatives. Given the zone's enhanced precarity, it would be difficult to claim it resembles the modern zoo's mission of conservation and thereby justify its containment and management of animals (Braverman, 2012, p. 42). However, in both cases, there seems to be an implicit understanding that this careful management—keeping animals in captivity in the enclosure of the zoo and elimination or abandonment of presumably contaminated animals within the zone—is a necessity and therefore justified. In the zoo, captive animals are sacrificed for the collective well-being of their counterparts in the wild. In Fukushima, the animals' contaminated status and the government's inability to provide for them are used as justification for their abandonment or culling. However, whether it be the modern zoo or the exclusion zone of Fukushima, for any management of a facility to be successful uninterrupted and organised surveillance over humans and animals within in needs to be carried out. This surveillance results in knowledge creation and, as already mentioned, is linked to visibility, which in the case of the exclusion zone, brings into focus refusenik-animal relations. However, the zone's physical conditions

seriously undermine the ambitions of successful surveillance, and while checkpoints exist, *they cannot hope to contain what they are ultimately meant to contain: radioactivity itself.*

Nevertheless, numerous artists, scholars, and activists from around the world have been spurred on by the zone's precarious conditions and utilised the area near the Fukushima Daiichi Nuclear Power Plant (as well as its human and nonhuman inhabitants) as source material or inspiration for their individual endeavours, which in the process of drawing attention to the reality of the zone's different layers of existence is also creating another layer of visibility, namely that of their own work. Thus, although the zone's physical remoteness means that its visibility cannot generally be experienced through direct contact, it is played out through the enabling work of human actors, with their labour pulling the invisible into the light.

Interestingly, in the process of turning the zone visible, these external human actors may end up also visualising the invisible: the radioactivity which imbrues the atmosphere therein. If making something visible means making it knowable and dividable by the senses, then what these individuals are doing is performing a gesture of taking control. Hence, the zone acts as a green screen against which the precarious existences of its inhabitants are enacted, resulting in a flattening whereby any distinguishing characteristics, as well as any hierarchical divisions between the bodies in the zone (i.e., humans, companion animals, farm animals, nondomesticated animals) are effectively blurred.

In a not dissimilar fashion, human actors also regulate the visibility within zoos. They achieve this via a number of different techniques which are aimed at enhancing or influencing the dynamics of seeing animals. For example, the angle of vision allowed the spectators can enhance a sense of awe. Exhibits are placed so that the human eye has to be directed upwards to see the animal (Braverman, 2012, p. 77) since looking down can diminish the sense of natural respect humans have towards wild animals. In addition, certain

zoos are reportedly taking the step to physically alter exhibits' design so as to guarantee "a good "shot" (Braverman, 2012, p. 80). Visitor cameras, as well as those documenting the movements of captive creatures, however, serve as reminders of "the inherent tension between authenticity and artifice" (Braverman, 2012, p. 80) of human and animal encounters. Indeed, the question of humans seeing (and being seen by)[56] animals is highly problematic. As Berger (1980) argues, zoos can never fulfil their promise of providing humans with the possibility of not only seeing animals but being seen by them.

Finally, in modern zoos, encounters with the animal gaze are supposed to help discipline humans into caring for the species individual animals in captivity represent and the entire wild population outside of the zoo enclosure (Braverman, 2012, p. 44). However, a zoo's design can also deny the visibility of infirm or old animals so as to "maintain the zoogoer's immersion in a pleasant image of nature," making sure "even nonviolent natural events such as sickness, ageing, and death are rendered invisible at the zoo" (Braverman, 2012, p. 68). The realities of the postnuclear-meltdown zone complicate such didactic ends since its inhabitants are not only withdrawn from view, many are simply no longer there. In addition, when the unsightly is visualised and exposed in the zone (for example, in pictures of dead carcasses of the starved animals), its power to influence the affective responses of its audience cannot be overlooked. In light of this analysis, let me now turn to an iconic photograph of another refusenik in the following section.

On the Side of the Animal: A Portrait

The photograph of the refusenik Matsumura Naoto [cf. Appendix B], which comes from a series called "Fukushima no-go zone,"[57] was taken by Carlos Ayesta and Guillaume

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[56] Braverman (2012) also argues that while hoping to discipline their public in the appropriate way of gazing at animals, many zoos are pointing to the least threatening ways of doing it all the while warning the visitors that indeed most of the zoos' residents cannot and will not return a human gaze (p. 79).
[57]https://www.fukushima-nogozone.com/copie-de-fukushima-no-go-zone

Bression and illustrates many of the major themes discussed thus far. Of all the Fukushima refuseniks, Matsumura of Tomioka is perhaps one of the most celebrated. As stated in numerous newspaper articles, as well as one of several volumes dedicated to him (e.g., Pagnotta, 2013), Matsumura, a then 51-year-old farmer, decided to return to his farm in the evacuation zone to care for his (and others') abandoned animals following an abortive attempt to evacuate with the other town residents. Fearing they would be contaminated due to his exposure to radiation, his own family had reportedly rejected him. On top of Matsumura's dissatisfaction with the conditions at the evacuation centre, the family rejection facilitated his decision to go back and stay in the exclusion zone in an apparent bid to care for the left-behind animals,[58] in complete defiance of the government. Details such as these are important when poring over the countless online images of Matsumura because they help paint a clearer and more comprehensive picture of his motives for returning to the exclusion zone.

To date, Matsumura has been visited, photographed, and filmed extensively, has had his name petitioned for a Nobel Prize,[59] internet sites devoted entirely to him,[60] been invited on several fully-sponsored international trips, and been the object of fund-raising by organizations around the world. To some extent, this is not surprising given that he was, for a while at least, the sole returnee to Tomioka. As is evident from a closer reading of what has been written about him however, Matsumura's life today is not what it was in 2011. In fact,

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[58] As mentioned earlier in the chapter, incorporating animals (efforts to rescue them, stories of them being reunited with their owners, and stories of them being abandoned) into the post-3/11 picture gives "human face" to the disaster aftermath management. The effect seems to be intensified when companion animals are featured, which may be seen as one reason for Matsumura's celebrity. Countless publications heavily featuring abandoned pets are testimony to the above. Among them, the photo albums of Ota Yasusuke (2011, 2015) are a good example.
[59] https://www.change.org/p/nobel-price-for-naoto-matsumura-the-last-man-of-fukushima
[60] The following two are just some of the existing sites, including blogs and fun-rising sites: https://naotomatsumura.weebly.com and http://ganbarufukushima.blog.fc2.com

he is no longer even the sole resident of Tomioka.[61] Naoto Matsumura was initially hailed a hero and frequently called the guardian of abandoned animals by his supporters.[62] Indeed, it is this romantically humanitarian angle that seems to have caused his fame and guided the eager hands of photographers lining up to take his pictures.[63]

At first glance, the photo [cf. Appendix B] is nothing more than a posed portrait of Matsumura in an abandoned barn. Nothing unusual there perhaps: The viewer is well aware they are in the exclusion zone post a natural (and manmade) disaster. A soft beam of light is directed at Matsumura but the light's greatest concentration is in the background where natural lush green melts from right to left into atomic-like white and then back—as if in an invisible circle—into near obscurity. Matsumura is sitting on a grey brick wall, perhaps a metre away from where the wall turns at a 90° angle, with his gaze directed at what resembles a pile of rubble but is actually the scattered bones of a dead animal. There is a certain sad serenity to Matsumura's face, and his lowered eyelids suggest an air of quiet contemplation. However, it is essential to recognise the performativity of this image.

As already mentioned, the photo constitutes just one image of a meticulously engineered project for which the inhabitants of the exclusion zone had been asked to return to their destroyed and abandoned homes and/or places of work. The result is a set of highly

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[61] The currently defunct "Kizuna for Naoto" site (https://kizunafornaoto.com/2018/04/22/le-nouveau-defi-de-naoto-matsumura-par-antonio-pagnotta-17-avril-2018/) used to provide up-to-date information concerning Matsumura's everyday struggles. It also included not-often-mentioned facts, such as that he had a baby with an estranged wife, that his now-deceased father returned to live on the farm a few years back, and that his enormous fame has not always brought positive results. The site stopped operating while in the process of completing this thesis.

[62] However, when analysing the image of Matsumura and discussing the discourse surrounding him and other refuseniks, my aim is to resist superficial interpretations of their actions. That said, my analysis is in no way an attempt to take away from the extraordinary help that Matsumura and others like him have no doubt been to the abandoned animals ever since the 2011 disaster.

[63] Like most refusenik photo albums, the following two devoted to Matsumura portray him as a jovial man perpetually surrounded by his animals, many of which are in no way restrained. The atmosphere of the photo chosen for this chapter is somewhat at odds with this positive, laid-back image. Yususuke's *Shiro, Sabi, and Matsumura* (2015) is just one example of a volume devoted exclusively to Matsumura.

staged and rather eerie images where individuals are portrayed "mid-action," surrounded by cobweb-covered objects.[64]

While each photo in the "Fukushima no-go zone" series displays the same affective relationship with light and shows its subjects in sad contemplation, what sets the photo in Appendix B apart is that it depicts the only human accompanied by what was once a living member of another species. Equally, none other stands with a nonhuman animal, and none other is faced with such clear irreversibility.[65] Arguably, the camera—positioned directly in front of the corner where the wall breaks at a right angle and departs in two opposite directions—simultaneously documents a disappearance and an arrival. On the side of the dead animal, there is either darkness or a bone-like whiteness. Meanwhile, on the side of the "undead," there is a living green. The photo could thus be read as depicting its subject caught between alternative layers of existence (i.e., between being and being no longer), where the layers fold into one other and boundaries seem blurred. Each layer is separate, and each is its own extension. The viewer cannot see the limits of the enclosure where the man and the animal are contained, and they cannot be certain if the rest of the enclosure is bathed in light or covered in darkness. Moreover, it is hard to ascertain the nature of the relationship between the man and the animal. It is also difficult to determine whether only these two were present when the photo was taken, although this is obviously possible if we suspend our disbelief and mentally erase the potentially large crew who were present at the shoot.[66]

What *is* clear, however, is that we are looking at a document of disappearance. The ghostly precarity stalks the scene: The man is gazing at the skull, or more precisely, what was

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[64] The authors claim the series is "profoundly linked to photography's role as a documentary medium" but does not represent a pursuit of truth per se. As "a form of operational neutrality that allows photographers to assume a position and express themselves," Ayesta and Bression explain their oeuvre has "a demonstrative dimension" and they admit to using photography through "its interpretative relationship to the real." For more on the series, go to the following site: https://www.fukushima-nogozone.com/copie-de-fukushima-no-go-zone

[65] While the remaining photographs in the series present residents in their abandoned and destroyed homes and former places of work, none feature death.

[66] The shooting process can be seen in the following short documentary: https://vimeo.com/112469977

once a face of a dying cow. The animal's jaws are pictured wide open as if in a "mid-roar" of agony. A voiceless cry of the voiceless. The rest of the animal's bones, meanwhile, are arranged in a way that is reminiscent of a natural history museum's exhibit of some long-extinct species. Equally, it could be argued that the man is also an exhibit. Indeed, both Braverman[67] and Bennett[68] talk of a once relatively common practice of exhibiting humans and animals together. The natural history museum dynamic of the image is further enhanced by the bones' positioning within the frame of the picture. Indeed, the skeleton takes centre stage and occupies almost fifty percent of the entire photograph, the dead animal's head resting in a desperate gesture of a failed escape, ensnared by the metal bars of a zoo-like enclosure through which its feed would have most likely been served by a human carer.

What *can* we then surmise about the man's relationship to the animal? Sitting placidly by the animal's side, Matsumura appears to have come not as a saviour but as a companion to the animal's remains, perhaps a former guardian or even a silent and powerless observer. The animal no longer possesses a gaze with which to arrest the human and hold him accountable for what has become the animal's fate. Instead, the man is looking blankly at the dark sockets where the animal's eyeballs once lay. The man is thus bearing witness to the result of humans (i.e., the state) withdrawing care for the animal and his human comrade(s).

The scene epitomises the highly fragile existence of the container that we know as *Fukushima*. The *liveness* of animals, which was supposed to be the source of vitality and hope for the postdisaster humans, can no longer be relied upon. At the same time, the photo

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[67] According to Braverman (2012), human zoos used to exhibit "unusual humans" as well as "indigenous people" next to animal exhibits (p. 73). At the turn of the century, (Western) people were not beneath deliberations of not only "who was and who was not human" but also or perhaps rather, whose humanity was of a higher rank, in other words, "who was more human." Consequently, instead of simply displaying humans, they exhibited "animalized humans" or "the missing link necessary to account for the transition between animal and human history."

[68] Bennett (1995) mentions the practice of exhibiting human remains of "primitive peoples" in relation to remains of "still extant peoples"[68] as well as stuffed animal bodies (p. 79). Such displays strengthened the rhetoric of progress and hierarchies alike.

depicts a cautionary return to the future or even a postapocalyptic zoo where the extinction of one species is observed by the watchful gaze of another, a hybrid species that represents both perpetrator and victim. In this sense, therefore, Matsumura's presence is both an accusation and a lament. But this is not a two-way affair. In other words, it is not only a question of Matsumura and the dead animal, nor is it simply a question of refuseniks using animals for their own aims. The two had to be photographed by a photographer, written about by a journalist or a scholar for whom the refusenik(s) and the animal, tied into one, act as a surrogate for their own critique, their accusation of the state's inability to effectively deal with the situation. However, as these human actors utilise refuseniks and the animals to accuse the state, they are forgetting that as humans, they are also imbricated into the creation of the problem they are now protesting against. Furthermore, as a consequence of residing in the exclusion zone and being bound to their animal charges, refuseniks themselves are ironically living symbols of the human failure to remove the species divide their kinship with animals perpetuates. It is the same blurry and malleable divide that allows for refuseniks to be lumped together with the nonhuman animals, permits them to biopolitically manage animal lives, and results in them being used by the representatives of their own kind.

It would, therefore, be facile to use the above-mentioned expression of lament (of the refusenik, as a stand-in for other humans) as a justification for the presumed and much-lauded humanitarian instinct that supposedly fuelled Matsumura's resolve to return to the no-go zone and thereby assume the role of guardian-of-the-left-behind. Something more disquieting is clearly at stake. Just as he was a left-behind (at least at the time of the picture being taken), he *is* now part of the spectacle for the viewing public of the virtual museum of the Fukushima exclusion zone. A wax-figure-like presence framed (photographically and symbolically) as a disposable life on the side of the disposed within in a spatially porous

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precinct of the zone. In this sense, the *zone* is no longer a place on the map but a condition of existence.

Concluding Thoughts

Within the exclusion zone of Fukushima, precarity is culture *du jour* and is played out against a green screen of radioactivity which is both limitless *and* limiting. Refuseniks, by definition, reject their position of impotent objects of power, defying the authorities' orders so as to become subjects and regain control against the backdrop of unabatedly intensifying precarity. However, this dynamic is complicated by the invisible clout of radioactivity permeating all involved bodies and imposing limits on their temporal boundaries. Radioactivity thus becomes a regulating power. It invisibly delineates the zone's purlieus and dictates the power relations within it, inscribing the contents of what becomes staged (and for whom) within its precincts.

When drawing parallels between the exhibitionary complex and institutions of panoptic surveillance, Bennett (1995) aptly quotes a section of a "Short Sermon to Sightseers", saying "Please remember when you get inside the gates you are part of the show" (pp. 68–69). If applied to the conditions of the exclusion zone, refuseniks and their animal charges become not just *part* of the spectacle but the spectacle *itself* and are therefore external to power. Becoming the spectacle itself costs them the possibility of creating a fissure in the existing sense of perception, controlled by the neoliberal state because it means they are part of this perception. This spectacle is dictated by and played against a radioactive background that quietly cripples the possibility of refuseniks changing the subject/object positioning in their favour. Thanks to its pull, it is radioactivity that seems to be the subject while both the human and nonhuman animals are objects to *and* of it. However, it would be a mistake to see radioactivity as an agent in its own right. While it is certainly hard to control,

radioactivity needs to be seen as a force, a tool at the disposal of the state and the human and nonhuman animals as objects *subjected* to it. When pulled out of obscurity into atomic visibility through the media of photography,[69] refuseniks and their animals are the observable objects to the outside world. Consequently, similarly to the powers at work in the exhibitionary complex in its capacity to create an order and dictate people's place in relation to it (Bennett, 1995, p. 67), the exhibitionary dynamic of the exclusion zone stages a shift, conferring upon the refuseniks the elusive privilege of being subjects only within the zone and arguably only vis-à-vis the nonhuman animals they are in kinship with.

As is the case when imposing precarity, the zone's radioactive status quo also works for the benefit of the neoliberal state. By not regulating radioactivity, whether out of inability or negligence, and by not openly discussing the reality of the radioactive pollution, the government is able to exercise power over the unadapted and vulnerable bodies of the zone's inhabitants. Basically, the state can *control by withdrawing control* (over the zone, its residents, and the radioactivity it is permeated with) or *regulate* by leaving conditions in the zone *unregulated*. Thus, abandonment is a form of control, and it works in a similar way to precarity, paralysing and motivating at the same time. Much in the same way internalising of the gaze leads to self-surveillance in Bennett's museums,[70] by allowing the unregulated radioactivity to be *internalised* by the bodies of the zone's abandoned residents, the state is able to create self-regulating neoliberal "subjects" whose self-imposed set of attitudes and rules is delimited by the boundaries of their rebellion against it.[71]

A similar paradox is at play when it comes to the visibility of refuseniks and the animals. Defying the government while taking the side of the left-behind animals makes the

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[69] However, they are arguably also visualised in other forms of artistic expression, through activism, in literature, and in academic discourse.

[70] Bennett(1995) talks about the public internalizing [its] gaze" (p. 63).

[71] It could be further argued that this complicated subject/object position of refuseniks means they cannot be seen as creators of a new reality in opposition to the neoliberal state.

refuseniks an uncomfortable presence for their government, while at the same time rendering

them visible through the exhibitionary work performed by photographers. Whether alive, in

the process of dying (refuseniks and the animals they look after), or already dead (carcasses

of the left-behind animals), the "exhibits" of the virtual museum of Fukushima exclusion

zone are physically limited by radioactivity. In turn, radioactivity becomes both a condition

for their existence (i.e., the reason for their slow decline) and a guarantee of their visibility,

particularly if we consider radioactivity's relationship of dependence with photographic art.

The government's withdrawal of care and regulatory capacities with respect to radioactivity

is thus the enabling power for the staging and display of precarity when living within the

zone.[72]

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[72] Just as Bennett wonders whether the exhibitionary complex could be likened to a carceral archipelago, the same could perhaps be asked of the Fukushima exclusion zone. Indeed, objects and bodies within it are withdrawn from public view (Bennett, 1995, pp. 59–60), and while it is feasible to claim, for example, that refuseniks, as rogues, are punished for their rebellion by the abandonment of care on the side of the government, it would be much harder to claim the same in reference to the animals. Punishment cannot be inflicted on a party not cognizant of its wrongdoing. In addition, refuseniks exercise free will in returning to the zone, even if, as has been claimed, they may have been deemed as polluted and thus *unwanted* by the community. With this in mind, I have chosen not to engage with part of Bennett's argument in *The Birth of the Museum.*

Chapter 2: The *Miracle Pine*

According to reports, the 3/11 tsunami tore through an estimated 561 square kilometres and, together with the earthquake, claimed the lives of almost 20,000 people.[73] Town names such as Ōtsuchi and Rikuzentakata in Iwate prefecture became known for being some of the hardest hit. And yet, not all life and hope were obliterated that fateful afternoon. In a borderless sea of debris, a pine tree—the lone arboreal survivor of a once 70,000-strong thicket—stood defiant and would soon be transformed into an emblem of much-needed hope.

This second chapter opens by situating the *Miracle Pine* against the call for political change and an essentialist rhetoric. It next outlines the pine tree's trajectory from lone arboreal survivor of the tsunami to symbol of a uniquely Japanese resilience in the face of disaster. This is followed by a discussion of Japan's so-called tradition of animism and the *Miracle Pine* as seat of animist investment. The chapter then provides an overview of the history of nuclear power generation within Japan, moving on to a comprehensive examination of the human infrastructures which surround and sustain the *Miracle Pine.* In particular, attention is paid to the interconnected nature of such infrastructures and an argument is made against the tropes of ethnic environmentalism. The chapter then explores the different mediatic incarnations of the *Miracle Pine* as a tool to promote the government-sponsored discourse of resilience. The chapter concludes by couching the *Miracle Pine* as a Foucauldian *dispositif* of government and a site of biopolitical management of (non) life.

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[73] The official figures vary depending on the investigative body, but the numbers range between around 16,000 plus 2,500 still missing and the above-quoted 19,575. For examples, see the following: http://www.fdma.go.jp/neuter/topics/houdou/h29/09/290908_houdou_1.pdf and https://www.livescience.com/39110-japan-2011-earthquake-tsunami-facts.html

A Sea-Change of Politics and Rhetoric

It goes without saying that the implications of this disaster and its aftermath were of cataclysmic proportions, and not just in terms of human cost. The earthquake and the nuclear meltdown that followed ended up entering communal consciousness as the indexical-in-nature "3/11." placing it alongside other sets of figures signifying traumas, right next to 9/11 (Shukin, 2016; Thouny & Yoshimoto, 2017) but certainly not far off other events such as wars which call for effective practices of combative containment and urge preparedness in the face of a future threat. All such desperate times have called for desperate measures and a reconfiguration of the status quo of governance. In the case of 3/11, the response of the administration in power could be certainly described as wanting. In this light, it is perhaps not a surprise that soon after the disaster, the rhetoric of change began to prevail in the media, as well as political and academic discourse (Samuels, 2013, p. 97). It seemed as if the characteristically soulless, top-down approach of Tokyo politics would no longer suffice. Voices within the media and the popular discourse talked about the need for Japan to regain its sense of self and agency over its destiny, for which new powers needed to be activated. It could be argued a situation such as this required new entities, both human and nonhuman, to be marshalled, and a new vocabulary to describe the emerging reality to be constructed.

According to Samuels (2013, p. 97), the word *rebirth* (*saisei* or 「再生」 in Japanese) when coupled with Higashi Nippon Daishinsai (Great Eastern Japan Disaster in English), generated millions of hits following 3/11. Samuels further argues that voices on the right of the debate over Japan's future, such as those of Ishihara Shintaro or Umehara Takeshi[74] (both known for their essentialist ideas regarding a supposed Japaneseness) invoked the need for

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[74] The former is one of the most prominent right-wing politicians as well as an author who, at the time of the disaster, served as the Governor of Tokyo. The latter is a famous philosopher from Kyoto University known for the very controversial theory of Japanese essentialism, i.e., Nihonjinron.

the Japanese to rid themselves of greed and excessive consumption, calling instead for a return to a purported tradition which privileged the unique relationship between the archipelago's inhabitants and nature (Samuels, 2013, p. 99). The then-incumbent prime minister, Kan Naoto, became an object of intense criticism for his (mis)management of the disaster aftermath, something which soon cost him his leadership. Shortly after Kan's successor Noda Yoshiko took power, however, the public chose change. Gripped by growing precarity and disoriented by conflicting opinions—some calling the disaster an opportunity,[75] others claiming Japan needed to "stay the course" (Samuels, 2013, p. 99)—Noda's departure signified a return to the former political order. The now-defunct Democratic Party of Japan, which Kan and Noda represented, had been in power following a landslide victory in 2009 after over fifty years of uninterrupted rule by the more conservative LDP, or Liberal Democratic Party (Kushida & Lipscy, 2013). It is against this backdrop that the *Miracle Pine*, as the 250-year old tree came to be known, surfaced.

From a Pine Tree to the *Miracle Pine*

The *Miracle Pine* stands in one of the most disaster-afflicted zones in the Tōhoku region. Following its discovery, the pine was instantly portrayed with romanticized exultation by the mainstream media, with news of the tree often accompanied by evocative music or "inspirational" stories aimed at encouraging a warm-hearted reflection about the resilience of the Japanese spirit. The tree began to be described with highly emotive vocabulary, was quickly named a symbol of recovery,[76] and subsequently became associated with hope and

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[75] Abe Shinzo, as quoted in Samuels (2013).
[76] *Fukkō* or 「復興」 in Japanese, as featured for example in the following:
http://www.asahi.com/special/10005/TKY201103260461.html

miracle by the mainstream media.[77] Not long after the disaster, Yanase Takashi, the creator of the famous *Anpanman* anime series, was asked to name seedlings created from the original tree before it began to die[78] and, to complement the occasion, he composed a commemorative song in which the tree—predictably, anthropomorphised—professed to be "a friend of all the lives" and, as such, one that "ties lives together."[79] Of course, it was not only the *Miracle Pine* that triggered emotional responses. The sheer scale of the disaster combined with strategic reporting may have been excuse enough for some to fall prey to such tropes of essentialism and the glorification of Japanese uniqueness. A notable example of this was a speech delivered by Murakami Haruki in the aftermath of the disaster, where he extolled the purportedly unique Japanese ability to appreciate beauty even in the face of devastation, calling upon the image of communal cherry blossom viewing and thereby portraying the collective and ethnically singular robustness of the people of Japan (Marran, 2017, pp. 7–8).

The extent to which such evocations had an impact on the populace is debatable, and the dangers of such essentialist subsumptions fall outside the scope of this inquiry. It is important to note that my use of the term *subsumption* is not referring to Marx's use of it in his theorisation of the capitalist mode of production. Rather, it loosely reflects the term's philosophical origins in German philosophy (i.e., Kant, Shelling, Hegel), where it concerns the dynamic relationship between something universal and particular, providing the particular is logically identifiable as part of the universal.[80] Consequently, by *essentialist subsumption* I mean a process in which the particular *cherry blossom viewing* is subsumed under *Japanese*.

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[77] *kibou* or 「 希望」 and *kiseki* or 「奇跡」 respectively. These words feature, for example, in the following: http://www.asahi.com/special/10005/OSK201106140038.html and http://www.asahi.com/special/10005/TKY201106280283.html

[78] http://www.asahi.com/special/10005/TKY201106280283.html

[79] In Japanese: *minna no inochi no tomodachi* or 「みんなのいのちの友達」 and *inochi wo tsunagu tomodachi* or 「いのちをつなぐ友達」. These terms can, for instance, be found in the following: http://www.utagoekissa.com/utagoe.php?title=rikuzentakatanomatsunoki and http://www.asahi.com/special/10005/TKY201106280283.html

[80] https://endnotes.org.uk/issues/2/en/endnotes-the-history-of-subsumption

In other words, cherry blossom viewing is an instance of appreciation of beauty which, in Murakami's case, is doubly subsumed under communal activity *and* an activity performed in Japan, which thereby turns cherry blossom viewing into something *Japanese*. General assumptions about what traits are necessary in order to appreciate beauty thus help to symbolically elevate the Japanese above other peoples. Furthermore, positing that the Japanese retained their unique ability to appreciate beauty at times of an out-of-the-ordinary situation, strengthens the effect of such an elevation, however questionable this elevation may have been to begin with. What is incontestable, however, is that the situation on the ground after the disaster was in utter disarray and that (for good or ill) local residents and subsequent governments latched on to the tree.

While the preceding section provides an overview of the more immediate background against which the *Miracle Pine* came into existence and the shape this existence took, to fully grasp the complexity of what the *Miracle Pine* signifies and the force it is able to exude, it is crucial to briefly examine the discourse surrounding the concept of the so-called tradition of animism and the history of nuclear power generation in Japan. The former allows us to contextualize the aforementioned affective investment visible in the elevation of the *Miracle Pine* to a symbolic status. The latter points to similarities between the trajectory of the post-Hiroshima and Nagasaki introduction of nuclear power generation in Japan and strategies used to sway public opinion, as well as the way with which the post-3/11 governance tried to affect the acceptance of the precarious status quo and directions for the future.

The *Miracle Pine* and Japan's Animist "Tradition"

This post-3/11 governance and media gesture of turning to the *Miracle Pine* as a seat of animist investment is not unusual for at least two reasons. One is the narrative professing the existence of a deeply entrenched "tradition" of animism in Japan, which has been

reductively claimed as the basis of Shintō, the country's supposed indigenous system of belief. The other may be attributed to the recently renewed interest in animism per se.[81]

Historically, Shintō is a set of diverse religious rituals which have been utilized to strengthen political power (Nelson, 2000, p. 10), involving, in more recent history, complicity in various attempts to obscure Japan's wartime responsibility and conduct (Nelson, 2000, p. 15). In the Meiji (1868–1910), Taishō (1910–1921), and early Shōwa periods (1921–1945), Shintō was promoted as a "national faith" (Nelson, 2000, p. 11). Indeed, the Meiji government, in a bid to reduce administrative costs, strengthen control over the newly-created nation-state, and provide the country with a unified sense of identity whilst ridding it off any scent of shamanism, undertook a project of "modernisation." Part of this project consisted of merging (or destroying) countless small shrines and putting them under state control,[82] as well as foregrounding emperor worship. Thus, institutionalized Shintō became partly responsible for providing the nation-state of Japan with a deadly war ideology which culminated in imperial Japan's involvement in the Second World War and ultimately led to the loss of lives of countless victims (Yoneyama, 2018).

Although Shintō (as a state institution) and emperor worship were constitutionally rescinded after the war, to this day, Shintō is still used to promote nationalism[83] and is linked with the right-wing rhetoric of *nihonjinron* (i.e., a theory of Japan's uniqueness). Certain scholars even emphasize that Shintō's mission is to build "a sense of continuity, stability and the management of uncertainty" (Nelson, 2000, p. 243). Also, there still exists a school of

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[81] According to Yoneyama (2018, p. 17), scholars such as Bird-David and Harvey can be credited, among others, for animism returning as a theme of debate and a source of renewed interest.

[82] In 1906, as part of the move to "modernise" Japan, a limit of one shrine per administrative unit was introduced resulting in numerous lesser shrines being levelled (Yoneyama, 2018, p. 132).

[83] Exemplified by the contentious visits of the nation's prime ministers to Yasukuni Shrine where the war dead, including convicted war criminals, are enshrined.

thought positioning Shintō as a uniquely Japanese tradition,[84] extolling its superiority over other traditions and religions, and even going so far as to claim it can offer solutions to environmental (and other) problems facing humanity, due to its "animistic" and "holistic" perception of the world (Prohl, 2007, p. 369). Nonetheless, according to Rots (2014, p. 25), it is generally accepted to be virtually impossible to talk about a singular notion and tradition of Shintō. Indeed, throughout history, Shintō came to mean different things, even if it is arguably one of Japan's oldest establishments involved (or employed) in influencing a sense of local or ethnic identity (Nelson, 2000, p. 3).

The 3/11 disaster may have inadvertently given Shintō new strength when the rhetoric of reconstruction was supplemented by a narrative requiring the "resurrection" of traditional culture, a sense of harmony and morality (Rots, 2014, p. 23).[85] Indeed, while Shintō has continued to be promoted (by some scholars as well Shintō institutions themselves) as an expression of "primordial spiritual tradition of the Japanese nation," since the 1980s it has been further reinvented as "animism" whereby the very notion of animism becomes supposedly synonymous with Japan. Such appropriation of animism helps construct the image of Shintō as an ancient nature-worship which can henceforth be promoted by the proponents of ethnic environmentalism as an environmental solution (Rots, 2014, p. 26) for Japan and even the world.

Very broadly speaking, and in relation to this thesis' point of interest, Shintō can be described as a set of practices and beliefs which epitomize an understanding of "human-

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[84] Nelson (2000) recounts that the kanji characters representing Shintō (literally "the way of the *kami*" where *kami* means deities in English), were originally introduced from Chinese Taoism in the 6th century as a way of distinguishing Buddha worship from local worship of various deities. The concept of Shintō can, therefore, be seen as a sign of early self-assertion and recognition of local traditions even though, as Nelson stresses out, it was done without any acknowledgement of similar practices/acts in neighbouring China, the Korean Peninsula or the areas of modern-day Hokkaido, Tohoku and Okinawa (p. 14).

[85] Famously, the previously mentioned Ishihara interpreted 3/11 as a sign of god's wrath or divine punishment (*tenbatsu* in Japanese) to which the only valid response would be for the Japanese to rid themselves of selfishness (*gayoku*)—the main cause of the punishment in Ishihara's eyes. Comments such as these would seem to imply that Japan is a cohesive unity and its faults, whatever they may be, are collective in nature (Rambelli, 2014, p. 51).

cosmos relationships" (Clammer, 2004, p. 89), where human, nonhuman, and inanimate actors are seen as a possible seat of spirit or god. In fact, within the Shintō tradition, god descends onto a pine tree where he then resides. Indeed, the Japanese word for pine is *matsu* (松), which literally translates as "waiting for a god." Pines are grown around shrines, and it is their twigs that are used in New Year's decorations to beckon good fortune and god's blessings (Omura, 2004, pp. 179–183). As a result of the aforementioned Meiji government's project of destruction and/or merging smaller shrines[86] it is now common that in their stead, a rock or even more so just a tree adorned with festoons made of straw, occupies the former shrine site (Clammer, 2004, p. 94) or stands in the vicinity of shrines that were built later. Such trees are believed to possess a special power which can be passed on to those who touch their bark (Omura, 2004).

Of particular interest to my inquiry is the idea that the above-mentioned merging of shrines by the Meiji authorities, apart from the purported aim of creating sound spiritual and ideological foundations for Japan as the "modern" nation-state (Yoneyama, 2018, p. 209), was in fact an act of systematising and spreading state control over a complex patchwork of local beliefs and kami, or gods, in order for them to fall under direct state governance (Yoneyama, 2018, p. 132). It could be argued, therefore, that in the direct management of the *Miracle Pine*—as well as by withdrawing and allowing the citizens to take control of the postdisaster management—the state is performing a similar act. Bearing in mind the cultural and spiritual significance of a pine tree and the historical precedent of coding animist Shintō tradition as a seat of a unique national identity and an imperial wartime propaganda tool, it is not too much to say that the *Miracle Pine* constitutes a powerful accessory at the state's disposal. The image of resilience in the face of disaster that the tree became, offered invaluable distraction from the unfolding Fukushima Daiichi Nuclear Power Plant meltdown,

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[86] According to Yoneyama (2018, p. 132), this was the case in 1906 as part of the move to modernise Japan.

the mounting frustration and distrust of the information provided by both the authorities and the corporate sector, as well as general life-safety concerns. However, when it became apparent that the roots of the tree had died due to exposure to salt water, a campaign and a Facebook page[87] were launched by the town in order to collect money for the tree's restoration. The $1.6 million eventually spent on the project, in a town where bureaucracy and lack of sufficient funding hampered the reconstruction efforts and left thousands in temporary accommodation, drew bitter criticism from the online community throughout Japan.[88]

History Repeats Itself: Nuclear Power vis-à-vis the Emergence of the *Miracle Pine*

Given the role nuclear power played in the shaping of the post-3/11 landscape of Japan, it is impossible not to examine the trajectory of the atom in the country. After all, the history of nuclear power generation in Japan is imbricated in the broader history of post-WWII US dominance and the ensuing Cold War, during which the American "nuclear umbrella" (Yoshimi, 2012, p. 122)[89] was extended over Japan as both shelter and Cold War deterrent. To these ends, the US administration needed the Japanese to turn away from the past and look towards the future. It also needed to make that future seem bright and the source of that brightness to be nuclear. Thus, according to Yoshimi (2012), the US had to cease being perceived as a country of war and to become a symbol of protection (p. 13).[90]

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[87] https://www.facebook.com/RikuzentakataCity/

[88] https://www.theguardian.com/world/2013/jul/03/japan-miracle-pine-tree-tsunami-rikuzentakata

[89] In the original, this was *kaku no kasa*「核の傘」.

[90] In an ironic twist of fate, the Fukushima meltdown offered the US a chance to further prove itself by playing a significant role in providing timely and reliable assistance, while the Japanese government and TEPCO (the operator of the Fukushima plant) appeared unprepared to deal with the crisis efficiently. However, Yoshimi also suggests that the energetic support relief by the US side was at least partly linked to the hope it would help aid sway the unfavourable public opinion regarding the move of the Futenma American military base in Okinawa.

Post Hiroshima and Nagasaki, anything nuclear would have been an impossibly hard sell. However, a determined and multifaceted approach put forward by the then US president Eisenhower—effectively aided by Japanese conservatives such as Nakasone (later Japan's prime minister) and even more so Shōriki (the first president of the Atomic Energy Council and the owner of the Yomiuri newspaper)—worked to successfully promote nuclear technology as a tool for peace and prosperity (Yoshimi, 2012, p. 122).[91] For Eisenhower and the US, the aim of the postwar "Atoms for Peace" programme was to erase the stigma associated with nuclear power, and ensure a shift in consciousness of the Japanese whereby Hiroshima and Nagasaki were forgotten, and the nation was persuaded to take refuge under the United States' "nuclear umbrella." As Yoshimi explains, "Atoms for Peace" had to turn into "Atoms for Dream" (p. 39). For this dream to happen, however, an unimaginable transition needed to take place, and that required more than ideals such as relief, growth, and welfare (Yoshimi, 2012, pp. 281–291). In the end, what was needed was to *dream up* a figure that could be linked to such ideals, and it appeared in the form of nuclear-powered robot Astro Boy[92] whose role was precisely to help bring about peace for humanity (Yoshimi, 2012, p. 243).

Nonetheless, just as postwar Japan needed more than words to embrace the atom (Yoshimi, 2012, pp. 122–125), what post-3/11 Japan and the Tōhoku region in particular required so as to brave the once-more irradiated precarious landscape were powerful symbols of hope and resilience. Therefore, I argue that the *Miracle Pine* and its various mediatic incarnations (as well as the products it inspired)[93] served as a vessel through which the message of future possibility could be disseminated, offering an illusion of self-reliance and

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[91] In the original this was *kaku ga sensou no tame dewanaku heiwa to hanei no tame no tekunoroji de aru koto* 『…核が「戦争」のためではなく「平和」と「繁栄」のためのテクノロジーであること…』.

[92] Also known as Atom Boy. Its Japanese name literally means *Atom Armed with Iron* or *tetsuwan atomu* 「鉄腕アトム」According to Yoshimi, at the time, Astro Boy was not the only *anime* robot figure powered by nuclear energy. Other examples include popular figures such as Doraemon or Gundam. Ibid. 243.

[93] This is discussed later in the chapter.

benefitting the wounded economy. Moreover, the actors that constitute the human infrastructure necessary to maintain the pine, as well as those onto whose unrecovered remains the pine stands, are all unwitting parts of the neoliberal machine and reluctant (or otherwise) proponents of a government-sponsored narrative of revival where, in the end, it was better for Japan to "stay the course" (Samuels, 2013, p. 99). Galvanised by the need to work together—whether through online campaigns, work on the ground, or volunteering— the citizens build their own "social zones of human resistance" (Berardi, 2009, p. 219)[94] from underneath the synthetic shade of the *Miracle Pine*'s branches. In other words, by joining forces and taking on the role of patrons of the tree's resurrection, the citizens perform an act of self-care and appropriate that burden from the state. In one fell swoop, therefore, the citizens celebrate the lives of those whose bodies symbolically nourish the ground on which the tree stands, productively participate in the neoliberal market of exchange through the production of the *Miracle-Pine*-inspired goods, and (given the already mentioned ideological tradition of the spiritual and cultural importance of trees) become living examples of the state-promoted narrative of the Japanese spirit's uniqueness in dealing with adversity.

The 2011 earthquake, tsunami, and nuclear disaster at Fukushima have topped the list of disasters that can be seen as a definite end to the country's postwar affluence (Yoshimi, 2012, pp. 8–9).[95] Considering Japan's population density and its geographical predicament (i.e., being literally wedged among some of the world's biggest tectonic plates[96]) along the so-called Pacific Ring of Fire, a zone where as much as 90% of the world's earthquakes and volcanic eruptions occur, it is puzzling that the country is only behind the US and France when it comes to nuclear power plant presence (Yoshimi & Loh, 2012, p. 321). It is equally

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[94] This concept is already discussed in greater detail in Chapter 1 where, in my discussion of precarity, I describe social zones of resistance.
[95] Yoshimi also mentions the bubble economy bursting, the Great Hanshin Awaji earthquake, and the Aum Shinrikyo sarin gas attacks as other notable events leading to this collapse.
[96] https://www.livescience.com/30226-japan-tectonics-explosive-geology-ring-of-fire-110314.html

baffling that despite a large-scale protest movement in the wake of the earthquake and the nuclear meltdown opposing the reactivation of the shutdown power plants, as well as nuclear power generation in general, the post-3/11 administration (in particular the Abe administration) has turned away from its predecessors' policy to eventually phase out nuclear power. Instead, nuclear power is now put forward as a key energy source for the future.[97] Such a change of direction and rebranding of a once unpopular or even vilified idea and turning it into something synonymous with future prosperity and by extension desired, is nothing new and bears resemblance with my reading of Yoshimi's argument (Yoshimi, 2012). By the same token, skilfully using powerful symbols to distract public attention, moulding it to the most convenient shape while regaining confidence is also a road already travelled and, according to Yoshimi (2012), the postwar introduction of the nuclear power generation followed a similar trajectory. Hence, the aforementioned "Atoms for Peace" project promised more than just peace. It implied affluence through the use of an affordable, efficient, and clean source of energy. Moreover, by building the infrastructure necessary to embrace the atom, as it were, signified moving on from traumatic past. To no small degree, this project was aided by the government-sponsored and media-supported narrative, as well as a powerful new symbol: the nuclear energy-powered and humanity-loving robot, Astro Boy (Yoshimi, 2012).

Thus far, I have set the scene against which the *Miracle Pine* came into existence. I have outlined the immediate background, including the political situation in the aftermath of the disaster, discussed some notable responses to the ongoing crisis, as well as the popular discourse surrounding the tree's transformation from a tsunami survivor to a beacon of hope and resilience. Finally, I have situated the *Miracle Pine* within the essentialist discourse purporting the existence of an animist tradition in Japan and drawn parallels between the way

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[97] https://www.japantimes.co.jp/opinion/2019/03/13/editorials/japans-post-3-11-energy-policy/#.XNxFiS3Mxo4

in which the country (post World War II) came to embrace nuclear energy and the post-3/11 government's future-oriented return to nuclear power. In this way, the preceding sections form a prepped canvas onto which this chapter's object can be envisioned. Consequently, in the following section, I ground the *Miracle Pine* in the (human) infrastructure that sustains it before examining how that infrastructure is in turn sustained by the tree.

Symbiotic Nature and Embodied Histories of the Miracle Pine's Infrastructure

My first point with regard to the tree relates to the symbiotic nature of infrastructures. *The Undersea Network* by Starosielski (2015) represents an inquiry into the material infrastructures supporting the flows and exchanges of global information currents. Her book focuses on "strategies of interconnections" (p. 117), namely the fixed, material and spatial infrastructure systems necessary for transfers between the network users and the environment in which they are located. Starosielski argues that these systems, which are reliant on fibre optic cables for information transfer and human actors for maintenance, are surprisingly fragile and wired (p. 10). Thus, by revealing the hidden truth about our precarious, global cable infrastructure, the author dispels the myth of wirelessness, wherein the physical existence of cable networks is obscured in favour of the imagination-capturing idea of invisible, satellite communication transfer or "cloud" computing (p. 5). Moreover, she invites us to see the undersea communication networks as more than just a functional technology, compelling us instead to grasp these networks through the prism of their cultural history and the narratives surrounding their coming-into-being, and thereby appreciating their temporalised and spatialised existence.

In the chapter titled "Gateway: From Cable Colony to Network Operations Center," Starosielski (2015) traces two intertwined evolutionary trajectories of material and human infrastructures underpinning the network of undersea cables, paying particular attention to the

relationships between them and the communities that sustained cable stations, as well as the populations that had originally occupied the area therein. Starosielski argues that through a process termed "narrative of connection" (p. 95) new relationships come to the fore while others are reconfigured. Thus, stations once residing at the centre of local communities constituted intersectional nodal points. For example, in the era of British colonial empire,[98] cable stations played a significant part in transoceanic traffic, with interpersonal connections affecting the way of life for local personnel (p. 111). In contrast, during the Cold War period, security concerns meant that changing political and "cultural geographies" (p. 97) not only weakened such connections or made them cease to exist, but the architecture of the stations "hardened" (p. 112) as they became preoccupied with the possibility of an attack. Also, as former colonies started to gain independence, the erstwhile nodes of access to colonial empires became "gateways to new nations" (p. 116). One notable example discussed by Starosielski is Fiji gaining independence from the British Empire in 1970 (p. 181) and having its role changed. Rather than serving as an entry point into a colonial domain, it became a node of transnational communication traffic (p. 116). Later, with shifts in technology, the intersections previously provided by cable stations fell into misuse. Furthermore, as the need for personnel to operate and maintain these cable stations diminished, the stations turned into silent monuments to what they once represented.

My particular point of interest here lies in how Starosielski views infrastructure, describing it as bearing resemblance to living organisms, bodies, or sets of organs working symbiotically. Seen through this lens, undersea cables spread their tentacles to human bodies involved in their maintenance:

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[98] With the existence of other empires such as German or French being referred to in passing.

> The body of the cable worker—a site through which messages and information passed and where they were interpreted—formed the key gateway to the system and the network's most important pressure point. Very small movements here could have large-scale effects; the cableman's body was understood as the site that was most susceptible to variance or interruption of flow. (Starosielski, 2015, p. 105)

Hence, cables are like veins stretching out of one body and linking it not only to the next one, or to a set of bodies, but also to the greater network. The human bodies are extensions of the network. But just as the network depends on the bodies' rootedness in it, the bodies are shaped by the network and set of relations that enabled the network's existence. As mentioned earlier, when discussing the infrastructure supporting and being supported by the *Miracle Pine*, I understand it as a composite of human bodies whose labour sustains it, human and nonhuman remains that enrich the soil on which it stands and by which it is "nourished" as well as the *Miracle Pine*'s own once-living flesh. Therefore, in the case of the *Miracle Pine*, the network of bodies and relations that support it rests on the radioactive ground and breathes in the radioactive air.

It could be argued then that the *Miracle Pine* and this network of bodies and their labour normalise the precarious living conditions of the post-3/11 Tōhoku region and beyond. To refer back to Starosielski, we could say laying cables is like a tree putting down roots to steady its hold. The purpose of communication network cables and the roots of a tree is to gain control over something which is uncontrollable. In the former case, the uncontrollable refers to the volatility of geopolitics; in the latter, it refers to the nature of a tree's inextricable relationship with the environment, part of which is the invisible radioactive plume. While communication network cables' controlling and *steadying* function has material, tangible outcomes in that it is connected with physical presence (i.e., of cable stations and their operating bodies), when thinking about trees in general and the *Miracle Pine* specifically,

such outcomes, are more symbolic in character, particularly in case of the *Miracle Pine*. When it comes to living trees, like all forms of life, they need to find a way that binds them to their environment. The tree's roots are the physical extremities that establish and maintain this bond. In other words, they are the infrastructure that binds a tree to its surroundings or, to echo Berlant (2016) and her discussion of infrastructure,[99] that which "organizes life" (p. 393): in this case, of the tree and its environment. The above-mentioned control dynamic of the tree vs. environment relationship stems from its symbiotic nature. That is to say, neither can thrive without the other—a control dynamic which grants *each* side a degree of power.

However, the *Miracle Pine*'s roots have been compromised by this very symbiosis and, technically speaking, it is no longer a tree in an arboreal sense. While initially the pine seemed to have survived the tsunami—a testimony to the strength of the tree/environment bond—after a time, it begun to succumb to the damage inflicted on the environment by the precarious conditions of life post 3/11. Simply put, as a result of having been submerged in salt water for so long, the tree was already *dying as it was rising to fame*. And while Reuters reported in February 2012[100] that the tree was "not the only botanical symbol of rebirth along the swathe of coast devastated by the tsunami," the word botanical can hardly be used to describe the pine today. After it had become apparent that the tree's roots were dying, the (domestically-and internationally-raised) funds for reconstruction were used to remove the tree and cut off its head. What happened next was perhaps even more disturbing:

> Experts preserved the 27-metre (89 ft) tall tree in its near-original state by inserting a metal skeleton into its trunk and adding replica branches and leaves made from a synthetic resin. (Meyers, 2012)[101]

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[99] See my discussion of it in the introduction.
[100] https://in.reuters.com/article/japan-disaster-pines/hope-fades-for-lone-pine-tree-survivor-of-japans-tsunami-idINDEE81M02U20120223
[101] https://www.theguardian.com/world/2013/jul/03/japan-miracle-pine-tree-tsunami-rikuzentakata

In effect, the tree has been revived to a *nonlife*. Having had its roots ripped out of the tsunami-razed ground, the *Miracle Pine* needed to enter into a different symbiotic relationship for its survival. As with Starosielski's cable stations, its existence relies on an assemblage of conditions and relations much broader than the span of its roots used to be. Consequently, supported by the labour of the living bodies of experts who worked to resurrect it and those who work to maintain it, local residents who feed off it materially[102] and affectively, donors inside and outside of Japan whose generosity made the revival and ongoing reconstruction possible, and tourists who flock to see it, the tree *also* stands *on* and *with* the bodies of the victims. That is to say, it is the unrecovered human and nonhuman remains absorbed into the ground which hold the tree in place that take on the role of the *Miracle Pine*'s roots. It is this *fleshy* infrastructure that *organizes* the (non)life of the tree. Symbolically, moreover, this monument to a tree cannot exist without being *rooted* in its human infrastructure. However, just as arboreal roots are somewhat *opportunistic* with regards to when, where, and in what shape they grow (Perry, 1989), this infrastructure is not only dependent on the tree for visibility, it is also able to benefit from the tree in more tangible ways, such as through production and sales of *Miracle-Pine*-inspired merchandise discussed later in the chapter, for example.

While against an entirely different political backdrop, the cable stations described by Starosielski and the *Miracle Pine*'s coming-into being plus maintenance both rely on "local infrastructure and practices" (Starosielski, 2015, p. 101), as well as on the existence of an "imagined (…) community" (p. 115). In Starosielski, this community continued through physical insularity and shared knowledge (p. 115), whereas in the case of the *Miracle Pine*, it is united in a prolonged effort to remain visible to the larger community of Japan. The ironic

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[102] This happens through the capital that the tree-related goods generate. I will be looking at the serialisation of the tree's image in the next section.

twist to this narrative is that in order to be brought to life (since visibility is usually understood to equal importance and hence promises enhancement of life),[103] the community had to rebuild the tree on the soil made fertile with unrecovered human bodies. Moreover, it had to let the pine tree die in order to recreate it into a dead replica of itself.

In addition, the concept of community when talking about the *Miracle Pine* is not something that is built to serve a purpose but something that preceded the network. Historically on Japan's margins of importance and currently as a side-effect of industrial modernity, the community surrounding the *Miracle Pine* enters communal consciousness at the moment of its demise and thanks to it. Unlike the cable station communities which thrived on systematisation, it does not possess any fixed structure (p. 99). While the cable station communities were often self-contained and made to withstand natural and man-made disasters, the *Miracle Pine* community is vulnerable as it is dependent on the network it is situated outside of. Furthermore, in Starosielski, the cable station community consisted of cablemen whose presence and labour spanned time zones (p. 103) and who had to remain aligned with "global rather than local temporalities" (p. 105). Because the cableman's body was perceived as crucial to the station's smooth operations yet vulnerable to possible interference with the outside of the network, insularity of the stations and cohesiveness of the network had to be enforced, while "social mingling" (p. 106) beyond cultural perimeters of the cable station was discouraged. Cable station magazines featuring information about stations' "affairs" and pieces featuring the cable network staff[104] served as a platform through which the dispersed cablemen were able to participate in a thus "imagined" (p. 106)

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[103]This idea is expanded in my discussion of Foucauldian biopolitics later in the chapter.
[104] During the colonial era, racial difference was being often stressed, thus implying "civilizing" work the stations were meant to perform (p. 108). Later, this was replaced by a discourse of multiculturalism with the same local residents being described as "part of the network" (Starosielski, p. 118).

community.[105] For Starosielski, this platform meant "a social infrastructure" on which operational efficiency of cable networks depended (p. 111). The cablemen of the postcolonial period, meanwhile, continued to see themselves as members of a community partly thanks to the cable station magazines, but also to knowledge sharing, the stations' architectural insularity (p.115), and cablemen often being sent to faraway stations where face-to-face encounters with other cablemen and local staff helped create a sense of belonging, personalized familiarity, and trust (p. 132).

In stark contrast, the structureless *Miracle Pine* community does not possess a similar stretch and is far more localized. Consequently, preoccupations such as insularity and cohesiveness do not apply. We can surmise, therefore, that the *Miracle Pine* community is therefore not "imagined" (p. 106) in a way consistent with Starosielski's cable stations' communities, even if it is symbolically connected or *imagined* as connected to the unrecovered bodies on which the pine stands. It is this community's affective and physical work for the *Miracle Pine* and the resonance this has that transforms it into a useful tool to shape the communal imaginings of post-3/11 Japan. Consequently, the *Miracle Pine* and the community that made it possible, are brought under the umbrella of the state-sponsored essentialist imaginary of presumed Japaneseness and thus made to represent a microcosm of a (future) Japan that is solidly based on its unique culture and tradition including the invented tradition of Shintō animism. This is not dissimilar to early cable stations which, through their imposed cultural insularity (p. 111), were meant to be operating like replicas of the empire (p. 99), presumably enforcing its image, definitely benefiting the empire's future prosperity.

Indeed, as the photograph in Appendix C illustrates, the tree now represents a gateway to an independent domain or a lighthouse summoning fishermen to come ashore.

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[105] Starosielski's analysis suggests that the "imagined community" is related to the process of nation-building via the media, in line with Anderson's (1983) seminal analysis of the modern print media as a means to form the imagined community of a nation or an empire.

Similarly, Starosielski's cable stations stand on the brink of affective disappearance from the map of human consciousness (p. 136). Draped in retrospective nostalgia, the cable stations of today are no longer what they used to be. Starosielski traces the stations' different historical trajectories, thereby inviting a reconsideration of their role. According to Starosielski, the stations of the past underwent huge political and technological changes[106] leading to some of them (especially those along the American transpacific cable routes) becoming not only invisible ("unexcavated" and only accessible through historical images of them in often faraway archives, p. 134 and 135 respectively) but also of little importance. In contrast, cable stations of the former British colonies find themselves repurposed (p. 135) and given a new life, even if most are far from where the cables land today (p. 136). Thus, Starosielski argues that nostalgia grafted onto the histories of cable stations provides an opportunity to recognize the connectedness of global networks of communication where each new cable infrastructure was built "in relation to the previous one" (p. 134) through the absorption of knowledge and technological as well as geopolitical changes.

For Starosielski, to forget cable history means to lose grasp of the human, or "embodied" (p. 136) histories intertwined with it. In case of the *Miracle Pine*, nostalgia is used to gloss over the uncomfortable present and promote a future that does not learn from the past. This half man-made "tree monument to a tree" is perched on top of today and looking towards tomorrow, its existence determined by the nostalgia of the past in which the nation is imagined united *and unique,* cohesive, and existing in unison with nature, testifying to the purported tradition of animism. That is to say, its pathos is the engine transporting it into the future while keeping it tied to the past. The *Miracle Pine*, while symbolising hope

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[106] The political changes refer both to the end of the empire and the end of the Cold War. In terms of technological changes, the move to fibre optics is one good example. These changes required further readjustments, such as changes to the architecture of the stations and a reconfiguration of security protocols. Since the end of the Cold War, it is no longer thick walls that serve as the border between the network and what lies outside of it but access codes and operational manuals. Also, while the number of staff has been reduced, Starosielski argues that the network's operations still rely on the swift and efficient actions of a few highly skilled men (p. 130).

and resilience, is meant to be a proof that a new, bright tomorrow is possible. It is a tomorrow characterised by resilience of its people, leading the way to a prosperous future of a nation that has come to terms with its traumatic past and found ways to overcome its current challenging economic conditions. But the *Miracle Pine*'s power to light the way there is stunted by its entanglement in the collectivized and essentialist image of culture and "ethnic belonging" (Marran, 2017, p. 13) it was made to represent. Consequently, the *Miracle Pine* cannot but encourage acceptance of the precarious reality of the neoliberal status quo (as opposed to a truly new beginning) in which rather than lead the way, it leads *astray* by diverting attention from the reality on the ground. To wit, the visibility that the tree guarantees to the bodies it supports and is supported by—the narrative of robust uniqueness it helps cloak them in—allows for this precarious neoliberal status quo to be justified and facilitates the rhetoric of staying the course I mentioned earlier to take hold.

The *Miracle Pine* and the Essentialist Tropes of Post-3/11 Unique Japaneseness

The discourse employed to describe the *Miracle Pine* matters no less than its materiality (i.e., its form and location). That materiality is tightly linked to cultural and affective practices performed in order to sustain it, while the language used to describe the pine tree draws from and reinforces that materiality. Together, the language used to describe the tree and allowing it to be associated with concepts such as hope and resilience, as well as its above-mentioned materiality, affect the tree's transformation into the *tropes* of the post-3/11 unique Japaneseness. This, in turn, becomes attached to the *Miracle Pine* and is put forward as the key to rebirth (instead of any real introspection or change in direction that would be more conducive to building a new relationship with the world).

The theme of such potentially perilous closeness of culture to the material world and the interrelatedness of the two is what lies at the core of *Ecology Without Culture* (Marran,

2017). In her analysis, Marran introduces two concepts of critical importance to my own inquiry. Of these, the first is that of the biotropes, which signifies "material" and "representational" (p. 6) figures utilizing biological elements (p. 12) to stand in for culture. In the process of foregrounding the material "biotic world" (p. 6) and affixing it to (essentialist) cultural claims, the true nature of that world and its agency are effectively erased. I suggest that the *Miracle Pine*, just as the previously mentioned cherry blossom in Murakami's speech, is an example of a biotrope. Often enlisted by the state or by the agents of ethnic environmentalism[107] to justify claims of a nation's uniqueness and obscure the view of damage inflicted on the environment by industrial modernity (p. 24), biotropes can create an erasure of experiences of human (and nonhuman agents) inhabiting that environment. In addition, and as a consequence of this, Marran contends that they thwart the possibility of our grasping the ecological world and its issues in their true complexity. The images that biotropes help create (of the environment, our role in it, or more specifically the actual post-3/11 situation) are incommensurable with the respective reality and play a part in creating communal imaginings of a nation" (p. 11) by stressing out often rather ambiguous examples of cultural difference.

One example given by Marran is Tsurumi Kazuko,[108] whose ethnic environmentalism extols the uniquely Japanese affinity for a communion with nature. In doing so, Tsurumi

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[107] Another term introduced by Marran (2017, p. 13), which she explains thus: "(…) ethnic environmentalism attempts to solve environmental problems through the suggestive force of ethnic belonging and ethnic histories without addressing capitalist modernity."

[108] Tsurumi (1918–2008) was a famous sociologist and notable professor emeritus of Sophia University. Known for her work on various social issues such as Minamata disease and ethnic environmentalism, Tsurumi claimed that Japan had a unique relationship with nature based on the "tradition of animism" where all beings and inanimate objects have souls, meaning that, for example, fish can listen to and appreciate music (Marran, 2017). Tsurumi differentiated *folk Shintō* from *institutionalised Shintō*, proposing that it is the former that can lead the way to a "sustainable future" (Yoneyama, 2018, p. 23). According to Yoneyama, Tsurumi's theorisation of animism comes partly as a critique of the Meiji government's merging of shrines and the resulting obliteration of many "vernacular Shintō shrines" (p. 209). Yoneyama also argues that Tsurumi was able to escape the tropes of *nihonjinron* in her work on animism and her ideas regarding environmental destruction. Marran (2017), however, seems to hold the opposite view.

rejects Japan's role in the natural degradation, laying the blame squarely with the "Western" nations. Such claims, as was the case with Murakami mentioned earlier, allow for blame to be commuted to the entire "cultural entity" (i.e. the "Western" world in case of Tsurumi)[109] while the guilty party is let off (Marran, 2017, pp. 13–14). And this is where the author's critique rests: Tropes of national uniqueness are deployed to elude responsibility for environmental destruction and to refuse to face the realities shaping the contemporary moment. Even though the *Miracle Pine* is only partly a "biological element" (p. 6), the effect of its mobilisation as a tool of the neoliberal state qualifies it as a biotrope. For instance, Murakami interpreted the ability to appreciate cherry blossoms even in times of hardship as an exclusively Japanese trait that would help the country weather the postdisaster storm[110] (Marran, 2017, pp. 7–8). Similarly, the state enlisted the *Miracle Pine* to stand in for the supposedly unique Japanese strength and resilience guaranteeing the country's revival.

Furthermore, Marran's *Ecology Without Culture* discusses the importance of ecocritical thinking that considers "the mutual constitution" (p. 56) of the world and the human (and nonhuman) actors within its midst. According to Marran, a change of perception is needed where humanity rids itself of both the "constructivist" (p. 119) confidence in its ability to deal with crises and the view that the environment is ambient: a fixed space we inhabit (p. 56) and which can change the conditions even if they mean inflicting damage. For Marran (2017), such views ignore the reality of our "embeddedness" (p. 25) in the natural

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[109] As mentioned earlier, in case of Murakami, the biotrope of the cherry blossom was used to make claims about Japan's ethnic "national collectivity" (p. 7) as a unique power that would carry the country through the postdisaster hardships. Furthermore, Murakami blamed most Japanese for the nuclear disaster by presenting it as a direct consequence of ignoring those who protested against nuclear power in the 1970s (p. 8). As a result, radiation crisis becomes "a problem of the nation" (p. 8). That is to say, all Japanese are equally responsible. Consequently, the suffering of those truly affected by the disaster and the radiation spill (humans and nonhumans alike) becomes "erased" (p. 8) as it is unified into something experienced in equal measure *and* presumably only by the ethnic Japanese.
[110] See my discussion of romanticized exultation with which the *Miracle Pine* was talked about in the aftermath of 3/11 earlier in the chapter.

world and the fact that they reside at the core of the problem, namely, the poisonous industrial modernity we have created (p. 24).

Additional inquiry into the workings of the biotrope of the *Miracle Pine* reveals how in spite of the *Miracle Pine*'s interdependent relationship with its environment, it is able to freeze-frame the world around it into a fixed unit that can be observed externally. First of all, let us not forget that the *Miracle Pine* arrives at the scene (and has the message of national uniqueness and strength affixed to it) on the back of a preexisting state narrative which professes the age-long tradition of animism, albeit somewhat reductively absorbed into Shintō.[111]

The already-mentioned importance of trees within the Shintō belief system is also of relevance here. Recent environmental discourse within Shintō has focused prominently on the importance of trees, particularly Japan's so-called sacred forests growing around shrines, or *chinju no mori* (鎮守の森). Within the discourse, these are presented as pristine, unadulterated and ancestral. This allows for them to become part of the essentialist national identity narrative evoking an idealized image of (Japan's) past as harmonious and pure. It also calls for the nation's rebirth.[112] The post-3/11 saving and (re)planting of trees by organisations such as Shasō Gakkai (社叢学会 or Shrine Forest Society), as well as by numerous volunteer groups, could thus be seen as a symbolic gesture of reconstruction and recovery that signifies more than a restoration of the environment and constitutes a way to (re)connect the disaster-ravaged Japan with its supposed tradition and identity as a cohesive, traditional and "in-harmony-with-nature" nation (Rots, 2014, pp. 26–30).

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[111] Already discussed in the section titled "The *Miracle Pine* and Japan's animist 'tradition'" earlier in the chapter.

[112] Ironically presenting *chinju no mori* as ancient and mythical (Rots, 2014, p. 27, citing a Shintō studies professor, Motegi Sadasumi) fails to acknowledge the fact that many of the truly old sacred forests were cut down and sold to support more prominent shrines as part of the 1906 Meiji government's shrine "merging scheme" (Yoneyama, p. 132).

Another notable example falling under this rhetoric is the "Great Forest Wall" project in Tohoku, for which 90 million seedlings (including seedlings expressly planted for the purpose in shrines around the country) are to be *planted on debris* in order to create a natural barrier against future disasters (Rots, 2014, p. 30. In a similar vein, the *Miracle Pine* is resurrected to nonlife through the scrap metal created resin that is now its core *and stands on land containing both debris and unrecovered bodies of the tsunamis' victims*. In other words, the purposeful foregrounding of the *Miracle Pine* as a stand-in for resilience, hope, and national uniqueness is a familiar sight. As such, the notion of *Miracle Pine* may be easier to digest and even seem innocuous *precisely* due to proclaimed links between trees and Japanese culture, as well as animism's inferential association with Shintō's institutional discourse and practices. Simply put, the *Miracle Pine* is still a tree and, therefore, close to nature, something which some ethnic environmentalists claim Japan has a very special relationship with.[113]

In addition, the *Miracle Pine*, with its physical presence amongst the postdisaster ruins and the essentialist message of national unity, resilience, and ethnically singular robustness grafted upon it, clogs the way to grasping the reality of post-3/11 Tōhoku and Japan. In addition, regardless of its symbiotic relationship with the human infrastructure and its physical presence on the ruins of a postdisaster neoliberal Japan, the *Miracle Pine*—both a monument and a spectacle—stands external to the true experiences on the ground and hopes for the future. With the pine at the centre, the environment around it becomes ambient and static, "a scene we are looking at" (p. 56) and the only way forward is a step back (to tradition and culture). Looking at the pine, the citizens can see themselves and *into*

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[113] One example mentioned by Marran (2017) is Yasuda Yoshinori, who calls for "a Shintoist animism renaissance" (p. 16) as a necessary step "to overcome the invasion and expansion of Western beliefs that have destroyed the Japanese world of animism, which is inherently ecological—and recoverable" (p. 16)

themselves and thus discipline[114] themselves into being who they are meant to be in order to productively contribute to the growth of the neoliberal state.

Arguably, the cable stations described by Starosielski (2015), especially the early ones which were all linked by the network and labour of human actors involved, also needed some physical representation to communicate the message of their purpose, strengthen their image, and communicate with the other stations. Hence, the network cables and the stations where they landed, needed to become communicational media and this was at least in part achieved the moment they started being revered with "commemorative postage stamps" (Starosielski, 2015, p. 99) and their stories disseminated in the Eastern Telegraph Company's monthly family magazine, the *Zodiac* (Starosielski, 2015, p. 106).[115] Often, the stamps were part of broader "connection narratives" (p. 23), which were aimed at portraying the early history of the cable network while highlighting the network's "transcendence of national boundaries" (p. 23). These connection narratives were often employed by (private) cable companies to create an "imagined" community around the cable project in order to foster trust in the network's success (p. 60).

One example mentioned by Starosielski is the 1963 inauguration of the Commonwealth Pacific Cable (COMPAC), where commemorative stamps documenting the landing of the cables were issued in television broadcasts and newspaper articles (p. 70). Notably, however, the media buzz surrounding the inauguration of COMPAC stopped as soon as the "imagined" networks of communication the organization aspired to create were all that was left (p. 71). Even though this has afforded the stations a certain materiality and anchored them in the imaginations of those who received the mediated messages, the stamps'

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[114] This dynamic of self-discipline is discussed in Chapter 1 when analysing Bennett's exhibitionary complex vis-à-vis the exclusion zone of Fukushima.
[115] In the early days of telegraph cable networks, and in contrast with the post-Cold War times when fear of an attack made the stations strive for invisibility, cable stations used to be celebrated on envelopes and commemorative stamps (Starosielski, 2015, p. 99).

reach has remained relatively limited and faded further into near obscurity as time progressed. Indeed, according to Starosielski, connection and disruption narratives designed to spotlight the cables' restorative work in the face of an urgent struggle to maintain the global network's connectivity (p. 23) were rather limited in that they functioned to focus on the cable network when it was *not* operating. This consequently obscured the view of labour performed to maintain it, which in turn may have acted as a technique of insulation to shield the cable from outside interruptions or damage (p. 23). In contrast, the *Miracle Pine* has secured for itself a strong intermedial presence both in and out of Japan and to achieve this, it became a subject of purposeful commercialisation.

The *Miracle-Pine*-Inspired Goods and the Infrastructural Networks of Communication

The following section hence takes a closer look at the *Miracle Pine*'s intermedial trajectory from humble tsunami survivor to material communication tool: a tool which enhances the government-sponsored discourse of resilience, generates profits, and propels the neoliberal engine of capital forward. Moreover, the commemorative merchandise fits seamlessly into the neoliberal design and allows the tree a layer of material dimension that dims the view of the post-3/11 managerial inadequacies of the state. As will be demonstrated, by crossing different media forms, the *Miracle-Pine*-inspired commodities are able to strengthen the message (resilience, hope, national unity) implanted onto the pine by the government-sponsored and media propagated narrative. Furthermore, by intercommunicating both with the *Miracle Pine* and within the network of its associated goods, the *Miracle Pine* merchandise creates a basis or infrastructure for the network of communication between human actors involved. However, while bolstering the above-mentioned state narrative, this intercommunication may also create *openings* for new narratives, even if they are unavoidably linked to pre-existing ones. Given certain parallels between the *Miracle Pine*

merchandise and that of the anime character Astro Boy,[116] my discussion now turns to Steinberg's (2012) analysis of the character-based marketing of toys and other merchandise. In particular, I will argue how the *Miracle-Pine*-inspired merchandise can be seen as following a similar trajectory to the character merchandise as analysed by Steinberg.

The material communication and the intermedial presence I refer to here features prominently in *Anime Media Mix* (2012), Steinberg's account of the history of Japanese media infrastructures, the relationships underpinning them, and technologies of communication, as set against the emergence of Japanese TV animation and the commodities it inspired. Of particular relevance to this chapter is Steinberg's detailed discussion of Japanese media convergence or *media mix* (i.e., a synergetic relationship between varied forms of media disseminated across divergent platforms) and its relationship to (early) television anime. Steinberg argues that the origins of the Japanese media mix can be traced to the transmedial movement of the character (image) of *Tetsuwan Atomu* (also known as Astro Boy), the prototype for the current character-merchandising system.

Originally a manga character adapted to a *limited animation style* TV series,[117] *Tetsuwan Atomu* became a subject of merchandising whose likeness was reproduced first on stickers and then toys. By enabling the character to move across media, it became part of children's worlds and allowed them, in turn, to become part of *Atomu*'s "world." This resulted in an "active" (p. 7) consumption and fostered a desire in children consumers—a lucrative "new market segment" (p. 167)—to follow the character across varied media forms. Steinberg thus claims that how *things* interact with people and with other *things* is important,

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[116] For the purpose of continuity throughout this thesis, I will use the term *Astro Boy*. Steinberg privileges *Atomu* or *Tetsuwan Atomu* in his text.

[117] Limited animation is the type of animation that instead of attempting to recreate real-life movement (i.e., the way full animation of Disney does, for example), minimises movement (p. 5) and relies heavily on still images.

and it is this which guarantees the success of the media mix.[118] Furthermore, he suggests that

understanding the development of this character merchandising or "anime system" (p. ix) is

essential to understanding the transformations to the conditions of life in late capitalism, or

more specifically, within the consumer culture of the same period (p. x). Steinberg also

argues that the intensified consumption of the media mix, where the child consumes her way

into the character's world, is in fact work which *consumes* the child, "colonizing interior

space" (p. 167) of the child's life. In this manner, the burgeoning media mix helped create an

ever-expanding mediatic network or an all-encompassing world of belonging for the

child/consumer. Life, work, and consumption are thus incorporated into one[119] within the

modern-day capitalist universe of accumulation. By extension, one could also argue that this

dynamic permeation of life via media content is a state-sponsored tool to influence

perceptions so that these perceptions fall in line with the desired narrative and productively

contribute to the state.

Of equal relevance to this chapter is the three-dimensionalization of mass media

characters. In Astro Boy's transmedial trajectory, the initially *flat* and immobile manga

character first gained the ability to move as a TV anime protagonist. Later, in the form of a

character sticker, Astro Boy acquired a different type of mobility that was able to traverse

television screens and—with a new sense of independence (due to its *portability* and new-

found ubiquity, p. 79)—could dynamically enter new narratives outside of its former media

(i.e., manga and TV) and invade the child consumer's living environment in the process.

According to Steinberg, the *everywhereness* of the character image produced affective

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[118] Also, in conversation with Lamarre's *The Anime Machine* (2009), Steinberg links the success of the media mix with limited animation which needs to be understood not in terms of its stillness but rather, its dynamism, or as Steinberg calls it, its "dynamic stillness" (p. 6). Thus, "stilling the movement of animation" (p. 6) while focusing on the central image (i.e., of Astro Boy) is what helps generate affective response in the audience, leads to increased consumption of the Astro-Boy-inspired items, and secures the success of the media mix (p. 6).
[119] Through the process of "real subsumption" developed by Marx. See pp. 166–169.

responses, which increased the appetite for the character image consumption leading to a further increase in the character image dissemination. A final, third dimension is added when the Astro Boy character-based toys, or *mass media toys*[120] enter the mix. A mass media toy allows direct contact with a *representation* of the character image (p. 111) and serves as a creative canvas for new narratives to be created and inhabited. I would contend, however, that when a character image is fleshed out into a 3D state of being, not only does it strengthen the already present "immaterial force" (p. 82) of the character's attractiveness but also, in spite of its openness to new narratives, it could invigorate the existing narrative inscribed into the character (should there be one).

Finally, the communicational aspect of *things* and how they interact with people and other *things* is especially germane to my inquiry. Specifically, *Anime Media Mix* (2012) demonstrates how Astro Boy stickers, related to the original manga and the subsequent anime incarnation by virtue of image likeness, became exchangeable objects and "communicational media" (p. 89). In other words, the media image of Astro Boy was materialised into an object which could transform other objects into media and in turn promote the media character of Astro Boy himself. Not only that, it could organise communication among children consumers and other objects who were now within the same "communicational network" (p. 89). This two-fold process of transformational interaction between *image* and *things* produced an *ecosystem of communication* with *image* and *things* at the centre. Moreover, *things* are not mere mediators of human communication since, according to Steinberg, when "media and commodities in the anime system" (p. 132) communicate, they constitute *an infrastructural platform from which human-human communication emerges* (p. 132). When applied to the *Miracle Pine*, the implications of such communication are manifold. As

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[120] "Mass media toy" is a translation of the Japanese *masu komi gangu* 「マスコミ玩具」 (p. 89) and is a term coined by Steinberg.

already mentioned, it can aid the dissemination of government-sponsored discourse while also creating openings for new narratives. In addition, such communication can guarantee visibility of the plight of the area's affected residents, both the ones who work to support the tree as well as those on whose remains the pine stands. Also, as it spurs the consumption of the *Miracle Pine* character goods, it may translate into economic benefit that eventually profits the state.

Had it not been for the subsequent incarnations of the *Miracle Pine* tree (i.e., the various merchandise either inspired by it, adorned with its image, or fashioned from its remains), the *Miracle Pine* would have remained a two-dimensional image. The preserve of newspapers or computer/TV screens, or else something verbalised and imagined but not tangible and within the physical reach of ordinary Japanese citizens outside of the Tōhoku region and Fukushima. However, the *Miracle Pine* tree's incarnations have increased exponentially and consequently allowed the tree its own 3D materiality. Indeed, the *Miracle Pine*'s image now adorns bottles of beer, commemorative towels, and tree-trunk-shaped biscuits (cf. Appendices D, E, and F) to name just a few. In each case, apart from the monetary gains generating power, and community-creating potential of such merchandise, the image of the tree performs an act of "repurposing" (Steinberg, p. 142). Basically, this consists of using a particular character or narrative (i.e., content) across divergent media forms while maintaining consistency of that content. Thus, if applied to Astro Boy—whether in the form of a toy, a sticker, or manga—the character's image, what Astro Boy means, and the message associated with him would stay unchanged even as the degree of transmedial mobility of the character's image and its message is increased (p. 142).[121]

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[121] Steinberg notes that understanding repurposing as "tak[ing] a 'property' from one medium and reus[ing]it in another" or as "pouring a familiar content into another media form" (p. 126) may be misleading because of the implicit claim that one narrative or content can simply be commuted onto a different media form thereby effacing differences between media forms and homogenising content.

Thus, when applied to the *Miracle Pine* image commodities, the uniform message associated with the tree (i.e., a "uniquely Japanese" resilience and hope), is heightened by the continuity of the tree's likeness (the image of the *Miracle Pine*). This signals the *Miracle Pine*'s *transversability* across materially different platforms of reproduction, which in turn could translate into greater diffusion of the image and a strengthening of its associated message. In addition, because of the tragic circumstances of the *Miracle Pine*'s emergence and the nature of the meaning which has been grafted onto it, the *Miracle-Pine*-related goods cannot but elicit an affective response from those who consume them. Furthermore, the active consumption of these goods entails participation in *the ecosystem of communication* created by the goods themselves. Thus, the willing consumer sees herself connected to something *sold* to her as part of who she is: a part that is currently under threat as a result of the disaster and the precarious conditions it created.

Therefore, consuming the *Miracle Pine* merchandise and engaging in the pine's upkeep, becomes an act of self-assertion and self-preservation. In so doing, consumers validate the state-sponsored rhetoric and perform work benefiting the neoliberal state. Also, given the potentially inexhaustible supply and ever-greater array of (the *Miracle Pine*) incarnations, the platform on which communication (thing-to-thing, thing-to-human, human-to-human) occurs lends these goods a considerable degree of openness (pp. 111–128), not only to ownership and market circulation (p. 125), but also to new communicational affiliations they could help forge and to different forms of media they could become and material transformations they could undergo. Thus, similarly to mass communication toys based on Astro Boy, the *Miracle Pine* goods offer a chance at participation (p. 113) in their "world" (p. 122), created via the unified narrative that surrounds the tree and the labour necessary to both maintain the *Miracle Pine* as well as conceive of and fabricate the *Miracle Pine* goods. Moreover, with the pine tree as anchoring character image, the *Miracle Pine*

merchandise offers a possibility of engaging in a network that the tree has inspired and depends upon.

So far, I have focused on the *Miracle Pine* merchandise that could be described as belonging to the category of image-adorned commodities. Just as the Astro Boy stickers could turn *any* object into a character image commodity, the image of the *Miracle Pine* could potentially be attached to *anything*, bringing it into the character goods network. The *Miracle-Pine*-image-adorned items are united by the likeness of the pine, regardless whether it is part of their physical surface (cf. Appendices D and E) or shaped to resemble the *Miracle Pine* (cf. Appendix F).

But what if a further layer of material dimensionality is added when merchandise is supposedly created from the "flesh" of the tree itself—as evidenced in commemorative fountain pens fashioned from the *Miracle Pine*'s wood (Appendix G)? First of all, any merchandise characterised by this additional layer of material dimensionality can potentially open the door to alternative narratives. While a *Miracle Pine* fountain pen may be linearly and retrospectively connected to whatever chips are left of the mummified *Miracle Pine*, it cannot immediately be recognised as belonging to the pine-inspired merchandise. Therefore, in order for it to participate in the network of such objects and the communication they initiate, the fountain pen needs to be discursively turned into an item of the *Miracle Pine* merchandise. It either becomes a canvas for an entirely new narrative or allows for the narrative already inscribed on the *Miracle Pine* to be amended or attached to different narratives, outside of the *Miracle-Pine*-inspired commodities network.

For example, rather than merely be associated with resilience and national uniqueness, an item made *from* the *Miracle Pine* could stand to denote robustness of the environment or promote the need for ecological preservation. Furthermore, as mentioned earlier, when the *Miracle Pine* was dying due to prolonged exposure to salt water, cloning

technology was used to create seedlings from it. These, and potentially other seedlings, could ensure that the otherwise finite supply of raw material to produce commodities from the *Miracle Pine* "flesh" is, in fact, sustainable, promising an almost endless source of pine-related goods. In this manner, creating commodities from the *Miracle Pine* wood gives the pine back its fleshy three-dimensionality. Moreover, unlike Astro Boy, the *Miracle Pine* was once a 3D living entity which, as it became a character media commodity, had to be *flattened* so as to be reproduced in its image-adorned incarnations.[122] Just as the mass media toy "provided the potential for play outside the existing narrative of the anime and manga" (p. 123), a *Miracle Pine* fountain pen (or indeed any other commodity made out of the original pine's wood or cloned seedlings) conveys the promise of mediatic and narrative openness (pp. 113, 124). As in Steinberg's analysis of the workings of the media mix, the *Miracle-Pine*-inspired goods are arguably linked through the material divergence of the various forms they take in conjunction with their shared character-likeness, even if—as is the case with a *Miracle Pine* fountain pen—this likeness is expressed through texture more than figurative shape.

While itself now dead, the artificially restored tree continues to inspire a plethora of increasingly durable incarnations, ranging from commemorative metal coins to potentially timeless cinematic depictions, as evidenced in Studio Ghibli's *The Tree of Hope* (2013), where Nizo Yamamoto rendered the tree in an anthropomorphised, female spirit form (cf. Appendices H and I) something which resonates with my earlier discussion of the claims to the supposed animist tradition in Japan. A more recent (and presumably resilient) *Miracle Pine* incarnation is the 1:10 metal replica of the tree designed and "lovingly handcrafted" by

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[122] While the tree-trunk-shaped biscuits (cf. Appendix F) emulate the *Miracle Pine*'s appearance, it is really the packaging, embellished with the pine's image, that guarantees the biscuits belonging within the network of the *Miracle Pine* goods.

Nissan, Toyota, Mitsubishi, and Mazda technicians[123] (cf. Appendix J). Made partly out of scrap metal found in the debris, the replica represents yet another effort to immortalize the tree. Meanwhile Nissan, who has long been present in the area, seems to be implying their return is motivated by a desire to help with reconstruction rather than profit.[124] However, the scrap metal used to resurrect the pine comes from the same ground that sheltered the unrecovered bodies of victims. Also, being part of the debris could mean that the metal itself played a part in human and nonhuman deaths. Recycling the remains of the disaster in that way and turning them into a miniature replica of "the real thing" is reminiscent of how early cable stations (cf. Starosielski, 2015) were meant to condense the empires and recreate them through the bodies of the cable station workers. The metal collected to recreate the pine tree thus symbolises a new beginning where the debris and all it contains becomes a resource to be extracted. Automobile companies—themselves a microcosm of the neoliberal state— utilise the postdisaster Tōhoku to promote a greener tomorrow in which they are to be the main stakeholders.

These various incarnations of the *Miracle Pine* are present at different levels of the infrastructure surrounding and supporting it, but all help to root the tree at the intersection of the painful past, thereby allowing its branches to grow out of the troubled present into the still uncertain future. In that sense, the *Miracle Pine* character goods presented in this section are not mere stand-ins for something. As already demonstrated, they do not just serve as simple mediators of relationships and ensuing communications between human agents. Rather, they form the very basis of an infrastructural platform upon which such communication can take place.

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[123] http://thenewswheel.com/jama-technicians-present-tree-hope-statue-rikuzentakata/
[124] http://thenewswheel.com/nissan-remains-committed-to-tsunami-recovery-five-years-later/

In the preceding sections, I have situated the *Miracle Pine* in the symbiotic-in-nature (human, nonhuman, and material) infrastructure that sustains it: an *assemblage* of dependencies and wide-reaching relations. This infrastructure was presented as reliant on the *Miracle Pine* for visibility but also able to profit from the commodification of the tree through the *Miracle-Pine*-inspired goods, while labouring to strengthen the state-sponsored nationalistic narrative of resilience and uniqueness. Finally, I have demonstrated how participating in the *Miracle Pine*'s sustenance and engaging in the networks of relations borne out of the commercialisation of the tree's image helped create a sense of self-assertion in the citizens. This self-assertion, akin to an illusion of sovereignty, will prove a valuable resource for the state as it tries to find the most efficient manner to manage the nation in ways that the following sections will explicate.

The *Miracle Pine* as an Apparatus of Power and Biopolitical Management of Life

As mentioned at the outset of this inquiry, the 3/11 disaster necessitated not only a prompt and efficient government response but also a significant reconsideration of governmental approach and a shift in perceptions. The induced heightened state of precarity proved an opportunity for the state: It was a result of something utterly unpredictable that the state could not be blamed for. Also, it exceeded all expectations (*sōteigai* in Japanese),[125] creating an impression that *all* were impacted in equal measure (Iwata-Weickgenannt, 2014), thus levelling the playing field. Due to the circumstances of its appearance as the tsunami waters subsided, the *Miracle Pine* started off as a defiant symbol of resistance against the post-3/11 broken infrastructure. However, as the news of its survival spread and interest in the tree grew, it became clear that the (biopolitical) management of the tree could equal the

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[125] See Footnote 7.

creation of a powerful tool of yielding control (of both the nation and the unfolding

situation).

In one sense, the *Miracle Pine* can be seen as part of and operating similarly to a

Foucauldian *dispositif* of the state: an apparatus of power and biopolitical management of

life, a vessel through which controlling powers were first mediated and then disseminated.

However, a closer look at the *Miracle Pine* reveals yet another layer of potency. The pine is

both part of the *dispositif* and its stratagem. This capacity to be both the tool and the hand

that holds it is manifest in more than one instance, as the following paragraphs shall

elucidate.

While the concept of Foucauldian *dispositif* remains a subject of theoretical debate

and possesses a number of interpretations and applications, my own understanding of it relies

primarily on its relationship with visibility. Broadly speaking, *dispositif* is a conceptual and

heuristic instrument that Foucault uses to talk about an assemblage or interrelated network of

institutional, material, and discursive elements that work together to operate a particular

regime of power (e.g., disciplinary power). In other words, it is a composite through which

power relations can be *observed*. Consequently, my interpretation of *dispositif* is partly

indebted to Foucault's (1980) formulation of it in *Power/knowledge: Selected interviews and*

other writings, 1972–1977. With respect to the notion of power relations vis-à-vis visibility,

my interpretation is also indebted to *Discipline and punish: The birth of the prison* (Foucault,

1995), in particular his discussion of the panopticon.

In *Power/knowledge*, Foucault describes *dispositif* as a "system of relations" between

different elements, discourses, and powers operating at a particular time, responding in a

strategic manner to a historical moment of crisis. However, according to Foucault, even

though the *dispositif*, or apparatus, acts strategically and targets a specific situation, its

application can yield new, unplanned results. These outcomes can subsequently become

applicable to other situations as the divergent elements of the assemblage operate through an "interplay of shifts of position and modifications of function," which can help extend the relational network of the apparatus (Foucault & Gordon, 1980, pp. 194–196). As the following pages will demonstrate, the original elevation of the *Miracle Pine* appears to have had rather ad hoc aims of distracting the survivors' attention away from the inadequacies of the government's dealing with the aftermath of the disaster. Ultimately, however, the *Miracle Pine* emerged as a grand opportunity for the state in its search for new ways of governing.

A brief look at Foucault's analysis and elaboration of Bentham's panopticon (Foucault, 1995) helps flesh out the relationship between visibility (and light) and power relations within the apparatus' operations. Roughly speaking, *panopticon* is the term given by Bentham to denote the architectural design and operational plan of a prison, in which the figure of a supervisor or a director occupies a central position from where all can be observed at a glance, but none can see the observer (Foucault, 1995). While Foucault discusses the architectural structure of Bentham's panopticon, it is not the buildings' architectural ingenuity that his focus rests with but the observable subject: the prisoners themselves. This "laboratory of power" (p. 204) implies a project-in-progress which, as it continues, can be improved upon. More importantly, it forces the observed to accept the possibility of being observed by the supervising gaze *at any given time*. For the prisoner, visibility is "permanent," and operations of power are, therefore, "automatic" (p. 201). Foucault also stresses the panopticon should not be understood merely as an architectural marvel of surveillance (p. 205) but "a figure of political technology" (p. 205) that enables the disciplining power to be dispersed without any intermittence.

Indeed, the incessant likelihood of being visible to the invisible figure of the disciplining body of the supervisor leaves the thus entrapped observed no choice but to look inward, self-survey, and self-discipline. For Foucault, therefore, the disciplinary power

operates *invisibly* by controlling and imposing *visibility* on its subjects, while remaining fully "unverifiable" (p. 201). Indeed, the ability of *dispositif* to "absorb the shocks" of the unfolding reality and productively adapt to it (by containing or neutralising precarious elements and powers [Hardy, 2015, p. 200]), as well as its utilisation of visibility as a force which reveals power relations between (human or nonhuman) agents is precisely why I see *dispositif* as a useful lens through which to behold the *Miracle Pine*.

The *Miracle Pine* is both revealing and obscuring. It operates as a form of bricolage of its character goods, representing a nonlife synthetic monument to itself with all the networks of interrelations necessary for its upkeep—a symbol of essentialist animist tradition. For example, it guarantees visibility to those who sustain it, while obscuring the plight of the human and nonhuman victims of the disaster on whose remains it stands. Also, it is able to overshadow the governmental inadequacies post 3/11, while bringing to the fore and promoting the state-sponsored rhetoric of national uniqueness. Hence, its existence is in equal measure a tool for visibility and invisibility. That what it makes invisible (i.e., the actual living tree it once was) is exactly what made it visible or was a condition for its existence (i.e., the current form of the tree in its synthetic nonlife replica of the original).

But it is not enough to look at the present-day material form the *Miracle Pine* was made to take and see it as directly linked to its former self. The current form of the *Miracle Pine*, (i.e., the resin-filled monument in Rikuzentakata) does not exist solely because there once was a lone standing and slowly dying pine tree. It is a result of various elements within a network of interrelations surrounding it, only one of which can be directly traced back to the actual pine tree. Similarly to the notion of *dispositif,* the *Miracle Pine* is a composite of these different relations and elements interacting in a way similar to that of light vis-à-vis objects it renders visible. That is to say, dispersed from a source, the light responds to the conditions it encounters and, in the process, both the light and the object are transformed.

The pine's current form is thus an assemblage of affiliations between agents and forces that have the capacity to create, obliterate, or transfigure the communal imaginings of the reality they inhabit.

The *Miracle Pine* is both a *dispositif* (i.e. an assemblage of institutional, material, and discursive apparatuses through which the state can disseminate knowledge and dispense its governmental power) and its creation in that it is an amalgam of its former arboreal existence, today's lifeless and artificially propped-up shell, human and nonhuman agents it relies on, those it obscures and the knowledge it creates. At the time of the Fukushima catastrophe, the government needed an affective canvas onto which a powerful message of hope and resilience would be writ, successfully obstructing the view and providing a necessary distraction. Taking note of a dying tree and allowing it to be taxidermized to a new "life" was a good move on the state's part and certainly an impactful technique, but one fraught with contradictions. The *Miracle Pine* is a vessel emptied of life and yet such is the governmental power at its disposal that it is used to promote life and inspire hope. It stands on soil sheltering thousands of unrecovered bodies of human and nonhuman beings and yet it is supposed to transport the viewer (gazing at its mediatic representation in its character goods) or visitor (physically present on the site of its resurrection) into the future on the very same precarious ground, breathing the very same radioactive air.

Given the unprecedented scale of the Tōhoku disaster, once the land had settled and the sea calmed, the ineffective DPJ administration (as well as its LDP successors) urgently needed to employ new and efficient ways of governing the precarious postdisaster habitat of both human and nonhuman existences, thereby ensuring the creation of a fertile and resilient ground upon which the state would be able to continue to grow. What was at stake, therefore, was the effective management of the nation's life, which included that of nonhuman animals due to their bearing on the nation's productivity.

In the preceding sections I have revealed an assemblage of interrelated apparatuses of governmental power at the state's disposal, utilised to manage the populace by allowing the *Miracle Pine* to be first brought back to nonlife and then enlisting it as a powerful symbol of national unity and resilience. Furthermore, I have discussed the infrastructural grids that support and feed off the *Miracle Pine*, including the network of the *Miracle-Pine*-inspired commodities. I have also highlighted their potential in aiding the state's managerial, economic, and ideological agenda. In the following section, I will stencil the shape the above-mentioned management of the population took by turning to Foucault's discussion of "arts of government" (Foucault, 2004). Part of this relates to techniques of biopower (Foucault, 2003) specifically designed to target biological aspects of life of the population.

Questions such as "how to govern oneself, how to be governed, by whom we should accept to be governed" (Foucault, 2004, p. 88) as well as the transformations the concept of government underwent on its way to the historical and political intersection referred to as modernity were a long-lasting preoccupation for Foucault (Foucault, 1980, pp. 142–143). Humanity's arrival in modern times was for him a moment when the concept of life became a subject of politics (Foucault, 2003, pp. 254–256). As opposed to the traditional sovereign power which was able "to take life or let live" (Foucault, 1980, p. 140), the cusp of modernity heralded a new kind of power operating through "administration of bodies" and "calculated management of life" (Foucault, 1980, p. 140). Hence, this new form of power, or biopower, is making life and letting die (Foucault, p. 2003, p. 241) or, to borrow Susan Stryker's words, biopower was "a calculus of costs and benefits through which the biological capacities of a population are optimally managed" (Stryker, 2014, p. 38) in order for them to positively and productively benefit the state.

This modern technique of government aimed at the management of the biological life of the population (i.e., biopower) is no longer applied directly at the population but takes in

its stead a variety of different techniques, strategies, and calculations (Foucault, 2004) conceived by and employed through institutions (e.g., medical) that facilitate the management or governing of a population so as to ensure its uninterrupted growth and ability to enhance the state's prosperity. According to Foucault, this biopower was organised around two poles. The first was preoccupied with "the disciplines of the body," the second with "the regulations of the population" (Foucault, 1980, p. 139). Moreover, the first pole was administered through a number of disciplinary techniques, the second through regulatory techniques. The latter are applied at the level of population and relate to the biological domains of health, sexuality, and reproductive capacity (Foucault, 2003, pp. 246–254), with the aim of achieving an "overall equilibrium" (p. 249) that augments life and wards off death (Rangan, 2017, p. 74). Disciplinary techniques, meanwhile, are directed at the body— perceived of "as a machine" (Foucault, 1980, p. 139)—and related to pedagogy and the penal system, with the aim of creating "docile bodies," or bodies that conform to norms, are modifiable, and possess increased value in terms of their economic utility (Foucault, 1995, pp. 136–138). They are also bodies that may be led to self-discipline, resulting from these bodies' relationship to visibility.

Once again, a brief return to my previous discussion of the panopticon is in order. As already mentioned, in the panopticon, prisoners must endure the perpetual prospect of being under supervision, a state which leads to the disciplining power being *internalised* by the observed, whereby they become objects of "subtle coercion" (p. 209), which over time creates subservience in those subjects of disciplinary supervision and results in a production of increasingly docile bodies. That is to say, the visibility of the panopticon's observed subjects ensnares more than the darkness of dungeons and it acts as a trap (p. 200).

As thus far elucidated, in opposition to traditional sovereign power, the regulatory and disciplinary power is dispensed by the state both directly and indirectly. As Foucault states

himself, it resides everywhere not because "it embraces everything, but because it comes from everywhere" (Foucault, 1980, p. 63) (i.e., both state and nonstate operated organisations and bodies). However, while the modern state's role is to promote the overall well-being of its population, it is important not to interpret this as an end to the state-sponsored violence with which the sovereign power was associated. Indeed, as Taylor (2013, p. 542) argues, the state could "refrain from fostering and protecting the lives of *certain* segments of the population" (my emphasis), which meant that while life became worth living for *some* segments of the population, the lives that were perceived as unproductive (i.e., disposable to the overall welfare of the state) were allowed to wither away. This means the modern state needed to find a way to overcome its self-professed role of a patron of the population's enhancement of welfare. According to Foucault, such ends were achieved through the intervention of racism (Foucault, 2003, p. 254).

When racism resurfaces[126] and becomes enlisted as a tool of the modern state, it creates a societal cleft, pitting the life of one being against the death or withering of another, thus forming hierarchies of *biological worthiness*. In fact, this withering of the other or the other's death is henceforth directly linked not so much to the actual survival but rather to the improvement of (the quality of) life of those whose lives are deemed to carry more worth, allowing them to "live more" (p. 255). In other words, biopolitics perceives of population as a biological *wholeness* (i.e., a species) and the protection of *wholesomeness* is a mandate of biopower. The state thus becomes a patron of "integrity" (p. 81). This implies the necessity of protection from "internal dangers" (p. 249), or enemy within. It is racism that helps split that *wholeness* and reveal this enemy, with racism signifying a force that turns society against itself.

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[126] Foucault is keen to stress that racism was *not* invented by the modern state but rather that it was the appearance of biopower that facilitated it becoming a fundamental mechanism of power. (2003, p. 254)

While a detailed analysis of racism falls outside the scope of this chapter, it is nevertheless worth noting how parallels can be drawn between biopolitical practices of state racism and the plight of the Fukushima refuseniks discussed in Chapter 1. Specifically, it could be argued that cooped up within the exclusion zone, refuseniks (along with their nonhuman charges) represent what "class enemies" (p. 83) were for the "Soviet State racism" (p. 83), where anyone straying off the socialist course was to be cut out of the social *wholeness* in the name of its integrity and health. The purpose of the exclusion zone in which the refuseniks reside(d) is to limit contamination from the nuclear waste seeping out of the Fukushima Daiichi power plant. In the background, meanwhile, the state- and media-supported rhetoric of national cohesion and unity (i.e., the same that ends up being inscribed onto the *Miracle Pine*) is being disseminated. No longer valuable in the eyes of the neoliberal state, the zone's animals are simply left to wither.

However, with them and by their own accord are the refuseniks who are *allowed* to defy evacuation orders: an act which in effect makes them the enemy within or the enemy of the state and its narrative of the above-mentioned cohesion and unity. To put it another way, refuseniks in the exclusion zone *stand against* what the *Miracle Pine* is made to *stand for*. Furthermore, the greater the elevation of the *Miracle Pine* and the more convincing the narrative grafted onto it, the easier it becomes for biopolitical state racism to justify withdrawal of care for the refuseniks. The *Miracle Pine* is therefore pitted against the exclusion zone's refuseniks. It is, moreover, simultaneously able to obscure and reveal. It obscures the state's postdisaster management or the real problems on the ground, while revealing the likes of the refuseniks who want to disrupt the course bestowed on the Japanese nation through its purported tradition and unique nature.

Techniques of the "Arts of Government" and Biopower

Moreover, of particular interest to my inquiry is the relevance of the analytical framework of biopower as part of the "arts of government" within which it operates through a set of powerful techniques available to neoliberal governments. While managing human population by targeting biological aspects of life aims to maximise human productivity and help the state prosper, for the state to thrive, it also needs to nurture subjects who will devote themselves to its prosperity. Indeed, it is not a question of forcing people to do something, but rather creating a situation of indirect coercion where "the self is constructed"[127] and able to self-modify in a way that corresponds with the state's expectations. It is here that the controlling and disciplining power of visibility's relation with the biopolitical rationality can be grasped.

As already discussed, imposed visibility of disciplinary power helps produce *individual* docile bodies, but they form part of "a multiplicity of men" (Foucault, 2003, p. 242) on which biopolitics has a "massifying" (p. 243) effect since it perceives them as a species that need to be managed. Visibility is, therefore, pertinent to my inquiry since I view the *Miracle Pine* as both a tool for achieving visibility and an object of it. Moreover, in *The Birth of Biopolitics* (Foucault, 2008) while further exploring the relationship between liberal governmentability and those that are subject to it, Foucault uses the figure of *homo economicus*, an example of a type of the self-reliant subject mentioned earlier, and characterises them as someone who is "an entrepreneur and an entrepreneur of himself" (Foucault, 2008, p. 226), responsible for their capital, is their own producer and is even in charge of their own satisfaction (Hamman, 2009). Thus, this new subject of government,

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[127] Foucault (1993) states the following: "Governing people is not a way to force people to do what the governor wants; it is always a versatile equilibrium, with complementarity and conflicts between techniques which assure coercion and processes through which the self is constructed or modified by himself" (as cited in Hamann, 2009, p. 42).

homo economicus, is of great interest to the neoliberal state because he/she is fully self-sufficient (also in their ability to self-modify) and able to productively contribute to the state's growth.

Ideas such as the creation of self-modifying and self-reliant subjects also resonate with the already-mentioned *jiko sekinin* mantra of the Japanese neoliberal state, particularly in the face of the heightening postdisaster precarity. Promotion of the *jiko sekinin* model of being in a neoliberal society could arguably be considered as yet another part of the "arts of government" (Foucault, 2004) arsenal whereby the state can offload the burden of securing welfare of citizens to each individual. To a degree, this signifies that the modern neoliberal state is relinquishing some of its grip on biopower in favour of the citizens. Better still, it is through shifting to the management of nonhuman life exemplified by the *Miracle Pine*, that the state is turning to the citizens and *allowing* them to assume the responsibility—once a mandate of the sovereign—"to take life or let live" (Foucault, 2003, p. 241).

Foucault suggests that when political power was being transformed in the 19th century, the old sovereign power over life and death was not merely *replaced* by the biopolitical right to "make live and let die" (p. 241) but rather "*complemented*" (p. 241) by it [my emphasis]. In a similar way, it could be argued that in the present moment of *neoliberal states of precarity*, these two powers are somewhat integrated. The symbolism implicit in and encoded into the *Miracle Pine* acts as a motivating factor for individuals involved to assume this multifaceted responsibility of *jiko sekinin* and step in as the state is free to vacate the scene. Consequently, the *Miracle Pine* is the result of apparent absenteeism on the part of the state, while also a result of its biopolitical management.

Whether through online fundraising campaigns or voluntary organisations such as Ipponmatsu Beer, by effectively withdrawing and *letting* the general public take charge of the tree's revival (and, to some extent, of the postdisaster management), the government

sanctioned *the illusion of the citizens exercising "sovereign" or free will* where not only the residents of Rikuzentakata but also those of other directly and indirectly affected areas could and *should* feel responsible for their own destiny. To reiterate, it is as if the above-mentioned notion of having the agency over the biological life of the population, something which was once the domain of the king with his right "to take life or let live" (Foucault, 2003, p. 241) is preserved in the semblance of sovereignty that comes about as the state performs something similar to the principle of "laisser-faire" (Foucault, Davidson, & Burchell, 2008). That is to say, by disavowing itself of the responsibility of care for the citizens, it lets them be responsible for their own well-being.

However, since welfare has come to symbolise the modern state and constitutes a means of exercising biopower, this act of abandoning welfare may signify that the present neoliberal mode of government is no longer compatible with Foucault's analysis of the modern state's operations of biopower. The post-3/11 neoliberal mode of existence operates through precarity, forming a powerful and potentially inexhaustible resource at the state's disposal. Creating and controlling conditions of precarity is a priority for the neoliberal state as it is directly linked to welfare, itself traditionally seen as its hallmark. The particular conditions of precarity dictate the degree of necessary welfare, provision of which is ultimately the state's mandate and responsibility. While this may initially sound paradoxical (i.e., the more precarious the conditions, the greater expenditure for the state through welfare provisions), it is anything but if we examine the specificities of a post-natural disaster precarity. Practices such as deregulation of labour, for example, cannot but be blamed on the state. In fact, heightened states of precarity resulting from a natural disaster complicate the traditional state/welfare dynamic. Indeed, post calamity precarious conditions represent a formidable opportunity in that they permit the state to shirk off a burdensome and costly layer of responsibility of care. The state is thus given wriggle room to decide just how much

care and to whom it will provide it. In surplus of all the other opportunities precarity presents to the state discussed thus far, a natural disaster equalises all involved, seemingly levelling the differences between them. After all, not only the populace but also the government are affected by a natural disaster.

As already discussed, the sense of vulnerability created by such an emerging dynamic presents itself as a chance to rebuild and reshape the nation. Just as the participatory documentaries in Rangan (2017) scream, "we are all in it together," so does the neoliberal state to its subjects after an all-flattening natural disaster. Furthermore, a new form of nationhood can be achieved through the promotion of powerful symbols, revoking the supposed tradition or myths of uniqueness, as suggested in my analysis of the *Miracle Pine*. Biopolitical management of the *Miracle Pine* and its utilisation as an apparatus of controlling power is similar to (but less costly than) direct management of the population through welfare provision. Arguably, a similar logic operates in the state's nonmanagement of animal life in the exclusion zone.

Overall, therefore, a post-3/11 landscape is a broad canvas of great openness. The state *may* provide care and governance, but it is able to decide to what degree and it can justify its withdrawal while capitalising on the newly born sense of self-assertion and self-responsibility thanks to the successful creation of an illusion of sovereignty where it is the citizens who become *empowered at their own peril*. To an extent, the citizens become their own care providers and assume the old sovereign-like power over life and death. Put more sinisterly, as the government withdraws, it *lets* the citizens make the decisions the government should be making. While the state needs to relinquish a degree of control, it gains as it relieves itself of the burden of care providing. And in pursuit of economic growth, whatever energy and resources are saved can be applied elsewhere.

The notion of individual responsibility (*jiko sekinin*), accompanied by a move towards deregulation of labour and privatization (Allison, 2015, p. 125) contributes towards an increased precarisation of the conditions in society and constitutes an integral part of the neoliberal state's operation. It is against this background that the tree gained in agency, became a mediator between the government and the people, and arguably worked as a self-care tool for the victims, wherein bruised psyches could begin to heal (or *iyasareru* in Japanese). The imagery of resurrection, along with the rhetoric of defiance, national uniqueness, and hope (all grafted onto the tree), thus became a temporal landscape facilitating an effacement of the government. Simply put, the populace stepped in where the authorities would not. What the pine tree represents (resilience, hope, tradition, etc.) was thus absorbed by the human actors. This propelled them into action and ended up benefitting the neoliberal state. Hence, allowing the lone-standing pine of Rikuzentakata to become the *Miracle Pine* consisted of having its arboreal existence biopolitically managed into nonlife, which in effect meant turning it into a malleable tool for the state to use as necessary, through which controlling power directed at the population was subsequently administered.

Visibility: Its Perils and Operational Framework

To a large degree, the *Miracle Pine*'s power also relies on visibility. Its physical form is, after all, that of a tree. Moreover, while what it stands to symbolise is, in theory, intangible, the pine is fleshed out into objects that are made to look like it or made of it. Also, its (romanticised) representation in the media as a symbol of resilience and national unity, accompanied by a narrative of reminiscences about animist so-called tradition encouraging and justifying engagement in the *Miracle Pine*, helps realise communal imaginings. That said, while visibility would have been no doubt much desired by Tōhoku residents who historically have reasons to feel disadvantaged and forgotten by Tokyo, visibility can also

be—to once more quote Foucault's discussion of the panopticon—a trap (Foucault, 1995, p. 200).

In her critique of the purported emancipatory capabilities of media reporting during humanitarian emergencies, Rangan (2017) refers to Foucault's analysis of Bentham's panopticon in *Discipline and Punish*, particularly in relation to the paradox implicit in how light or visibility operate in this model of a modern prison.[128] Specifically, Rangan explains that in his discussion of the specificities of (the panoptic) surveillance, Foucault states that modern power's controlling capabilities are most efficiently exercised not through darkness but through the entrapment of light (Rangan, p. 101).[129] Thus, in spite of the panopticon's "light-filled design" (p. 159), which is meant to typify values of enlightenment and progress (p. 159), it is not darkness (of dungeons) that captures and confines but the inescapable, "compulsory visibility" (Foucault, 1995, p. 187), i.e. light. Rangan extends her discussion by analysing the tropes of humanitarian emergency reporting in the aftermath of Hurricane Katrina, as exemplified by the very physical, somewhat exaggerated, yet award-winning coverage of the disaster by CNN's Anderson Cooper and a documentary film featuring footage shot by one of the survivors of Katrina "Trouble the Water" (Rangan, p. 67). Both these examples contain a participatory dynamic where the disaster victims are offered the possibility of contributing their presence (i.e. gaining visibility) and thus bear witness to the "live spectacle" (p. 67) of the disaster by becoming "citizen journalists" (p. 72). In reality, this is equal not only to offering free labour that supports "humanitarian media economies" (p. 67), but also calling upon victims to willingly put themselves in harm's way while adding validity to the documentary and the reporting's claim to *liveness*.[130]

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[128] Already discussed on pages 84 and 88.

[129] Specifically, Rangan considers these thoughts pertaining to the controlling powers of light as Foucault's greatest contribution to biopolitical thinking "as it relates to the media" (p. 101).

[130] Rangan (2017) defines *liveness* as "a set of rhetorical conventions designed to convey the technical capacity to transmit events in real time" (p. 20).

Furthermore, according to Rangan, rendering the disaster-affected and dispossessed subjects and their stories visible, instead of liberating them and granting them agency, makes them subject to the "predatory (…) logic of disaster capitalism" (Rangan, 2017, p. 67) whereby some of the weakest members of society are encouraged to accept potentially risking their lives as an individual choice, in exchange for a promise of empowering mediatic visibility. As these subjects' vulnerabilities are exposed, and the vision of their tragedy loses its sharpness and becomes more a question of authenticity (Rangan, 2017, p. 79), the illusion of (the establishment's) truthfulness becomes reinforced. Although Rangan uses this analysis to highlight how the immaterial labour of home reporters in natural disasters can become a neoliberal tool of racist exploitation, her analysis of Foucault—namely that biopower does not work through "exclusion and dispossession" but by "inclusion and affirmation" (Rangan, 2017, p. 101)—can be used as a lens through which to view the *Miracle Pine*.

On the surface, the pine tree puts Rikuzentakata and the surrounding disaster-struck areas on the affective map of Japan. This guarantees greater exposure of the postdisaster fates, and that can often translate into tangible rewards (labour of volunteers, funds generated through activism, and capitalisation on the symbolism implicit in the *Miracle Pine* through the sale of pine-related goods, for example). However, such "rewards" benefit the neoliberal state directly and indirectly. The funds generated fuel the economy and the assertion of self-responsibility for individual well-being, earnings, and the above-mentioned "satisfaction" permit the withdrawal of care by the state. Ironically too, the greater the visibility of the *Miracle Pine*, the brighter the affective light it shines and the more remote it appears to the rest of the Japanese populace. Moreover, the symbolism encoded in the tree confirms the possibility of repair and reaffirms the supposed national uniqueness of the Japanese, within whom the ability to nurture resilience—a neoliberal precarity super drug—is the focal point. Hence, once the existence of resilience is confirmed and encoded as national identity, the

neoliberal order of "disaster capitalism" is regained. The affected citizens are thus

interpellated into assuming responsibility for their own welfare and the revival of the

disaster-affected Tōhoku region.[131]

Concluding Thoughts

Thanks to the *Miracle Pine*, the communication facilitated by the commodities it

inspired, the symbols it encompasses, the relations it forges, the mediatic and discursive

visibility it gains, radioactive pollution is normalised. As a result of this normalization, the air

becomes breathable again, with warm-hearted stories of resilience and heart-wrenching

stories of loss ending up absorbed as communal heritage. This normalization subsumes the

individual tragedies; they become appropriated by all, their significance diminished and

flattened. In letting the pine die and then bringing it back to (non)life by animating it with

resin formed from scrap-metal found in the proximity of (recovered and unrecovered) human

bodies, this biopolitical management may create a lasting image of power, competence and

agency vis-à-vis (forces of) nature. However, it may also symbolise a rather troubling

testimony of the neoliberal machine's disregard for human life.

This illusion of (re)assertion of dominance over the environment is yet another way in

which the *Miracle Pine* acts as a *dispositif* of the state and resonates with the idea shared by a

number of scholars that control of the environment—in particular, the air—and the weather

represents the ultimate power in today's world. As "the human organism's most immediate

environmental resource" (Sloterdijk, 2009, p. 29) that lends itself to purposeful design or

manipulation (Sloterdijk, 2009, p. 47), air is Sloterdijk's primary focus in *Terror from the*

Air. For Sloterdijk, air has extensive clout over the shape of all beings' existence and is life's

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[131]When discussing participatory documentaries of hurricane Katrina victims, Rangan (2017) explains
that the inclusive nature of such reporting strengthens disaster capitalism by "interpellating disaster
victims as eyewitness journalists" and enticing them to actively accept risks as "personal liabilities" (p.
67).

most essential resource; consequently, to control the air means to control biological life. This, I posit, folds neatly into my discussion of the biopolitical management of human and nonhuman life post-Fukushima. Indeed, the word Fukushima is key here. Regardless of the physical distance separating the *Miracle Pine*[132] and the Fukushima Daiichi nuclear reactor, it is the radioactive air that comprises a focal point of reference for all the lives and nonlives it encompasses and is a condition of the (shape of their) existence. Allowing the tree to exist in its nonlife form and coding it as a symbol of national resilience is an attempt to design the post-3/11 environment as liveable and its radioactive air as breathable. In other words, by controlling the atmosphere's palatability, the state can control the population. In the case of post-Fukushima Japan, however, this control is carried out through no-control.

This is reminiscent of the previously mentioned liberal logic of "laisser-faire" (Foucault, Davidson, & Burchell, 2008, p. 270), whereby the state is able to indirectly mold the perception of reality through the use of "non-action" and symbols. From this perspective, by appearing to have defied the elements (sea salt, root erosion, the tremor causing all around it to collapse) while standing tall against the green screen of radioactive air, the *Miracle Pine* at the very least symbolises the possibility of an entity that can manipulate the environment. Indeed, the *Miracle Pine* "grows out" of dead bodies purposefully inserted into its narrative of coming-into-being. Life had been drawn out of it and nonlife reinstated within it; an act which makes the dubbing of the tree as *Miracle Pine* or sometimes also the Tree of Hope, doubly ironic, but equally illustrates the manifold project of the biopolitical management of life. The pine is the tool and the hand that holds it. It stands in for the post-3/11 populace as it is biopolitically managed into its symbol and by becoming the symbol, it stands with the same populace. It is thus from with-in that the *Miracle Pine* can do its job. As a symbol, the *Miracle Pine* is not a direct reflection of the population it symbolises but instead contains,

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[132] This is, of course, in addition to the left-behind animals, their guardians, and all the other actors involved.

and this is enforced by the existence of its time-resistant bionic core, not only its present shape but also its slowly unfolding future. A future that is stealthily managed not just from above and all around by the irradiated air, but also from underneath from where that core was fashioned and on which it depends. The actors participating in the *Miracle Pine*'s continued maintenance do so because of their own often-painful entanglements.

To summarize, this chapter has situated the *Miracle Pine* in its precarious environment and unearthed the human and nonhuman infrastructures with which the pine enjoys an interdependent relationship. The chapter has furthermore examined the infrastructural networks of the *Miracle-Pine*-inspired commodities, highlighting the mediating role such incarnations can inhabit, and articulated the political ends emblems such as the *Miracle Pine* can be made to serve. The *Miracle Pine* has also been presented against the backdrop of the supposed tradition of animism which was used (by the state) to turn the tree into a symbol of the nation's uniqueness and thereby shape the communal imaginings and what comes with it in a way that falls in line with the neoliberal state's agenda of growth. Surrounded and supported by its numerous mediatic incarnations as character goods, the *Miracle Pine* gained widespread visibility whilst acting as a smokescreen behind which the inadequacies of the postdisaster aid-relief and everyday governance in Japan could be obscured. The revival of the tree brings with it the powerful imagery of the biopolitical management of population, effectively making the tree a stand-in for the inhabitants of the disaster-affected environment.

Moreover, The *Miracle Pine*, this chapter has argued, operates as an apparatus of power (*dispositif*) through which the state has been able to exercise its governmental power. Furthermore, by surrendering the management of the tree to civic movements and willing individuals, the government has curated an illusion of sovereignty, empowering citizens to see themselves as agents responsible for their own future—whatever it may end up being—

and *because of* the narrative inscribed into the *Miracle Pine*, the citizens could glimpse at how they should be seeing themselves.

Finally, the chapter has proposed that this state-created illusion of sovereignty—facilitated in part by the biopolitical management of the *Miracle Pine*—coupled with the withdrawal of welfare (i.e., the hallmark of the modern state and its exercise of biopolitical management of the population) may signify that in the present-day *neoliberal states of precarity* the Foucauldian framework of biopower may have reached its use-by date. Analysing the chapter's networks of infrastructures, assemblages of power relations, as well as the techniques that operate through them and sustain them has opened up a view of the complexity a post-3/11 moment constitutes, pointing to important nodal points of the neoliberal state's structure from which significant reworkings of approaches and practices could arise.

Conclusion

This thesis has provided a glimpse of human and nonhuman actors in acts of self-assertion intended to weather the *neoliberal states of precarity*'s conditions of living as exemplified by the post-3/11 geopolitical cluster of relations known as Japan. Consequently, neither chapter was designed as a project of essentialist prying into or passing judgment of individuals' conditions of existence. Instead, both chapters recorded the biopolitical management of human and nonhuman protagonists. To be precise, the preoccupation of my inquiry lay with the conditions of participation of different animate beings in the sovereignty of life. I examined two different responses to the summons of resilience in the face of crisis and the state's inadequacies in dealing with it, and I demonstrated that the acts of radical resourcefulness that are mobilised turn out to sustain the neoliberal state. Furthermore, I explained how the human actors at the centre of both strands of my inquiry are ensnarled by their visibility and the nature of the discourse enlisted to represent them. In both cases, the state relieves itself of responsibility and allows the people to step in while its withdrawal (of care) paradoxically enhances its control over the citizens.

I initiated my inquiry by questioning the notion that a group of refusenik farmers returning to the exclusion zone of Fukushima to look after the left-behind animals is capable of offering a model for a new form of sociality outside of the neoliberal logic. Through my analysis, I have exposed the undercoat of falsehood latent in the refuseniks' kinship with nonhuman animals and demonstrated how their defiance is recuperable by the state. That is to say, the unfortunate consequence of the kinship is that it results in a creation of yet another tier of precarity. I have also framed the zone as a modern zoo with an exhibitionary dynamic where the humans and their animal charges become a spectacle observable from outside. Moreover, I have taken issue with the media and the academic discourses' inability to offer a

more inclusive view of the post-3/11 habitat, perpetuating instead a view that ignores the reality of the interspecies connectedness of life in the natural world.

Next, I have investigated the resurrected pine tree of Rikuzentakata and examined it both as a node of animist investment and as a vessel through which an essentialist message of national unity and uniqueness is disseminated. I have revealed the *Miracle Pine* as a result and a condition of its symbiotic relationship with the human infrastructure it depends upon and have discussed the different mediatic incarnations of the tree that are a fruit of this relationship. I have also argued the bionic rebirth the *Miracle Pine* served as a state-sponsored ruse to create the illusion of agency and free will among the citizens so that they can imagine themselves as lone-creators of their own future. The pervasiveness of the symbolism grafted upon the tree and its supposed origins in traditional culture allowed the citizens to stand external to the image of themselves and experience this as an audience in a museum would, effectively self-disciplining themselves into fitting in with that image. I maintain that this, in turn, acted as a smokescreen behind which the state was able to conceal its shortcomings in the face of the disaster and postdisaster management. The *Miracle Pine* thus manages to freeze-frame the environment around it and turn it into something to be looked at from a distance rather than a living extension of the same organism.

To conclude, this thesis underscores the necessity for a radical shift in perception vis-à-vis nonhuman life and frames this shift as an indispensable step towards a forward-looking future rather than one half-trapped in the past. Precarity is not something that happens to humans alone, and an interspecies perspective is essential to account for that. As I have argued, perpetuating the hierarchical order with respect to the relationship between humans and other forms of life does not only disadvantage other forms of life, it negatively impacts the conditions of human beings too. My examination of the human and nonhuman relations within the exclusion zone of Fukushima demonstrates that embracing nonhuman animals and

proclaiming kinship with them should neither be seen as a gesture triggered by humanitarian instinct nor as a herald of a new sociality in opposition to the state. Quite the reverse. It is a subsumption of two categories of life into one in which existing hierarchies remain in place. Indeed, rather than create a new sociality removed from the trappings of the neoliberal state, what the refuseniks end up doing is respond to the neoliberal logic of perfect inclusion whereby even their dissent can be absorbed and turned into a resource. In other words, the success of their dissent proves beneficial to the state as it discloses that even the most heightened state of precarity can be weathered by the population, ultimately leaving the neoliberal status quo intact.

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Appendix A

Yoshizawa Arrives in Tokyo With his White-Speckled Bull

Photograph by Sasahara Koji (2014). In Murano, D. (2016, March 2011). Caring for Fukushima's abandoned animals. *The Washington Post.* Retrieved from https://www.washingtonpost.com/news/in-sight/wp/2016/03/11/caring-for-fukushimas-abandoned-animals/?noredirect=on&utm_term=.b9bdf09e3170

Appendix B

Matsumura: On the Side of the Animal

Photograph by Carlos Ayesta and Guillaume Bression (2011). In Bression, G. & Ayesta, C. (n.d.). *Retracing our steps: Fukushima exclusion zone* [Website page]. Retrieved from https://www.fukushima-nogozone.com/copie-de-fukushima-no-go-zone

Appendix C

The Preserved *Miracle Pine* of Rikuzentaka

Japan's 'Miracle Pine tree' stands as reminder of 2011 tsunami [News article]. In *The Japan News / Yomiuri* (2017, March 3). Retrieved from https://www.pressherald.com/2017/03/03/japans-miracle-pine-tree-stands-as-reminder-of-2011-tsunami/

Appendix D

Ipponmatsu Beer

Photograph from Spoon & Tamago: Japanese art, design and culture (2013, September 16). *brewed with purpose | Ippon-matsu Beer inspired by Japan's Miracle Pine* [Blog post]. Retrieved from http://www.spoon-tamago.com/page/147/

Appendix E

Commemorative Tea Towel

Photograph from Tagada ya (n.d.). *Tokyo storehouse x macha: The future of Ichimatsu pine towel handkerchief* [Online store post]. Retrieved from http://rikutaka.jp/?pid=71451187

Appendix F

Tree-Trunk-Shaped Biscuits

Photograph from Tagada ya (n.d.). *Rikuzentakata regional development miracle ichimatsumatsu roll cookie* [Online store post]. Retrieved from http://rikutaka.jp/?pid=62800926

Appendix G

Commemorative Fountain Pen

A fountain pen allegedly crafted from the *Miracle Pine* itself. Photograph by Naoaki Terasawa. From Overblog (February 26, 2015). *'Miracle Pine' gets new life as luxury pen.* Retrieved from http://www.fukushima-is-still-news.com/2015/02/4-000-dollars-miracle-pine-pen.html

Appendix H

Illustration for Studio Ghibli's *The Tree of Hope* (2013)

Illustration by Nizo Yamamoto (2013). In *Kaieisha* (n.d.). *Tree of hope* [Website page]. Retrieved from https://www.yamamoto-nizo.com/kibounoki

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Appendix I

Still From Studio Ghibli's *The Tree of Hope* (2013)

Nizo Yamamotos' anthropomorphic rendering of the *Miracle Pine* in *The Tree of Hope*. In *Technology, business & art of animation & VFX* (May 29, 2013). Ghibli art director crowdfunds quake support film [Website page]. Retrieved from https://www.animationmagazine.net/features/ghibli-art-director-crowdfunds-quake-support-film/

Appendix J

Plaque and Metal Replica of the *Miracle Pine*

Photograph from *The News Wheel* (April 7, 2014). JAMA technicians present 'The tree of hope' statue to Rikuzentakata [News article]. Retrieved from https://thenewswheel.com/jama-technicians-present-tree-hope-statue-rikuzentakata/