

# Messing with cleanup: Biopolitical management of animal life in the wake of environmental disasters

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## Abstract

Recently scholars across multiple disciplines have extended Foucault's ideas of biopower beyond his original ambit to account for power relations between humans and nonhuman animals. Proceeding from this work, this paper considers how – and with what effects – biopolitical techniques are deployed to manage animal life after environmental disasters. This is a time in which wildlife management regimes are intensified through restoration and rehabilitation efforts that are funded by fines issued to guilty parties. Focusing on the 1989 *Exxon Valdez* oil spill, this paper tracks what management regimes and institutions followed in its wake. Two are dominant: widespread wildlife rehabilitation efforts and the construction of a public aquarium, the Alaska SeaLife Centre, which also operates as a rehabilitation facility and a scientific research institute. In the former, oiled birds and mammals are collected, calculated (weighed, medically tested, behaviorally assessed), cleaned, issued an ID band, and then released only if they meet criteria deemed to indicate that they can survive in the wild. Many rehabilitated animals remain captive, subject to an implicit biopolitical assumption: a captive life is preferable to a wild death. At SeaLife centre, resident animals' lives are tightly controlled and perpetually visible. Released rehabilitant animals are inserted with a microchip and tag to enable monitoring. Care is a significant motivator of this management and control, making Foucault's conception of pastoral power a useful analytic lens. In conducting this analysis, this paper also broadly inquires into how – if at all – human-animal relations are remade in the aftermath of environmental disasters.

## 1. Introduction

Sometime in late 1988 or early 1999, a female sea otter was born in the cold waters off Alaska's Prince William Sound. Nothing specific is known about the first months of her life. Likely she spent these early months as typical newly born pups do, resting on her mother's chest being nursed and groomed. Soon, after several weeks of diving practice, she graduated to feeding herself. At sunrise, sunset, and deep in the night she foraged for snails, clams and mussels with her mother. She slept when the sun neared its peak in the sky, floating with the ten to hundred other females in her social group, what scientists call a raft. When bobbing at the ocean surface to rest or eat, she wrapped herself in kelp to keep from drifting out to sea.

Much more is known about this particular sea otter after March 24, 1989. At midnight, just as she may have been crunching through a clam shell in a dark kelp bed under a starry sky, the *Exxon Valdez* went off course and groaned across Bligh Reef, slicing open the ship's belly and issuing forth, by final count, 11 million gallons of oil. The lowest estimates put the death toll at 2,800 sea otters, 300 harbor seals, 250 bald eagles, 22 orcas, 250,000 seabirds, and billions of salmon and herring eggs perished in the immediate aftermath of the spill (*Exxon Valdez* Oil Spill Trustees Council [EVOSTC]

no date; Newman et al. 2003). The young female sea otter was one of 450 of her species who were removed alive from the oily ocean water (Gorbics 1999). More than half died during rehabilitation. Of the 197 released back into the wild, 45 were tagged and monitored for two years. At the end of two years, 15 were still alive, 14 were dead, 15 were missing and presumed dead, and one radio collar failed (Gorbics 1999).

37 other sea otters were not released because they had severe health problems or because they were abandoned or orphaned pups, presumed ill equipped for return to the ocean. One of these was the female pup. Shortly after the spill, she was delivered by air to the Point Defiance Zoo and Aquarium (PDZA) in Tacoma, WA. She became known as “Homer”, named for the Alaskan town on the Kenai Peninsula, near where she was found. The other 36 un-releasable otters were shipped to aquariums and zoos across the United States, Japan and Canada. During the first year in captivity, 13 died (Williams 1999). Homer, though, lived until she was the last known sea otter to have survived the spill. Her days were spent floating in a small pool. Each night, she slept alone. Each day, she watched passing zoo visitors watching her.<sup>1</sup> Last June, veterinarians administered an exam that showed Homer suffered from “severe wasting and other serious medical issues” (Sherman 2013). On June 24, 2013, she was euthanized.

Homer’s story is an instructive one. It can prompt a broadening in the scope of questions directed at post-disaster cleanup. The most common question asked of cleanup and wildlife rehabilitation more generally is *does it work?* Studies in response have found low release and success rates across rehabilitation sites, usually measured by survival and reproductive rates (i.e. Anderson et al. 1996; Lunney et al. 2004; Teixeira et al. 2007; Russon 2009; see Newman et al. 2003 for a summary regarding oiled sea birds). While this is a critical question, in this paper I suggest we also ought to ask of cleanup: *what work does it do?* This implies a host of questions. What subjects and relationships does cleanup enact (or what are its performative effects)? What infrastructures does it leave in its wake? Does it contest power relations between humans and animals, reproduce them, or reinforce them? The *Exxon Valdez* spill dramatically altered the course of Homer’s life. But so too did the decisions, assumptions and embodied interactions (the apparatus, following Foucault and Agamben) constituting the cleanup effort that landed her in a small aquarium pool over a thousand miles from the Kenai Peninsula where she was born. It is not merely the original act of mess, of spill, that is power-laden and performative. In this paper I “mess with” the seemingly simple and innocent story (and even celebrated for its cathartic effects – see Massey et al. 2005) of cleanup, of redemption or reparation, examining it, too, as a performative apparatus.

To do so I undertake the above line of questioning through a Foucauldian analysis of power, particularly an entanglement of biopower, or power over life, and pastoral power, or power of care. There are two salient aspects of biopower acting within rehabilitation: first, rehabilitation takes as its target the biological life of the animal; and second, the *calculated management* of this life occurs at two scales that are entwined in Foucault’s analysis of biopower: the scale of the individual body (anatomopolitics) and the scale of the population (biopolitics). In what follows I will focus in more detail on the

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<sup>1</sup> Point Defiance’s 700,000 annual visitors – who also come to see animals ranging from sharks to polar bears to the Asian elephants, Malayan tigers and gibbons enclosed in the “Asian forest sanctuary” exhibit – generated \$12.5 million for PDZA in 2011, combined with private donations (PDZA 2012).

<sup>2</sup> For example, biologists counted just over 1,000 dead sea otters but as scientists estimate as many as three

former, because rehabilitation is largely concerned with individual animals. However, rehabilitation operates within a conservation context in which populations are key sites of intervention, and so biopolitics (i.e. not anatomopolitics) shapes rehabilitation decisions, as I will outline. I stress “calculated management” because rehabilitation (whether ending in release or captivity) is deeply entangled with calculation, with establishing a knowable animal subject. My analysis proceeds centrally from Foucault’s insight that biopower “is a form of power that makes individuals subjects. There are two meanings of the word ‘subject’: subject to someone else by control and dependence, and tied to his own identity by a conscience or self-knowledge” (Foucault 1982, 130). A second point of distinction is that my analysis will again focus on the first mode of subjectification – the making subject to another’s control and dependence (and, I add, knowledge) – in part because of the difficulty, if impossibility, of demonstrating an animal’s subjectification in terms of its identity or self-knowledge. The strong degree to which *care* motivates these practices of subjectification makes Foucault’s conception of pastoral power a useful lens.

Foucault’s development of biopower and pastoral power were concerned strictly with relations *among* human beings. In recent years, however, scholars have shown Foucauldian-inflected analyses of human-animal relations have productive results, particularly biopower, although increasingly, too, pastoral power. This paper begins with a short review of this work and Foucault’s original writing. The paper then turns to two dominant infrastructures left in the wake of the *Exxon Valdez* spill, and funded by fines issued to Exxon. The first is a rehabilitation regime in which birds and mammals are collected, calculated (weighed, medically tested, behaviorally assessed), cleaned, issued an ID band, and then released only if they meet criteria deemed to indicate that they can survive in the wild. The second is a related institution, a public aquarium, the Alaska SeaLife Centre, which also operates as a rehabilitation facility and a scientific research institute. In analyzing the management regime and the institution, I find that both involve an exertion of human domination to varying degrees, although in both cases motivated by care. I locate the assumption that a captive life is preferable to a humane death within a biopolitical regime, and interrogate its consequences. Finally, I conclude by reflecting on the implications of my analysis for future environmental disaster cleanup.

## **2. Life, care & power beyond the human**

In his writing Foucault scarcely mentioned beings or lives other than human. But in the past decade several scholars have shown the promise that lies in bringing Foucault’s ideas into conversation with empirical work in animal studies across disciplines. In particular, these scholars have taken up two Foucauldian modes, or techniques, of power: biopower and pastoral power. Given the extensive existing writing and reviews of these power techniques, this section opens with only a very short introduction to both before turning to a truncated review of their use to understand power relations beyond the strictly human subject.

For Foucault, both pastoral power and biopower are “modern” techniques of power, meaning that they arose during the eighteenth and nineteenth centuries. They did not displace existing modes of power at the time – namely disciplinary power and sovereign power – but rather developed alongside them. It is important to recall this co-existence. Pastoral power and biopower tend, even in Foucault’s own work, to be defined against or in contrast to sovereign and disciplinary power, potentially implying an

antagonistic or factious relationship. Foucault (1990, 2003) consistently points out, however, that this was and is not the case: various modes of power, despite their marked difference, entangle with each other in regimes of power and knowledge.

Against sovereign power, defined as the power to make die or let live, biopower is referred to as the power to make live and let die. For Foucault, this represents a fundamental shift in the target of power. While the primary means by which sovereign power intervened was through death, biopower's target is biological life itself – life's nurturing, flourishing, spread, manipulation, and “calculated management” through the “administration of bodies” (Foucault 1990, 140). Death becomes power's *limit* under biopower, which is one reason Foucault (1990) suggests that death has become closeted in modern society. Consistent with a biopolitical regime, modern society has seen the rise to prominence of several public institutions dedicated to life's calculated management in terms of health (hospitals, departments of health) and knowledge (statistical demographics, nutrition, etc), for example. An important and sometimes overlooked aspect of biopower is that, for Foucault, it operates at – and performs – two scales of subjectification: the population, in what Foucault calls biopolitics; and the individual body, in what he calls anatomopolitics. Biopower thus both totalizes (or aggregates) and individualizes.

So too does pastoral power. This is a power technique in which those in power do not merely *command* (as in disciplinary and sovereign power) but also *sacrifice* for their subjects (as a pastor) (Foucault 1982). It is also a mode of power that looks after both the “whole community” and “each individual in particular, during his *entire life*” (Foucault 1982, 783). Later, in his 1978-79 lectures at the Collège de France, Foucault (2009) likens this to a shepherd looking after his sheep. Immediately, then, there are clear ties between biopower and pastoral power, which is “coextensive and continuous with life” (783). For Foucault, pastoral power emerged after the pastorate, the ecclesiastical institution, but has taken on a new form in the state in the modern period. Pastoral power exerted by the state is no longer about salvation in the after life, as was the case in the pastorate, but about ensuring salvation in this world, where salvation refers to health, well-being, security, and so on – in many ways, the dominion of biopower. The officials of pastoral power also changed and increased in number, from being limited to priests and pastors to innumerable state officials and officials in public institutions, like the police and hospitals. Finally, again echoing biopower, Foucault notes how “the multiplication of the aims and agents of pastoral power focused the development of knowledge of man [sic] around two roles: one, globalizing and quantitative, concerning the population; the other, analytical, concerning the individual” (784). Of course, for Foucault (1977) knowledge and power always operate as a couplet, working to establish and maintain “regimes of truth” where truth is always an effect of power. Equally, the pursuit of knowledge is power-laden. As Derrida (2004, 25) writes, projects to *know* nature through zoology and biology, for example, are inseparable from techniques of intervention into and transformation of their object, namely “the living animal”.

Although the living animal was absent from Foucault's analysis, subsequent scholars have emphasized the “animal origins” of biopower (Shukin 2009; Wolfe 2003, 2010; Derrida 2008; 2009) and pastoral power (Pandian 2008, Shukin 2011). Shukin (2009, 2011, 144) in particular points to how “biopolitical thought is prone to generating concepts—pastoral power, ‘bare life,’ and so on—that displace animals from the material

stakes of the discussion even as they metaphorically summon them.” Animals are invoked as metaphors to think through the operation of power – especially, for Derrida (2009), sovereignty – but are excluded from the realm of the political. Recent years have seen a growth of scholars who are, then, interested in both this metaphoric function of animals within power’s exertion over other humans, and in actual animals who are subject to equally (and often co-constituted) biopolitical and pastoral techniques of power. This paper engages primarily with the latter: animal theorists across disciplines have increasingly enrolled biopower and pastoral power into their analyses – though in general, not both at once, and arguably biopower to a greater extent than pastoral power. Most of these studies focus on domesticated animals – cows, laboratory mice, sheep, dogs, and so on – and on the specific reproductive (breeding, genetics, cloning) and productive (milking, testing) practices by which these domesticated animals’ lives are controlled through biopolitical and pastoral power (i.e. Franklin, 2007; Haraway, 2008; Pandian 2008; Holloway, 2007; Holloway and Morris, 2007; Holloway et al, 2009; Shukin, 2009; Wadiwell, 2002).

Very recently, though, some scholars have also begun considering how wild (i.e. undomesticated) animals are enrolled in and subject to the exercise of power, both biopolitical (Youatt 2009; Collard 2012, 2014; Braverman forthcoming) and pastoral (Braverman 2012, 2013). These studies point to the calculative, scientific practices and the spatial manipulations and controls that are exerted over wild animals in zoos, rehabilitation facilities, and “the wild” to both keep animals alive – both individual animals and particular population levels, and to keep humans (and human-valued and propertied animals like pets and livestock) alive. Technologies ranging from force-feeding and global biodiversity censuses to animal relocations to captive breeding technologies all point to mechanisms through which animal life is subject to human control and surveillance, often motivated through a discourse of care. Again, we see in this work how biopower and pastoral power are often wed to efforts to “make life knowable” (Hinchliffe and Lavau 2013, 259). Surveillance, Braverman (2012, 121) writes, is “about managing information.” It can also be a central technique in the deployment of the power of care (Braverman 2013), an unquestioned and increasingly pursued component of *protection of life* – whether human or not. However, and here I part with Braverman, roads paved with good intentions go to many dark places. Ultimately, an unyielding prioritizing of life renders captivity – and its attendant violences, controls, and invasions – acceptable and even necessary. From here, this paper identifies such surveillance and control technologies to which Homer and other rehabilitant animals are subject – both as individuals and populations – in the aftermath of the Exxon Valdez spill.

### **3. In the wake of *Exxon Valdez***

After a criticized slow start, in the weeks and months after the Exxon Valdez ripped open on Bligh Reef, over 11,000 people, 1,000 vehicles, and 100 airplanes were engaged in growing numbers in the cleanup effort at its peak (EVOSTC 2010). Exxon counted more than one thousand miles of beach that were treated in the summer following the spill, and further cleanup continued for the next three summers. Over twenty years later, though, this cleanup is ongoing. Toxic oil remains in some areas and many species populations

have not recovered to pre-spill levels. One study suggests recovery time will be at least thirty years for many species (Peterson et al. 2003).

In assessing the spill's environmental damages, carcass counts became the primary and crude measurement tool, even though the number of carcasses is an almost undoubtedly inadequate measure of animal injury and death (in part because many carcasses sink) (EVOSTC 2010; Williams et al. 2010).<sup>2</sup> These counts factored into the calculations of Exxon's fines, which initially amounted to over \$5 billion but was subsequently, through a series of multiple appeals (including, finally, at the Supreme Court) and reductions, settled at \$500 million in punitive damages. Additionally, Exxon claims to have spent over \$2 billion on cleanup. An final \$900 million constituted the civil settlement between Exxon and the State of Alaska. Part of this civil settlement included a "reopener window" between September 1, 2002 and September 1, 2006, during which the federal and state governments could make a claim for up to an additional \$100 million. In 2006 they claimed for \$92 million, which Exxon has yet to pay (EVOSTC 2010).

Following the fines' calculation and payment path is an important exercise, but one not undertaken in detail here.<sup>3</sup> Instead, in what follows I examine two management regimes that received a bulk of fine money in the cleanup effort. First, I describe the more immediate act of de-oiling wildlife like Homer, the sea otter whose story opened this paper. Exxon contracted the Alyeska Pipeline company to manage the spill response, and it in turn secured the International Bird Rescue Research Centre (IBRRC) to conduct wildlife rehabilitation, specifically.<sup>4</sup> By March 25 1989, IBRRC began its operation, ultimately setting up four bird rehabilitation facilities in Valdez, Seward, Kodiak and Homer, and a sea otter facility in Valdez. Both sea otters and birds are particularly affected by oil spills (because they frequently clean themselves, thereby lethally ingesting the oil), and so are the focus of de-oiling efforts and therefore of the following discussion. Second, I look at a piece of lasting infrastructure in the form of an aquarium and rehabilitation centre, SeaLife Centre, in Seward, Alaska, of whose \$55 million price tag, \$37.5 million was covered by a portion of Exxon's civil settlement fines. In what follows I describe each regime and then consider the biopolitical and pastoral logics and technologies that underpin them.

### *(i) De-oiling*

Within six hours of the *Valdez* spill, the International Bird Rescue Research Center had received a phone call from Alyeska Pipeline and was asked to leave for Valdez immediately to organize an oiled wildlife rehabilitation program. Twelve hours later, four IBRRC oil spill response team members arrived in Anchorage. A dormitory at Prince William Sound Community College in Valdez was adopted as the first bird rehabilitation center. In the first pilot attempt, both birds and sea otters were collected by boat and on beaches – sea otters captured with long-handled nets to keep people away from their

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<sup>2</sup> For example, biologists counted just over 1,000 dead sea otters but as scientists estimate as many as three times that number may have died as a result of the spill.

<sup>3</sup> The other component of the broader research project in which this paper is situated will involve examining how fines were calculated (including on the basis of carcass counts) and in turn how they were paid out.

<sup>4</sup> Cleanup is also militarized all the way down, with the military assisting with cleanup and also involved in the development of tracking technologies (for the latter see Benson 2010).

strong jaws and sharp teeth. As a volunteer later reported: “Both the otters and the birds could bite dangerously. The otters tolerated sedation, but the birds with their delicate systems had to be physically restrained. ‘Control your birds! You’re handling weapons!’ the volunteers were told” (in Collins 2014). Quickly, IBRRC realised a larger effort was needed, and split off the otter rehabilitation to another group and facility.

Captured sea otters and birds must be kept warm during transportation to the rehabilitation facilities, as they often suffer from hypothermia due to the oiling. Upon arrival at a rehabilitation centre, animals must be stabilized before they are cleaned, which often involves further warming and tube feeding. According EVOSTC (no date) “Dawn® dishwashing detergent was the cleaning agent of choice” after the Exxon spill, and IBRRC continues to use this particular detergent in its cleanup operations. Throughout the process, animals are calculated (weighed, medically tested) and behaviourally assessed. They are issued ID bands to allow for individual identification and in some cases, satellite tags to allow for tracking. Accounts of oiled wildlife rehabilitation costs per animal vary widely, from \$15 to \$1,500 per bird and from \$5 to \$80,000 per sea otter – the latter of which was the estimated cost for Exxon’s rehabilitated otters, like Homer (Monahan and Maki 1991). A more recent study (Massey et al. 2005) examined three US oil spills and determined oiled birds cost between \$1,600 to \$3,100 per rehabilitated and released bird, inclusive of all costs.<sup>5</sup>

After the Valdez spill, 1604 birds arrived live, 803 were euthanized, and 801 were released. 113 of these captured birds were bald eagles, who were trapped by wildlife officials using a “modified floating fish snare”, an “eagle-triggered multi-noose system” in which bait such as black cod is placed on a floating device – often a plug of Styrofoam – and attached to a log anchor and noose that closes around the eagle as it flies away, and is then weighted down by the log (see Gibson and White 1990). After being picked up by people in a nearby skiff, the eagles were subject to a health inspection (including blood work), and then either released after the 30 minute inspection, or kept to be de-oiled at an IBRRC station and then released if they met release criteria, which included a hematocrit (red blood cell) level of 40 percent, and the resolution of any medical problems. 87 percent of the birds were released following the inspection when it was deemed they showed no signs of oiling. All trapped birds were banded with United States Fish and Wildlife Service bands before release (Gibson and White 1990). Of the fifteen birds kept for de-oiling, nine were released the same year, three the following year (1990), one was euthanized, and two were kept, one for “educational purposes” the other for non-specified reasons. An additional twenty-four birds were brought to the IBRRC centre by members of the public. Of these twelve were released. Six remain in captivity at facilities in Anchorage and New Mexico.

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<sup>5</sup> For the purposes of Massey et al.’s (2005) study, variable costs include staff labor and travel costs, consumable supplies, utilities, facility use fees and overhead charges, and fixed costs are associated with facility construction, beach search efforts, wildlife collection and transportation, and dead bird documentation.



A Bald Eagle being de-oiled after the Exxon Valdez spill (IBRRC photo)

*(ii) SeaLife Centre*

SeaLife Centre opened in May 1998 as a public aquarium, research facility, and marine wildlife rehabilitation facility on Resurrection Bay in Seward, AK. A private, non-profit corporation employing 105 full-time employees and a staff of volunteers and interns, the centre aims to combine public education with scientific knowledge generation. Its aquarium houses harbor seals, sea urchins, sea lions, a giant octopus, jellyfish and sea birds. Many birds and mammals pass through the facility's rehabilitation program, including species of seal, walruses, sea otters, sea birds, and sea lions. Through its program, the centre collects or receives injured, orphaned, or ill animals, brings them back to health, and, hopefully, releases them. A consultation of SeaLife Centre's rehabilitation program's fairly meticulous records from 2005-2012 indicates that it received 137 animals from across the state during this period. Of these, all but one was named. Twenty died during care, six were euthanized, one (an abandoned harbor seal named Onyx) was deemed non-releasable, 89 were released to various locations across the state, and sixteen (namely sea otters and walruses) were ultimately delivered to science labs and North American zoos and aquariums, including the New York zoo, the Pittsburg zoo, the Vancouver Aquarium, and the San Diego Sea World.

SeaLife's rehabilitation program is closely aligned with its research program. Rehabilitated animals are intimately studied to gain insights into to their biology and physiology. SeaLife's research program is also involved with monitoring the status of wild populations. Rehabilitated animals are issued ID bands or radio tags, and sometimes a satellite tracking tag, for harbor seals. SeaLife Centre (no date) claims to "recognize that researching animals in the wild can have a significant impact on their habitat, physiology, and behavior. It is critical, however, to conduct experiments on wild populations and their habitats to better aid in recovery, management, and conservation of the species. For these reasons, the equipment and instrumentation we use maximizes the amount of data we collect without compromising the species' overall quality of life." These "cutting edge" monitoring devices include remote video monitoring, satellite and



VHF telemetry, remote sensing, and “life history transmitters” (LHX), which “collect data during the course of the entire animal’s life.” LHXs are implanted intraperitoneally in the abdomen and can record data for upwards to 10-12 years, and report the “mortality event” of the animal (SeaLife Centre no date).



Alaska SeaLife centre photos (photographer unknown)

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Cleanup leaves more behind than residues of oil. The intensified management regimes put in place during rehabilitation and restoration of oiled environments and animals are not limited to the event of de-oiling; the regimes, like the oil itself, have lasting material legacies: radio tags, leg bands, an aquarium. I have just reviewed two primary regimes of such intensification, of congealed knowledge-power, paid for by Exxon as part of the cleanup effort in the aftermath of the Valdez spill: wildlife rehabilitation and SeaLife Centre. These regimes also, inextricably, have lasting effects on the power relations between humans and animals. There are in particular three entangled biopolitical and pastoral power techniques to draw out that can be observed in operation in these three regimes: a simultaneous individualization and aggregating through processes of naming and classification; an escalation of surveillance through tagging, satellite tracking, and inescapable behavioural observation; and a persistent prioritizing of life over freedom. In the remainder of this section, I discuss each in turn.

(1) Both de-oiling work and SeaLife centre engage in practices that both individualize and aggregate animals. Aggregation is accomplished through the placing of animals in species classifications and populations. Viewing animals as one-of-many is akin to development of “man-as-species” (Foucault 2003) under biopower. Rehabilitant and permanently captive (aquarium) animals are subject to concurrent individuation through multiple layers of naming, similar to the modes Braverman (2012) identifies in the context of zoo animals: pet names, tracking numbers, common species names, and scientific names – the Linnaean Latininate binomial nomenclature. Animals who are moved from SeaLife centre to a zoo will also be given an institutional name (a number that locates them within global zoo networks – especially the new Zoological Information Management System (ZIMS) (see Braverman 2012).

Names are a product of and further enable biopolitical and pastoral management. Pet names both result from and further inspire bonds of care between animals and caretakers and members of the public. Scientific, tracking and zoo names (numbers) allow managers in “centres of calculation” (Latour 1987) to govern populations from afar – for example, at sea – and, as SeaLife Centre (no date) claims, “allow scientists to collect data on the animal(s) without having to be in its presence, thereby recording natural behaviors and conditions.” Centres of calculation depend on things from afar being rendered mobile enough that they can be transported to the centre (the context for Latour’s writing was a scientific lab in a colonial centre, for example); kept stable so that they can be moved around with no disruption, distortion or decay; and made combinable so that they can be aggregated and cumulated. In this case, names/numbers operate as representations that can circulate in this manner, and indeed facilitate the circulation of animals as well, so that zoos and rehab centre can also be seen as centres of calculation that traffic in animal life and bio-information. As Foucault (1970) writes, “Each group can be given a name. With the result that any species, without having to be described, can be designated with the greatest accuracy by means of the names of the difference groups in which it is included... In this way, a grid can be laid out over the entire vegetable or animal kingdom.” This grid – i.e. the Linnaean taxonomy – depends upon the hubristic assumption that human beings can know and order the world. But like any classification, the vast biological species grid operates according to inclusions and exclusions that are imperfect, political (valorising some points of view and silencing others), dynamic and, critically, performative – that is, they do political work, bringing forth the world in particular ways (see Bowker and Star 1999).

(2) A second and related biopolitical and pastoral power technique exercised by both management regimes is surveillance, including tagging, satellite tracking and animals’ permanent visibility in rehabilitation facilities and aquariums, such as the Point Defiance aquarium in which Homer lived for most of her life. Foucault (1990) speculated long ago that the royal menagerie in Versailles might have inspired Jeremy Bentham’s panopticon prison design, in which prisoners never know if they are being watched. Zoos and aquariums similarly depend on the permanent visibility of their captive animals, allowing both public visitation but also sustained observation by scientists.

(3) Finally, rehabilitation at both SeaLife centre and directly following Exxon spill retains a deeply biopolitical assumption that a captive life is preferable to a death outside of cage walls. Many animals who are deemed un-releasable according to an often strict set of release criteria are either retained at the rehabilitation facility or transported to another lab or zoo for the rest of their lives. Importantly, both rehab and SeaLife centre do euthanize animals. This is likely because these animals are not members of a species considered at risk. But the occasions of euthanization also point to an important difference between the biopolitical management of human and animal populations, and would provide an interesting place for future research. For now, it is worth noting that euthanization is consistent with a pastoral power technique characterized by the extent of care for the “other” over whom power is exercised. The euthanization of rehabilitant animals is largely seen as a beneficent act, to “put an animal out of its misery,” as the common refrain goes.

This points to how the operation of biopower and pastoral power in wildlife management regimes post-environmental disasters must be situated within an ethic of

care, as Braverman (2012, 2013) reminds us in the context of zoos. And yet that these power techniques can be seen as beneficent must not preclude a consideration of their effects. In the conclusion I briefly consider this tension between care, power and effects, and the broader implications and stakes of this paper's analysis.

#### **4. Conclusion**

Although discussing about a different kind of “rehabilitation”, that of drug rehab, Anders (2013) could be referring to wildlife rehabilitation when he writes that “the primary danger we face today is the continued intensification of power relations through increasingly invasive and privatized mechanisms of rehabilitation.” This paper has pointed in a preliminary fashion to some of the ways that power relations between humans and animals can be intensified in the aftermath of a particular environmental disaster, the Exxon Valdez oil spill. In disasters, power inequalities can be exacerbated and also rethought. This has been acknowledged for human communities (Watts 1983, others). I argue the same can – and should – be said of animals and human-animal relations. In doing so this paper centrally poses a fundamental challenge to oil companies' promises of “state of the art” cleanup for future oil development projects (i.e. Enbridge Northern Gateway pipeline and Line 9 – see Bennett 2012; MacDiarmid 2013), not because methods are not “state of the art”, but because cleanup is itself not the purely restorative activity it is touted to be. Critiques of the efficacy of cleanup aside, this paper suggests that even in the highly unlikely event of an “effective” spill response, cleanup can re-entrench power relations between humans and animals – relations that themselves implicated in ecological crises, and in the logic that was at work in the spill in the first place – namely, the logic of a species hierarchy in which animals are subordinate objects and humans dominant subjects.

In concrete terms, this acknowledgement means that decision makers need to be far more skeptical of cleanup promises; that fine money could be funneled to different institutions and programs than those that lead to animal captivity; and that the scientific practices tethered to cleanup – such as tracking technologies – should be more closely interrogated. This last claim points in particular to a noteworthy tension within this paper between my interrogation of wildlife science and my re-deployment of it in re-telling the story of the Exxon Valdez and its impacts on nonhuman life. This leads me to specify that I am at this point largely advocating an expanded conversation, one that acknowledges but also seeks to go beyond questions about whether or not cleanup *works*, and asks *what work* cleanup does.

In a similarly ambivalent vein, it may be the case that an affirmative biopolitics and pastoral politics is at work in the cases examined here, particularly around surveillance, which may be defended on the ground that it better allows for representation of wildlife interests in formal political venues such as policy-making and legal proceedings. Human care for animals is indeed a significant motivator for cleanup and subsequent surveillance. Yet this does not mean that these activities do not themselves involve and license intrusion, even to the point of causing suffering or death. Above all, then, this paper seeks to muddy or “mess with” the purity or innocence of cleanup, to urge us to consider that that like the disaster in the first place, cleanup also remakes environments, changes human-animal relations, namely by engendering an intensification of human control and surveillance through biopolitical and pastoral power techniques.

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