**Podcasting**

Speculating on cetacean intelligence in 1967, American neuroscientist and psychonaut John C. Lilly wondered what humans would have to do in order to ‘excite the most respect’ from whales.[[1]](#endnote-1) He suggested that ‘a full symphony orchestra playing a symphony’ would do the trick.[[2]](#endnote-2) This would contrast with their other reference point for human beings, he notes, as ‘in-concert murderers of whales’.[[3]](#endnote-3) In 2009, Ben Walsh, executive director of M & C Saatchi in Sydney echoed Lilly in the form of an advert for Australian telecommunications company, Optus. Through CGI and strategic editing, the ad asked if

it would be possible to emulate a male humpback: to write our own love song and then play it, using the instruments of an orchestra? Could we serenade a humpback ourselves? Then imagine what could happen if the whales were to hear our song. We thought that would prove that when it comes to communication, anything is possible.[[4]](#endnote-4)

Perhaps Lilly was aware of Jean-Jacques Rousseau’s notion that hearing ‘either singing or a symphony’ immediately suggests the ‘presence of another intelligent being’ in reassurance that one is ‘not [..] alone.’ But the likelihood of advertising executives reading Lilly’s *The Mind of the Dolphin* is perhaps small.[[5]](#endnote-5) That Lilly’s cetacean speculations should echo decades later in other disciplines is not surprising, notwithstanding Walsh’s nationalistic efforts to ground the ‘inspiration’ for the advert in scientific research on whale songs from Queensland University.[[6]](#endnote-6) In *Sounding the Whale*, D. Graham Burnett describes Lilly’s work as the ‘single largest factor’ in transforming scientific and popular understanding of cetaceans as ‘intelligent’ life in distinction to creatures that could be killed with impunity.[[7]](#endnote-7) For Burnett, the lurid history of Lilly’s experiments with dolphins, incorporating both LSD and vivisection, was both far from unusual in 1960’s American military practices and inseparable from that culture’s bioacoustic ambition for covert navigation of the world’s waters.[[8]](#endnote-8) It may be impossible to glean any knowledge regarding cetaceans that is free from entanglement with agencies from which we prefer to remain disentangled; the military; the history of whaling.[[9]](#endnote-9) Donna Haraway’s persistent cultivation of the ‘non-innocent’ grounds of thought suggests that this entanglement is a general condition (in need of acknowledgement).

To recall the ad: small vessels ferry musicians to a floating stage; as anticipatory humans bearing instruments face the sea, the traditions of indigenous cultures are evoked and displaced. From their first whale-like notes the orchestra hear a whale intone and they resume playing enthusiastically: the camera cuts to underwater to visually evidence humpbacks heading towards this sound; using classic point of view shots, the advert cuts back to a single whale breaching in apparent appreciation of the orchestra’s efforts. In spite of the whale’s girth, she merely causes a little sea spray allowing the orchestra to remain stable in the serene sea: the humans are joyously wonderstruck. The ad concludes that ‘when it comes to communication, anything is possible.’ In this fantasy of interspecies telecommunication a number of problems overlap: the domestication of the humpback as both polite audience and performing animal; the dominance of the visual over the sonic; and a perhaps productive confusion between voice, speech and music. Tellingly, Optus provides the unwitting suggestion, made by virtue of imagination, that whales are able to distinguish between a song that seduces - that is a summons to mating, and a performance of a song about love.

This paper draws on a range of non-innocent knowledges that overlap when it comes to the question of cetacean voices. I point to the revaluation of the abilities that we thought were our own as vulnerabilities in common with other species; even as those vulnerabilities are given singular expression, say in the event of whale song.

This revaluation is informed by Jacques Derrida’s analysis of the dogmatic concept of ‘the animal’ widely brought to attention in *The Animal That Therefore I Am*, yet draws as much on *Of Grammatology’s* critical intervention into Rousseau’s legend of the origin of languages, a legend that makes a special case of song.[[10]](#endnote-10) In terms familiar from Derrida’s late work, *Of Grammatology* was critical of Rousseau’s performative gesture of ‘Man *call[ing] himself* man’ through expelling the other.[[11]](#endnote-11) Expelled, positioned as exterior to ‘man,’ such imagined absolutes as ‘the purity of nature, […] animality, primitivism, childhood, madness, divinity’ channel the ‘threat of death’ yet are ‘desired as access to a life without differance.’[[12]](#endnote-12) Yet for Derrida, there is no life without differance: there is no life without auto-affection.

**The Oestrus Complex**

Writing against the elevation of the narrow field of language by psychoanalysis in light of the wider category of the trace, Derrida alights on what Jacques Lacan determined as the capacity to pretend.[[13]](#endnote-13) In Derrida’s account, Lacan does permit animals some complexity in communication by virtue of the ability to pretend in the specific circumstances of seduction and combat. But he refuses them the redoubled capacity of pretending to pretend, or to lie, or even to bear witness to a lie.[[14]](#endnote-14) This redoubled and mendacious capacity is pivotal – in Lacan’s account – for language, and is characterized as the possession of humans alone. Embedded in the logic that fundamentally splits nature and culture, he excuses seduction and combat as need and thus as natural in distinction to the lie as the convenor of culture and of the signifier.[[15]](#endnote-15)

As we know, Aristotle credited humans alone with the capacity for speech while sharing the wider category of voice with other animals. Naming man in his *Politics* ‘as a political animal in a greater measure than any bee or any gregarious animal’ by virtue of his sole possession of speech, in his *History of Animals* Aristotle goes into some detail about why this he thinks this is the case.[[16]](#endnote-16)

The fact is that no animal can give utterance to voice except by the action of the pharynx, and consequently such animals as are devoid of lung have no voice; and language is the articulation of vocal sounds by the instrumentality of the tongue. Thus, the voice and larynx can emit vocal or vowel sounds; non-vocal or consonantal sounds are made by *the tongue and the lips*; and out of these vocal and non-vocal sounds language is composed.[[17]](#endnote-17)

In the case of the dolphin, he goes on:

The dolphin, when taken out of the water, gives a squeak and moans in the air, but […] this creature has a voice (and can therefore utter vocal or vowel sounds), for it is furnished with a lung and a windpipe; but its tongue is not loose, nor has it lips, so as to give utterance to an *articulate* sound […].[[18]](#endnote-18)

Notwithstanding Aristotle’s limited familiarity with cetacean physiology, including what are now called the ‘phonic lips’ internal to the nasal passages of odontocetes, the problem of articulation will resurface in various forms today. While the Aristotelian legacy distinguishes between a categorical distinction between inarticulate voice and deliberative speech as predictive of the *polis,* Rousseau’s Enlightenment imagines a political community that is yet informed by impassioned voices beyond speech while still distinguished from animals.[[19]](#endnote-19) If articulation is keyed to meaning in the former, for the latter it also presents a threat. Indeed, as *Of Grammatology* retunes this problem, articulation is a dangerous supplement on which the living - not humans alone – depend. This danger is at the core of what I am calling our vulnerability.

While humans have apparently only been taking note of the songs produced by whales by virtue of underwater microphones (hydrophones) over the last fifty years, it is remarkable how many marine researchers repeat Aristotle’s view that ‘all animals without exception exercise their power of singing or chattering chiefly in connection with the intercourse of the sexes.’[[20]](#endnote-20)

In her recent work on humpbacks, philosopher Denise Russell draws attention to what we might call a failure of imagination when whale song is framed by many scientists entirely as the work of seduction: males sing to attract a mate.[[21]](#endnote-21) Russell points out the numerous exceptions in numerous studies of when and where whales sing in excess of proximity to sites where they are known to mate. Philosopher and musician, David Rothenberg, who has himself played the clarinet to humpbacks through undersea speakers, goes so far as to say that while many bull whales have now been observed singing, in over thirty years of study no-one has concomitantly seen females rushing towards them.[[22]](#endnote-22) Rothenberg also points out our striking lack of attention to the sheer volume of sound made by whales – sounds which must have been *felt* as vibrations by those exploring the seas when those seas were teaming with such lives - prior to Naval recordings and official confirmation.

In counterpoint to doubts raised on grounds of lack of visual evidence, Philip Hoare has offered another twist on the same refrain made all the more curious given his extensive research on whales and experience in their company.[[23]](#endnote-23) He suggested that male humpbacks produce specifically penetrating bass tones in song in order to stimulate oestrus in females, their higher notes would be effectively produced by default as they run out of breath. The apparent absence of females in visible thrall to the song would then be moot, since sound travels faster in water than in air and these whales are among the loudest beings on the planet.[[24]](#endnote-24) Hoare’s story moreover, works to further embed not just the concept of ‘the animal’ as a repetition machine whose creativity is purely procreative, but ‘the feminine’ as that form of sexuality wholly determined from without, through the agency of masculine inscription. The equation of breath with note perhaps echoes only the paucity of what human physiology might perform should we try to vocalise underwater, certainly it runs counter to studies of the structure of whale song. The Whale Trust maps patterns of a four to six theme sequence in each humpback song: each sequence lasts 10-15 minutes; each song may last hours. *After each sequence* of articulated sound the whales then surface to breathe: cetacean oxygenation is not like our own.[[25]](#endnote-25)

In their book, deliberately titled *The Cultural Lives of Whales and Dolphins*, biologists Hal Whitehead and Luke Rendell detail what sounds are being made and by which species of cetacean.[[26]](#endnote-26) While nothing remotely like a babelfish has emerged to translate such sounds, they note with great interest not just that humpbacks are loud, not just that they sing the same song in groups and in isolation and not just that their songs change.[[27]](#endnote-27) Rather, groups of whales learn songs that may change over a surprisingly short time: the course of a year. These songs then travel, among different pods of whales, around the oceans.

More speculatively, we might wonder how the postures of humpback whales singing, tails closest to the ocean’s surface, upend our visual map of evolution. We are all too familiar with the ascent of man, diagrammed as the vertical ascension of a white man walking into the future, away from his more horizontal, hairy, dark, hominid ancestors. What might be the thought of evolution from land *back to* the sea, in the case of cetaceans, say? Rather than the horizontal plane surpassed and surveyed by the vertical, it would move from horizontal to any direction. This speculative evolution might also chart a journey not from smell to sight – Sigmund Freud’s narrative of the erection of the human, but *from smell to hearing*.[[28]](#endnote-28) Returning to the water from land, cetaceans maintained their mammalian dependence on breathing air. This allowed them to develop speed of movement, through oxygenation, as well as vocal communication.

For Animal Studies then, it is not just a question of locating practices *beyond* seduction and combat as sites of complexity in non-human animals. It is also to follow the implication of deconstruction and understand seduction and combat as *themselves* unable to be contained to a precisely ahistorical thus unchanging status of basic needs and, in so doing, dismantling the hard and fast distinction between nature and culture.

By virtue of their brain size - relative to their bodies, and intelligence - relative to that of humans, cetaceans, elephants and the great apes in particular become charismatic focal points for advocacy campaigns. Indeed when US Naval engineer, Frank Whatlington, gave recordings he had made of whales singing – made contingently while listening for foreign submersibles – to Katherine and Roger Payne at the Cornell Lab of Ornithology in 1964, he apparently told them ‘Go Save the Whales’.[[29]](#endnote-29) The recordings were subsequently integral to the early campaigns of Greenpeace. While I support campaigns for particular species strategically, as Cary Wolfe advises, I also find engagement with the particularities of other creatures gleaned however unevenly by the life sciences both urgent, given the pace of extinction, and revealing.[[30]](#endnote-30)

When anthropologist, ethologist and cyberneticist Gregory Bateson wrote that he ‘expect[ed] dolphin communication to be of an almost totally unfamiliar kind,’ he did not repeat the philosophical cliché that ‘the animal’ is completely cut off from ‘the human’ (in the violent sense of the conceptual difference between the lacking animal and the capable human, that Derrida unpacks).[[31]](#endnote-31) Rather, Bateson took seriously the dramatic adaptation to life in water that cetacean bodies have undergone and thus departed from an anthropomorphic yardstick for intelligence.

Rejecting as ‘circus tricks’ the now infamous experiments to teach dolphins English carried out by Lilly in the 1960’s including via LSD, Bateson advised that if we are to get anywhere with understanding what dolphins sounds might mean then we must study inter-dolphin communication.[[32]](#endnote-32) His work vehemently refused the anthropomorphic misrecognition of seeing the idiosyncrasies of dolphin jaw development as the appearance of a ‘smile’ (the familiar trope of international marine parks such as Seaworld). This misleading appearance is ironically most visible out of the water, or in shallow brightly lit tanks. Deep underwater, with receding penetration of sunlight, the face, as we think of it in simplistic anthropomorphic terms (Seaworld) or ethical ones (Emmanuel Levinas[[33]](#endnote-33)) is beside the point. In his 1972 collection *Steps to an Ecology of Mind*, Bateson suggests that dolphins, as fellow mammals, communicate about relationships. While he suggests that human language gained its specificity when the capacity to describe something beyond interpersonal relationships developed, importantly he also infers that the work of interpretation is required when interpersonal relationships are at stake.[[34]](#endnote-34) Interpretation, and the uncertainty it implies, opens a space to rethink the rigidity of Lacan’s assertion – that animals may pretend, but not pretend to pretend, seduce but not sing a song about seduction. Bateson wonders whether our problem in deciphering their communication lies in not knowing what dolphins can tell one another about their relationships. Yet, he

suspect[s] a more profound explanation. Adaptation to life in the ocean has stripped the [cetaceans] of facial expression […] evolution has streamlined the body, sacrificing the expressiveness of separate parts to the locomotion of the whole.[[35]](#endnote-35)

This does not mean they are not expressive. It does not mean, as Aristotle believed, that the lack of lips ruins articulation since cetacean phonic lips dispel that myth. Incidentally, as if in a gesture of inoculation against future zoological knowledge and the possible extension of articulation it could reveal, Aristotle assured us that voice is not ‘merely’ ‘the impact of inbreathed air’ but ‘what produces the impact must have soul … and must be accompanied by an act of imagination’.[[36]](#endnote-36) In contrast, Bateson speculates, that ‘the information we get visually and the other terrestrial animals get visually must have been pushed [by evolution] into voice.’[[37]](#endnote-37) He thus supposes the development of cetacean vocal expression beyond all the other supplemental physical movements that mammals might otherwise use (movements cartoonishly drawn into hyperbolic visibility for the sake of entertainment in marine park shows). While we are used to interpreting paralinguistic sounds amongst ourselves – ‘grunts and groans, laughter and sobbing’ – and interpreting these in other species, Bateson remarks that ‘when we hear the sounds of dolphins we cannot even guess at their significance.’[[38]](#endnote-38) He does not locate dolphin sounds as paralinguistics, yet neither does he allow dolphins anything that ‘a human linguist would call a ‘language.’[[39]](#endnote-39) Intriguingly, this is not a dismissal of anything like a language, but of what *a human linguist would call one*.

At first it seems that Bateson rejects any use of metaphor – the ability to discuss one thing (relationship) through the guise of another – arguing that it is humans that do precisely this ‘outlandish’ thing.[[40]](#endnote-40) He does not ‘believe’ that dolphins metaphorically discuss relationships through non-relationship content. From his observations, dolphins have no need to develop communication regarding non-relationship matters. Yet in spite of the limited research then available (all from captivity) Bateson suggests that something more difficult to fathom was at stake. He suggests that dolphin communication may operate entirely digitally yet in so doing remains capable of metaphor.[[41]](#endnote-41) Without clues supplied by sensory analogue - types of clue that we might recognize from our own endeavours - we are somewhat at sea in imagining what even a ‘primitive digital system for the discussion of patterns of relationship might look like.’[[42]](#endnote-42) It may, Bateson intuits, ‘more probably, resemble music’.[[43]](#endnote-43)

Bateson proposes guidelines, beginning with close study that might one day understand this music-like system. Such studies indeed continue and while they may require the revision of some of his deductions, his work remains insightful. One such revision arises in Katherine Payne’s subsequent research. While singing the familiar tune of sexual selection as likely motivation, she also suggests that the unfathomability of whale song is lessened by analyzing many such songs. Comparing songs recorded over two years in different locations Payne realized that forms of rhyme were structuring them thus contributing to their memorability, with ‘the most complex songs containing the most rhyming.’[[44]](#endnote-44)

At the limits of his own observations, speculations and conceptual inheritance, Bateson himself disturbs the legacy of the human/animal divide perpetuated by Lacan: Bateson suggests that dolphins can lie. For Bateson, this lie is attendant upon knowing the difference between ‘love and hate’ – affects that speak more obviously to a social order of relations but which are not so very different from, let’s say, ‘good and evil’.[[45]](#endnote-45) Since this speculation is prompted by the possibility of witnessing a dolphin (in captivity) punish a human for trying the same trick twice and that trick was the faking of distress in the water (*the* cetacean environment), the difference between communication only based on relationship and one that goes beyond it is troubled.[[46]](#endnote-46) Deception regarding kinesics would be a ‘sin’ Bateson suggests, conjuring morality. He concludes his ‘Observations’ with the admission that ‘this is way out on the limb’. While that idiom once referred to the risk of a tree’s ‘limb’ giving way in the adventure of a climb, perhaps it is our conceptual apparatus that is at breaking point.

**Song sung blue**

The blanket administration of valium and many other drugs to dolphins in captivity is clearly an abhorrent acknowledgement of the traumas produced by such environments as Seaworld – doubly so since this treatment is entirely for the benefit of human spectators.[[47]](#endnote-47) Marine entertainment is a training without healing in so far as that which evolved into voice in Bateson’s speculation, is collapsed into spectacle.[[48]](#endnote-48) I wonder if the noise pollution of the oceans produces traumatic effects on cetaceans that, as well as patently contributing to individual deaths and ecological disaster, also impacts on what might constitute wild psychic lives.

Writing on acoustic ecology, Shirley Roburns underlines the importance of sound to cetaceans from the practicalities of navigation through echolocation to the orchestration of what she calls ‘acoustic clans’.[[49]](#endnote-49) While the speed and range of sound travelling through water has been to cetacean evolutionary advantage, Roburns names the volume of noise now entering the waters from industrial and military sources as catastrophically deafening. In the first few weeks of 2016 some 29 sperm whales stranded and died along the east coast of the UK, Germany and the Netherlands (an unusually high number). Discussion of these deaths on the *Guardian* environment pages from marine expert, Andrew Brownlow, suggested that ‘some things would never leave a pathological legacy, such as if they were startled and disorientated by noise.’[[50]](#endnote-50) This is a strange understatement of the physical dangers of what can be weaponised sound, and is directly contradicted by US Navy statements regarding sonar exercises in the Bahamas from 2000, not to mention their draft environmental impact statement for 2014-2018 which announced that its plans might ‘unintentionally harm marine mammals 2.8 million times a year over 5 years’.[[51]](#endnote-51) Some cetaceans themselves produce sounds offensively to stun or kill prey. Kathleen Dudzinski and Toni Frohoff speculate that dolphins restrict their own use of echolocation to effectively ‘eavesdrop’ on each others’ such usage in order ‘to avoid potential signal jamming’ (something that implies both cooperation and the potential for its abuse).[[52]](#endnote-52) Brownlow further remarks, in mystification, that the British Navy had not been conducting any ‘massive exercise’ that might account for increased strandings.[[53]](#endnote-53) In contrast, Roburn’s article looks more holistically at the massive changes in ocean acoustics seen over the last century, from the heavy hitters such as Naval sonar, seismic surveys, and the testing of nuclear weapons, to the more banal but ever-proliferating volume and variety of shipping.[[54]](#endnote-54) Sea levels may rise, but alongside the acidification of those waters, marine echo-chambers shrink under the pressure of antisocial anthropogenic noise.[[55]](#endnote-55)

To conclude I return to *Of Grammatology*’s excursion into voice and resound some of the speculations on imagination, passion and the resemblance to music that have surfaced in the work of my interlocutors today.

Prior to reframing Rousseau’s ‘Essay on the Origin of Languages,’ Derrida encapsulates the way that voice has been crucial to the metaphysical fiction of subjectivity as autonomous and self-present: ‘[Voice] produces a signifier which *seems* not to fall into the world [...] It does not fall into the exteriority of space, into what one *calls* the world, which is nothing but the outside of [the voice].’[[56]](#endnote-56) Derrida disputes this effacement of the materiality of the voice and in contrast welcomes the intrusion of the spacing of the outside as its condition of possibility. We might wonder at cetacean vocalisation in this context, when they stir sound waves that are felt as much as heard by those who echo-locate, rippling out for miles. Indeed, Derrida locates this tendency of voice to be perceived as spontaneous independence within the wider structure of auto-affection – that condition of experience that he radicalizes as ‘universal’.[[57]](#endnote-57) Derrida also groups the imagination in Rousseau’s origin story within auto-affection. But rather than maintain the autonomy and the integrity that this ‘*auto-*’ ordinarily implies, and Rousseau would like to keep, imagination is contagious. Imagination both spurs vocality and musicality *and* opens its subjects to the outside and to what Rousseau would name perversion.[[58]](#endnote-58)

D. Graham Burnett thought that using the term ‘song’ in reference to whale vocalisations risked being ‘too Lilly:’ an anthropomorphisation of non-human sounds.[[59]](#endnote-59) Rousseau would have balked at the same gesture: in his legend animals cannot sing.[[60]](#endnote-60) Summarising Rousseau’s unfortunate fidelity to the concept of ‘the animal’ Derrida writes: ‘No prelinguistic sonority can […] open the time of music’.[[61]](#endnote-61) Rousseau’s ‘time of music’ is not that wrought by each repeating sequence in humpback song, say, spaced by the volumes of water in which it sounds as well as the oxygenation of cetacean bodies. Rather it is the time of history, the stirring of change and a relation to finitude. ‘Prelinguistic sonority’ would only repeat the same thing: it could seduce but not sing *of* seduction. Observing the cruel irony, Derrida remarks that what Rousseau calls ‘*animality’* remains ‘*inanimate*’.[[62]](#endnote-62) Not only is this inanimate animal unchanging and ahistorical, but it is not moved beyond pity through the – human – work of imagination into empathizing with others. In contrast, reaching out and in passion toward others, Rousseau’s human musicality aims for the telecommunicative mastery of the outside. Taking the Optus’ advertisement at its word – ‘when it comes to communication *anything* can happen’ – this mastery comes undone.

Just as Rousseau struggles to contain the identifications made possible by the imagination, articulation also endangers the boundaries of the human. Rousseau ‘wants’ a faculty of articulationthat woulddistinguish between ‘the fixity of animal language’ and the ‘progressiveness of human languages’.[[63]](#endnote-63) But that progressiveness threatens regression through a regularization that departs from the passions with which human vocality should remain identified. This pattern of regularization is what Derrida refers to as the ‘*becoming-writing of language’.*[[64]](#endnote-64)Rather than affirm Rousseau’s degenerative timeline that begins with static animality, is then enlivened by passionate human song before falling prey to a calamitous exterior influence, Derrida reposes articulation. It becomes that supplementary structure preceding and enabling all communicative forms without being identified with any one thing or agent in the form of an exceptional species that calls himself man. Articulation ‘does not come unexpectedly upon a constituted song’: nor is it the contingency of running out of breath.[[65]](#endnote-65) As spacing it cannot possess a form of its own.

Just as the violent conceptual fiction that is ‘the animal’ must be disbanded, we must finally drop the definite article in acknowledgement that *voices* resound beyond human beings. Naming the sequences of sound that humpbacks’ produce ‘songs’ brings us into a commonality characterized not by identity or ability but by vulnerability.

1. John Cunningham Lilly, [1967] qtd in D. Graham Burnett, *The Sounding of the Whale: Science and Cetaceans in the Twentieth Century*, (Chicago: University of Chicago Press, 2012) p. 624. [↑](#endnote-ref-1)
2. Ibid. [↑](#endnote-ref-2)
3. Ibid. [↑](#endnote-ref-3)
4. ‘M & C Saatchi launches Optus Whale Song’ Published 24/03/2003. Accessed 08/02/16.

   <http://www.campaignbrief.com/2009/03/mc-saatchi-launches-the-optus.html>

   As recently as April 2016 a twitter search showed viewers finding the advertisement online and assuming that it offered documentary evidence. [↑](#endnote-ref-4)
5. Jean-Jacques Rousseau ‘On the Origin of Languages’ in Rousseau and Johann Gottfried Herder, *Two Essays* *On the Origin of Language*, trans. John H. Moran and Alexander Gode (Chicago: Chicago University Press, 1966) p.64. John Cunningham Lilly, *The Mind of the Dolphin: A Nonhuman Intelligence* (New York: Discus Books, 1969). [↑](#endnote-ref-5)
6. The advertisement with Walsh’s additional narration can be viewed here: <https://www.youtube.com/watch?v=P2ER2MXhPHg>

   Accessed 08/02/16. [↑](#endnote-ref-6)
7. Burnett, *Sounding,* p. 530. [↑](#endnote-ref-7)
8. Ibid.p. 617. [↑](#endnote-ref-8)
9. See also Max Ritts and John Shiga, ‘Military Cetology’ in *Environmental Humanities*, 8:2, 2016, pp. 196-214. [↑](#endnote-ref-9)
10. Jacques Derrida, *The Animal that Therefore I Am,* trans*.* David Wills (New York: Fordham University Press, 2008). [↑](#endnote-ref-10)
11. Derrida, *Of Grammatology*, p. 244, italics original. [↑](#endnote-ref-11)
12. Ibid. [↑](#endnote-ref-12)
13. Jacques Derrida, ‘And Say the Animal Responded?’ trans. David Wills, in Cary Wolfe, ed. *Zoontologies: The Question of the Animal* (Minneapolis: Minnesota University Press, 2003) pp.121-146. [↑](#endnote-ref-13)
14. Derrida, ‘Say the Animal’ p.130. [↑](#endnote-ref-14)
15. See my discussion of the implications of Derrida’s critique of Lacan for a more deconstuctive psychoanalysis in ‘Animal Transference: A “Mole-like Progression” in C. J. Cherryh’ in *Mosaic: a journal for the interdisciplinary study of literature*, 44.3. 2011, pp. 163-175. [↑](#endnote-ref-15)
16. See Aristotle, *Politics*, 1.1253a [↑](#endnote-ref-16)
17. Aristotle, qtd in Marcello Zanata, ‘Voice as Difference in Aristotelian Zoology’ in the *Journal of Ancient Philosophy*, 7.1, 2013, p. 6. [↑](#endnote-ref-17)
18. Aristotle, qtd in Zanata, p. 8, emphasis added. [↑](#endnote-ref-18)
19. Tobias Menely, *The Animal Claim: Sensibility and the Creaturely Voice*, (Chicago: Chicago University Press, 2015) p.42. [↑](#endnote-ref-19)
20. Aristotle, qtd in Zanata, p. 4. [↑](#endnote-ref-20)
21. Denise Russell, ‘Capturing the Songs of Humpback Whales’ in M. J. Boyde (Ed.), *Captured: The Animal Within Culture* (New York: Palgrave Macmillan, 2014) pp. 43-59. [↑](#endnote-ref-21)
22. David Rothenberg, *Thousand Mile Song* (New York: Basic Books, 2008) p.5, p.162. [↑](#endnote-ref-22)
23. Philip Hoare, speaking at the Arnolfini Gallery, Bristol, UK, 27 February 2016. He is the author of *Leviathan, or The Whale* (London: Fourth Estate, 2008). [↑](#endnote-ref-23)
24. Deeper notes travel further, as Rothenberg notes, by virtue of the deep sound channel within the oceans, given poetic expression in his title, *Thousand Mile Song*. [↑](#endnote-ref-24)
25. The Whale Trust, accessed 29/08/2016:

    <http://www.whaletrust.org/song-structure-composition/> [↑](#endnote-ref-25)
26. Hal Whitehead and Luke Rendell, *The Cultural Lives of Whales and Dolphins* (Chicago: Chicago University Press, 2015). [↑](#endnote-ref-26)
27. The Babelfish was a living universal translation organism imagined by Douglas Adams in *The Hitchhiker’s Guide to the Galaxy* (London: Millenium, 1994). [↑](#endnote-ref-27)
28. Sigmund Freud ‘Civilization and its Discontents’ [1929] in the Penguin Freud Library V.12 *Civilization, Society & Religion*, trans. James Strachey (London: Penguin, 1991) p. 288, n. 1. [↑](#endnote-ref-28)
29. NPR special series ‘Close Listening: decoding nature through sound’. August 6, 2015. Accessed 8 February, 2016.

    http://www.npr.org/2015/08/06/427851306/it-took-a-musicians-ear-to-decode-the-complex-song-in-whale-calls [↑](#endnote-ref-29)
30. Cary Wolfe, *Animal Rites: American Culture and the Discourse of Species*, (Chicago: University of Chicago Press, 2003)p.192. [↑](#endnote-ref-30)
31. Gregory Bateson, ‘Problems in Cetacean and Other Mammalian Communication’ in *Steps to an Ecology of Mind: collected essays in anthropology, psychiatry, evolution and epistemology* (Chicago: Chicago University Press, 2000) p. 370. [↑](#endnote-ref-31)
32. Lilly’s experiments – including Bateson’s criticism of them – are the subject of the documentary, *The Girl who talked to Dolphins*, dir. Christopher Riley, UK, 2014. There we learn that as an elderly and discredited scientist Lilly apologized for working ‘on’ dolphins rather than ‘with’ them, and had ‘his’ captive dolphins released. [↑](#endnote-ref-32)
33. ‘The face’ is central to Levinas’s ethics, yet his inability to think this ‘face’ as anything other than human has now been the topic of extensive debate, e.g. Deborah Bird Rose ‘Bobby’s Face, My Love’ in *Wild Dog Dreaming: Love and Extinction* (Charlottesville: Virginia University Press, 2011) pp. 29-41. [↑](#endnote-ref-33)
34. Bateson, *Steps* p. 368. [↑](#endnote-ref-34)
35. Bateson, *Steps* p. 371. [↑](#endnote-ref-35)
36. Aristotle, from *De Anima*, qtd in Mladen Dolar, *A Voice and Nothing More* (Cambridge, Ma: MIT Press, 2006) p. 23. [↑](#endnote-ref-36)
37. Bateson, *Steps* p. 378. [↑](#endnote-ref-37)
38. Ibid.p. 371. [↑](#endnote-ref-38)
39. Ibid.p. 376. [↑](#endnote-ref-39)
40. Bateson, *Steps* p. 375. [↑](#endnote-ref-40)
41. Ibid.p. 375. [↑](#endnote-ref-41)
42. Ibid.p. 375. [↑](#endnote-ref-42)
43. Ibid.p. 375. [↑](#endnote-ref-43)
44. Katherine Payne, ‘The Changing Songs of Humpback Whales’ in *The Origins of Music*, eds. Nils L. Wallin, Bjorn Merker, Steven Brown (Cambridge, Ma: MIT Press, 2000) p.147. [↑](#endnote-ref-44)
45. Bateson ‘Observations’ p. 165. [↑](#endnote-ref-45)
46. Ibid.p. 159. [↑](#endnote-ref-46)
47. ‘Seaworld accused of using drugs to control “its” whales,’ Whale and Dolphin Conservation charity website, 03/04/2014. Accessed 29/08/2016.

    http://uk.whales.org/blog/2014/04/sea-world-accused-of-using-drugs-to-control-its-whales [↑](#endnote-ref-47)
48. One might consider the confessional tone of former trainers interviewed in recent documentaries exploring cetacean captivity such as *Blackfish* (dir. Gabriela Cowperthwaite, US, 2013) as a sop to the lack of any such whispering. [↑](#endnote-ref-48)
49. Shirley Roburn ‘Sounding a Sea-Change: Acoustic Ecology and Arctic Ocean Governance’ in *Thinking with Water*, eds. Cecilia Chen, Janine Macleod, and Astrida Neimanis (Montreal: McGill-Queen’s University Press, 2013) pp. 106-128. [↑](#endnote-ref-49)
50. Patrick Barkham, ‘UK Whale Strandings: why did they happen?’ *The Guardian*, 25/01/2016. (Accessed 09/02/16).

    <http://www.theguardian.com/environment/2016/jan/25/uk-whale-strandings-why-did-they-happen> [↑](#endnote-ref-50)
51. Rothenberg, p. 206. ‘Navy raises sonar impact on dolphins, whales dramatically’ *NBC News* 11/05/2012, (Accessed 09/02/16).

    <http://usnews.nbcnews.com/_news/2012/05/11/11659008-navy-raises-sonar-impact-on-dolphins-whales-dramatically?lite> [↑](#endnote-ref-51)
52. Kathleen M. Dudzinkski and Toni Frohoff, *Dolphin Mysteries: Unlocking the Secrets of Communication* (Yale University Press, 2008) p. 77. [↑](#endnote-ref-52)
53. ‘Royal Navy bomb explosions caused mass whale deaths, report concludes’ *The Guardian*, 24 June 2015. Accessed 09/02/16. https://www.theguardian.com/environment/2015/jun/24/royal-navy-bomb-explosions-mass-whale-deaths-report [↑](#endnote-ref-53)
54. See also: <http://uk.whales.org/news/2016/02/new-research-reveals-noise-threat-to-endangered-orcas> (Accessed 09/02/16). [↑](#endnote-ref-54)
55. It is not only cetaceans whose acoustic environment is drowned out by ‘anthropophony’. See Claire Asher, ‘The world now sounds different to how it did a century ago’ <http://www.bbc.co.uk/earth/story/20161110-the-world-now-sounds-different-to-how-it-did-a-century-ago> 11/11/2016. (Accessed 14/11/2016). [↑](#endnote-ref-55)
56. Just as Leonard Lawlor retranslated Derrida’s *La Voix et le Phénomène* as *Voice and Phenomenon* (Evanston: Northwestern University Press, 2011) instead of *Speech and Phenomena,* the vicissitudes of the translation of ‘*la voix’* in *Of Grammatology*, sometimes as voice and sometimes as speech, is perhaps symptomatic of the problem. Here I substituted ‘voice’ for Spivak’s ‘speech’ following the French: Jacques Derrida, *De La Grammatologie* (Paris: Les Editions de Minuit, 1967) p.236, *Of Grammatology*, p. 166, emphasis added. [↑](#endnote-ref-56)
57. Derrida, *Of Grammatology*, p. 165. [↑](#endnote-ref-57)
58. Ibid. p. 187. [↑](#endnote-ref-58)
59. Burnett, *Sounding,* p. 636. [↑](#endnote-ref-59)
60. Rousseau uses birds as the marker of what Derrida calls ‘prelinguistic sonority’: ‘Birds whistle; man alone sings.’ See Rousseau, ‘Origin’ p.64. [↑](#endnote-ref-60)
61. Derrida, *Of Grammatology*, p. 195. [↑](#endnote-ref-61)
62. Derrida, *Of Grammatology*, p. 196, italics original. [↑](#endnote-ref-62)
63. Ibid. p. 241-2. [↑](#endnote-ref-63)
64. Ibid. p. 229, italics original. [↑](#endnote-ref-64)
65. Ibid. p. 242. [↑](#endnote-ref-65)