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Sexual display from the abyss: Octopuses between heteronormativity and exorbitance

Exhibición sexual desde el abismo: Pulpos entre la heteronormatividad y la exorbitancia

Exhibició sexual des de l'abisme: Pops entre l'heteronormativitat i l'exorbitant

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Abstract

This paper focuses on a footage recorded in 1993 by Woods Hole Oceanographic Institution at 2500m depth. It is the first visual experience of sexual activity between abyssal octopuses in their oceanic habitat: they are two males of two different species. This paper aims to analyze the gendered, affective, and moral structures that have produced texts and voice-offs in relation to this visuality, letting emerge how a transcultural, feminist, queer, and artistic gaze can lead to a reparative stance, beyond a replicated heteronormativity perceived as threatening, towards a more relaxed intimacy with animal sexualities, including a hybrid sense of eroticism that accompanies the human attraction for visual sexualities.

Keywords

Visual culture; queer studies; animal studies; feminism; sexuality; art practice; octopus.

Resumen

Este artículo se centra en un metraje grabado en 1993 por la Institución Oceanográfica Woods Hole a 2500 m de profundidad. Es la primera experiencia visual de actividad sexual entre pulpos abisales en su hábitat oceánico: son dos machos de dos especies diferentes. Este artículo tiene como objetivo analizar las estructuras de género, afectivas y morales que han producido textos y voces en off en relación con esta visualidad, dejando emerger cómo una mirada transcultural, feminista, queer y artística puede conducir a una postura reparadora, más allá de una replicada heteronormatividad percibida como amenazante, hacia una intimidad más relajada con las sexualidades animales, incluyendo un sentido híbrido de erotismo que acompaña a la atracción humana por las sexualidades visuales.

Palabras clave

Cultura visual; estudios queer; estudios con animales; feminismo; sexualidad; práctica del arte; pulpo.

Resum

Aquest article se centra en un metratge gravat l'any 1993 per la Woods Hole Oceanographic Institution a 2500 m de profunditat. És la primera experiència visual d'activitat sexual entre pops abissals al seu hàbitat oceànic: són dos mascles de dues espècies diferents. Aquest treball pretén analitzar les estructures de gènere, afectives i morals que han produït textos i veus en off en relació a aquesta visualitat, deixant emergir com una mirada transcultural, feminista, queer i artística pot conduir a una postura reparadora, més enllà d'una replicació heteronormativa percebuda com a amenaçadora, cap a una intimitat més relaxada amb les sexualitats animals, inclòs un sentit híbrid d'erotisme que acompanya l'atracció humana per les sexualitats visuals.

Paraules clau

Cultura visual; estudis queer; estudis amb animals; feminisme; sexualitat; pràctica artística; pop.

Introduction

The development of visual technology distances one of the first observations of the sexual arm of an octopus made by Aristotle with the naked eye¹, from the one, for example, that brings to our living room's TV screen two abyssal octopuses in a sexual act. Increasing technological visibility reveals the presence of a repeated creative force, ambiguously stretched between the attempt to collect *facts about which there is no question*², one of the classic diktats of the nascent anthropological and zoological photography of the late nineteenth-century, and an imaginative effort, an affective state (understood as the ability to affect and be affected), at times erotic (as a way to experience the sexual) that act as semi-transparent filters screwed on the lens³. The relevance, therefore, of vast visual productions of the oceanic sexualities does not have the characteristics of factuality, but of a stratified construction, thinning or magnifying tones and contours, exceeding, in the will to know, our way of appearing out there. This research aims to submit this complex visibility to a transcultural, feminist, queer, and artistic gaze, towards a reparative stance, and a more relaxed hybrid intimacy between our eyes and animal sexualities.

Dive Number 2694

In 1993 during one of the expeditions of the deep-sea submersible *Alvin*, an unexpected sequence was recorded along the bottom of the East Pacific Rise, at 2500 meters deep, while observing lava phenomena: the first visual experience of two mating octopuses in their habitat. They are two males of two different unknown species. A 400-watt light makes visible for 16 minutes the

Midnight Zone, an area between 1000 and 4000 m depth, where sunlight does not penetrate. A 16-minute sequence destined to become a case in the history of visual encounters with animal sexuality.

The video was realized by Woods Hole Oceanographic Institution⁴. Thanks to WHOI I had the chance to have the license of the complete footage⁵. The expedition captain, Richard A. Lutz, once landed, sent the film to Janet R. Voight, a scientist specialized in cephalopods, now Associate Curator of Zoology at the Field Museum in Chicago. The copulation footage leads Lutz and Voight to a paper. I had the pleasure of interviewing Janet Voight, to get closer, emotionally, to this *first time*. Her words:

"Rich Lutz had Fed-Exed me the video cassette and I put off watching it till the end of the day, as I did not anticipate it to be of great interest. When I finally watched it at the end of the day, I was amazed. First for the quality of the images, second for the large size of one of the two octopuses, and third for the relatively small size and white color of the vent octopus (much later named *Vulcanoctopus hydrothermalis*"). (Voight, personal communication, January 4th, 2022)

I also waited until night to watch it. I agreed with Voight: the footage is amazing. For her, beauty is the content visibility; for me, as a visual artist, it is something else: a visibility able to let emerge our hybrid and emotional relations between human and non-human creatures. To my eyes they are two octopuses, different species, rolled over together, but I do not know if they are a female and a male, two males or two females, and if it is

¹ An example of Aristotle's notes about octopus sexual behaviors is in *History of Animals*: "...the octopus, by the way, uses his feelers either as feet or hands; with the two which stand over his mouth he draws in food, and the last of his feelers he employs in the act of copulation; and this last one, by the way, is extremely sharp, is exceptional as being of a whitish color, and at its extremity is bifurcate..." (Book IV-part 1) and "Some assert that the male has a kind of penis in one of his tentacles, the one in which are the largest suckers; and they further assert that the organ is tendinous in character, growing attached right up to the middle of the tentacle, and that the latter enables it to enter the nostril or funnel of the female" (Book V, part 6) (edition translated by D'Arcy Wentworth Thompson (http://classics.mit.edu/Aristotle/history_anim.html))

² Read, Charles, Hercules (1899), *Notes and Queries on Anthropology*. London: Anthropological Institute., p. 87;

cited in Pinney, Christopher (2011), *Photography and Anthropology* (London: Reaktion Books Ltd), p.25.

³ Exactly as in photographic practice, there are various types of filters: some subtly emphasize a color, others soften the contours, and still others can turn red into black, or white. As much as they can change the image even profoundly, they are all united by being semi-transparent, that is, partially invisible. I will say that a photographic semi-transparent filter invisibly builds the image. Even the *clear filter*, which has only the protective function of the optic glass lens, imperceptibly changes light and quality, so even a *clear optic* is, for the photographer, a semi-transparency.

⁴ <https://www.whoi.edu/>

⁵ 1993 Octopus footage, Alvin Dive 2694, Woods Hole Oceanographic Institution Archive, Betamax tape. Video image produced by A. Giddings, E. Kristof, W. Lange, R. Grieve and R. L.

sex, cuddling, a series of typical actions, or something else. For Janet, it is all clear from the first glance: sticking the hectocotylus (male copulatory organ) into the mantle cavity is a typical example of any octopus sexual mating. In the words of Janet Voight: "I was stunned that the first known video recording of copulation in deep-sea octopuses would involve two males of different species, it was almost as if they were saying, 'no wonder we are so rare!'" (Voight, personal communication, January 4th, 2022)



Figure 1: 1993 Octopus footage, Alvin Dive 2694, Woods Hole Oceanographic Institution Archive, Betamax tape. Video image produced by A. Giddings, E. Kristof, W. Lange, R. Grieve and R. L.

The Footage

I am hypnotized by this synchronic fluctuation of the two bodies attached to each other, the silence of the original footage sinks me into the image. Practicing photography, I think about the effect of the submersible artificial light on their eyes⁶ and it seems to cross their achromatic skin. I imagine this de-coloring is typical at that depth. Why do they chromatically camouflage themselves, or appear colorful, in the darkness of the abyss? It is an experience of violently illuminated darkness. The rhythm of the robotic-human-control of the camera is hypnotic. I am excited, and cold. Alvin is 12 underwater lights, 4 visual recording devices, two hydraulic robotic arms.

⁶ From Rocha, Francisco & González, Ángel & Segonzac, Michel & Guerra, Angel. (2002). Behavioural observations of the cephalopod *Vulcanoctopus hydrothermalis*. CBM - Cahiers de Biologie Marine (0007-9723) (Station Biologique de Roscoff), 2002, Vol. 43, N. 3-4, P. 299-302. 43: "Little is known about this small benthic octopus, up to 35 mm mantle length, with a muscular and semi-translucent

We, from the point of view of the octopuses, are *Alvin*. The dream of *Alvin*⁷, a human-occupied abyssal submersible – in 4 cubic meters of cockpit, where it can embark a maximum of 3 people, including one pilot and two researchers – and constantly reassembled with the most advanced technologies, became a reality at WHOI in 1964. It reached a record depth of 6453 meters in 2022, and collected an invaluable archive on the life and phenomena of the ocean floor. Seven by three meters of steel, later to become titanium, plexiglass, electrical circuits.

Light exposures and re-framings let emerge the charm of the raw material. The Betamax magnetic tape is closer to a 16 mm rather than to digital 4k, deleting shadows, unfocused elements, and uncertainties. I imagine a sexual intercourse there where Voight knows it is one. I'm happy that an energetically demanding activity happens in the abyss, where I imagine a saving energy form of life. An exuberance, I think, but compared to which energy system? I realize that I prefer to understand it as exorbitant, rather than habitual. I think of how beautiful it would be to have a diorama of it in a Natural History Museum, wrapped in black velvet, among other dioramas that usually bore me: males fighting, females with cubs, a life theatre embalmed in the patriarchal law of survival. Instead, they are two males of different species having sex. At min. 11 breath increases, the hectocotylus penetrates the mantle cavity. It is sex, I agree with Voight. Which structures do connect my sexuality, to that of the octopuses, of the scientists, and mix them all with sexual image regulations? While watching them, my sense of relaxation counterbalances conflicting thoughts.

Hypervisibility, penetrating depth, and darkness place this scientific material in proximity to a surveillance device, a perfect footage for an artistic space, or an erotic material for someone. Consequences we believe to have under control often overturn perceptual hierarchies (watching for study, watching for enjoyment, watching to control). We are the only living creatures

body, lack of any type of chromatic elements in the skin and eye with no trace of an iris (González et al., 1998). *Behavioral observations of the cephalopod Vulcanoctopus hydrothermalis*."

⁷ <https://www.whoi.edu/what-we-do/explore/underwater-vehicles/hov-alvin/history-of-alvin/>

endowed with norms while looking at human sexuality, and this results in an overflow of social, cultural and moral codes that regulate human sexualities, to the point of constructing an animality that practices a sexuality to be shown on a display⁸. Further, we are not used to studying human sexuality in the same form we observe and study animal sexuality. As pointed out by Bruce Bagemihl (1999):

This presents both special challenges and unique advantages to the study of the subject. On the one hand, certain behaviors such as sexual acts can be observed directly (and even quantified) which is often extremely difficult, impossible, or unethical to do in studies of sexuality among people (especially stigmatized or alternative forms of sexuality). On the other hand, we are in the dark about the internal experiences of the animal participants: as a result, the biases and limitations of the human observer – in both the gathering and interpretation of data – come to the forefront in this situation (p.2).

The footage visual life becomes more complex when in relation to words: texts, captions, voice-offs. This "never before observed" data leads scientists to a paper which is based on other known species, the hypothesis forces the image to exceed any word. Donna Haraway (1989, p.4), discussing primate observation, notes that the dictat that visual data can produce *facts without questions* is not dismantled but still structuring: It is a story of progress from immature sciences based on mere description and free qualitative interpretation to mature science based on quantitative methods and falsifiable hypothesis, leading to a synthetic scientific reconstruction of primate reality. But these histories are stories about stories, narratives with a good ending, i.e., the facts put together, reality reconstructed scientifically. These are stories with a particular aesthetic, realism, and a particular politics, commitment to progress.

I will attempt to repair this hegemonic commitment, seeking support, as Eve

Sedgwick (2023) suggests, even from a cultural formulation that may seem hostile to us:

No less acute than a paranoid position, no less realistic, no less attached to a project of survival, and neither less nor more delusional or phantasmatic, the reparative reading position undertakes a different range of affects, ambitions, and risks. What we can best learn from such practices are, perhaps, the many ways selves and communities succeed in extracting sustenance from the object of a culture – even of a culture whose avowed desire has often been not to sustain them (p.150-151).

The shifting structures, constantly editable, around this video, make it a particularly significant *first time* from the perspectives of contemporary queer and gender studies, intertwined with animal studies. Voight says something similar, in her own way, but its relevance is not limited to that: "It may be of interest that since publication of our paper, evidence of similar 'inappropriate' matings have been found in multiple species of squids" (Voight, personal communication, January 4th, 2022) .

The quotation marks in the word "inappropriate" are from Voight's original answer; I think she uses them to emphasize a certain levity in the use of the word, used in the jargon of an email exchange In relation to whom and to what data is this sex act inappropriate? Which sexual activity would be appropriate? I decide to interpret the term ironically, and focus on the fundamental fact: the video, even for its beauty, was a watershed, and a push in the search for further same-sex activities in other oceanic species as well. I reflect on the fact that my understanding of this act as something wonderful, exorbitant, surprising, is exactly mirroring the understanding of it as inappropriate, and surprising by Voight. On the other hand, we both find it important, me thirty years -after her.

Writing at the intersection of performance theory and animal studies, Una Chaudhuri (2015) emphasizes how the development of

(Spring/Summer 2011), pp.121-158, Duke University Press.

⁸ In addition to Bagemihl, see also Barad, Karen, (2011), "Nature's Queer Performativity" in *Qui Parle*, Vol. 2

animal studies in recent decades has discouraged physical contact with animals, in respect to their space, territoriality, smell, and sensitivity; and increasingly leads to choose exclusively visual contact, a relationship made of looks.

What Chaudhuri overlooks, however, is that the exclusively visual experience, which has led to the multiplication of the hypervisibility of high-definition *wildlife* documentaries, means that the act of looking at an animal is no less invasive than touch, even when we look at it in a display.

This visual *first time*, unexpected in the eyes of the zoologists, is relevant for my argument because it creates a network of relations that, although it is considered a scientific fact, it cannot be dissolved from the structures of feeling and perceptual, affective experience, which constitutes visual astonishment. In Voight's words: "I had frequently observed mating octopus so I was familiar with the stereotypical behavior of the copulating male, and I would not say I was shocked but surprised certainly" (Voight, personal communication, January 4th, 2022)

Managing astonishment is complex, it concerns novelty: a disorganization, immediately reorganized in the method. Caught in its disruptiveness as a condition of blurring (the action of scratching the eyes when one does not believe what he or she is seeing) briefly brings a signal of clarification and pleasure. What is the value of this video beyond words and in relation to them, in 1993, in 2000, and today?

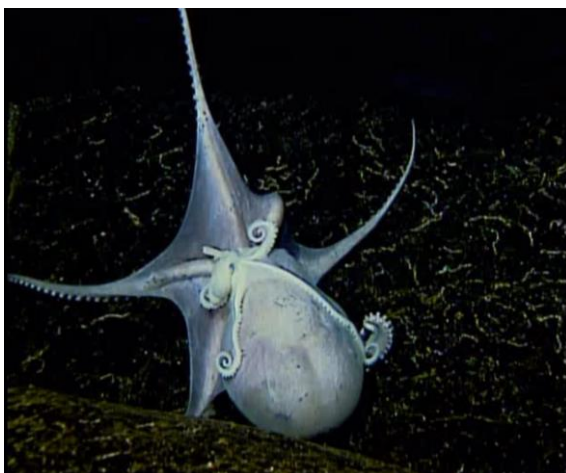


Figure 2: 1993 Octopus footage, Alvin Dive 2694, Woods Hole Oceanographic Institution Archive, Betamax tape.

Video image produced by A. Giddings, E. Kristof, W. Lange, R. Grieve and R. L.

The Academic paper

The copulation footage leads Lutz and Voight to an article published in 1994: "...as the smaller male shifted position, his hectocotylus (a uniquely male copulatory arm) moved across the posterior dorsal surface of the large male's mantle; his ligula (intromittent organ), in contrast to its normal, protected position, became extended....The small male subsequently succeeded in introducing the distal end of his hectocotylus into the mantle cavity of the large male, an act constituting copulation in octopods." (p. 563)

Literally bringing to light this sexual act between two abyssal octopuses, which we cannot define in terms of a broken intimacy since privacy is an anthropocentric construction, immediately transforms it into a visual display subject to an audience, scientists, artists, people sitting on a couch. This display is not exclusively factual (since we have made it visible, therefore it is) but determined by what Una Chaudhuri (2016) defines as *zooesis*. *Zooesis* is the process that brings some animal performativities to their representations in the contemporary media, culture, popular imagination. A beyond-the-human visual performativity that suggests the need for a non-linear, transdisciplinary aesthetic approach. What is the value of this video beyond what has been written (or not written) by the scientists? What do we see in what we have not seen before, and, in the logic of the *blind spot*, what do we not see in what we do see?

The *blind spot* physiological dynamic, as a metaphor of our visual perception, is ironically significant: in every act of looking in the eyes of mammals, including humans, a vision hole is determined due to an interference of the optic nerve with the retina. We do not perceive it because the brain fills it with lightning speed. This visual dynamic is known as the *filling-in* process: it affects and compensates with a visual imaginary what is partially seen. Every gaze has a blind spot.

The academic paper's conclusion, based on the footage, is relevant:

The present study, to our knowledge the first account of copulatory behavior in deep-water octopods, questions whether copulation between males of different species of these mobile abyssal organisms is a rare event. The apparent readiness to copulate, or attempt to copulate, may reflect adaptations to low mate availability and the short lifespan of cephalopods, a group in which promiscuous mating occurs (Lutz and Voight, 1994, p.563).

We identify here two criticalities and their impact in different cultural fields. One concerns the word *promiscuity*, that is not understood if it can be emptied of moral value. The second one is about the *low mate availability*, which is understood as a lack of females and as a phenomenon that directly impacts on reproduction. Since the central question is whether it is "a rare event" or not, how does one circumscribe *promiscuity* without *non-promiscuous* data? Voight herself answers this question by comparing it to other similar species living in the abyss. Scientists' question is important: this act can be common. Here the term, moreover, seems to mean pro-mixing, following the etymological meaning, an intrinsic property of a subject. In this acceptance can an octopus be promiscuous without being *promiscuous*? It means that octopus has a mixed sexual activity, with both females and males, but this activity is not *promiscuous*, in its meaning confused or out of norm. Voight and Lutz's question raises, from the first sighting, the possibility that it may not be uncommon: for example, let's imagine abyssal octopuses performing sexual acts between individuals of the same sex and different species as much as other sexual combinations.

Yet there is something strange in the use of the word, for example in the article written by Hendrik, Bush and Robison in 2011, about abyssal squid sexuality. Twenty years later, the word *promiscuous* still returns in a similar context:

"Equivalent numbers of both sexes were found to have mated, indicating that male squid routinely and indiscriminately mate with both males and females. Most squid species are

short-lived, semelparous (i.e., with a single, brief reproductive period) and promiscuous...While promiscuity is common in cephalopods, the risks and costs of same-sex mating raise the question of its apparent negative evolutionary value.

Promiscuity in cephalopods, writes Hendrik, is common, but such promiscuity could have negative evolutionary value. So here the use of the word *promiscuous* seems to dodge the logic of norm and out-of-norm, and the effect of this undifferentiation is an error. We could say that in this research the squid is a *promiscuous* creature, meaning it has sex with both males and females, and that this *promiscuity* is promiscuous, the effect of it is an interference. In the words of the article's authors: "A failure to exhibit sex discrimination and the acceptance of same-sex mates are generally considered a recognition error with an attendant reproductive cost" (Hendrik et al., 2011). If the opposite of a mistake is to do the *right* thing, then, in the name of the hypothetical maintenance of their species, it would be to refuse (the opposite of *acceptance*) same-sex mating.

My role here is therefore not to be able to speak in a technical language that I do not know, but to disturb it when, if anything, scientists appropriate, more or less voluntarily, ideological devices that can sometimes be recognized only in an overall view, such as the moral history of this word. A study held in 2013, analyzing more than 350 animal sexuality studies, responds to the word ambiguity, as pointed out by Sarah Jane Alger, a behavioral neurobiologist at the University of Wisconsin-Stevens Points: "This idea of promiscuity seems to mean different things to different people" (Fowle et al., 2018). The ambiguity of the use of the word turns it into a dome with different meanings: *promiscuous* as opposed to animal monogamy, for example in rats, *promiscuous* sexuality as a compensation in the case of lack of choice of mates; or *promiscuous* as undifferentiated sexual choice, and *promiscuous* in animal females, with a pronounced bias founded on how it is used in relation to human cultures. The proposal of Mark Elgar, Theresa Jones and Kathryn

McNamara (2013), in their study *Promiscuous words* suggests to first clarify the archaeology of the word: before 1600 the word refers to generic indiscriminate actions, in 1800 it began to be used to describe human sexual activity, in 1900 it began to appear as a term in evolutionary biology. From there it is necessary to understand how much of this stratification persists or not.

The second critical point is about the lack of females. This is supported by a sexual hierarchy. At the top the primary function of reproduction and the heterosexual encounter as an expression of fitness, and at the bottom other forms of non-reproductive sexualities, distortions of the process, and asserted to the primary reproductive function. This logic has a long history, and it is similar to other encounters/clashes with sexual manifestations. This is the case, for example, among many others, of a reflection produced by anthropologist Margaret Mead in 1928, during her study trip to a Samoan island to investigate the sexual expressions of Samoan youth that was collected in the well-known *Coming of Age in Samoa*:

"They also have a vivid understanding of the nature of sex. Masturbation is an all but universal habit, beginning at the age of six or seven. There were only three little girls in my group who did not masturbate. Theoretically it is discontinued with the beginning of heterosexual activity and only resumed again in periods of enforced continence. Among grown boys and girls' homosexual practices also supplant it to a certain extent (Mead, 1967, p.136).

Masturbation and homosexuality therefore are seen as moments of passage, or of waiting, between one heterosexual activity and another one. It seems that is the case with octopuses, but we are among humans. Mead, writing in the first decades of the twentieth century and taking into account the sexual knowledge of her time and criticism around her research, creates an

apparatus capable of giving way to future gender studies and cultural formation of gender, as a fundamental part of any anthropology.

The diversity of sexual mechanics between humans and animals is evidently wide, yet the interpretive structure is the same. This however, let us emphasize, becomes clearer to us in retrospect. Bagemihl (1999) analyzed this dynamic in his encyclopedic text on animal homosexuality:

"In nearly a quarter of all animals in which homosexuality has been observed and analyzed, the behavior has been classified as some other form of nonsexual activity besides (or in addition to) dominance. Reluctant to ascribe sexual motivations to activities that occur between animals of the same gender, scientists in many cases have been forced to come up with alternative "functions (p.115).

Some scientific observations on sexuality and gender in the animal world go hand in hand with the trends of sexuality and gender studies in reference to humans, while others do not. We can note, for example, the chronological proximity of the appearance of what are called *queer animals* and the wave of studies on *queering nature* and *naturalize queerness*⁹ with the development of the most recent queer studies on human beings. Even if feminism has met the study of primates since the 1970s¹⁰, as pointed out by Jennifer Terry in 2000, many questions are still open:

"This trend reflects some of the refinements in definitions of sexuality that we find in the broad cultural context of the twentieth century: sexuality has come to be related more centrally to bodily pleasures and desires, irrespective of the aim of reproduction. To many biologists and ethologists, however, the problems presented by nonreproductive sexual behavior have to do mainly with how it thwarts, disturbs, or, in the best light,

⁹ See for example Mortimer-Sandilands, Catriona, Erickson, Bruce, (2010). *Queer Ecologies: Sex, nature, Politics, Desire*, Indiana University Press.

¹⁰ See for example Akers and Conaway, (1979). "Female Homosexual Behavior in Macaca Mulatta", in *Archival of Sexual Behavior*, 8, 63-80.

merely supplements heterosexual reproduction.¹¹

The 1993 paper suggests that this same-sex sexual act occurs because they must reproduce anyway but they don't *know* they are two males of two different species. The question is: what do octopuses know about sex?

This predetermined plan, in which reproduction moves creatures, sometimes boycotted, is a familiar story. For example, the 18th century Carl Linnaeus' scientific research played the role of maintaining some Western socio-cultural structures: the botanist attributed to plants the Christian patriarchal system of his time, demonstrating that it was nature itself to provide the Christian understanding of sexuality. The human development of the notion of nature has often the appearance of a mirror. As specified by Linnaeus:

"...petals do service as bridal beds . . . adorned with such noble bed curtains and perfumed with so many soft scents that the bridegroom with his bride might there celebrate their nuptials When now the bed is so prepared, it is time for the bridegroom to embrace his beloved bride and offer her his gifts."¹²

Two centuries separate the octopus' hectocotylus from Linnaeus' stamens and pistils, two languages and the different technological possibilities of the visual, yet there is a common thread: hectocotylus, as stamens and pistils, in these cognitive constructs are organ-function asseverated to reproduction. Every different use is considered a promiscuous activity, an interference, or something that tends not to have a name. As underlined by Stephen J. Gould and Elisabeth Vrba, unmentionable phenomena are a conceptual gap: "They truly have no name, and concepts without names cannot be properly incorporated in thought"¹³.

The two scientists observe in the octopus's footage a biological concatenation of functions, which is what they seek. Octopus is a *physiological sack*¹⁴, but, as written by Adolf Portman in 1948 in his study about the relation between animal forms and functions, this exclusively biological reading applied on a visual datum can be misleading, limiting an external manifestation to just a function of an inner engine:

"In such circumstances, the idea easily takes root that what represents itself immediately to the senses is a more or less secondary consequence of what is far more essential, that is the "intrinsic", the "central" happening. A further step and we come across a view by no means rare, that the exteriority of an animal exists in order to preserve the essential internal mechanism, by means of acquiring food and by moving, by avoiding enemies and by finding the opposite sex. Formulated as such, the idea appears exaggerated; but it would not be difficult to produce evidence from the rich field of embryological and physiological research to show how often animal life is in fact seen in that perspective...it leads finally to conceiving the animal body to be a *sac physiologique*¹⁵.

An assumption: the more exaggerated a manifestation appears on the surface, the more it is forced into a physiological sack. But we can exceed the physiological sack, reproduction, and, in Antonin Artaud's words, *the judgment of god*¹⁶. As much as it may seem like a sudden change of reference field, Artaud, in one of his radio pieces, hints at how the ideological and moralistic notion of body is based on a divine judgment organically invasive; it even invades physical biology, the inner part of bodies. It is this judgment of god, according to Artaud, that would attribute a function to organs,

¹¹ Terry, Jennifer (2000). "Unnatural Acts" in *Nature. The Scientific Fascination with Queer Animals*, GLQ 6:2, Duke Press University, pp.151-193, p.154.

¹² Larson, James.L (1967). Linnaeus and the Natural Method. *Isis* 58:304-320.

¹³ Gould, Stephen J., Vrba, Elisabeth, S. (1982), "Exaptation- A Missing Term in the Science of Form" in *Paleobiology*, Vol. 8, No. 1, p. 12.

¹⁴ The term is critically used by Adolf Portmann, in *Animal Forms and Patterns: A Study of the Appearance of Animals* (1967).

¹⁵ Portmann, Adolf (1967) *Animal Forms and Patterns: A Study of the Appearance of Animals* (New York: Schocken Books Inc), p. 204.

¹⁶ Artaud, Antonin, (1948), "Pour en finir avec le jugement de dieu", in *Opere complete*, vol. 8, Parigi, 1974.

determining them in a functionalist system, in which any form of biological boycott would be blasphemous. Then, to which human (divine?) body organization are octopuses subjected in this encounter? The octopuses are breaking an organization, becoming a dynamic field of forces, or in Artaud's words, *bodies without organs*.

The resistance of a scientific approach to overturn the centrality of reproduction as a primary function of animal sexualities is often evident. Jennifer Terry¹⁷ dedicated part of her study to the case of octopuses: the sexual primacy of reproduction has a long history of criticism; in 1979 the precursor case of Akers and Conaway¹⁸, focused on pleasure experienced by some female macaques during same-sex sexual exchanges. However, the 1993 octopus case attracted media attention, and in the general public, even hilarity, while Akers and Conaway's 1979 primate case received little academic attention and none at the media level. The title of an article that came out a few months after the academic paper, "Torrid sex scenes puzzle octopus experts" anticipates its own positioning. In the words of the journalist:

"Raunchy video footage from the depths of the Pacific Ocean has got marine biologists excited – and perplexed. For the first time, they have witnessed two deep-sea octopuses having sex – only to discover they have been watching the intimate embraces of two males of different species¹⁹".

It is relevant how popular media's ridiculing register wrapped both octopuses and scientists. The case, in some way, was a double construct between performing octopuses and scientists as affected by the show. In 2019, Ashton Wesner (University of California, Berkley), in a collaboration with Elias Lab, in this case engaged in research on courtship behaviors in spiders, dedicated an article, in the guise of a

feminist researcher, on a certain resistance of some scientific approaches. In Wesner's words:

"Building on over a year of participant-observation and collaboration with the Elias Lab, the scientists and I explore how historically violent conceptions of sex, gender, and agency are both replicated and disrupted by laboratory practices and theoretical discussions in animal behavior sciences...Unsurprisingly, we have found the cultural inertia of disciplinary knowledge production, ongoing investment in objectivity and simplicity...To what extent might this work be informed by commitments to undo the longstanding violences of misogynistic and heteropatriarchal trajectories of biological determinism, sexual dimorphism, and compulsory heterosexuality? What are the major obstacles to communication, funding, and paradigm shifts for biologists as they parse through the rigidity and inaccuracy of concepts such as biological sex and sexual dimorphism?²⁰"

One answer provided by the text is in constantly subjecting the data to the queer and feminist gaze, and to those who can repair some habits based on paradigms on which to freely pose questions in an interdisciplinary dialogue.

¹⁷ Terry, Jennifer (2000). "Unnatural Acts" in *Nature*. The Scientific Fascination with Queer Animals", *GLQ* 6:2, Duke Press University.

¹⁸ Akers and Conaway, (1979) "Female Homosexual Behavior in Macaca Mulatta", in *Archival of Sexual Behavior*, 8, 63-80.

¹⁹ Mestel, Rosie, (1994) "Torrid Sex Scenes Puzzle Octopus Experts" in *New Scientist*, 22 October 1994.

²⁰ Wesner, Ashton, (2019), "Messing up Mating: Queer Feminist Engagements with Animal Behavior Science" in *Women's Studies*, 48:3, 309-345.



Figure 3: 1993 Octopus footage, Alvin Dive 2694, Woods Hole Oceanographic Institution Archive, Betamax tape. Video image produced by A. Giddings, E. Kristof, W. Lange, R. Grieve and R. L.

2001. An LGBT documentary

In 2001, part of the abovementioned footage was included in the documentary *Out in Nature: Homosexual Behavior in the Animal Kingdom*²¹. The *out* in the title refers to the *coming out*, the initial graphic is a rainbow flag, supporting LGBT community. The promotional statement: "Can anybody of those who claim homosexuality is 'unnatural' explain this beastly behavior?"²² shows the logic put in place in the name of the rainbow flag twenty years ago. It represents a minority scientific approach, in a frightened territory of public opinion. The logic is to demonstrate that there are various animal sexualities that can be considered as natural. Through a careful selection of visual data and an incisive voice-off, supervised by Paul L. Vasey, the documentary series promises, in a pop key, to include different animal behaviors in a questionable notion of nature.

The issue here is to shake the notion of nature itself if it works exclusively as a system where reproduction is the primary function. If in this documentary nature means a super-machine that tames its creatures, making them work in a certain way so that this super-nature project, moved exclusively by survival and reproduction,

is fulfilled, non-reproductive sexual activities are not admitted according to that logic. At that point it is clear why the documentary's aim is to look for a function of homosexuality in nature. The notion of nature, as it is presented in this documentary, is a dangerous notion and capable of absorbing into itself the possibility of thinking homosexuality and other non-reproductive sexual forms, outside of the nature/against nature binarism. Just as capitalism can capitalize any alterity, minority or diversity²³.

Having said that, it is clearer why the voice-off that accompanies the WHOI's octopus footage is characterized by a certain homophobia. A male voice-off, a documentary classic, not only establishes who tells the *true wild* stories, but forbids a female voice-off, even in a LGBT space. Sir David Attenborough, one of the most acclaimed documentarist in the last fifty years, will elaborate, and spread in the popular media, this insidious patriarchal register in wild nature's narratives: a sexual surveillance device shared as the serene and accommodating voice of a grandfather telling the *wild* to children and adults. In 2001 some sexualities, until then marginalized, if not concealed, were ready to be included in pop media communication, but this had to take place through a certain type of speaking subject and register. In the mating scene, the voice-off and music sink into horror. In the sensationalist construction, there seems to be a certain ranking of shock. Viewers sit on a couch in 2001 for a documentary about animals but find themselves immersed for a few minutes in Ridley Scott's 1979 *Alien*:

"Imagine their shock when they realized they were watching two males...and the surprises were far from over. These octopuses belong to two different species...But octopus is known to be highly intelligent and if the smaller male made a mistake, surely the larger male would realize this and back off..."²⁴.

²¹ <https://www.youtube.com/watch?v=LFeXwKnCUNl>

²² <https://www.imdb.com/title/tt0422898/>

²³ See Wood, Peter (2004) *Diversity. The Invention of a Concept*, Encounters Books.

²⁴ *Out in Nature: Homosexual Behavior in the Animal Kingdom*, (2001), directed by Menendez, Jessica, Loyer, Bertrand, Alexandresco, Stephane, produced by Canal+, Saint Thomas Production, France. See at min. 4:45. https://www.youtube.com/watch?v=Hbw_O8wAwtU

Is this a public opinion burlesque? Which voice-off would be suitable today, in 2022? When interviewed in the documentary, Janet Voight once again proved herself superior in attempting to dodge a certain type of register, rejecting the shock and sensationalism. I have had the opportunity to talk to her about these forms of spectacularization, and she agrees that the mechanism is typical when scientists make public something they do not quite know the limits of, lending the side to the sensationalist dynamic:

"Seriously, the tone does seem a bit scary, but often that is typical of stories about the deep sea and its animals. People are aware that we don't know what is out there and it might be scary! The deep sea is the least known habitat on earth. I suspect that this production is trying to make the video enticing for the average viewer...designed strictly to make you want to open the link...when we see for the first-time copulation in a group of animals, we expect it to involve a male and a female of the same species. When that expectation is not met, it is easy to sensationalize."²⁵

Media visibility has staged a naturalization of some animal sexual behaviors but without making them less frightening, and at the same time it has spectacularized, ironically or not, our own fears. In this weird traffic of notions and affects between human and animals, what makes some sexualities more sensational than others? Dismantling the cultural primacy of reproduction will help us to understand something more of the structures through which we culturally manage non reproductive sexual practices.

Conclusion and release

The relation between visual sexuality and texts generate exorbitance, that is a disproportionate addition,. We make the octopus exorbitant that

means subjecting it to greater visibility, but also possible surveillance. The double surprise, good in scientists and scary in the media, has maintained its visibility. Visibility has placed this sexuality under scrutiny, but also available for reinterpretation. Overflowing into creative fields has diversified its beauty. It spurs us to relate this sexual visuality to others coming from oceanic, maritime, and insular territories, grasping their similarities: aesthetic-formal aspects, textualities, and eroticism that, as a refrain, often affects our relation with insular and oceanic life, undergoing²⁶; de-sexualization or hyper-sexualization.

Eva S. Hayward, faculty member of the Department of Gender and Women Studies at the University of Arizona, analyzed Jean Painlevé and Genevieve Hamon's 1965 surreal science film, *Les Amours de la piovre*:

two octopuses, male and female, mate in an aquarium. Hayward here finds herself dealing with a filmmaker who adhered to the avant-garde film movement and then produced scientific cinematography with strong accents of sound and editing. Her analysis brings out a complex anthropomorphic and heteronormative attribution: human gendered clichés onto the bodies of the two octopuses between the transparent walls of the aquarium. Although the above mentioned footage arose not in an avant-garde context but as a casual scientific encounter while collecting data on the abyssal volcanic activities of the East Pacific Rise, it moves our attention to the important fact that artistic production can be subjected to the analyses of a similar perceptual, cognitive, and feeling structures. The contiguity, as Hayward names, is remarkable and erotic, but refracted, as in a game of mirrors:

"*The Love Life of the Octopus*, witnessed in title alone, is an erotic narrative that is contiguous. The octopus, the spectator, the camera, the lens, the filmmakers are conjugated in the refracted space – each is wet, and

²⁵ Private email interview with Janet Voight, January 2022.
²⁶ My PhD research at Durham University, *The Invention of Visual Sexual Exorbitance in Insular Spaces* (2020-ongoing) is focused precisely on photographic and video

productions in insular and oceanic spaces, and how exoticism, colonial aesthetics and Western sexual knowledge constructions have exploited those landscapes towards the invention of sexual diversity notion.

continues to soak, with the encounter of the others."²⁷

This tendency to exceed forms and products that we create in the relationship among sexualities, is an erotic experience, if eroticism can be understood as one of the ways in which we experience visual sexual expressions. This relationship is a hybrid and complex space made of the subjects but between the human-non-human subjects themselves. The relation we can build with it, in the words of Rita Felski, prominent scholar in the fields of aesthetics and literary theory, feminist theory and cultural studies, is grounded in: "...a stance that looks to a work of art for solace and replenishment rather than viewing it as something to be interrogated and indicted"²⁸.

Relief encourages an aware intimacy. Astonishment, when faced with a sexual phenomenon, is already eroticism. This is intertwined with the structures of knowledge, affection, feeling, senses, and we cannot misunderstand this physical and sensory experience that is brought into play, even if tamed, hidden, displaced, or exaggerated. When we believe we are dealing with visibility, textuality or data that we consider sexual, but that we do not categorize in terms of erotic experience, we find ourselves in a limbo, and it is in this limbo that sexual exorbitance is conformed: an erotic experience that mixes perceptual states, putting together, even cohesively, different domains and feelings together with thoughts. We are participants in, and responsible for each visual encounter/clash and each disproportion which reveals not only itself but also the infrastructures that support it. Many astonishments, that are the foundation of a reading not afraid of either

differences or novelty, characterized this encounter: Lutz's surprise, in preserving the video and sending it to Voight; Lutz and Voight's one in dedicating passion to what they saw and putting their knowledge into play; *Alvin's* crew's one, immersed at 2500 m in the darkness of the abyss, recording the 16 minutes wonderful footage with their optics pointed on it. At the end, the astonishment of this queer re-reading. The consequences of surprise, or the lack of it, are the core of what we re-produce about this footage: "If anybody can come up with a good idea," Voight replied in an interview²⁹, "they should feel free to give me a call". If this footage could potentially stimulate ideas, after thirty years, it has fully proven it: investigating hybrid animal and human sexualities, inventing new relations, and posing a question: "once we get used to it, will it still be extra-ordinary?" WHOI's rules in relation to their images, "...and License's use of the Work will not infringe, misappropriate, or otherwise violate the intellectual property...", make me wonder if there is actually a way not to be misappropriate with the abyssal octopuses. Maybe a hybrid intimacy can be a way to dismantle unnecessary oppressions and over-impressions.

Let's imagine now our diorama in a museum: we are those inside that diorama, hyperealistic statues against a painted backdrop, illuminated by neon, and not those outside, in front of it.

Who or what has ever encountered — that is, sensed and made sense of — a concept, or even a word, that was not an entanglement of matter, history, forces, political and legal structures, [...] and physical intra-actions? (Gandorfer & Ayub, 2021, p. 3)

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²⁷ Hayward, Eva S., (2005) "Refracting the Love Life of the Octopus" in *Enfolded Vision*, Vol. 1, p. 44.

²⁸ Felski, Rita (2015) *The Limits of Critique*. The University of Chicago Press, p. 151.

²⁹ Mestel, Rosie, (1994) "Torrid Sex Scenes Puzzle Octopus Experts" in *New Scientist*, 22 October 1994.

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Videography

- Complete 16-minute Octopus footage (December 1993), Digital version from original Betamax tape, from Alvin Dive 2694, Woods Oceanographic Institution Archive.
- Out in Nature: Homosexual Behavior in the Animal Kingdom, (2001), directed by Menendez, Jessica, Loyer, Bertrand, Alexandresco, Stephane, produced by Canal+, Saint Thomas Production, France.

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