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MATTER

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EDITORIAL
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Situating research on art, technological practices and literature: new materialist and posthumanist feminist perspectives

Situar la investigació sobre arte, prácticas tecnológicas y literatura: nuevas perspectivas feministas materialistas y posthumanistas

Situar la recerca sobre art, pràctiques tecnològiques i literatura: noves perspectives feministes materialistes i posthumanistes

Silvia Luraschi (ORCID: 0000-0002-87619134) University of Milano-Bicocca;
Federica Timeto (ORCID: 0000-0003-2492-733X) Ca' Foscari University of Venice
Sibel Yardımcı (ORCID) 0000-0001-7748-8946) Mimar Sinan Fine Arts University.

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This special issue collects a selection of contributions presented at the “Feminist Art, Technological Practices, Literature, New materialism, Posthumanities” strand at the 11th European Feminist Research Conference, which took place at the University of Milano-Bicocca from 15th to 18th June 2022. The aim of the whole event, whose title was “Social Change in a Feminist Perspective: Situating Gender Research in Times of Political Contention”, was to explore social changes during the Covid-19 pandemic from a feminist perspective and a variety of disciplines. In particular, the recent pandemic made us (as the coordinators of this strand) think about the need to start looking for different ways of thinking, acting, and performing social change.

An innovative feminist intervention is needed in order to interfere in what feminists see as a reestablishment of neoliberal structures (Revelles-Benavente, 2021) that impose a perpetual state of war (Negri & Hardt, 2001), competition and individualism as the “new way of the world” (Dardot & Laval, 2017) – resulting in differentiated global waves of ecological destruction and social dispossession. Choosing the topic of our panel, and selecting the papers afterwards, our intention has been that of foregrounding the importance of adopting new materialist feminist approaches (Alaimo & Hekman, 2008) as a strategy to dismantle existing dualisms and oppressive structures that are hereby being reinstalled in society.

Posthumanism and new materialism are two umbrella terms for various cross-disciplinary challenges to rethink the way prevailing assumptions are structuring the relationships between the “human” and “non-human/more than-human/other-than-human” worlds (as various feminist scholars like Karen Barad, Rosi Braidotti, Elizabeth Grosz, Donna Haraway, Stacy Alaimo, Anna Tsing among others explain). Both provide ethic-onto-epistemological paradigms that break through traditional dualisms, such as man/woman, human/non-human, culture/nature, subject/object of research, in which one of the terms is designated as inferior, this devaluation being the basis for domination, exploitation, oppression, extractivism. Priority is instead given to relationalities, intra-actions (Barad,

2007), entanglements, diffractions (Haraway, 1997), always preceding the emergence of contingent, partial and hybrid social actors and their multiple configurations. This also implies a trespassing and possibly deconstructing of disciplinary boundaries, bringing together the arts and the sciences, as well as the social and the natural sciences perspectives, now more than ever engaged in fruitful transfusions and hybridizations.

Departing from Haraway’s situated knowledges (Haraway, 1988), we acknowledge that one of the most important contributions of new materialisms to feminisms is a situated methodology in which the “God trick” is challenged, and the researching subject, as well as the researched object, are understood as parts of a dynamic, affective and “entangled” (Barad, 2007) relationship. The political and ethical consequences of such an approach are paramount: differences are never already there to be represented from the outside but are always in the making (Timeto, 2011); each epistemological intervention at the same time interferes with the material-semiotic reconfigurations of the world and can be considered an engaged practice that performs the co-emergence of both meaning and matter.

The faith in the truth of representation and of sight as the privileged sense of knowledge acquisition and documentation still appears as the leading principle of the natural sciences, as Benedetta Panisson affirms drawing on Haraway. Her paper takes the cue from a submarine expedition that took place in 1993, during which two mating octopuses, both males of unknown species, were filmed by the Woods Hole Oceanographic Institution in their habitat, the dark depths of the Ocean, which the human gaze “violently illuminated” (p. X) for the occasion. Looking at the scene with the eyes of an artist and diffracting scientific vision through it, Panisson wonders why animal sexuality appears so astonishing, for whom, who looks and who has the right to do so, and how invasive this look can be. Panisson conducts an analysis that involves her personally, but which does not allow her to adopt a decisive point of view with regard to this animal appearance, which rather raises a series of questions about the margins of visibility, its normativity and what

remains excluded from the picture. Drawing, among the others, on the notion of zoösis by Una Chaudhuri (2016), Panisson asks: “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?” (p. X). She then goes on to problematize the normativity of this look that at all costs tries to define what rather appears as a body without organs (Artaud, 1975) arguing for a liberated gaze that, in turn, also liberates an “inappropriate/d” performativity of the body on display, as Haraway (1992) would put it.

The eyes are also the protagonists of Jannis Steinke’s paper, who re-turns to the renowned Romantic novel *Sandman* by E.T.A. Hoffmann through Haraway’s diffraction and the quantum physics concept of dis/continuity as reformulated by Barad (2010). In going back to what can be conceived as a parable of scientific and masculinist hybris, Steinke renounces reproduction and, drawing on a variety of philosophical sources, rather “matterphors” the narrative (according to the term coined by Gandorfer & Ayub, 2021) to grasp a material-semiotic reality and relocating the lost/blinded/exchanged eyes in the flesh: objectivity is replaced here by op-jectivity, a matterphor that Steinke uses to refer to “the throwing/leaping of the eye(s)” and the “I” as well (p. X), both of which lose mastery over reality. Nathaniel’s, the novel’s protagonist, mind and body fall apart together, demonstrating that vision cannot exist without a body and that the collapse of vision, and reason accordingly, also reveals all the body’s vulnerability. Steinke concludes her complex analysis recurring to a “vio-lens” that, while diffracting the violence of hegemonic vision, works fiercely against hegemonic violence, and is capable of resisting to, and eventually overturning, the Law (Derrida, 1992).

Starting from a violent concept of time in the Anthropocene where each moment is absolutely present and then absolutely past, dead, and forgotten, Susanna Schoenberg’s article discusses a selected art project in the perspective of a practice of composting in relation to “timespace-matter”. The reference to “timespace” intends to operate on the idea of a “reality” not made by separate, discrete entities,

where the distinction and juxtaposition of “subjects” and “objects” is expected to be composted and operated as a relational practice. According to Karen Barad, “spacetime-matterings” refer to “turning it over and over again—iteratively intra-acting, re-diffracting, diffracting anew, in the making of new temporalities (spacetime-matterings), new diffraction patterns” (Barad, 2014, 168). To reflect on it, Schoenberg refers to the collaboration with the trans-disciplinary collective *Kompostistische Internationale*, expressly inscribed in the concluding artwork *Dissolution Table*. The project is based on the “infiltration” of (recording) media and the introduction of a differentiated form of authority into a situation that was not sketched by Schoenberg (*Kompostistische Internationale*, 2022). The result of the first collaboration is that the artist sets the indeterminacy of the “subject” as an “emerging” material, while the further developments of the “form finding” for *Dissolution Table* have been discussed and questioned within the working group.

These three research papers situated in between literature, science and art show how feminist research is always positioned and engaged, on multiple levels, with the material realities of life on our planet. We consider it significant to highlight a further characteristic element of this way of moving in the world: feminist new materialism research is a doing and thinking that bridges individual lives (Formenti, Luraschi & Del Negro, 2022) and highlights the rhizomatic interconnections (Deleuze & Guattari, 1987) of living’s experiences.

A collective investigative practice is at the centre of Lenka Veselá’s research that presents the *Endocrine Disruption Tracker Tool* (EDTT) as a speculative instrument. This tool kit was created by herself to inquire into how chemical endocrine disruptors affect us and focuses upon the ways in which they can influence our emotions. The article demonstrates how industrially manufactured chemicals are capable of mimicking or interfering with the ways in which the body’s hormones typically work (Bergman et al., 2013). The EDTT invites participants to attend to and act upon these changes to our sensory and cognitive

capacities, as well as our emotional well-being. Following Ahmed (2004), she suggests considering the social practice of expressing emotions that are caused and modulated by involuntary exposure to chemical endocrine disruptors. The article discusses the potential consequences of feeling angry, frustrated, and sad because of chemical exposure, which stresses how our ecological interconnections are also a source of vulnerability, apart from being the very condition of life flourishing.

The condition of women flourishing is also part of Marta Olivi's paper who was working on feminist dystopia as a source of a political and ecological impulse capable of renovating utopian thinking (Baccolini, 2020). Olivi analyses a novel of the American writer Diane Cook entitled *The New Wilderness* (Cook, 2020) through the lens of food. The novel is considered a significant example of what is called Anthropocene fiction because food is highlighted either as the hinge of the relationships between human and non-human and as a class of objects that can drive the

protagonist through her process of becoming (Braidotti, 2013). In summary, from this perspective, food can be used as a powerful vector of performative meaning to create a posthuman female identity. Reading Olivi's essay, the reader will gain a wonderful sense of how the evocative power of literature can inspire daily life practices and make materialist and posthuman theories very concrete and close to each of our lives.

Although dealing with very different topics, at the same time the five articles in this special issue share a common desire to think and act critically in order to produce social change through their theoretical and engaged analyses. In inviting you to read them with care and attention, we want to renew our belief in the importance of feminist new materialist and posthuman research for breaking down traditional disciplinary boundaries and to also overcome the theory/practice divide, to promote a complex view of the troubled world in which we live.

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Author information

Silvia Luraschi (ORCID: 0000-0002-87619134)
silvia.luraschi@unimib.it

Silvia Luraschi, PhD, is a pedagogist, Feldenkrais method practitioner, counselor, and researcher in Adult Education. She works as a coordinator of social service for families on the edge of Milan, and she is collaborating with Milano Bicocca University in projects related to the promotion of reflexivity in educational settings. Her research interests include embodied narratives, aesthetic practices, and walking methodologies. She is involved in the Life History and Biography Network of ESREA, European Society for Research on the Education of Adults, and in the international group of feminist scholars and activists Gender Justice, Creative Pedagogies and Art-based Research coordinated by the University of Victoria, Canada. She is involved in Experiential Translation Network: Meaning Making Across Languages and the Arts. Her last book is *Le vie della riflessività* (Armando, 2021). She loves to swim in the open sea, but also in public swimming pools.

Federica Maria Giovanna Timeto (ORCID: 0000-0003-2492-733X)
federica.timeto@unive.it

Federica Timeto is an undisciplined and interdisciplinary antispeciesist feminist. She deals with the visual arts, new media and Critical Animal Studies. She teaches Sociology of the Arts and Critical

Animal Studies at the Ca' Foscari University in Venice, and is also a member of the International Association of Vegan Sociologists, the Technoculture Research Unit (TRU), The Institute of Radical Imagination, and Ecologie Politiche del Presente. She writes on blogs, academic journals, militant journals, and is on the editorial board of Liberazioni, Studi Culturali, Lagoonscapes. Her latest book is Bestiario Haraway (Mimesis, 2020). She lives in front of the sea, with a daughter and three cats.

Sibel Yardımcı (ORCID: 0000-0001-7748-8946)

sibelyardimci@gmail.com

Sibel Yardımcı is a professor in Sociology at Mimar Sinan University of Fine Arts, Istanbul. She completed her PhD in 2004 in Lancaster University, UK, Department of Sociology, with a dissertation titled "Meeting in Istanbul: Cultural Globalisation and Art Festivals". Her various publications are a book in Turkish drawing upon her PhD thesis, and articles, books, and book chapters reflecting various aspects of her recent research interests, including the city, (urban) citizenship, nationality/nationalism, biopolitics, queer studies, disability and debates on post-humanism.

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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

Benedetta Panisson (ORCID: n/a) Durham University

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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 visibility, 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 visibilidad, 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 visibilitat, 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

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

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

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?

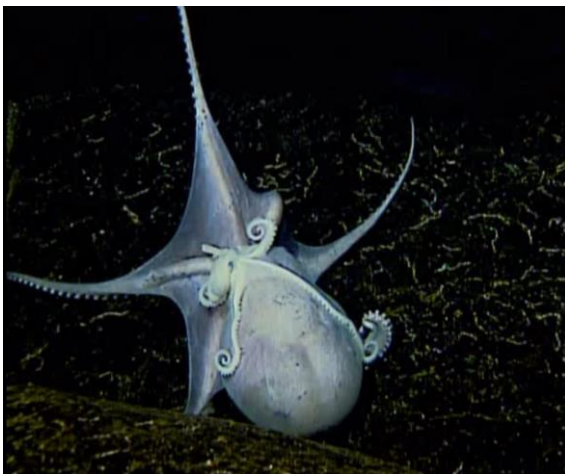


Figure 2: 1993 Octopus footage, Alvin Dive 2694, Woods Hole Oceanographic Institution Archive, Betamax tape.

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 octopodids. " (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 thought¹³."

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=LFeXwKnCUNU>

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 visibility 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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Author information

Benedetta Panison (ORCID: n/a)
benedettapanisson@gmail.com

Benedetta Panisson (Venice) is a visual artist working with film photography, video, and performance, interweaving art practice with academic research. She is engaged in a PhD research at Durham University, UK (2020-ongoing, *The Invention of Sexual Exorbitance in Island Spaces: Experimental Displays of Human and Animal Life*). BA in History of Arts at Ca' Foscari University, Venice, and a MA in Performing Arts at Brera Academy. Her research focuses on extended relations among visual productions of sexual imaginaries (photography and video) in sea and insular scapes. She has exhibited in international museums, galleries and institutions.

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Of eyes and men: Diffracted violence, embodied vision, and dis/continuous objectivity

De ojos y hombres: violencia difractada, visión encarnada y objetividad dis/continua

D'ulls i homes: violència difractada, visió encarnada i objectivitat discontinua

Jannis Steinke (ORCID: 0000-0002-3972-3420) TU Braunschweig

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Abstract

According to Donna Haraway, a certain disembodied scientific method relies on parables about objectivity (Haraway, 1988, p. 575f.). The latter is framed as the mandatory principle that can visualize a representative knowledge that is accessed by tools of empiricism – most prominently, the phallic eye. This article (re-)turns to a famous parable about objectivity – The Sandman by E.T.A. Hoffmann – entangling it with Donna Haraway's situated knowledges and Karen Barad's conception of a dis/continuity. It focuses on the violence that is always displayed in knowledge production and offers an alternative: another kind of objectivity that neither neglects nor unconditionally affirms this violence, but rather transforms it by sensing the fact that a violent act always hits back.

Keywords

Situated knowledges; objectivity; matterphorics; E.T.A. Hoffmann; dis/continuity.

Resumen

Según Donna Haraway, el método científico incorpóreo se basa en parábolas sobre la objetividad (Haraway, 1988, p. 575f.). Esta se enmarca como el principio obligatorio que puede visualizar un conocimiento representativo al que se accede mediante herramientas del empirismo, principalmente, el ojo fálico. Este artículo (vuelve) a una famosa parábola sobre la objetividad: The Sandman de E.T.A. Hoffmann, entrelazándolo con los conocimientos situados de Donna Haraway y la concepción de dis/continuidad de Karen Barad. Se enfoca en la violencia que siempre se despliega en la producción de conocimiento y ofrece una alternativa: otro tipo de objetividad que ni desatiende ni afirma incondicionalmente esta violencia, sino que la transforma al sentir que un acto violento siempre devuelve el golpe.

Palabras clave

Conocimientos situados; objetividad; materiafora; E.T.A. Hoffmann; dis/continuidad.

Resum

Segons Donna Haraway, el mètode científic incorpori es basa en paràboles sobre l'objectivitat (Haraway, 1988, p. 575f.). Aquesta s'emmarca com el principi obligatori per a visualitzar un coneixement representatiu el qual s'accedeix mitjançant eines de l'empirisme, principalment l'ull fàl·lic. Aquest article (torna) a una famosa paràbola sobre l'objectivitat: The Sandman d'E.T.A. Hoffmann, entrelaçant-ho amb els coneixements situats de Donna Haraway i la concepció de dis/continuitat de Karen Barad. S'enfoca en la violència que es desplega en la producció de coneixement i ofereix una alternativa: un altre tipus d'objectivitat que ni desatén ni afirma incondicionalment aquesta violència, sinó que la transforma en sentir que un acte violent sempre torna el cop.

Paraules clau

Coneixaments situats; objectivitat; matèriafora; E.T.A. Hoffmann; dis/continuitat.

Introduction

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)

The following article will further explore the entanglement between concepts and words with matter, history, forces, political and legal structures, and physical intra-actions. Donna Haraway tells us that “the boundary between science fiction and social reality is an optical illusion” (Haraway, 1991, p. 149). This article turns toward a novel which could be considered in Haraway’s sense as “parable[s] about objectivity and scientific method” (Haraway, 1988, p. 576). That novel is E.T.A. Hoffman’s *The Sandman* (2022), chosen, not least, because Haraway alludes to it in her famous text *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective* (1988), stating that “they [the scientists] and their patrons have stakes in throwing sand in our eyes” (Haraway, 1988, p. 576). I want to consider *The Sandman* as a fiction about science, a science fiction, and a parable about objectivity and the scientific method — specifically, a parable about “ideological doctrines of disembodied scientific objectivity” (Haraway, 1988, p. 576). I will show why *The Sandman* is specifically a story about disembodied scientific knowledge.

As stated above, science fiction and social reality are not strictly separated. Therefore, it is necessary to analyze the novel *The Sandman* “matterphorically”, its true meaning neither “rhetorical” nor “metaphorical” (Gandorfer & Ayub, 2021, p. 4). This means, that the “inextricability of thought and matter for a matterphorical ethics of thinking” (p. 4) has to be taken into consideration. With this approach, I hope to be able to answer the above stated question about the entanglement between words, concepts – here displayed as a parable or science fiction about disembodied objectivity by throwing sand in our eyes – and politics,

history, and intra-actions. Such an approach, I believe, will eventually offer a way to ethically respond to “the violence(s) already inherent in representational modes of thought and sense making” (Gandorfer & Ayub, 2021, p. 2). Therefore, the following analysis will always be informed by this approach, considering science fiction and social reality as fundamentally intertwined. It is thus possible and necessary to have a closer look at the narratives and novels that serve as (fictional) parables about scientific methods of objectivity.

Furthermore, the novel to which my attention will now turn is also a story about an optical illusion itself, since the main theme is the eye, the male gaze, the penetration and appropriation of the other, and therefore a catachresis of the positivist and empiricist scientific method itself, as Haraway tells us:

This gaze signifies the unmarked positions of Man and White, one of the many nasty tones of the word “objectivity” to feminist ears in scientific and technological, late-industrial, militarized, racist, and male-dominant societies [...]. (Haraway, 1988, p. 581)

Throughout this article, when referring to science, the scientific method, and objectivity, I mean hegemonic, masculinist, militarized, and positivist concepts of scientific knowledge-making — concepts that Haraway strives to transform through her approach of situated knowledges. Although Haraway does not explicitly mention *The Sandman* in her text, I identify it in a matterphorical sense as a parable that not only semiotically contains a narrative about the eye, disembodiment, and therefore scientific objectivity, but also materializes it, therefore making it material-semiotic (Haraway, 1988, p. 588).

My chosen method will be neither hermeneutic, nor will it aim to produce representative knowledge. Rather, borrowing from Karen Barad (Barad, 2014, p. 168), I want to re-turn to this parable without reproducing it. Here too, I want to add the insight of Minna Salami, who states: “A revolution means to turn something on its head. There are many ways to turn something on its head, but the method that

prevents a 're-turn' is to change what is actually inside the head" (Salami, 2020, p. 74). Although Karen Barad and Minna Salami use the same word to express a different meaning (re-turn), I read Minna Salami's formulation as equal to that of Karen Barad when they (Barad) spell 'return' without a hyphen.¹ The method I want to use therefore is a re-turning without a returning – neither regression nor recidivism. This method is revolving knowledge production, not only by turning it on its head, but also by transforming what is inside the head and, in doing so, transforming the sensory system of perception – addressed in greater depth later.

This approach also takes into consideration Haraway's warning that "[i]t is, of course, hard to climb when you are holding on to both ends of a pole, simultaneously or alternatively. It is, therefore, time to switch metaphors" (Haraway, 1988, p. 580). The two ends of a pole spoken of here are social constructionism, with its focus on narratology and semiology, and feminist empiricism, which centers around the ongoing reflection of so called practices of domination (pp. 576-579). With her insistence on the necessity to change metaphors, Haraway wants to stress that, for a feminist concept of knowledge and objectivity, it is impertinent to try to simultaneously climb up to another level while continuing to hold onto and maintain the implications of the starting point. However, this is *not* a plea for dialectics. She does not mean to dialectically synthesize the 'old' with the 'new' approaches. However, by alluding to the need to 'switch metaphors', she means to transform them.

What I therefore intend with (re-)turning towards *The Sandman* is to transform it, neither clinging to an approach of perceiving it via a semiological perspective, nor by merely considering it as an empirical document that is proof of a specific historical-material concept of objectivity. I do not only want to switch metaphors, but also want to transform the metaphor of *The Sandman* (2022) into a

matterphor (see Helmreich et al., 2021, p. 158) that constantly carries meaning. By following Haraway's track into 'vision', I want to "reclaim the sensory system" (Haraway, 1988, p. 581) of the eye. Therefore, I now give a short summary of *The Sandman*, which enables me to then follow up with my feminist transformation thereof.

The Sandman's main protagonist, Nathaniel, is a student. He regularly converses with his fiancée Clara by means of letters. One day, he makes a disturbing acquaintance in the form of Coppola, a barometer dealer, who strangely resembles the advocate Coppelius – Nathaniel's nemesis, who haunts him in his dreams both by night and by day. Coppelius is the source of Nathaniel's childhood trauma and once a close paternal friend who visited Nathaniel's father by night, shortly after Nathaniel had gone to bed. Nathaniel's nurse told him stories about the sandman visiting his father, aiming to steal the boy's eyes. A passage in the novel, which cannot be verified either as 'real' or as a 'dream', describes a horrible scene in which the nurse's tale comes true and Coppelius pushes Nathaniel onto a stove to burn his eyes. As a student, Nathaniel now lives close to his professor, Spalanzani, whose daughter Olympia is of the utmost interest to him. He falls in love with her and abandons his fiancée, Clara. One day, on his way to Olympia's and Spalanzani's house to propose to Olympia, Nathaniel finds Spalanzani and Coppola fighting over Olympia, who then reveals herself as a perfect anthropomorphic automaton. She lies broken on the floor. Her wrecked body is stolen by Coppola, who escapes. Spalanzani throws the remaining eyes towards Nathaniel's chest by telling him that those are his – Nathaniel's - eyes. Nathaniel is pushed to the point of insanity about that. The story continues with Nathaniel's mind and reasoning becoming increasingly clouded. Feeling haunted by Coppelius,

¹ "As such, I want to begin by re-turning – not by *returning* [emphasis added] as in reflecting on or going back to a past that was, but re-turning as in turning it over and over again – iteratively intra-acting, rediffracting, diffracting anew, in the making of new temporalities (spacetime-matterings), new diffraction patterns. We might imagine re-turning as a multiplicity of processes, such as the kinds earthworms

revel in while helping to make compost or otherwise being busy at work and at play: turning the soil over and over – ingesting and excreting it, tunnelling through it, burrowing, all means of aerating the soil, allowing oxygen in, opening it up and breathing new life into it." (Barad, 2014, p. 168).

Nathaniel eventually commits suicide, jumping to his death from a tower (Hoffmann, 2022).

The story has many intertwined layers of possible meanings or interpretations. Most famously, Sigmund Freud scrutinized this story in terms of the uncanny – a part and function of the unconscious that is constantly haunting and returning (Freud, 1976). In this article, I would like to focus on the scene in which Nathaniel's professor, Spalanzani, throws Olympia's eyes at him, leading to his mental collapse. Pivotal here is the fact that the eyes only assumingly belonged to Olympia, Spalanzani's handcrafted automaton, with whom Nathaniel fell in love. Their origin remains unclear, however. The concept of vision is crucial here – something to which I return later. Although Nathaniel fanatically and narcissistically adored Olympia, he did so without ever actually seeing her. Rather, she was merely a vessel for his own reflection – the perfect avatar for a patriarchal and masculinist erotic dream of the ideal woman. She seemed to unconditionally love him back, since she was only able to nod her head, never contradicting that which she was programmed to do (Hoffmann, 2022).

A Continuous Transition of Standpoints?

As a result, Nathaniel was able to parasitically take over Olympia's body, disembodimenting himself in order that he might, on the one hand, be able to totally melt into her, and on the other hand, totally erase and extinguish her, performing a "leap out of the marked body and into a conquering gaze from nowhere" (Haraway, 1988, p. 581). However, this 'nowhere' is actually just an illusion, a "god trick" (Haraway, 1988, p. 582). "Relativism and totalization are both 'god tricks' promising vision from everywhere and nowhere equally and fully, common myths in rhetorics surrounding Science" (Haraway, 1988, p. 584). By leaping away from it into a nowhere that is called Olympia, Nathaniel simultaneously relativises and totalizes his own standpoint. In doing so, he claims an unmarked, bodiless, and all-encompassing vision that remains uncontaminated by 'bodily constraints', possessing and appropriating Olympia's vision

for that end. However, this appropriation can – and that is the very trick, to coin it in a cynical way – be obfuscated by claiming to be just "flies on the wall" that innocently and without any own position or interest "see[...] through other people's [...] eyes" (Jackson Jr., 2013, p. 13). It is part of a scientific method that anthropologists describe as "thick description" (Jackson Jr., 2013, p. 13), which claims to be able to fully know by deviating from a mere superficial view by the "naked eye" (Jackson Jr., 2013, p. 13) and by gaining emancipation from any sensory or raw empiricism. Yet, this so-called emancipation is merely an act of disembodiment, a jump out of the marked body into an unmarked transcendence that is able to arbitrarily take over other bodies and other sensory systems to 'fully' see.

Paradoxically, this disembodiment still relies on a continuity of the Self to be able to 'conquer' and to 'know'. This can be shown by approaching the work of M. Jamie Ferreira (2006), who describes and interprets Søren Kierkegaard's main philosophical concepts, such as 'the leap' (to which I will turn later). Here, I want to have a look at what M. Jamie Ferreira – referring to Kierkegaard – has to say about continuity. Ferreira suggests that Kierkegaard – by disguising himself as one of his many alter egos, 'Climacus' – states that a qualitative transition of standpoints is actually discontinuous (Ferreira, 2006, p. 210). Ferreira further explains:

What becomes clear is that the direct and immediate transition [...] is precisely not the qualitative transition at issue. Rather, 'direct and immediate' refers to the cumulative, automatic, Hegelian type of transition in which something passively "flops over" by "immanent necessity" (Kierkegaard, 1967-78, p. 21); the immediacy that is rejected is that involved in the Hegelian view that "the one standpoint on its own necessarily determine[s] its transition over to another" (Kierkegaard, 1992, p. 295, as cited in Ferreira, 2006, p. 210).

Thus, the Self needs to rely on a stable and secure standpoint which determines the necessity of its transition from one to another. The two standpoints have to communicate with

each other if they are to guarantee that when they leave the starting point, they arrive at the finish. This is ensured by the immanence, directness, and immediacy, which is described in the quote above. This is the way rationality and reasoning (from a Hegelian perspective) work:

But he includes under demonstration inductive as well as deductive reasoning, teleological as well as ontological arguments, calling attention to the way in which the premises we accept in order to begin (as Socrates knew) must already be infused with the ideas with which we conclude (Kierkegaard, 1985, p. 44, as cited in Ferreira, 2006, p. 209).

Thus, the premise from which we begin – the one standpoint – must already contain an idea of where we conclude – the other standpoint. This is the necessary continuity mentioned above: All known scientific methods, such as inductive and deductive reasoning or teleological and ontological arguments, are based on this absolute necessity – of a passive immediacy of standpoints that flop over to another. If these circumstances are corrupted, the whole scientific method will collapse.

I want to infuse these Kierkegaardian prolegomena with Barad's work on quantum entanglements. She tells us that the former planetary model of the atom, developed by Ernst Rutherford, had been flawed: It conceptualized "electrons orbiting the nucleus like planets orbiting the sun" (Barad, 2010, p. 245). This resembles the phallogocentric model of the Self I am investigating here by matterphorically reading *The Sandman* as a parable about the megalomaniac god trick and scientific methods. However, Barad further states that, if the above were true, "an orbiting electron would continuously radiate away its energy, giving off a continuous spectrum of light while it quickly spirals into the nucleus. Atoms wouldn't be stable" (Barad, 2010, pp. 245-246). If we entangle this further with the continuity of standpoints of the Self, which follows this Rutherfordian atomist model of matter, it becomes obvious why Kierkegaard (to whom we are partly indebted for the more responsible model of matter, developed by Niels Bohr,

to which I also turn later) is so skeptical about continuity. It apparently leads to an instability of matter, initiating a suicidal tendency of spiraling into its own nucleus. The problematic scientific method therefore is an ongoing attempt to maintain stability by the wrong means: continuity and an immanent 'flopping over' of standpoints. This attempt is always in danger of collapsing and therefore needs to possess and appropriate another Self to which it can cling – in the case of Nathaniel, this other Self is Olympia – to prevent the suicidal spiraling into the own nucleus. This is the god trick par excellence: It is necessary to pretend to speak from a neutral, objective, and bodiless position or a transcendence in order to obfuscate this violent possession of the other that is the actual means to maintain this stable but fragile position in the first place. If the exploitation of the other's corporeality, the other's body and matter would be revealed as the very means that facilitate neutrality and objectivity, both would implode immediately because their own premises (the claim that matter is irrelevant for objectivity and neutrality) are undermined. Therefore, this violent constellation of the god trick is not only a necessity but at the same time an effect. It is a self-contained loop that constantly substitutes its effect by its cause and its cause by its effect. The god trick is also a choice, because one decides to rely on continuity as the defining principle for matter's stability, which then leads to the problems described above. At the same time, this choice results in divorcing matter from mind and idealism therefore neglecting matter as such. This is because the exploitation of the other needs an alibi if it is to maintain continuity (as the means of the stability of the Self). The closed nature of this vicious circle is thus sealed. The orbital logic of a planetary and hermetically closed solipsistic system is reproduced over and over.

To further scrutinize this, I want now to look again at my chosen parable *The Sandman* to find out if it tells us something about this continuity of standpoints and about what happens when this concept is jeopardized. As the eyes are thrown at Nathaniel, we read:

'After him – after him – why do you pause? Coppelius, Coppelius, has

robbed me of my best automaton – a work of twenty years – body and soul set upon it – the clock-work – the speech – the walk, mine; *the eyes stolen from you* [emphasis added]. The infernal rascal – after him; fetch Olympia – there you have the eyes!’ And now Nathaniel saw how a pair of eyes, which lay upon the ground, were staring at him; these Spalanzani caught up, with the unwounded hand, and flung against his heart. (Hoffmann, 2022, p. 38)

As we can see in the above, the continuity of standpoints totally collapses: Coppelius has stolen Olympia after an argument with Spalanzani. All that is left are some eyes on the floor. By relying on a continuity of the scientific method of reasoning, these eyes clearly belong to Olympia. The starting point was that her being there was the very reason for the turmoil between Coppelius and Spalanzani and hence, she was harmed and partly destroyed during the fight. The conclusion must therefore be that now Olympia is gone, but her eyes remain on the floor, which is an immediate, continuous, and therefore reasonable inference. However, Spalanzani cries “the eyes stolen from you” (Hoffmann, 2022, p. 38) and throws them at Nathaniel. This immediacy now faces a hiatus, is hindered and corrupted: Spalanzani throws the eyes towards Nathaniel stating that those have been stolen from him. I follow Sigmund Freud’s interpretation here, who states “This short summary [of the plot of *The Sandman*] leaves no doubt, I think, that the feeling of something uncanny is directly attached to the figure of the Sand-Man, that is, to the idea of being robbed of one’s eyes [...]” (Freud, 1976, p. 3683) It is Nathaniel’s trauma that is revoked here. As we know, he had been traumatized by an experience of losing a means of perception and by a dispossession: Coppelius had stolen (or tried to steal; it remains unknown if he was successful as Nathaniel’s memory is clouded) his eyes. Thus, if those are indeed Nathaniel’s eyes flung against his chest, it does not make sense that they should have belonged to Olympia before and are the leftovers of her wrecked body. Therefore, the premise (the eyes belong to Olympia) must be wrong. The alternative is, that those are not Nathaniel’s

eyes and that this is therefore a wrong conclusion because it does not include parts of the premise (Olympia’s eyes lie on the floor). To the best of Nathaniel’s knowledge, his eyes have not been stolen, indeed they have remained intact and working – how else could he perceive and sense this situation? It is at this point that “madness seized him with its burning claws, and clutched into his soul, tearing to pieces all his thoughts and senses” (Hoffmann, 2022, pp. 38-39). Clearly, any sense of continuity as a proper method of reasoning becomes useless now as a means to grasp this situation of contradictory inferences. That is why Nathaniel’s mind – until then relying on continuity, immaterialness and reasonable inferences – changes perceptive terrains from ‘reason’ to ‘madness’. It is a collapse of the scientific method that is dependent on neutrality and objectivity.

A Sensory Particularity

To grasp the above described contradiction and uncertainty of inferences in a way, that does not rely on objectivity, it might be pertinent to approach matterphorics again. This would imply “to slide between language and materiality” (Gandorfer & Ayub, 2021, 4). That means stopping to try to decide whether the premise (Olympia’s eyes lie on the floor) or the conclusion (Nathaniel’s eyes are flung at him) is wrong, but rather trying to slide between all the different possibilities and therefore trying to sense what is materialized by this uncertainty. To explore this, I re-turn to Haraway’s *Situated Knowledges*:

I would like to suggest how our insisting metaphorically on the particularity and embodiment of all vision (although not necessarily organic embodiment and including technological mediation), [...] allows us to construct a usable, but not an innocent, doctrine of objectivity. (Haraway, 1988, p. 582)

I want to further have a look on the word ‘particularity’. My attention is turning to this, because etymologically stemming from Latin, ‘particular’ can mean ‘small part’. I want to associate Haraway’s joint concepts of the particularity and embodiment of vision with the

very means of vision itself: the eyes. Sliding between language and materiality, therefore grasping the eyes matterphorically, one could float between particularity semantically being a 'small-part-ness' and the eyes as small parts of a body. This entangles particularity's etymology and language with the eyes' materiality and leads to a material and embodied particularity. The eyes therefore serve here as medium or mediation of another doctrine of objectivity (see Haraway's quote above).

Nathaniel's mind and thoughts are torn apart. He simultaneously loses his mind and perceives his body as vulnerable and incomplete – the ultimate catastrophe for reason and the scientific method. The catastrophe here is not only to perceive one's own vulnerability, but rather to realize that mind and reason are entangled, both with materiality and their own embodiedness. Haraway encourages us to affirm this very fact – this shredding to bits and pieces – as a mattering particularity. Paradoxically, at the same time Nathaniel realizes that his body is flawed, harmed, and vulnerable, it is also this recognition that allows him to actually *have* a body. Whereas he did not sense his body at all before, he now embodies his vulnerability. Nathaniel used to play the god trick which constitutes as follows (as already discussed above): As first step, mind is detached from body, as second step it is pretended to speak from a transcendental nowhere and as third step – to be able to stabilize a bodiless Self – another body is appropriated while at the same time this violent act is obfuscated by attributing the virtue of objectivity to this appropriation. This third step is performed by Nathaniel when he fanatically and in a patronizing manner preaches first to Clara, his fiancée, and then to Olympia, his new love interest. This admiration is actually an appropriation as Nathaniel carelessly throws aside Clara's love letters (Hoffmann, 2022, p. 36) or when he praises Olympia's passivity and scarcity of words as an expression of love (Hoffmann, 2022, p. 36). Both female characters are mere projections for his own self-centeredness and therefore mere means which have to be possessed to be able to use them to a full extend. The purpose of this use is to maintain the stability of Nathaniel's Self. Thus, Nathaniel performs exactly that to

which Haraway alludes when she indicates the scientific method with a leap out of the marked body (see Haraway quoted above) into the possession of another body (Clara and Olympia). Nathaniel was permanently switching standpoints by transcending his body and disembodying himself at the same time.

So here we see how Nathaniel's madness, the shredding of his mind and thoughts, is transformed into a particularity that can be affirmed for producing another kind of knowledge – one that deviates from the label 'objective'. I have also shown that the scientific method, which claims to produce objective knowledge, relies on a certain conception of continuous and immanent switches of standpoints while simultaneously transcending the mortal and vulnerable body. *The Sandman* speaks of the consequences when the scientific method of continuously and reasonably inferring conclusions from set premises fails to make sense of the world. As a replacement for a universal mode of reason, Nathaniel's insanity has been presented as a simultaneous collapse of the structure of reason and also as a remedy or remediation for another mode of knowledge production that reworks and rethinks the continuity of standpoints as a shredded particularity. What has been described thus far, therefore, was a kind of "double relationship" (Aarø, 2010, p. 336) – one that occurs as the eyes are thrown.

Ane Faugstad Aarø, referring to Maurice Merleau-Ponty's interpretation of phenomenology and his concept of the flesh, states that "the double relationship that he mentions is the two aspects through which the body functions as 'sensing-sensible' in a reversible flux" (Aarø, 2010, p. 336). She further says that, according to Merleau-Ponty, "reversibility moves beyond the visible and constitutes a fundamental relationship that is consequential to the understanding of the self, language, thought and intersubjectivity" (Aarø, 2010, p. 336). Continuing, Aarø also adds that Merleau-Ponty conceptualizes or grasps the Self as always unavailable for consciousness (Aarø, 2010, p. 337).

I have to add another layer about perception before I can re-turn to *The Sandman* and see how it materializes this reversibility in the

perception of the Self. As Aarø points out, Merleau-Ponty, in turn, refers to a Hegelian continuity:

It is precisely in the chiasm of identity and difference to the perceived, in this phenomenon of structuring perception, that the break occurs creating a distance to nature, because perception is to leave oneself and to return to oneself in a continuous movement. It is in this movement that the mystery of perception lies hidden, according to Merleau-Ponty, who alludes to Hegel. (Aarø, 2010, p. 343)

What I perceive as a feasible and viable concept for further conceptualizing our alternative method of particularity is the fact that the body is apparently always in a state of reversible flux: a sensing-sensibility. This is materialized in a visceral sense when Nathaniel is hit by the eyes, representing a catachresis that visualizes the reciprocity between Olympia and Nathaniel. As in the above quote, perception leaves oneself and then returns to the Self – the eyes once stolen and now returned to their (presumed) owner². The chiasm of identity and difference is also well displayed in that scene. Nathaniel possessed Olympia and perceived her body as part of himself. For him, trapped in a solipsistic loop, no break occurred, his perception neither left nor returned. What happens then is that, by throwing the eyes, both the chiasm between identity and difference and this break (or hiatus, as I referred to it earlier) are reinstated. Yet another paradox becomes apparent here. Nathaniel felt assured that his perception of the world was stable and reliable, but must now abruptly recognize that perception (in Merleau-Ponty's sense) was not possible at all because the reversibility of the body as a sensing-sensibility was impaired by his narcissistic acquisition of Olympia. Furthermore, there is another transformation taking place, as Aarø further argues:

[The] *Flesh* is introduced in Merleau-Ponty's philosophy by the discovery of the affinity of the visible and the tactile aspects of perception: between the visible and the seeing. The experience of the visible and the touchable, and the enfolding of the visible on the seer and the look of the visible — all aspects point to a mutual element that can include and uphold these phenomena, but maintain their qualities within the structure. (Aarø, 2010, p. 341)

The flesh is a mutual element in the experience of the visible and the touchable and maintains their qualities. However, striking Nathaniel's chest with the eyes, the ownership of which remains unknown, not only materializes a chiasm between the visible and the invisible – since seeing with eyes disconnected from a body and brain is impossible, yet still Nathaniel was able to somehow see – it also renders the difference between touching and seeing undecidable. Thus, seeing becomes touching becomes seeing – Nathaniel is touched by his seeing, questioning the difference between those two sensory systems.

Re-turning to Haraway's concept of particularity, already brought into conversation with *The Sandman* by transforming Nathaniel's madness and shredding of thoughts into an embodied concept of vision, I want to further suggest that vision and touch build a new chiasm that fails to maintain their qualities, but rather entangles them, becoming a touching/tangible vision or a visualizing/seeing touch. Thus, I deviate here from Merleau-Ponty's conception of the flesh which maintains the qualities of the visible and the touchable within the structure (see quote above). Rather, not only are their qualities transformed and entangled but also the structure (of the Self) is getting shredded. Re-turning to Daniela Gandorfer and Zulaikha Ayub, "*matterphorics*" is an "ethics of both sense-making and sensing in the making" (Gandorfer & Ayub, 2021, p. 2). The eye, therefore, becomes matterphoric,

² I still want to stick to the uncertainty of the eyes' 'true' owner. The whole article tries to embrace and preserve this uncertainty. However, for the sake of analysis and for the sake of supporting my argument that constellates Merleau-

Ponty's reversibility with the throwing of the eyes, I speak here of a restitution or restoration to visualise the reciprocity of this movement.

matter a shredded particularity – a particularity that considers sensing (both touching and seeing) as always in the making. By this ongoing making, touching and seeing become intermingled and entangled as a more ethical way of producing knowledge.

Diffraction Violence

This particularity opens the way for a “heightened attentiveness to the violence(s) already inherent in representational modes of thought and sense-making” (Gandorfer & Ayub, 2021, p. 2). Obviously, the parable of *The Sandman* is also a story about violence: the violence that causes Nathaniel’s trauma; the violence he imposes upon his fiancée Clara, to whom he constantly devotes his love only to abruptly lose interest as soon as his attention turns to Olympia; the violence that Nathaniel enacts upon Olympia, since his adoration is merely narcissistic abuse; the violence that Spalanzani and Coppelius enact upon Olympia, since they fight about her and destroy her; the violence that Spalanzani enacts upon Nathaniel, throwing the eyes at him; and, eventually, the violence that Nathaniel does to himself when he commits suicide by jumping from a tower. I want to attend to the web of violence that knits all these different actors together.

In a strange and cynical way, one could say that violence seems to be the glue that sticks together the plot of this parable and also stratifies the relationships between the actors in the story. However, this violence, “if attended to *matterphorically* [is] not rhetorical, [its] meaning[s] not metaphorical” (Gandorfer & Ayub, 2021, p. 4). The violence matters, something *is* materialized here. Therefore, I do not just want to reject the violence or perceive it merely as a metaphor. By inscribing violence into every relationship in the story and especially into the performance of the thrown eyes, which offers another form of particularity, a transformation might be possible. The particularity I want to develop here, therefore, is not non-violent, but rather sees and senses

violence, touches it, and at the same time is reciprocally touched and seen by it. This transforms the violence into a break, a hiatus, that disrupts the continuity of both the Self and the continuity of its standpoints. It is still an ongoing violence, but it is no longer a form of representationalism. “*Thought is relational, non-representational, and collaborative*. To deny this [...] is a proprietary act – one of capture, appropriation, and seizure” (Gandorfer & Ayub, 2021, p. 2). The violence to which I allude here, rather than appropriating, should be seen as a dispossession. Nathaniel has to affirm and perceive that he has been dispossessed all along, that his eyes had been stolen. Only now is he able to relate, is he able to affirm the reversibility between him and the world. What was necessary was this break of the solipsistic loop by an act of violence that now reversibly becomes an act of *vio-lens*, as I want to call it. His eyes become a lens, an objective, that transform and diffract the representational violence of the Self to a partial way of knowing and thinking. This partial way of knowing is itself a diffracted violence, which I want to conceptualize in reference to Jacques Derrida’s reading of Walter Benjamin’s *Critique of Violence*:³ I choose this text because Jacques Derrida construes Benjamin’s critique of violence based on the insight that violence emerges in a circular and tautological manner. For me, this resembles the way in which I described the god trick (see above). Derrida states about Benjamin’s conception of violence:

Performative tautology or a *priori* synthesis, which structures any foundation of the law upon which one performatively produces the conventions that guarantee the validity of the performative, thanks to which one gives oneself the means to decide between legal and illegal violence. (Derrida, 1992, p. 33)

Something is performed – for the god trick, this is the appropriation of another body to enact a scientific method which pretends to speak from a transcendental nowhere; for violence it is the

³ The original version “Zur Kritik der Gewalt” was written in German and originally published in 1921.

moral configuration of justice – and then, in a recursive movement, this performance is validated and justified – for the god trick by emphasizing the ends of this performance: scientific objectivity; for violence by stressing the fact that morality and justice need means to decide between legal and illegal. What strikes my attention further is that Benjamin, according to Derrida, while analyzing the workers' right to strike, does not perceive this right as non-violent, as it is conventionally seen (Derrida, 1992, p. 34). I appreciate this position, because it facilitates a conception of violence *itself*, while many analyses merely scratch the surface and rather focus on the means or the ends of violence and not at violence *as such*, which also confers to Benjamin's critique (Derrida, 1992, p. 31). This is because Benjamin does not hesitate to assess the general strike as a variation of violence. He does not wonder if something is violent in relation to its means (and legitimizes some of those as morally or juridically non-violent, such as the general strike) or ends (and legitimizes some as morally or juridically non-violent such as less exploiting work). He rather tries to scrutinize violence *as such* without distracting himself by looking at means or ends. Therefore, he can conclude (according to Derrida) about the general strike:

And so there is violence against violence. In carrying the right to strike to its limit, the concept or watchword of general strike thus manifests its essence. The state can hardly stand this passage to the limit. It deems it abusive and claims that there was a misunderstanding, a misinterpretation of the original intention, and that *das Streikrecht* 'so' *nicht gemeint gewesen sei*, "the right to strike was not 'so intended'" (Benjamin, 1921, p. 282; cited in Derrida, 1992, p. 34). It can then condemn the general strike as illegal and, if the strike persists, we have a revolutionary situation. (Derrida, 1992, p. 34)

The diffraction of a violence by the vio-lens – the thrown eyes – is a *violence against a violence*. By framing the general strike as violence, it is now possible to identify its revolutionary potential: The state's monopoly of

violence becomes threatened by another violence. Furthermore, revolution is a violence against a violence and therefore not morally preferable to the order of the state. Morality is rather rendered useless for a conception of violence as it is only able to assess its means or ends and not violence itself. The diffraction of violence is mediated by re-turning and revolving it: a violence against violence – or a violence – is set beyond moral categories of good or evil and materializes a revolutionary potential. As stated above, referring to Minna Salami: "A revolution means to turn something on its head. There are many ways to turn something on its head, but the method that prevents a 're-turn' is to change what is actually inside the head" (Salami, 2020, p. 74). So what is inside the head? In this case, it is the eyes. They pop out of Olympia's head and they had been taken from Nathaniel's head long ago; stolen by Coppelius. What is inside the head needs a change. The violence that Coppelius enacted to possess Nathaniel's eyes could therefore be framed as a revolutionary violence, because only this performance made it possible to change what was in his head. It was this that made it possible to change the eyes – before simply means of a violent production and capturing of representationalist knowledge – into a lens that diffracts this violence.

An Ongoing Rotation

This lens becomes a means of turning objective knowledge production, transforming it into a particularity. This revolution matters; it is materialized not only as a concept, but in this very performance of throwing the eyes, since 'to revolve' literally means 'to turn' or 'to rotate'. The eyes are rotated – between Coppelius, Spalanzani, and Nathaniel – every one of them possesses them at a certain point. In a way, they are therefore exploiting the eyes for their own ends, letting them work for the purpose of a supposedly objective vision. Only Olympia seems to never possess the eyes in a sovereign way, since she is being exploited herself. However, this rotation yields also a violence against a violence. The exploitative violence hits back in analogy to the general strike. It is a strike that strikes with madness, shreds the participating subjectivities' thoughts,

and re-assembles them to an assemblage of particularities. This rotation of the eye is, however, anything but dialectic. Here I re-turn to a previously mentioned quote:

The experience of the visible and the touchable, and the enfolding of the visible on the seer and the look of the visible — all aspects point to a mutual element that can include and uphold these phenomena, but maintain their qualities within the structure. (Aarø, 2010, p. 341)

The eye has now been identified as the mutual element in this rotation between the different participants. However, as already discussed above, the qualities of the phenomena – in this case, the different standpoints and subjectivities of the actors in the story – are not maintained, but constantly transformed. Since *The Sandman* is also a story about possession and propriety (the possession of the eyes), it is pertinent to turn to one of the most famous stories about propriety: Karl Marx' (1906) *The Capital*. In Karl Marx' formula for the exchange of commodities, the mutual element is value, which represents the commodities (exchange value) (Marx, 1906, p. 44). Following Marx, one could assume that – in contrast to Ane Faugstad Aarø's reference to Merleau-Ponty – the quality of the phenomena (for 'phenomena' in Merleau-Ponty's approach I want to set the commodities in Marx' approach) is not maintained, but rather is constantly transformed by trading them. Each trade changes the commodity's quality (its use value) because it is specifically entangled with the buyer's needs and desires. A crucial part of Marx' theory, which is based on the idea of propriety, is the transformation of money (which represents the exchange value) from a mere means to an end (the trading of commodities) to an end in itself (the accumulation of financial capital) (Marx, 1906, pp. 164).

A similar phenomenon can be observed in *The Sandman*: The eyes as a mere means of knowledge production become an end in themselves. By starting to rotate them, the eyes become the object of desire; it is necessary to possess them. However, while Marx keeps the dialectical structure of his formula intact and merely interchanges its elements from C-M-C

to M-C-M (commodity-money-commodity to money-commodity-money) (Marx, 1906, pp. 164), I want to think of this rotation, not as a dialectical movement that flips between different standpoints, but rather as an ongoingness, a performativity, an iteration or repetition that neither arrives nor leaves. Therefore, just as Marx criticizes the accumulation of financial capital as exploitation of labor-power (Marx, 1906, pp. 235-244), so do I want to stress that this rotation of the eyes, which I rendered as a way in which particularity is materialized, is not only violent in a diffracted way, but also bears in itself traces of exploitation.

The changing between appropriation and dispossession (of the eyes) during this rotation and ongoing performativity eventually leads to Olympia's destruction. Yet nowhere in the story is her death grieved. Instead, all the other students try to fathom if their girlfriends too might be non-human (Hoffmann, 2022, p. 39). The story therefore privileges an anthropocentric and androcentric perspective. However, the story also shows how this anthropocentrism and androcentrism is violently thrown back onto the perpetrator (Nathaniel), preventing him from escaping this ongoing iteration of violently shredding standpoints and thoughts, revolving, re-assembling, and transforming them.

The Dis/continuous Leap of the Eye

To further distinguish my concept of rotation from a dialectic circulation of standpoints between different actors and their positionalities, I now have to turn back to the Hegelian concept of continuity, discussed above in M. Jamie Ferreira's reading of Kierkegaard. According to this Hegelian view, there is an immediacy at work and a necessity that determines the transition from one standpoint to another (Ferreira, 2006, p. 210).

For that, I now want to introduce "the concept of a leap", which "is appropriately associated with the name of Kierkegaard, since the leap is a structural element that winds its way throughout his whole authorship: it informs his various accounts of the peculiar character of transitions between radically different ways of life"

(Ferreira, 2006, p. 207). These “different ways of life” in my formulation translate to different positionalities or standpoints: In the story or parable of objectivity that I scrutinize here – *The Sandman* – different ways of life are materialized by the different actors. However, I now want to figure out what happens when the rotation or throwing of the eyes is conceptualized as a ‘leap’. Such a conceptualization might transform the otherwise smooth transition of different standpoints to a discontinuous one. Ferreira further tells us that Kierkegaard speaks of an “attempt to disguise the discontinuity of a qualitative transition” (Ferreira, 2006, p. 210). This implies that the leap diffracts continuity by materializing a discontinuity while transitioning from one way of life to the other. Søren Kierkegaard’s leap provided the inspiration for the Danish physicist Niels Bohr’s quantum jump or quantum leap (Heilbron, 2016, p. 72). By following this trace, I want to have a closer look at the kind of discontinuity that is performed by the leap.

For that end, I turn to Kierkegaard and his conceptualization of the leap and consider why Niels Bohr considered it suitable for theorizing quantum physics. Ferreira tells us: “Aligning the leap [...] with letting go already hints at the leap as something curiously active yet passive” (Ferreira, 2006, p. 210). The leap seems to be kind of a strange, undecidable, and indeterminate motion that oscillates between activity and passivity. In her work about quantum entanglements Karen Barad (2010) refers to Niels Bohr, who co-founded the so-called ‘Copenhagen interpretation’ of quantum physics. Barad asks: “what precisely is the nature of this ‘leap’?”, concluding:

It is a measure of *the discreteness of nature*. Unlike any ordinary experience of jumping or leaping, when an electron makes a quantum leap it does so in a discontinuous fashion [...]. In particular, the electron is initially at one energy level and then it is at another *without having been anywhere in between*. Talk about ghostly matters! A quantum leap is a dis/continuous movement, and not just any discontinuous movement, but a particularly queer kind that

troubles the very dichotomy between discontinuity and continuity. Indeed, *quantum dis/continuity* troubles the very notion of *dicho-tomy* – the cutting into two – itself (including the notion of ‘itself!’). (Barad, 2010, p. 246)

As can be seen in the quote above, Barad indeed answers the question about how the leap, dis/continuity, and Bohrian quantum physics are entangled. This has several implications for the rotation of the eye and therefore for a particular and other form of knowledge production. I want to conceptualize the violence against a violence that breaks the otherwise smooth circle of rotation as a hiatus that configures the throwing of the eyes – rather than a smooth and continuous movement – as a dis/continuous leap. The eyes become a quantum of embodied vision. As I discussed earlier, the ‘real’ owner of the eyes is indeterminate. However, this indeterminacy is irreducible to a primordial determinacy or continuity. In other words, it is neither necessary nor possible to offer a conclusive answer to the question: ‘Whose eyes are these?’ This indeterminacy or undecidability is rather a matter or a mattering of the dis/continuous jump between standpoints. The fact that Nathaniel is driven mad when he perceives this dis/continuous jump is an expression of the trouble that he has with the impairing of the notion of ‘itself’ and therefore the ‘Self’, as Barad (2010) might say.

The leap of the eye, with its implications of dis/continuity, makes it impossible to keep concepts such as ‘subject’ and ‘object’ intact. Indeed, ‘origin’ and ‘aim’ seem to be equally in need of reconsideration. Returning to Karen Barad’s quote that electrons perform this jump from one discrete level of energy to another, one can say that this strange event that defies the idea of continuity and of transcendence – two candidates that guarantee the stability of matter and identity in a Hegelian context – is paradoxically the very reason matter is able to matter. Dis/continuity and not transcendence are necessary to heal, to be able to have a body, and to be stable.

Embodied Op-jectivity

Nathaniel is a Hegelian disciple of continuity, of the transcendence of the I, and of the planetary model of identity. He orbits around himself, a narcissistic solipsistic solar system. He constantly emits his energy and eventually falls into his own sun, into himself. He collapses when all the energy is spent, in the very moment when his last chance to endure is gone, when Olympia is broken and he realizes his terrible mistake. This emitting of energy is the “*automatic* [emphasis added], Hegelian type of transition in which something passively ‘flops over’ by ‘immanent necessity’” (Kierkegaard, 1967-78, p. 21, cited in Ferreira 2006, p. 2010). However, here, again, the eye becomes the (vio-)lens that diffracts this suicidal violence: This very movement – of an immediate transition of standpoints that is necessary to keep the transcendental ‘I’ intact – is kind of an automation. Cynically, one could say that, by striving to recuperate a human and sane body by taking over Olympia, Nathaniel becomes something else – he becomes an automaton himself. For Olympia being an automaton can be considered a metaphor (or indeed, matterphorically) for the kind of disembodied Hegelian aesthetic that Nathaniel is performing. So to summarize, not only is this performance parasitic, narcissistic, and violent, it is also auto-aggressive, self-deceiving, solipsistic, and tautological. The apotropaic attempt to prevent harm to himself by colonizing the other returns as an atavism – as the question of vision in the form of the eyes and the question of violence to which they allude. This is diffraction in action: Nathaniel’s human Self is diffracted with violence, with a non-human automaton, with a shredding of his thoughts, and with a radically different way of life.

Nathaniel has to affirm the dis/continuity of these discrete body parts. At the same time, those eyes belong and do not belong, they are, and are not, Olympia’s. The affirmation of this discreteness is necessary for his stability. It would have prevented him wanting to take over Olympia in the first place. His trauma, his expropriation matters and the jump of the eyes, the jump of the ‘I’, could be affirmed as another way of mattering stability that does not need disembodied vision, but rather embodied *op-jectivity*, as I call it. I derive this matterphor from

the Greek ‘*ops*’ (‘eye’) and the Latin ‘*iacere*’ (‘throw’). An embodied op-jectivity therefore figures and matters matterphorically the throwing/leaping of the eye(s).

This op-jectivity is therefore another kind of knowledge production that is an ongoing dis/continuous performance -- a leap between different ways of life that diffracts the violence of representational thought to a vio-lens that breaks the continuity of the flopping over of standpoints. It is an embodied and sensory vision where seeing and touching are chiasmatically entangled. It is a non-dialectic rotational movement that matters a revolutionary violence that strikes with madness and therefore not only (re-)turns Hegelian reasoning on its head, but also changes what is inside the head: the eye or the transcendental ‘I’. A dichotomy between subject and object becomes undecidable, indeterminate. What remains is an ongoing becoming – an ongoing performance of throwing and leaping, being hit and shredded, and being partial – welcoming a particularity and vulnerability. Concluding, I turn to Donna Haraway:

All Western cultural narratives about objectivity are allegories of the ideologies governing the relations of what we call mind and body, distance and responsibility. Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. It allows us to become answerable for what we learn how to see. (Haraway, 1988, p. 583)

The dislocated eyes and the limited, untraceable, unlocatable body of Nathaniel allow this feminist op-jectivity to become possible. Yet this is not an immanent or continuous transition of standpoints, but rather always, over and over again, a search for answers for the eyes on the floor that hit us, that embody our vision and therefore welcome our ability to respond – our response-ability.

What is crucial here and what I perceive as an extension of Haraway’s concept of situated knowledges and of an embodied objectivity, is the embodied *op-jectivity* as a way of re-turning

violence and exploitation. Haraway states that we are not innocent (Haraway, 1991, p. 175). I would add that we are also far from non-violent. Indeed, by referring to Derrida's reading of Walter Benjamin, I have shown that violence is a founding principle of law. A revolution – which is a kind of re-turning, the very methodology in this article – is a violent act, a divine violence that seeks to destroy the law (Derrida 1992, p. 52). If violence is neglected and rejected, it will re-turn, and the revolution will recede. When Minna Salami (2020) advocates a change of what is *inside* the head, the change must also include the concept of violence. The parable of *The Sandman* as a parable of objectivity is in itself indeterminate and undecidable. It is not a rejection of violence, but rather it is an offer to dive into it, re-turning to it by transforming it. Therefore, I conceptualized 'op-jectivity' as a matterphor and a homophony that still bears and contains the violent concept of 'objectivity'. Both do not absolutely differ from each other, but are rather connected by a *différance* (Derrida, 1982). It is a play between differing and deferring:

Thus one could reconsider all the pairs of opposites on which philosophy is constructed and on which our discourse lives, not in order to see opposition erase itself but to see what indicates that each of the terms must appear as the *différance* of the other, as the other different and deferred in the economy of the same (the intelligible as differing-deferring the sensible, as the sensible

different and deferred; the concept as different and deferred, differing-deferring intuition; culture as nature different and deferred, differing-deferring; all the others of *physis*—*tekhne*, *nomos*, *thesis*, society, freedom, history, mind, etc.—as *physis* different and deferred, or as *physis* differing and deferring. (p.17)

Opposition is not erased, but a total difference that differs two concepts, discourses, entities, meanings etc. from another is always deferred, never totally manifests into the realm of the 'real'. Therefore, I want to add the following concepts to the series of philosophical pairs Derrida is alluding to: violence as differing-deferring non-violence, as non-violence different and deferred; objectivity as differing-deferring op-jectivity, as op-jectivity different and deferred. This *différance* is mediated by a rotation of matter and meaning, a throwing and leaping of quanta of vision that makes it possible to respond to this violence and ongoingly transform it, hold on to it, and re-turn it.

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Author information

Jannis Steinke (ORCID: 0000-0002-3972-3420)
jannis.steinke@tu-braunschweig.de

Jannis Steinke, M.A., is a doctoral candidate in Cultural and Media Studies at the Heinrich Heine University in Düsseldorf, Germany. He is currently working as research assistant at TU Braunschweig, Germany, and conducting an ethnographical study based on insights and knowledge from Feminist Science and Technology Studies. His work covers the fields of French Poststructural Theory (Jacques Derrida et al.), Post- and Decolonial Theory (Gayatri Spivak et al.), Philosophical Existentialism (Friedrich Nietzsche and Sören Kierkegaard et al.), Feminist Science and Technology Studies (Susan Leigh Star, Ruha Benjamin, Astrid Schrader et al.) and Posthumanism (Donna Haraway, Rosi Braidotti et al.).

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On timescapes

Sobre paisajes temporales

Sobre paisatges temporals

Susanna Schoenberg (ORCID: 0000- 0003-4764-2214) Kompostistische
Internationale/Kunstakademie Düsseldorf

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Abstract

The article conveys and discusses selected art projects in the perspective of a practice of composting in relation to “timespace-matter”; to do this, it refers to the collaboration with the trans-disciplinary collective Kompostistische Internationale, expressly inscribed in the concluding artwork Dissolution Table. Items of interest are the “subject”/“object” relation and strategies of “inter-subjectivity”; the interaction with toxic/sensitive materials (of the past/present/future); the practice of re-membering and a possible negation of the institution of the archive.

Keywords

Composting; spacetime matters; Media realism; art practice; archival re-turning; re-membering; toxic materials.

Resumen

El artículo transmite y discute proyectos de arte a través de la perspectiva de una práctica de compostaje en relación con el “tiempo-espacio-materia”; para ello, se remite a la colaboración con el colectivo transdisciplinar Kompostistische Internationale, expresamente inscrito en la obra final Dissolution Table. Los ítems de interés son la relación “sujeto”/“objeto” y las estrategias de “intersubjetividad”; la interacción con materiales tóxicos/sensibles (del pasado/presente/futuro); la práctica del recuerdo y una posible negación de la institución del archivo.

Palabras clave

Compostaje; materia-espacio-tiempo; Realismo mediático; práctica artística; devolución de archivos; recordar; materiales tóxicos.

Resum

L'article transmet i discuteix projectes d'art a través de la perspectiva d'una pràctica de compostatge en relació amb el “temps-espai-matèria”; per això, es remet a la col·laboració amb el col·lectiu transdisciplinar Kompostistische Internationale, expressament inscrit a l'obra final Dissolution Table. Els ítems d'interès són la relació subjecte/objecte i les estratègies d'intersubjectivitat; la interacció amb materials tòxics/sensibles (del passat/present/futur); la pràctica del record i una possible negació de la institució de l'arxiu.

Paraules clau

Compostatge; matèria-espai-temps; Realisme mediàtic; pràctica artística; devolució d'arxius; recordar; materials tòxics.

The framework of composting for the practice of re-membering

WHY do WE refer to the practice of composting, and WHAT do WE purport to compost? In this case, what are the monolithic, linear and hegemonic timescapes of the Anthropocene. Because the Anthropocene can not be just superseded or overcome; because this very logic of surpassing, of progressing and synthesizing,¹ constitutes the Anthropocene's main diet: a violent concept of time where each moment is absolutely present and then absolutely past, dead, forgotten, a succession of substitutions, each predecessor the surrogate for its descendants.

Especially Karen Barad proliferates a gesture of composting not only the Anthropocene's space, but also its time—its spacetime-matterings—by her concept of “turning it over and over again—iteratively intra-acting, re-diffracting, diffracting anew, in the making of new temporalities (spacetime-matterings), new diffraction patterns.” (Barad, 2014, 168).

To be able to re-turn, to iteratively re-diffract time, this contribution explores the aesthetic practice of remembering: “Freedom/haunting: two sides of the same experience. Conjuring a future full of pasts, a ghost-ridden freedom is both a way to move on and a way to remember.” (Lowenhaupt-Tsing, 2015, 79).

Remembering can be seen as a response-able way of never letting go, of never killing the past for a truly brighter future—where one can eventually be free and independent of the past—, but as a practice of welcoming it in its ghostly hauntings.²

At this very point, I must clarify: personally, I'm an optimist, also a cultural optimist.

Appropriation of terms and some operators of composting

Even this paper does not contain explicit references to any theoretical or speculative body of work, its narrative already adopted, disposed of, digested categories of thought and empirical observations by many authors, indispensable a.o. Karen Barad, Donna Haraway, Carla Lonzi, Anna Lowenhaupt-Tsing, Trinh T. Minh-ha, Jacques Rancière, Rebecca Schneider, Astrid Schrader, Ruth Sonderegger.

The appropriated terms of spacetime-matterings and compost (both as matter and a material practice) have been put in relation to the tasks of “form finding”.

The reference to spacetime-matter intends to operate the idea of a “reality” not made by separate, discrete entities (if not negotiated in the here and now). The distinction and juxtaposition of “subjects” and “objects” is expected to be composted and operated as a relational practice: „What if we were to recognize that differentiating is a material act that is not about radical separation, but on the contrary, about making connections and commitments?“ (Barad, 2012, 47).

In this exercise the “form finding” is set as a complex of material acts of differentiation where the agents reflect “themselves” in relation to past experiences, sensory and psychic “presets”, emerging and situated response-abilities. In the same setup all the involved “material” is compost, something YOU can not

¹ This “logic of surpassing, of progressing and synthesizing” is not unlike the one proper to modernity with all its practices and political, aesthetic and scientific claims. Personally, (in the sense of a scientific affirmation, positive) I consider that the “creation” (or adaptation) of the Anthropocene as a geological metaphor of/for human history, eventually functions like a mental escape (in the future): from the formal (that is, formative) realities that shape US, from different “materialisms” (material practices and corresponding logical considerations such as optimization thoughts) related to industrialization, colonialism, capitalism, globalization as ongoing processes (which could be stopped or radically transformed).

² Until here/now, the introduction has adapted words thought with/by members of the collective *Kompostistische Internationale*. In particular, these words fit and refer to protagonists of research narratives such as the (last) Tasmanian tiger as treated by Friederike Ahrens, the main character of the novel *Never Let Me Go* as treated by Joshua Ben Pesch, and *After/Life* as treated by Fiona Schrading in their contributions to *Queerfeminist Compostings of the Anthropocene – Ecologies, SpaceTimes, ResponsAbilities* (*Kompostistische Internationale*, 2022). This text is dedicated to their sensitivity for the present (and future) of figures, agents, life forms of the past, or without an own past. *No past, no future.*

protect from changing attributes, its use and “meaning”.

The perspectives opened up by spacetime-mattering and composting have been reflected also as formal operators inside this text. The composting of certain structures of thought and text generation have been “marked”, not because they can be solved, corrected or undone; much more because they “contain” THE relation, because they can be the (spacetime)matter of negotiation around my/your cognitive situation. In particular pronouns have to be questioned, first of all the WE and the US, which establish the identity of those, who observe an external reality which the text internalizes. The capitalization of some words intends to fix the (spacetime)matter where the writer/reader has to simulate a form, which is “not really” there, which is absolutely negotiable, which can be expected to get composted. Added to that, quotation marks not only distinguish published sentences with their source; they are also applied to terms because of their contextual ambivalence or unorthodoxy, in particular if related to the making/becoming of subject and object, it means in terms of a differentiation (of entities) as a practice of connection and commitment instead of separation and exploitation.

The framework of art (techniques) and the use of time as a material (for art)

In order to highlight the possibility to experience (to act with) time as a “physical” matter, this paper refers to (six) specific artistic works using them in order to articulate some more general art practice. This more general art practice is clearly situated as European; as such, it is able to access (Western) European institutional resources and uses European socio-historical references. At the same time, the more general art practice to which this paper points, can lay claim to the designation “feminist”. Specifically, I am introducing here the idea of an art practice which already reflected and appropriated techniques and protocols of “media realism”, like surveillance, monitoring, experimental repetition, recording, playback and re-enactment.

Art practice contingent to a “creative use” of recording media, archival logic and instruments, a use “free of order”, let me think of all the wounds, gastric ulcers, sleepless hours and digestion problems of artists re-turning matter which hurts. Toxic materials, malicious instruments. Creation, transformation, refinement, instead of erasure and final undoing or material dissolution. “WE would (really) have to destroy some items of the archive” claims the artist here/today.

Narratives and the use of time as a material

This text builds on the reproduction of narratives from artistic projects and their chronologies. The projects produce the past by documenting the present (1); they evoke the past in order to create new relations to the present (2); they create a new present through an “extension” of their “own” past (3); they consider giving up pasts (4); they accept that envisioning dissolves the relation to the past (5); they create new “subjects”, new positions that negotiate their relation to the past “together” (6).

The description of chronologies serves to situate pasts in relation to one another. The present of the “subject” who acts in the artwork is no longer that of the artist who opens and closes the work.

The text uses the selected artworks in order to frame artistic action in terms of “subjectivity(ies)”. The subjectivity that means the view of herself, as well as the one which faces an “object” that she understands as simultaneously foreign and her own. Throughout the projects, the relation between subjectivity and objecthood is variable, like that between (active) memory and (passive) document. A re-turning is visible as an action, in some projects operationally central, even constitutive: without re-turning any artwork.

The selection of the works does not impose a typology, yet the works stand sometimes next to each other, sometimes in relation to each other, as if they were discrete positions on a (pluridimensional) continuum of possibilities. Thus the selection serves more to visualize a leap: between questions and strategies that

activate similarities, without wanting to form a system from them.

As far as (these cases of) artistic work do(es) not intend to prove any thesis, nor to produce a message as such, this article is not going to formulate any conclusion to the case studies presentation. Interest and motivation of this contribution refer to the property of artistic work to formalize questions, affections and relations, so that art practice can improve on its own methods.³ The more “technical” methods these art projects apply, can visualize relevant issues of possible “inter-subjective” relations:

the way the agent/s is/are situating herself/themselves;

the production and reproduction of multiple points of views;

the transformation of relations;

the transfer of action;

the time-related dynamic of affects, which means the setup of time-related operations, first of all repetitions;

the offensive use of textuality in order to present an inversion of the process of “objectification”.

The selected art projects are going to be discussed as follows:

La Filature (The Shadow)

ohne Title/senza titolo (untitled)

states of documents

Abyss—performing the archive

Douleur exquise (Exquisite Pain)

Dissolution Table.

Dissolution Table is a project I have produced between 2018 and 2022, that explicitly refers to a practice of composting as discussed and

imagined by a group of scholars. The interaction of contingency and intention in the discussion of relational objects is inscribed in the situative AV-recording which delivered the initial “material” for the “piece”. Apart from the methodological choices realized in the subsequent developments of the becoming artwork, it was rather affection-related “insights” that led me to the selection of the further art projects. In particular I identified the conceptual piece *Douleur exquise* by Sophie Calle as a useful counterpoint to *Dissolution Table* in order to reflect the field of tension between subjectivity, pain and time, and the possibility to “use” it as a material for aesthetic formalizations. All the presented projects are intended to contribute to a vision of “realism” as a “form finding” strategy which is not unique, but adaptive; together they seem to diffract their “subjects”, first of all the (epistemic) position of the artist herself.

Timescape 1: 1981, after 1979, seven years after 1972

“In April 1981, at my request, my mother went to a detective agency. She hired them to follow me, to report my daily activities, and to provide photographic evidence of my existence.” (Calle, 2002, 6-7)

After returning to Paris as a stranger, following unknown people on the street⁴ to rediscover the city in 1979, the becoming artist Sophie Calle arranged herself to be pursued (for one day). In *La Filature (The Shadow)* Sophie Calle juxtaposes the detective’s photographic account and textual report to her own observations. As third witness, the art viewer experiments some designed superposition, capable of reflecting the simultaneity of the “subjective” expectation (of the female artist) and object-making relation (of the male detective).

³ The improvement of methods means in my perspective that the work of art develops its “readability”; such a readability is not a performativity “for the viewer” (there are not better readable artworks for neither universal nor situated viewers), but a relational quality between the artist work and its formal “objectification”. Readability answers the (rhetorical) question of how much or what exactly the process of relation between the artist(s) and the materials

they use, is going to be “inscribed” in something else. In the perspective of the artist(s), readability results from their response-ability to their materials.

⁴ Sophie Calle started combining observation, surveillance, photographic evidence and textual narrative with *Filatures Parisiennes*, collected texts and photographs of 1978/1979, anticipating works like *Suite Vénitienne*, also realized in 1979.

"Thursday, 16th of April. 10 am. I am getting ready to go out. Outside, in the street, a man is waiting for me. He is a private detective. He is paid to follow me. I hired him to follow me, but he does not know that. At 10:20 am I got out." (Calle, 2002, 2)

"At 10:00 am we take up our position in front of the residence of the subject (...). At 10:20 am the subject leaves the house. She is wearing a grey raincoat, a pair of grey pants, black shoes, tights of the same color. She carries a yellow shoulder bag." (Calle, 2002, 9)

"Then I walked towards Luxembourg Gardens. I want to show "him" the streets, the places I love. I want "him" to be with me (...). I keep my eyes lowered. I am afraid to see "him". (Calle, 2002, 3)

For few days the artist also arranged a friend, named François M., to wait for her at the same time/spot in order to observe if she is being followed. On April 16 around 5:15 pm the added witness observes Sophie Calle followed by a young man—twenty-five of age, wearing a leather jacket, carrying a camera around his neck—, who is taking a picture of her. François M. documents himself his target taking a picture, and follows him as long as he enters a movie theater and loses track of his target, Sophie Calle.

That the detective has been watched himself is the condition that clarifies the transfer of relational "toxicity": while the (female) "subject" is staging herself in order to structure someone's day, the (male) "observer" does not know of her knowing about being watched, nor about himself being watched. As a formal reduction, and an inverted transfer, to be watching someone unknowing of being watched, performs here the point about (relational) toxicity in generating ("objective") reality.

The artist forces another person to observe her, to perceive and document her existence. She projects onto this gaze on herself an act of dependence and love; she writes in her reports,

she wants to please this gaze, she wants to exist in relation to this person.

She records her expectations and her observations, she writes about "him" even before she has seen "him". In the English translation of the detective's documents, the artist is called the "subject". The collected material evidence includes the notes of the artist dated 16.4.1981 and those of the detective, the pictures of the artist taken by the detective, and a short report by François M., who on 16.4.1981 observed the detective and photographed "him".⁵

The mode of presentation of this and several of the artist's works combining photographic evidence with text, oscillates between the book artifact and a kind of raffinate "posters presentation" dedicated to getting viewers to read while standing in an exhibition space. Apart from the presentation as an installation, I would like here to focus on her, the artist and first target of observation, looking at the report pages and pictures of herself taken from the back or from the distance. To think of the physical reality of her touching pages and or photographic paper. And to reflect here the question of simultaneity. The established description of Sophie Calle's practice as one of "self-fictioning" means technically a representation of (constructed) simultaneity, where the main artist's instrument is the application of "femininity" (as a form of active/passive worlding).



Sophie Calle, *The Shadow* (1981): Detail photographed from page 10 of the catalog (Calle, 2003, 10)

⁵ The different sources of documentation make clear, that the relation between the main agents was interrupted quite early, around 6 pm, when Sophie Calle left the cinema alone, without being observed by the detective, who had

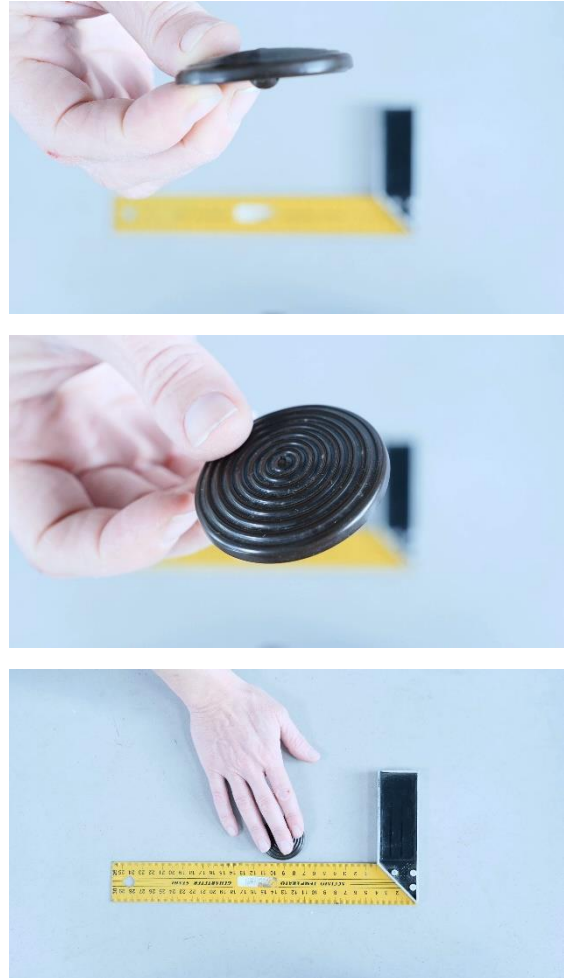
later been following someone else, and concluded the surveillance at 8 pm. So the artist kept unobserved until 5 am when she went to sleep in a hotel room, drunk and not alone.

The haptic aspect remains the most acute: that a document of reality—with its perspective and attitude—is disposable, physically, and can be touched (or monumentalized). The past, even the artist's own past, is physically disposable.

This as a timescape presented art project is based on the “object-making” of the artist who makes herself available as a material; to do this, the artist involves a relation operated by an adapted practice of stalking. The strategy, specific to the artist, aims at the emergence of new narratives both as a result of her conceptual work and her contextual and situated sensitivities. From the perspective of this text, the most interesting “reality” inscribed in the artwork is that a past has been generated, combining “subjective” expectations and intentions with “objectifying” instruments, and that the core setup of these “objectifying” instruments can not be called cooperative nor seen as negotiated on the basis of shared or common interests. Effectively, it is exactly this “misuse” of the “objectifying” agent that anticipates a relation to the audience.

Timescape 2: In 2017, referring to objects already existing in 1938, obtained after 2009

After my grandmother died at the age of almost 101, I took over very few items from her last flat. Among these things, mainly related to embroidery and sewing, is a transparent plastic bag, where 235 buckles have been stored. They have been stashed for decades, moved from/to different regions and houses: their common origin is the introduction of the racial law in Austria and Italy in 1938. With an audio/video-work titled as *ohne Titel | senza titolo* (untitled) I set up a textual exercise related to the shocking experience of my aunt saying, grandmother took them from her “Jewish friend”, staging the trial to use these physical objects and their visual qualities as matter which haunts me, re-turning a past that I cannot control. The text applies repetition as a central aesthetic instrument (repetition of words as sounds, but also as meanings and visual gestures), and makes very literal observations evoking the attitudes of counting, measuring or indexing.



Susanna Schoenberg, *untitled* (2018), frames from the video

The objects—functioning as pieces of evidence—can be treated as items of the biographical imagination archive of “my” personality. I can associate their physical integrity to the impossibility to compost what they mediate: (im)possible narratives about the relation to Italian and German fascism that my relatives have censored (forever).

In fact, the study of these objects is still incomplete. Within the study complex, there are excursions to collections and archives in order to identify materials and date objects. Hand sketches of the objects have been drawn and an inventory has been set up. The buckles have been digitally scanned to develop printable 3D-files. The leading idea is/was to work on the scale, that is, to use an oversizing of the archived objects as the allegory of a (self-)lie. The video recordings of *untitled* were produced in 2017, a text was written, first in German then in Italian, and recorded as spoken in both

languages. The video and audio tracks are supposed to be presented in a projection and amplification setup without designed synchronicity, temporarily loose.

The text refers to the materiality of the buckles—to the information conveyed by markings and engravings on them, the fragments of writing and numbers on their labels, the descriptiveness of color, shape, seriality of forms, material—to establish relationship with their temporal location: What language, what currency are involved; in particular, where does the material come from (from which manufacturing process). The text presupposes that the existence of this bag and its contents in grandmother's inheritance is related to the dispossession and/or escape of a Jewish friend, that is, a known person who is said to have had her haberdashery store either in Austria (Villach) or Italy (Tarvis).

"Grandmother was in Tarvis, 32 kilometers from Villach. 69 kilometers from Klagenfurt. She keeps 235 pieces in a bag, which probably came later. After 1938 she moved completely at least twice. She used to tailor her own clothes. Partly. Anyway, she collected a lot for sewing, also for embroidery. And this bag, the contents of which she supposedly bought because her friend had to close up the store because she was Jewish.

Are the prices in Reichsmark? Many buckles are made in AUSTRIA. The made in designation is a British invention from 1887 that made cheap imported products from Germany recognizable.

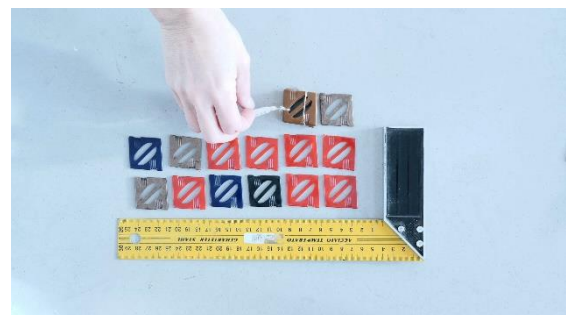
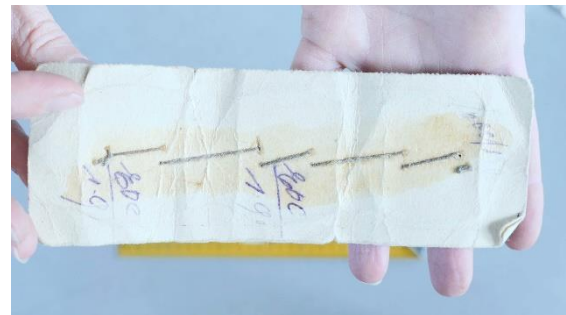
Were the buckles also purchased in Austria, or were they purchased in Italy, on this side of the border?

Which racial law made the Jewess sell, that of the 3rd Reich, or the Italian one, introduced without being asked for in July 1938?

What kind of friend is the Jewess whose buckles grandmother buys, 235 pieces, made of a plastic not yet identified, or even of several ones. Does she speak German, Italian, Slovenian?" (Susanna Schoenberg, 2017)

The work laments a non-relationship to the family's past, as well as to a time that is fundamentally a non-relationship to one's

grandparents. The present is informed that Jews who tried to escape could not sell their belongings according to the real value; if they got to it at all, and had not been expropriated, or simply robbed. The collection of buckles corresponds to a market value at that time of about 180-330 RM, which means a purchase value of at least 800 euros. The impossibility of knowing "by herself" how much grandmother paid for these buckles, the fact of not being able to imagine an honest purchase, allow a "subjectivity" to emerge that perceives herself as alienated in these objects, in the attraction for the things that grandmother kept, for their seriality, and for collecting and hoarding them herself.



Susanna Schoenberg, *untitled* (2018), frames from the video

In terms of a timescape, this art project treats a past that is not available (to the artist). The found objects are expected to contain a relation to past realities, so that their indifference to time—their non-ageing and their persistence in the same family—is equated as the impossibility of composting their (relational) meaning. If timescape 1 happens by monumentalizing the "subject"—made more appealing and interesting by inventing some (toxic) objects related to it—, this timescape presents a vanishing, unsafe "subject" monumentalizing its relation to objects which is felt as ambivalent (and toxic).

Timescape 3: In 2012, referring to recordings from 2011 dedicated to medical and legal documents from the 1970s found in an abandoned building at the mining plant San Giovanni in Iglesias on the island of Sardinia

In the context of an artist-in-residence focussed on the methodological idea of returnability⁶ as a particular attitude for artistic intervention, during a visit to the mining plant San Giovanni in Iglesias, I walked unobserved into an abandoned building, where I found bags full of old documents, in particular reports of accidents made by the company medical officer, and an official brochure published in 1977 by INPS, the Italian national institute for social security, concerning the rules of retirement for mining workers (and their surviving family members).

Excerpts from these documents have been read and video-recorded at their find spots immediately, on November 27 in 2011. The attitude of the camera is as uninvolved as possible in the determination of what WE see; it operates as an extension of hand and voice rather than a (re)production of the gaze. But the camera is THERE, recording a time of browsing through files and the artist's voice trying to decipher mostly handwritten words on printed forms.⁷



Susanna Schoenberg, *States of Documents* (2012), frames from the video

These fragments of past realities, the workers's files, the situations—accidents, in particular—they were involved in, the implicit hard facts behind the rules of early retirement or pension after death, e.g., become then an off-text for more video footage, played-back or re-read on two different locations: the almost abandoned miners village of Montevecchio, where the playback is choked down by the wind despite the use of a megaphone, and the community of Buggerru, a former miners foundation as well, where the text is read by a municipal employee in charge for official public announcements, and amplified through the local public voice system. The repeated “public making”—or technical amplification—of the documents is an exercise of reenactment, the repeated trial to get in relation with the timespace of the “subjects/objects” signified in the documents. The linear video-work edited from the situational footage is titled *States of Documents* (SoD) and is made by eleven (mostly one-shot) sequences of one minute in duration each. The editing structure refers to the idea of indexing

⁶ Artistic intervention is here focussing “form finding” strategies in public or accessible spaces with the goal of re-feeding (amplifying, strengthening..) the found form “on site”: <http://susanna-schoenberg.net/e-concepts/returnable>

⁷ The (documentarian) strategy of copying by reading creates two very different associations. On the one hand I would like to point to some hypothetical need of transferring (factual) contents (of the past) to speech (and oral

transmission) to preserve them from censorship and destruction. On the other hand I underline the juxtaposition between the (written, thus material) objectivity of facts produced and recorded by a state-similar authority, and their (verbal, performative) (mis-)appropriation (by the artist): the artist's archive in this case does not appropriate the very same archival items, and the artist deliberately leaves the found documents to decay.

the footage, as far as different states of the documents (performed timespace version of them) are capable of corresponding to each other as anchor-points on a multi-track timeline.



Susanna Schoenberg, *States of Documents* (2012), frames from the video

Added to the different time layers the issue of translation is used in order to produce new (linguistic) states of the documents. The translation is fragmented and visualized by selected written words and numbers; the gesture of translation intentionally does not fully serve a literal comprehensibility for viewers who do not understand Italian: it much more intends the process of reading documents in the present, right now, where the single document does not possess any (objective) authority any longer. The gesture of reading is the only possible practice (in the present) of reproducing documents with a (subjective) authority.⁸

⁸ *States of Documents* was edited with text frames in three different bilingual versions: English/traditional Chinese, English/Korean, English/Spanish.

⁹ A sequence of the video-work explicitly addresses the meaning of a practice of “infiltration” (or even

accident source

意外事故來源

his leg

他的腳

Susanna Schoenberg, *States of Documents* (2012), frames from the video

In terms of a timescape, this art project introduces the element of an “external” authority situated in the past, where it is superordinate (as an objectifying agency) both to the artist and to the persons involved in the documents. But in the present of the documents finding moment, their being abandoned—their being like waste—testifies this authority to be deactivated. The physical availability of the documents (with their implicit narratives) stands for a ruin of agents, a gap in power in the interpretation and use of these evidences of past circumstances (of subordination).

The use of access⁹ is the ignition for the successive practice of appropriation and sharing; the reenactment of the documents—their “playback”—intends a more poetic than informative gesture, a gesture of re-turning: it produces fragments and associations made by time specifications, injured body parts, words related to materials and instruments.

The (found) materials for this artwork convey in a very “natural” way the idea of compost: modernity itself as based on extractive (and colonial) practices and economies, emerges in

insubordination, if related to the public making of something which is corporate property) as something out-of-its-time, showing a train ride through a tunnel of the abandoned mine.

a “state of compost”, like its economic agents and their abandoned documents. The artistic intervention is not needed for deconstructing or dissolving anything: it just presents dissolving relational forms, it produces something like an echo.

Timescape 4: In 2021, recording on video collected printed media, many of them produced during World War II

Abysses—performing the archive was conceived by the end of 2020 and realized at the beginning of 2021. The video-work was first presented as part of a collective art piece¹⁰ titled *Calling the anthropomorphic cabinet*—a project responding to Salvador Dalí’s painting *Le cabinet anthropomorphe* of 1936, an emblematic representation of psychoanalysis, as the artist intended.

The approach of the video-collage treats (material) images as images inscribed into the (artist’s) psyche, and formulates the need of some practice of exorcism, asking the permission to eventually erase, remove, destroy some items out of (HER) psychic archive. Repetition is used as a technique.

“Added technical operators are the free fall, hysteria and the abyss itself. Realistic practices. History, as well as all the matter of culture and civilization – things which do not belong to her: they act her, they have already thought her before. She has started collecting their evidences. In her drawers, folders, albums, boxes: items so alien to her. Unavoidable. It horrifies her. There are shapes, they can talk to her. They talked to her even before she could think of a thing as a message. An intended infrastructure for thinking. Pictures of horror. Resonators of being an other. Shoes. Hands. Mouths.

It’s not just about pictures. Of course not. Techno-imagination. There has to be a reason for all this archival matter. Language. Everything she can imagine as being reenacted. Reseen. With shame. She

has to perform all these things. Her being aged, for example. Or the color of her skin. She cannot undo this part of herself. Ourselves. Cut out. Recombined.” (Schoenberg, 2022, 96-104)

The video *Abysses* presents the situation of disposing of (toxic) images and touching them as a concrete sensory transmission of the psychological burden of phenomena that have been normalized for US, first of all in the form of images. Apart from some black and white photographs belonging to “post-colonial” French socio-geographic magazines from the late 1960s dedicated to Africa, the most “sensitive materials” are taken from a Nazi photographic magazine named *Signal* published by the Wehrmacht between 1940 and 1945, specifically addressed to readers in allied and occupied countries.¹¹

Making pictures of pictures, their context is partly censored: the hand and the lens look for motifs that can unsafely affect, more technical details, and representations of women and art. As a compensation for the exposure to the (psychic, interiorized) images which can’t be destroyed, the soundtrack is made of words and phrases spoken in French by a text-to-speech program. The selected textual fragments mirror and extend some visual contents, and repeatedly they proclaim the dimension of horror of OUR abyss, disaster, hysteria, obsession, fraud, oblivion, fetishism:

“obsession / viscéralement / brillant / bleu brillant / brillant avenir / briller / le brillant fut retailé / imposteur / dénoncer qc. à qn. / il a trahi son ami / accident mortel / désastre / catastrophe / calamité / accident / feu / fournée / mettre le feu / il a échappé à ce désastre d’extrême justesse / suicidaire / mythomanie / beaux-arts / culture / dans les règles de l’art / technique / cité / ville / dispositif / municipalité / ville ouverte / machine / passer par une ville / machine / beaucoup de monde / technologie / émigrer vers les villes / en ville” (Schoenberg, 2021)

¹⁰ The project related art collective is named *Детские* and was initiated by artist Samuel Ferstl.

¹¹ As a propaganda instrument *Signal* embodies the European vision of Nazi Germany; at the beginning the magazine was produced in four languages (German,

Italian, French, English), which later became 25. It leaned on the layout of *LIFE* and made generous use of full-page color plates. It was published fortnightly and in May 1943 it achieved a circulation of 2,500,000 copies.



Susanna Schoenberg, *Abysses – performing the archive* (2021), frames from the video

The (forced) connections between image content, image context, literal content, and word context or extension intend to visualize the (difficult? unarticulated?) practice of situating OURselves in relation to “objects” like disciplines and practices of resource and human exploitation, technology, medical sciences, war industry, servile arts and

sciences, and the normalization of “subjects” in relation to them.

Stronger than all the others, this timescape disposes of “objects”. These “objects” have been searched in a (material) past, because of their “unaccountable” performativity in “shaping a subject” (out of synch). These “objects of vision” are at the same time products and instruments of an ongoing media revolution; to enter a relationship with them was unavoidable (for the artist), to undo their effect in terms of affection, seems to be impossible. In the video-work motifs of such an objectification of vision are shown, touched, turned over. Full of presets, the “subject” reflects herself in her relation to the collected objects; some kind of “abyssal intimacy” resonates in the title, the practiced encounter with herself as an alien.

Timescape 5: 2003 referring to 100 days in 1985, but the narrative starts in October 1984

Sophie Calle again. Her *Douleur exquise*: “In 1984 the Ministry of Foreign Affairs granted me a three-month fellowship in Japan. I left on October 25 not knowing that this date would mark the start of a ninety-two day countdown that would end in a breakup, which ... felt like one of the most painful moments of my life. I held this trip responsible. Back in France, on January 28, 1985, I chose to tell my suffering rather than my journey. In return, I asked my interlocutors, friends or chance encounters, When did you suffer the most? This exchange would cease when I had exhausted my own story by dint of telling it, or relativized my pain in the face of others'. The method was radical: In three months [99 days] I was healed. The exorcism succeeded, and in fear of a relapse, I abandoned my project. To exhume it fifteen years later.” (Calle, 2003, 13)

Douleur exquise (exquisite pain, a French expression which refers to the particular agony of wanting someone who doesn't want you) intends to describe a pain that is very acute. The project intends to address the most intense experiences of pain in a human life; it refers to moments that are unique and “localized”¹²—connected to a concrete time and space, of which the details are (forever?)

¹² A “douleur vive et nettement localisé” as described by Christine Macel, curator of the exhibition *M'as-tu vue?*

(*have you seen me?*) at Centre Pompidou in Paris in 2003. (Masschelein, 2007)

inscribed in memory—. But the narratives, the re-turning and re-membling of the own punctual psychic state, will corrode. The expression *douleur exquise* also recalls the Surrealist *corps exquis* (or *cadavre exquis*), the technique of collage in which several authors collaborate to create a poem or painting by each folding over a portion of a piece of paper. The “exquisite collaboration” here is evident both in the juxtaposition of subjects and in the spatial unfolding of the work. (Masschelein, 2007, 2)

Sophie Calle's localized pain is generated on January 24, 1985 between the airport of New Delhi and room 261 of the Imperial Hotel where she was supposed to reunite with “him”. A red phone on her bed is the more comprehensive object of her pain, the body of evidence of her lover's absence. Every day, for 99 days, she rebuilds the narrative of her pain: each day-narrative accompanied by the narrative of someone else, like two pages in the same book: Calle's narrative is white on dark, the other is dark on white. In the repetition there is the trial to prove the intensity of her own shock—to keep it under observation, extending it and at the same time watching its downfall—, but it is the juxtaposition with the shocking pain experience of someone else that finally operates the “transfer”. Sophie Calle appropriated the pain of others, translating their narratives into her language, generating the photographs that objectified their timespaces of pain.

On the 15th day after the break-up the accompanying text is introduced by a photograph of two nails, one with severed head: “(..) Something brutal, barbaric is going to happen. There is a local tradition that the men of the family are the ones who put the deceased in their coffin. So we — my father, my uncle and me — carried my grandfather's body from the bed to the coffin. We pulled back the sheet, put the lid on. We took a screwdriver, put in the screws and, most importantly, broke off the screw heads so that no one could open it again.

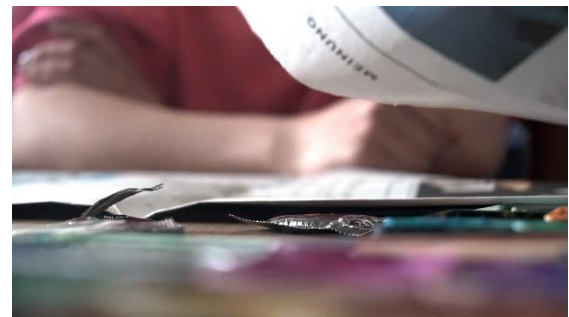
A quick, decisive act. Like saying: I accept. Worse than the last look.” (Calle, 2004, 36)

While timescape 4 means non compostable relations to “objects” as far as they are fixing an “affected subject”, this timescape is made by the process of transformation and dissolution of a “self” after the shock. This acute and localized pain meant in the art project works as a metaphor for the ability to face death as such, for knowing about (OUR own) mortality and the terminability of any conscious relation.

Timescape 6: In 2022, referring to 2018, facing a murder of 2005, because of unsolved judicial proceedings

The video work *Dissolution Table* and all the related artifacts perform the shocking experience of a working group finding “haunting material” on a table cloth. And it hides the spoken unspeakable word with the German sound “Schw*rzafrkaner”, where *schwarz* means black.

The work has its origin in the situational AV-recording of a workshop,¹³ generated by the camera as well as by the subjects who shared that particular time-space-cut and formed a specific techno-ecological setup in the sense of a more-than-human world (that no one had at their disposal).



Susanna Schoenberg with Kompostistische Internationale, *Dissolution Table* (2022), frame from the video

The text emerges from the revision, appropriation and reflection of the speech transcript of a specific work situation around a table. The recordings (2018) were not

¹³ The workshop *We Are Compost, Not Post-Human - Queer-feminist Compostings of the Anthropocene* was held at the University of Cologne in April 2018, and is the

founding project of the collective Kompostistische Internationale.

focussed, the original sound has been processed to be used as sound-without-literal-meaning (2021). The spoken text was reenacted (2020) by persons who have been involved in the “original” situation (2018) and/or in the process of writing a “new” dialogical, choral narrative (2020-22). This text is remembering a situation of contents made by thoughts, relations, (non)articulations of subjects exercising a queer inter-subjectivity. Because they have been invited to express their speculative process with the support of material acts—using paint, glue, water, condoms—they were contingently forced to relate to sheets of newspapers, in particular to one page of the German newspaper *DIE ZEIT* (*the time*) presenting an article on the status of the investigation into the circumstances of the death of Oury Jalloh, which happened 2005 in Dessau, while the young man was in police custody.

The question about what to do with the materiality of this narrative encounter corresponded to the question about permissible material for discussion: Is it possible to compost this page of a newspaper? Is it possible to declare specific materiality as neutral (non-affecting), non-belonging to the humus of the past/present/future situation of the “subjects” involved?

“Shall we just discuss?”

I would like to talk about the materials.

Shall we talk about the materials first?

I would have thought now that the materials have to do with queer temporality: with the HIV question and no future.

What is THIS here? Is IT something WE put down, did someone bring IT?

IT belongs to the material.

In fact, IT is meant to be a tablecloth.

Is IT considered a working material?

There is material on this table and there are impulses. It is clear to US what is what; but if someone says, I see the newsprint as an impulse... Nevertheless it is a coincidence that this content emerges here.

This page cannot pass as a coincidence.

THAT is indeed a coincidence. We have distributed colors and newspapers as working material.

It's good that the article fits us so well.

Probably any article would have fit well. Aren't we so conditioned by narrative impulses that we see them even where they are not meant?

How can WE call something work material that is not meant to tell US anything. Are you saying the working material doesn't give impulses? Which neutrality of the working material should I assume? Some kind of practical expediency, perhaps? Don't you think such an assumption is a bit unrealistic?

I see the article as an impulse.

I've only seen the condoms.

I didn't read the article, but the picture immediately caught my eye.

The colors are everywhere, but different colors. Green is not everywhere. Red isn't either.

But colors and leaves are everywhere.

We can write, paint, do crafts, play.

Leave the paper...

But THIS is for working...

No...

But I want to work with it. You can't take the paper away from me. Do you think I'm using it up?

I think that if we have this image now, which was not planned, then we should use it as an image as well.

It refers to Oury Jalloh. ” (Schoenberg, 2022 b)



Susanna Schoenberg with Kompostistische Internationale, *Dissolution Table* (2022), frame from the video

The viewing of the recorded footage revealed how intense the re-turning of concern experiences related to racism offered during the workshop, already destabilized the perspective of “subjects” who had and have to call themselves “white persons”. It was the one remembering the occurrence of Oury Jalloh’s death¹⁴ who concluded their report saying, THIS (narrative? occurrence? existential reality? article?) belongs to the categories “racism against bl*ckAfricans” and “institutional violence against individuals”. The perspective “that spoke”, did not belong to anyone, but there was nor is any evidence of any reaction or relation—with the exception of some appearance of autism or numbness—to the presence of this one word, which absolutely belongs to the legacy of German colonialism.

The phrase including the word which was kept unheard, was not included in the video.¹⁵

It was the genealogy of this art project with its inscribed attributes that inspired me first to adapt the readability of works of art to the idea of a timescape, because of the (specific) processuality of the artistic work, but also for the temporal depth of the field of relations between materials and forms, and their reflection as practiced by the artist and the involved “subjectivities”. The project is based on the “infiltration” of (recording) media and the

“introduction” of a differentiated form of authority into a situation that was not sketched by the artist. From the original recordings to the finalization of an experimental text and the related video-artwork, the commitment of the artist was dedicated to the exchange with the other members of the collective Kompostistische Internationale and to the contribution to their common work. The further development of the “form finding” for *Dissolution Table* applied most of the questioning and discussion that was practiced within the working group. From the very first viewing of the originally recorded footage, which happened some months after starting the collaboration, the artist set the indeterminacy of the “subject” as an “emerging” material: WHO exactly is thinking when WE are thinking with others? The operated/operating “subject” was thought as a “matter of compost”: all the “sublimation” applied to the original recorded material refers to this (diffracted/diffracting) “image”.

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¹⁴ After fleeing from Sierra Leone, Oury Jalloh had applied for political asylum in Germany. His application was declined, but he received an exceptional leave to remain in the country. He was found burnt to death in a police jail cell

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¹⁵ An excerpt of 5 minutes of the video work is published here: <https://vimeo.com/731740967>.

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Author information

Susanna Schoenberg (ORCID: 0000-0003-4764-2214)
info@susanna-schoenberg.net

Artist producing in the fields film, video, photography, installation, performance; curator at the agency for artists' collaborations arte e parte; member of the transdisciplinary collective Kompostistische Internationale. Dedicated to transmedial practices and transcultural discourses, her work strives to make visible and articulate methodological issues of an engaged "realist" aesthetics.

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Getting angry with endocrine-disrupting chemicals

Enfadarse con las sustancias químicas alteradoras endocrinas

Enfadar-se amb les substàncies químiques alteradores endocrines

Lenka Veselá (ORCID: n/a) Brno University of Technology (Czech Republic)

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Abstract

Endocrine-disrupting chemicals are industrially manufactured compounds that have the capacity to mimic or interfere with biosynthesis, metabolism, and the functions of bodily produced hormones. The ubiquity and persistence of endocrine-disrupting chemicals in the environment have raised concerns about their impacts on human as well as nonhuman life. How do these chemicals affect us? How do we interact with them? And how do we respond to the risks that they pose? My inquiry into how chemical endocrine disruptors affect us focuses upon the ways in which they can influence our emotions. I bring attention to how being exposed to them can disrupt our brain chemistry, and therefore our emotions, too. With the help of the Endocrine Disruption Tracker Tool—a speculative instrument for a collective investigative practice that I have created—I look into what we can learn about endocrine disruption if we consider how are emotions are affected. I have developed this tool to help me, my research participants, and a broader community of interested people to address the exigencies of our lives, as affected by involuntary chemical exposure, and to construct responsive care relations—paving the way for new approaches to research, ethics, and politics that are embodied, experientially and materially grounded, in their concerns about endocrine-disrupting chemicals.

Keywords

Endocrine-Disrupting Chemicals; Chemical Exposures; Anthropocene; Feminist Technoscience.

Resumen

Las sustancias químicas alteradoras endocrinas son compuestos fabricados industrialmente que tienen la capacidad de imitar o interferir en la biosíntesis, el metabolismo y las funciones de las hormonas producidas por el organismo. La ubicuidad y persistencia de las sustancias químicas alteradoras endocrinas en el medio ambiente han suscitado preocupación por su impacto en la vida humana y no humana. ¿Cómo nos afectan estas sustancias químicas? ¿Cómo interactuamos con ellas? ¿Y cómo respondemos a los riesgos que plantean? Mi investigación sobre cómo nos afectan los alteradores endocrinos químicos se centra en cómo pueden influir en nuestras emociones. Atiendo a cómo la exposición a ellos puede alterar nuestra química cerebral y, por tanto, también nuestras emociones. Con la ayuda de la herramienta Endocrine Disruption Tracker -un instrumento especulativo para una práctica de investigación colectiva que he creado- examino lo que podemos aprender sobre la alteración endocrina si consideramos cómo se ven afectadas nuestras emociones. He desarrollado esta herramienta para ayudarme a mí, a los participantes en mi investigación y a una comunidad más amplia de personas interesadas a abordar las exigencias de nuestras vidas, afectadas por la exposición involuntaria a sustancias químicas, y a construir relaciones de cuidado receptivas, allanando el camino para nuevos enfoques de la investigación, la ética y la política que estén encarnados, basados en la experiencia y el material, en sus preocupaciones sobre las sustancias químicas que alteran el sistema endocrino.

Palabras clave

Sustancias químicas alteradoras endocrinas; Exposiciones químicas; Emociones; Antropoceno; Tecnociencia feminista.

Resum

Les substàncies químiques alteradores endocrines són composts fabricats industrialment que tenen la capacitat d'imitar o interferir en la biosíntesi, el metabolisme i les funcions de les hormones produïdes per l'organisme. La ubiqüitat i persistència de les substàncies químiques alteradores endocrines en el medi ambient han suscitat preocupació pel seu impacte en la vida humana i no humana. Com ens

afecten aquestes substàncies químiques? Com interactuem amb elles? I com responem als riscos que plantegen? La meua recerca sobre com ens afecten els alteradors endocrins químics se centra en com poden influir en les nostres emocions. Atenc a com l'exposició a ells pot alterar la nostra química cerebral i, per tant, també les nostres emocions. Amb l'ajuda de l'eina Endocrine Disruption Tracker - un instrument especulatiu per a una pràctica de recerca col·lectiva que he creat- examino el que podem aprendre sobre l'alteració endocrina si considerem com es veuen afectades les nostres emocions. He desenvolupat aquesta eina per a ajudar-me a mi, als participants en la meua recerca i a una comunitat més àmplia de persones interessades a abordar les exigències de les nostres vides, afectades per l'exposició involuntària a substàncies químiques, i a construir relacions de cura receptives, aplanant el camí per a nous enfocaments de la recerca, l'ètica i la política que estiguin encarnats, basats en l'experiència i el material, en les seves preocupacions sobre les substàncies químiques que alteren el sistema endocrí.

Paraules clau

Substàncies químiques alteradores endocrines; Exposicions químiques; Emocions; Antropocè; Tecnociència feminista.

Introduction

Endocrine-disrupting chemicals are industrially manufactured chemicals that are capable of mimicking or interfering with the ways in which the body's hormones typically work. The hormones whose production and performance they disrupt are "chemical messengers" (Starling, 1905) that circulate through the bloodstream, informing the various functions of the body's organs and tissues. Hormones can be biosynthesized in and released from the endocrine glands of animals (including humans), or they can be produced within the bodies of plants and fungi. Naturally occurring phytohormones and mycohormones also have the capacity to interfere with the hormonal systems of human and nonhuman organisms, but they do so in ways that are believed to be beneficial to those organisms, or that are considered to belong among the manifold material processes taking place in the "natural" world. Indeed, we mostly have industrially manufactured endocrine disruptors in mind when we talk about the endocrine disruption that is associated with adverse health outcomes and linked to environmental pollution. The circulation and persistence of anthropogenic endocrine disruptors, which have the capacity to "hack" the chemical information network of the body and thereby connect our endocrine systems to global chemical supply chains, entangle us in uneven relations of power, capital, and harm, while raising questions about who we are becoming, since these chemicals are increasingly part of the very substance of our bodies.

Of the hundreds of thousands of synthetic chemicals that are currently in existence, approximately 800 are either suspected or known to possess endocrine-disrupting properties. Ubiquitous chemical endocrine disruptors include Bisphenol A (commonly known as BPA), which is found in plastic bottles, food containers, the liners of metal cans, and other packaging materials; phthalates and parabens, which are found in cosmetics; ultraviolet (UV) filters, which are added to sunscreen products to absorb UV radiation from the sun; detergents that are used in household cleaners; and flame retardants that safeguard furniture and electronics.

Besides their presence in such everyday consumer products, endocrine-disrupting chemicals are also deployed in various industrial processes, such as polychlorinated biphenyls, which are used as industrial lubricants and coolants; the chemicals that are discharged during oil and gas extraction, as a result of hydraulic fracturing technologies; and the pesticides that are used to protect crops from weeds, insects, rodents, and fungi. In addition, industrial wastewater and livestock waste are two other major sources of endocrine-disrupting chemicals.

Some pharmaceutical drugs also have the potential for endocrine disruption (Tijani et al., 2013). These include hormonal medicines, such as hormonal contraception, hormone replacement therapy, and thyroid hormone substitutes, as well as nonhormonal drugs. Paracetamol—one of the most purchased over-the-counter drugs, which is used to treat fever and mild to moderate pain—is a familiar example of a nonhormonal endocrine disruptor, while a broad range of antipsychotic, antiepileptic, antihypertensive, antiviral, antidiabetic, and anticancer drugs also have the capacity to disrupt the endocrine system through a wide array of different mechanisms. Pharmaceutical drugs (both human and veterinary) that impact hormonal systems as a side effect and through the uptake of their residues that are subsequently released into the environment trouble the clear-cut categories of "good" and "beneficial" medicines versus "bad," "toxic," and "disrupting" environmental chemicals. Endocrine-related toxicity of pharmaceutical drugs, as well as many other staples of life in the era of late industrial modernity, from plastics to agrichemicals, foregrounds the necessity of investigating the presence of these chemicals with an open and curious mind—by remaining attentive to the intricacies and complexities of our chemical becoming, which is finally irreducible to the simplifying categories of "good" and "bad" and "beneficial" and "toxic." Ultimately, what makes these chemicals problematic may not have to do with their effects, but rather with their unscrupulous production, use, and disposal, as well as the involuntary and uneven nature of our exposure to them. Studying such chemicals therefore

requires us to pay critical attention to our non-innocent chemical relations, including our various engagements with the issues of consent, complicity, and violence that are bound up with the extractivism and consumerism that is implicit in their manufacturing and circulation.

Hormones—and the hormonally active chemicals that are synthesized in laboratories and manufactured at industrial sites—have wide-ranging impacts on our bodies, including effects on growth and development, bone density, the cardiovascular system, fat distribution, lipid metabolism, blood sugar, sleep, mood, cognition, and stress levels. Nonetheless, it is their impact on sexual development and reproduction that has mostly captured the attention of scientists, as well as the popular imagination, especially when it comes to endocrine-disrupting compounds. Gender Studies scholar Celia Roberts (2007) has coined the term “messengers of sex” as a means of critically analyzing how hormones act to produce sexed bodies and behaviors. Her analysis of how the biological and the social come together in the concept of the hormone has inspired and informed a growing body of research, which has extended her insights in order to address the biosocial character of endocrine-related toxicity (Ah-King & Hayward, 2014; Bailey, 2010; Birke, 2000; Chen, 2012; Davis, 2015; 2022; Di Chiro, 2010; Haraway, 2012; Hayward, 2014; Langston, 2010; Lee, 2020; O’Laughlin, 2016; 2020; Oppermann, 2016; Pollock, 2016; Robyn & Mykitiuk, 2018; Scott, 2009; Shotwell, 2016). Building upon the theoretical findings and queer ecological sensibilities of these researchers, this essay attends to the signals (chemical and cultural) that are transmitted and communicated within the material-discursive networks of endocrine disruptors. In what sense do these chemical messengers have the potential to disrupt not only endocrine systems, but also normative gender orders? And what kinds of disruption can emerge if we shift our gaze to the “other” effects of endocrine disrupting chemicals, such as their effects on our emotions?

Exposure to endocrine-disrupting chemicals in the environment, at early stages of development as well as later stages of life, has

been associated with the high incidence rates of—and increasing trends in—the early offset of puberty, lower sperm counts, genital malformations, infertility, and adverse pregnancy outcomes in humans, while genital malformations and changes to sexual and reproductive physiologies and behaviors have been observed in wildlife populations that have been exposed to endocrine-disrupting chemicals and identified by laboratory studies (Bergman et al., 2013). But besides these frequently cited, discussed, and examined effects on sexual development and related functions, chemical endocrine disruptors also act as carcinogens, increasing the risks of hormone-sensitive cancers in humans and animals (Bergman et al., 2013a; Soto & Sonnenschein, 2010). Additionally, animal model data and human evidence have linked endocrine disruptors to endometriosis and autoimmune diseases, as well as increased susceptibility to infections, diabetes, obesity, and cardiovascular problems (Bergman et al., 2013a). Furthermore, exposure to chemical endocrine disruptors has also been associated with effects on neurodevelopment and brain function, which can result in neurological and learning disabilities (Bergman et al., 2013a). While disrupted brain chemistry and signaling can lead to severe mental illnesses and neurological disorders, this essay focuses on the less serious ways in which endocrine disruptors impact our lives, by affecting our emotions.

Being exposed to endocrine-disrupting chemicals can be traumatic and harmful—and even deadly. So why does this essay focus on how these chemicals can affect our emotions? And what can we learn about endocrine disruption by considering how our emotions can be impacted? Whereas endocrine disruption is too often displaced as a looming cause of sexual and reproductive anomalies, as well as—to a lesser extent—cancers, the act of calling attention to less serious forms of endocrine disruption that most of us experience can help us to address endocrine disruption as a shared (albeit unevenly) condition of living in the Anthropocene. Locating the effects of endocrine-disrupting chemicals in our irritability, anxiety, sadness, and fear

foregrounds our shared vulnerability in relation to the ongoing chemical transformation of the planet, raising awareness of how closely interconnected we are becoming with global networks of man-made chemicals. In what follows, I examine the critical (and political) potentials of thinking endocrine-disrupting chemicals not only with the anger, fear, and anxiety that can be caused or modulated by disrupted brain chemistry, but also with the anger and other emotions that can be provoked by involuntary and unjust exposures to profitable chemicals, which put us at risk of harm. To this end, I first reflect on the narratives and discourses that populate the public sphere and shape the public's perceptions, attitudes, and practices when it comes to endocrine-disrupting chemicals and their effects. Then I introduce the Endocrine Disruption Tracker Tool, my intervention into these narratives foregrounding the impact of chemical endocrine disruptors on emotions. I elaborate on the ideas and motivations behind its design and share observations from a workshop, which made use of it. I conclude with an argument in favor of the speculative practice centering the likely influence of endocrine-disrupting chemicals on our emotions. What are the potential consequences of feeling angry, frustrated, and sad with these chemicals as they continue to affect us? What possibilities could the collective and public expression of these feelings open up? In what ways could our feelings of anger, frustration, and sadness motivate and energize action opposing the oppressive conditions that are making us angry, frustrated, and sad in the first place?

Endocrine Disruption

The very nature of chemical exposure makes this issue difficult to track, but it is by no means "invisible." Rather, we should think about the different cultural practices that have rendered exposure to endocrine-disrupting chemicals—and the effects of such exposure—(in)visible or (im)perceptible. In this section of the essay, I

take a closer look at the practices that have sensitized (or desensitized) us to the presence of endocrine-disrupting chemicals in our lives and their hidden, slow-moving, and gradually emerging effects on our bodies.

According to the report titled *State of the Science of Endocrine Disrupting Chemicals* (Bergman et al., 2013a), a landmark review of the science of endocrine-disrupting chemical agents, which was released by the World Health Organization (WHO) and the United Nations Environment Programme (UNEP), the true extent of our exposure to chemical endocrine disruptors, and the consequences of such exposure, have yet to be fully understood.¹ The report summarizes research findings that provide evidence that endocrine-disrupting chemicals are causally implicated in adverse health outcomes in both humans and wildlife, while also raising concerns about the incompleteness of our knowledge about the endocrine activity that results from the presence of environmentally ubiquitous chemicals:

Because only a small fraction of the hundreds of thousands of synthetic chemicals in existence have been assessed for endocrine-disrupting activity, and because many chemicals in consumer products are not identified by the manufacturer, we have only looked at the tip of the iceberg. (Bergman et al., 2013b, p. 18)

Despite the proliferation of research on endocrine-disrupting chemicals, significant uncertainties remain about the true extent of the risks that are posed to human health and wildlife:

How many endocrine disrupting chemicals are there? Where do they come from? What are the human and wildlife exposures? What are their effects individually and in mixtures during development and adulthood and

¹ *State of the Science of Endocrine Disrupting Chemicals* released in 2013 by the WHO and UNEP remains the largest and most comprehensive systematic review to this

date. Recent updates include Kabir et al. (2015), La Merrill et al. (2020), and Laurretta et al. (2019).

even across generations? What are their mechanisms of action? (Bergman et al., 2013b, p. 18)

These are some of the questions outlined in the WHO–UNEP report that demand urgent answers. Unfortunately, however, given the invisibility, mobility, penetrability, and complex interactivity of endocrine-disrupting chemicals, these problems remain largely intractable. The study of chemical endocrine disruptors requires the examination of a plurality of interactive factors, including the net effects of complex chemical mixtures; tissue-specific responses; critical windows of exposure across lifespans; the intricate problematics of epigenetic effects, which alter susceptibility to diseases both intra- and inter-generationally; and anomalous dose–response relationships, which mean that even low-concentration exposures can be harmful. In sum, endocrine disruption is a complex and multilayered phenomenon, which poses momentous challenges, not least in terms of the gathering of scientific evidence.

Endocrine-related diseases and disorders are on the rise, but is it plausible and scientifically demonstrable that chemical endocrine disruptors are among the causes that are to blame? Endocrine-related effects have been observed to occur in wildlife populations inhabiting contaminated environments, but what do such identified changes in wildlife development and physiological function tell us about the potential consequences for the human populations that are suffering from chronic exposure to endocrine-disrupting chemicals? Numerous laboratory studies have identified the adverse outcomes that result from

chemicals with endocrine-disrupting properties (Bergman et al., 2013a),² but how do findings that are focused upon the selected effects of single chemicals under laboratory conditions bear upon the real-life conditions of humans and nonhuman organisms that are exposed to complex chemical mixtures throughout their lives on a daily basis?³

The absence of irrefutable evidence means that chemical regulation is contestable. National and international legislative frameworks for regulating chemicals aim to ensure high levels of protection for human health and the environment. Such frameworks are developed and managed by means of national laws, national and international regulatory agencies, and international initiatives, agreements, and conventions.⁴ By defining policy elements, such as exposure and emission limits, and by overseeing their enforcement, chemical regulators can be just as influential as scientists, if not more so, in determining public perceptions of chemical pollution and its various effects upon human health and the environment. Under the currently existing neoliberal governance systems, though, many regulatory decisions tend to be lax and industry-friendly, facilitating investment and economic growth, instead of protecting public health and the environment. More often than not, regulatory decisions result from a utilitarian calculation of the potential benefits and harms, which exaggerates the social and economic benefits of toxic chemicals, while downplaying the suspected or known costs in terms of the health of humans, nonhuman organisms, and the environment.⁵

² See the review of these studies in chapter “Evidence for endocrine disruption in humans and wildlife,” Bergman et al. (2013a), p. 23–188.

³ For a discussion about the methodological limitations of studying endocrine-disrupting chemicals in human populations, see Lee & Jacobs (2018).

⁴ In the EU, the European Commission and European Chemicals Agency (ECHA) overseeing Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), the new *European chemicals legislation*, are the most important bodies informing the regulation of endocrine-disrupting chemicals. In the US, it is the US Environmental Protection Agency (US EPA). The following international collaborations have been set up to achieve regulatory goals for endocrine-disrupting chemicals: EU/WHO/International Programme on Chemical Safety (IPCS) coordinating international research and

development through the formation of the Global Endocrine Disruption Research Inventory; WHO/IPCS overseeing the global assessment of the state of the science of endocrine disruptors through an assessment prepared by an expert group on behalf of the WHO and UNEP; EU-US Science and Technology Agreement under which a joint meeting was held in Italy in 1999.
https://ec.europa.eu/environment/chemicals/endocrine/index_en.htm

⁵ Environmental justice researchers Reena Shadaan and Michelle Murphy (2020) refer to governance systems that justify the continued production of known toxins and “acceptable” risks to health as “permission-to-pollute regulatory systems,” while pointing out the links between such systems and the structures of settler colonialism and racial capitalism. For a discussion about the conceptualization of pollution as a form of colonial violence,

Industry-friendly regulatory policies are predicated upon systemic asymmetries that make it easy for the financial beneficiaries of chemical manufacturing processes to obscure or buy their way out of their wrongdoings. At the same time, they make it more difficult for those on the receiving end to demand more stringent regulations, as the burden of proof is often placed on the victims of pollution, rather than on the perpetrators. Moreover, it is difficult to hold chemical companies accountable when only the high probability—rather than the reasonable possibility—of adverse health outcomes warrants regulatory action, and when the bar for evidence is raised impossibly high in relation to the applicable scientific methodologies. Furthermore, as the immensely profitable chemical industry increasingly encroaches upon the domain of scientific research, chemical industry executives not only exploit but actively manufacture doubt, by hiring reputable experts to controvert the findings of independent researchers (Oreskes & Conway, 2011). Exemplifying this strategy is an article by a collective of industry-sponsored scientists (Lamb et al., 2012), published in the acclaimed scientific journal *Regulatory Toxicology and Pharmacology*. It undermined the influential WHO–UNEP report by contesting its conclusions, suggesting that they were drawn without sufficient evidence, that they were lacking in scientific rigor, and that they provided an unbalanced and misleading view of endocrine disruption. The authors of the WHO–UNEP report responded to the article, to defend the credibility of their claims, and accused their opponents of deliberately manufacturing doubt about the harmful effects of endocrine-disrupting chemicals, with the aim of confusing the public and decision makers, who do not possess specialist knowledge in the field of endocrine disruption, rather than attempting to convince the scientific community (Bergman et

al., 2015).⁶ Since current legislation requires substantial evidence in order to ban or restrict chemicals that are suspected of causing harm, such a strategy of manufactured skepticism can pay off: the chemical companies succeed in their querying of the evidential basis of health hazards, which ultimately enables them to keep their products on the market.⁷

Given the uncertainty about the true extent of chemical damage, and the reinforcement of this message by industry-sponsored campaigns of denial and doubt, members of the public have been encouraged to take preventive and protective actions. The sociologist Norah MacKendrick (2010; 2018) has introduced the term “precautionary consumption” to describe a practice of reducing personal exposure to the chemicals that are found in everyday consumer products, by making responsible and informed consumer choices. As MacKendrick (2010; 2014; 2018) has shown, “precautionary consumption” shifts the responsibility for reducing toxic burdens away from the manufacturers and distributors of toxic products and instead places it upon individuals, especially child-bearers and those caring for young children. However, such individualized tactics, which invoke the consumer caution, fail to the extent that the surrounding presence of chemicals is not limited to consumer products, but also encompasses various industrial processes. Even more crucially, these chemicals cannot be contained, since they infiltrate the environment. Once they have been released from their multiple outlets, endocrine-disrupting chemicals circulate through the ground, water, and air, eventually being diffused throughout the whole environment. While disadvantaged workers suffer the consequences of occupational exposure, and the communities that live in the environs of chemical production and dumping sites are disproportionately affected, a truly effective

see also Liboiron (2021) and Murphy (2016; 2018). Shadaan, Murphy, and Liboiron are members of EDAction, a coalition of researchers concerned with the widespread presence of endocrine disrupting chemicals in Canada. <https://endocrinedisruptorsaction.org/>

⁶ For the continuation of this debate, see Beronius & Vandenberg (2015), Lee (2018), Vandenberg et al. (2016), and Zoeller et al. (2014).

⁷ For instance, Syngenta, the producer of the common herbicide atrazine, managed to keep it on the US market by

successfully challenging the evidence demonstrating the health hazards that it poses, even though it had already been banned in other parts of the world. In 2016, the US Environmental Protection Agency found that atrazine posed reproductive risks to wildlife, and in 2018 the Agency concluded that combined exposure to atrazine from different sources posed developmental risks to children—yet it still reapproved atrazine for use in lowered amounts in 2020 (Erickson, 2020).

means of preventing wider exposure to chemicals would be infeasible, and not something that even the expensive and onerous practices of shielding, filtering, and distancing that MacKendrick elaborates would be able to achieve. Individualized tactics for managing environmental toxicities have been subjected to feminist critiques (Robyn & Mykitiuk, 2018; Scott et al., 2017; Shadaan & Murphy, 2020; Szasz, 2007), not only because they spread the misguided belief that effective protection from environmentally ubiquitous chemicals is possible, but also because, in doing so, they shift our focus from protecting the environment to protecting ourselves individually, with the result that we will be less likely to engage in public debates about how to address the problem of chemical pollution via systemic precautionary arrangements.

In contrast to the neoliberal prescription that individuals should attempt to maintain control under conditions of uncertainty by avoiding chemicals individually, through their consumer choices, environmental activists demand structural changes in order to hold those who are truly responsible to account. International environmental organizations—such as Greenpeace, the World Wildlife Fund, the Sierra Club, and Friends of the Earth—as well as NGOs and community groups are campaigning for a toxin-free future, in which hazardous chemicals are no longer produced, used, and dumped into the environment. Environmental activists insist that the manufacturers and regulators of the chemical industry must be held accountable for the multifarious impacts of the toxic chemicals that they produce, especially on the communities that are immediately affected, and that decisive steps must be taken in order to achieve a toxic-free global environment. However, the agenda of a zero-pollution and toxicity-free future for all, which is utilized to promote the banning of toxic chemicals and subsequent transitions to alternatives that are considered to be safe and sustainable, is underpinned by problematic assumptions. Fantasies about bodies and environments that are clean and chemical-free promote anxieties about impurity, contamination, and pollution, and are prone to what Giovanna Di Chiro (2010) has termed

“eco-normativity”—that is, they are often ableist and normative ideas that have been harnessed by environmental discourse in order to conceptualize chemical exposure and its effects.

This uncritical rhetoric—labeling bodies and environments as “unhealthy,” “unnatural,” “impure,” or “toxic”—becomes increasingly problematic when considering the effects of endocrine-disrupting chemicals on sexual and reproductive development and functions. Eco-normativity becomes eco-heterosexism once queer bodies and behaviors are put forth as the main evidentiary focus of documented harms. When studies that examine the effects of endocrine-disrupting chemicals on animal sexual development and reproduction are published in acclaimed scientific journals and use normative expressions and catchphrases, such as “chemical castration” or “gender-bending chemicals,” or when they describe animal physiologies and behaviors as “feminized,” “homosexual,” or “transgender,” they make endocrine disruption visible in ways that promote heterosexist and transphobic views. Indeed, some images—such as a photograph of copulating frogs, one of them being a genetic male that has been turned into a female by the endocrine disruptor atrazine—have already taken hold in collectively shared imaginaries of endocrine disruption. The photograph in question, which was taken in 2010 by scientist Dr. Tyrone Hayes (Sanders, 2010), was even mobilized to uphold far-right sentiments, after it caught the attention of alt-right conspiracy theorist Alex Jones, who made use of it in several of his widely shared *InfoWars* videos. His rant about the government “putting chemicals in the water that turn the friggin’ frogs gay” circulated on Twitter for months and gave rise to an impressive number of memes and threads on 4chan and Reddit. Scientific articles and media reports that are concerned with endocrine disruption often have a disturbing amount in common with Jones’s alarmist and attention-seeking language, and they can be dangerously reminiscent of the rhetoric and logic of far-right ideology, as epitomized in its

conspiracy theories about “white genocide” and “male extinction.”⁸

How, then, do we orient ourselves in this labyrinth of unreliable facts, indirect evidence, inconclusive research results, manufactured doubt, and normative assumptions? How do we conceive of endocrine disruption without resorting to the normative imaginary of a toxin-free futurity in which ableism, heterosexism, and transphobia are embedded? How do we identify, study, and represent endocrine-disrupting chemicals in ways that facilitate caring relations and allow us to envision and enact hopeful futures with—and despite—them? How do we navigate the territories of the unknown and uncertain, which indicate harms, but also remain open to the potentials of becoming, while admitting the presence of hormone-disrupting chemicals?

The representation of chemical violence is key to effective resistance against it, but the manner of its representation is also significant, as the ways in which chemical harms are made visible can become sources of violence in their own right. Under the umbrellas of feminist technoscience and queer ecologies, a growing body of research has developed an alternative vocabulary for conceptualizing chemical exposure—doing so with care, and in a hopeful manner, but also remaining critical and refusing to gloss over the ongoing violence resulting from the profitable chemicals that are being produced, used, and dumped into the environment. The artists, activists, and scholars who are adopting a queer ecological approach not only point out the biosocial nature of endocrine-related toxicity, by critiquing heterosexist articulations of sexuality and nature that are predicated upon socially constructed binaries of the “natural” and “cultural,” the “pure” and “polluted,” and the “healthy” and “damaged,” but also offer feasible alternatives to discourses and practices that are grounded in static, essentialist, and normative understandings of bodies, sexualities, and

environments.⁹ Rather than addressing environmental chemicals with “concerns” (about “purity” and “health”), a queer ecological approach views them through notions of indeterminacy, becoming, and care—looking for, experimenting with, and inventing forward directions that facilitate caring relations, allowing us to live well with these chemicals, despite their potential for harm. My inquiry into how endocrine-disrupting chemicals affect our emotions is inspired and informed by the affective, caring, and experimental engagements (both scholarly and artistic) that queer ecological thinking and sensibilities have given rise to.

Affective Disruptions

The circulation of knowledge about endocrine-disrupting chemicals, as well as our embodied experiences of their effects, not only inform our understanding of what these chemicals are and do, but also make us emotional about them. This prompts an array of angry and “unhappy” feelings: the misery of the workers who suffer the consequences of occupational exposure, the anger and fear of the communities who live nearby chemical production and dumping sites, the emotional distress of gestators who are burdened with the task of protecting their unborn children, the anxieties relating to the effects of “gender-bending” chemicals that are fostered by mainstream environmental advocacy, the anger and hurt felt by queer and trans folks who are habitually excluded from considerations of how endocrine-disrupting chemicals differentially affect different groups of people, or the sadness, anger, and feelings of being let down that are felt by those who suffer symptoms of diagnosed and undiagnosed conditions and diseases that may have been caused, triggered, or modulated by endocrine-disrupting agents—such as the hormone-related migraines that I suffer from. In addition to the emotions that are provoked by known, suspected, or perceived exposure to chemical

⁸ For further discussion about the links between scientific and popular media rhetoric on endocrine disruption, normative masculinity, and far-right ideology, see Perret (2020).

⁹ See, for example, Ah-King & Hayward (2014), Birke (2000), Chen (2012), Davis (2015; 2022), Di Chiro (2010), Hayward (2014), Kier (2010), Lee (2020), O’Laughlin (2016; 2020), Oppermann (2016), Pollock (2016), Robyn & Mykitiuk (2018), Scott, (2009), and Shotwell (2016).

endocrine disruptors, we can further observe emotions that are caused and modulated by brain chemistry being affected by endocrine-disrupting actions, as well as the interactions between the two.

The adverse outcomes that have been linked to exposure to chemical endocrine disruptors include effects on neurodevelopment and brain functions. Such disruptive influences on thoughts, feelings, and motivations are not commonly discussed in relation to endocrine disruption. But even though these impacts on emotions have generally been overlooked in previous research on endocrine disruption, examinations of emotional symptoms have taken center stage when the effects of physiologically produced hormones have been considered. Fluctuations in endogenous (physiological) hormones during puberty, pregnancy, and menopause, as well as over the course of the menstrual cycle, have long been associated with sensory, cognitive, and emotional changes. These result in symptoms such as anxiety, irritability, mood swings, difficulty in concentrating, fatigue, lethargy, insomnia, social withdrawal, depression, paranoia, and feelings of being overwhelmed and out of control, which have been attributed to underlying hormonal changes in female (and, to a much lesser extent, male) bodies. Furthermore, adverse influences on sensory and cognitive capacities, as well as emotions, have been associated with the use of hormonal medicines and listed as common side effects of hormonal contraception, hormone replacement therapy, and fertility-stimulating treatments and assisted reproductive technologies that make use of synthetic hormones. Both scientific studies (Brooks-Gunn et al., 1994; de Vied & van Keep, 1980; Freeman et al., 2004; Golightly & Young, 1999; Hoagland, 1957; Marceau et al., 2015; Rio, 2014; and Toffol et al., 2013) and the testimonies of those who have experienced emotional symptoms resulting from fluctuations in endogenous hormones (notably, many period-tracking apps contain a mood-tracking function) or as a consequence of medical interventions confirm the vital influence that hormones have on our emotions, with even the slightest change in their levels being reflected in our emotional makeup.

As a teenager I suffered from anxiety and depressive symptoms. When I was eighteen, I received my first prescription for hormonal contraception from my gynecologist. I started to use it in a continuous manner and my mental health improved. My mood became more stable and less prone to the episodes of feeling down. A positive effect of the continuous use of contraceptive hormones on my emotional well-being has been confirmed whenever, for various reasons, I discontinued their use. Following withdrawal of synthetic hormones, I experienced adverse symptoms, both physical and psychological, with the psychological distress being more serious and lasting than physical changes, which went away after some time. In addition, since my thirties, I have been suffering from migraines. Contraceptive hormones used in extended cycles have helped me manage my condition and live well with migraines.

In my inquiry into chemical endocrine disruptors, I have drawn on this experience. Insofar as endocrine-disrupting chemicals are increasingly entering and acting upon our bodies, then, I argue, they also play a part in the fundamental processes that shape our hormonal makeup, and thus also our emotional well-being and subjective experience. The Endocrine Disruption Tracker Tool (EDTT) is a speculative instrument that I have created (Veselá, 2022) which foregrounds disrupted emotions as an index of endocrine disruption. I have developed the EDTT as a tool for a collective investigative practice in which I can examine, together with other research participants, what we can learn about endocrine disruption if we consider how our emotions are affected.

The EDTT is modeled on a tool for diagnosing premenstrual syndrome and premenstrual dysphoric disorder, two medical conditions that are caused by changes in hormonal levels in the second half of the menstrual cycle and the first few days of menstruation, leading to a range of physical and emotional symptoms, with the emotional symptoms resulting in greater impairment than the physical symptoms. The EDTT has been adapted from the 2021 variant of the Premenstrual Symptom

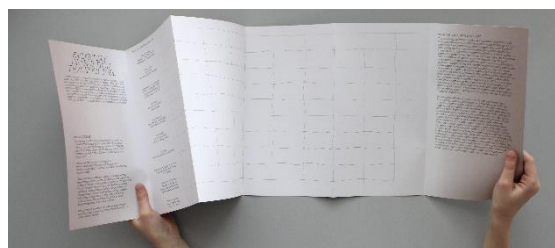
Tracker that has been developed by the International Association for Premenstrual Disorders (2021), using the same set of ten emotional symptoms, while leaving out the eleventh symptom—the only physical symptom on the list.¹⁰ The physical symptom was left out to keep the focus on the psychological disruptions and to make the tool gender inclusive. Significantly, the EDTT adapts the original design by expanding the functional range to cover emotional symptoms that are caused by the production and interplay of hormones and hormone-disrupting chemicals.

The EDTT invites participants to examine their emotional symptoms over a period of 10 days. Each day during the investigation period, participants take a moment to make observations about the emotional symptoms listed in the EDTT and note their observations in the chart. They consider emotions both as they are personally experienced and as they are shared with or observed in others. Participants describe the emotion and the situation in which they experienced it. They then reflect on how it impacted their daily life and well-being. In addition, they think about the possible influence of exposure to disrupting chemicals on the onset of the emotion and the degree to which it was felt.

The EDTT opposes an individualized understanding of the exposure to chemical substances and an individualized responsibility for the endurance of their impacts. Contrary to medical handbooks and self-tracking apps for the self-management of a medical condition that the EDTT refers to by its aesthetics, it does not provide an individual diagnosis or prognosis, nor does it offer a solution in the form of an individualized preventive or therapeutic intervention. Instead, it is a tool for a workshop practice drawing attention to the necessity of a political response to the problem of environmental chemical disruptors and involuntary exposure to them. The EDTT is intended as a means for the discussion about the exigencies of our lives, as affected by

chemical exposures, and the possibility of a politics for anti-toxic actions that foster and exercise solidarities in opposition to nonconsensual chronic exposure to environmentally ubiquitous endocrine-disrupting chemicals—collectively and affectively.

The EDTT invites participants to examine their emotional symptoms over a period of 10 days.



¹⁰ Printable version of the Premenstrual Symptom Tracker developed by International Association for Premenstrual Disorders (IAPMD), as well as a tracking app based on it,

can be downloaded from the IAPMD website:
<https://iapmd.org/symptom-tracker>.



Endocrine Disruption Tracker Tool, Veselá (2022).

Uncertain Effects

Prior to conducting the first workshop with participants, I presented my proposal at several conferences and symposia, receiving important feedback.¹¹ Some of the female attendees of these events who had observed changes in their emotions resulting from hormone

fluctuation during the menstrual cycle or because of synthetic hormone intervention

were particularly intrigued by the idea of using this experience to relate to environmental chemicals. At the same time, they expressed reservations whether the changes in their mood can be attributed to environmental endocrine disruptors in the same way they were able to link them to endogenous or synthetic hormones. As one attendee pointed out:

When I started to use [hormonal] contraception, I could tell something changed, I didn't feel like myself. I felt

tense, on edge, and irritable. It was so bad that I decided to switch to a different [contraceptive] method. After that, things went back to normal. This way I knew, my contraception was to blame. But how can I tell when I am exposed to [environmental] chemicals? How do I know when they exert their influence on me and my emotions?

Indeed, it is not possible to identify when chemical endocrine disruptors are involved, specifically, with a high degree of confidence. The influence of chemical endocrine disruptors cannot be distinguished from the actions of endogenous hormones and exogenous hormonally active agents, such as self-administered synthetic hormones and medications or naturally occurring phytohormones that are absorbed from our diets, as well as the many other nonhormonal influences (biochemical and social) that also affect us. Environmentally ubiquitous endocrine-disrupting chemicals penetrate our bodies and interfere with the normal functioning

¹¹ Invited lecture "Mé chemické já: o životě s toxickými chemickými látkami (a navzdory jim)" [My chemical self: On life with and despite toxic chemicals] for the course Antropologie, tělo a biotechnologie [Anthropology, body, and biotechnologies], Faculty of Social Studies, Masaryk University, Brno, 29 November 2022; invited talk "Endocrine disruption tracker tool" for symposium *Toxic futures and the creative process*, Planet B—Module for sustainability and civilization issues, UMPRUM, 27 October 2022, <https://www.umprum.cz/cs/web/umprum/udrzitelnost/planeta-b/toxicke-budoucnosti-a-kreativni-proces>; paper "Getting angry with environmental chemicals," *Earth sensations: Affects, sensibilities and attachments in an era of climate change*, Aarhus Institute of

Advanced Studies, Aarhus University, Denmark, 13–14 October 2022, <https://aias.au.dk/events/earth-sensations>; paper "Endocrine disruption tracker tool", *Vienna ethnography lab: Relating risks*, Department of Social and Cultural Anthropology, University of Vienna, 28–30 September 2022, <https://ksa.univie.ac.at/en/departments/events/vienna-ethnography-laboratories/>; "Keeping track of the Anthropocene: Endocrine disruption tracker tool" in panel "Posthumanism/new materialism," *11th European feminist research conference: Social change in a feminist perspective: Situating gender research in times of political contention*, University of Milano-Bicocca, 15–18 June 2022, <https://11efrc.unimib.it/>.

of our endocrine systems to a degree that remains unknown. Accordingly, it is not possible to determine the precise extent to which chemical endocrine disruptors are able to affect our emotions. Given their ubiquity, it is likely—even certain—that they are influencing our emotions. But how extensive this influence is, and whether it is always detrimental, resulting in emotions that are considered to be “negative,” “unpleasant,” or “unhappy,” cannot be determined.

This indeterminacy goes beyond the mere uncertainty about the causal ties linking endocrine disruptors with disrupted emotions. Indeed, the very possibility of these causal relations being established in the first place comes into question. Indeterminacy relates to complexity that is characterized by the actions of multiple entangled components interacting in situated ways, yielding nonlinearity, randomness, collective dynamics, and emergence. In this respect, indeterminacy also relates to the notion of “becoming,” especially as it is discussed by the feminist theorist Karen Barad (2007), who understands it to be a counter-causal process. According to Barad, “becoming” signifies the mutual constitution of entangled material and social phenomena coming into being out of the different possibilities that occur at each moment. It therefore follows that cause and effect—as well as other binary distinctions, such as “natural” and “synthetic,” “clean” and “polluted,” or “beneficial” and “harmful”—do not exhibit clear-cut boundaries, but only become determinate and meaningful in the dynamic and open-ended processes of becoming.

The indeterminacy of the effects of endocrine-disrupting substances that results from their unfolding performatively and relationally by no means gives grounds to excuse the violence of involuntary chemical exposure or to relativize its effects. Rather, it foregrounds the necessity of uncovering and opposing the structural

conditions and systemic arrangements that make this violence possible—urging us to shift our attention from the “damaged” bodies of victims of pollution to the damaging colonial practices of the perpetrators of chemical violence, who are responsible for the reckless actions of chemical manufacturing, application, and disposal.¹² The notion of “becoming” helps us to grasp the indeterminacy of how endocrine-disrupting substances unfold and emerge relationally and differentially, beyond the normative and essentializing dualisms outlined above, prompting us not only to investigate unjust chemical relations, but also to ditch purity politics and attend to the emancipatory possibilities that chemical becoming can give rise to. The notion of “becoming” encourages us to keep the lines of our inquiry open, to embrace impure and contaminated forms of life and affirm their capacity to recompose into something else, and to search for new, surprising, and unpredictable ways of living well with the presence of “bad” chemicals—the nascent forms of resilience, “chemical kinship” (Balayannis & Garnett, 2020), queer survival, and resurgent life that are asserting themselves and continuing nonetheless.

It follows that a consideration of our emotions as they are affected and modulated by endocrine-disrupting chemicals cannot provide conclusive answers about the current state of endocrine disruption. Nonetheless, locating the effects of endocrine disruption in our irritability, anxiety, sadness, sleeplessness, or inability to concentrate underscores our shared (albeit unevenly) fragility and vulnerability when it comes to the chemical transformation of the planet. Furthermore, it raises awareness of how closely interconnected we are becoming with the planetwide networks of man-made chemicals. By attending to these subtle—and not necessarily always harmful—effects of exposure to the endocrine disruptors that have become an inescapable part of our lived

¹² Indigenous Studies scholar Eve Tuck (2009) uses the term “damage-centered research” to refer to research that documents people’s pain, brokenness, and suffering in order to hold those in power accountable for the oppression that they have perpetrated. According to Tuck, the possible gains of research that describes people, communities, or

environments as “damaged,” “polluted,” or “toxic” do not warrant the costs of thinking about ourselves or others in reference to such terms. Tuck urges communities, researchers, and educators to reconsider how research is framed and conducted, and to rethink how research findings could be used by, for, and within communities.

experience (rather than displacing them as impending threats to infertility and causes of cancers), we can bring about a politically generative understanding of our collective becoming within the confines of industrially transformed circumstances. And by reflecting upon the mobility and interactivity of chemical endocrine disruptors, as well as the porosity of the body, in terms of its absorption and excretion of chemicals, we can unsettle the atomistic conception of humans as bounded individuals who are separated from the broader collectivity of nonhuman life in the shared environment of Earth. Our contemplation and experience of the far-reaching effects of endocrine-disrupting chemicals on our emotions not only constitute valuable sources of situated—and felt—knowledge of the effects of these chemicals, but also an important basis for initiating cross-species solidarity and actions that are rooted in interconnectedness, interdependency, and mutual becoming, in an ever-changing and ever-diminishing world. To the extent that endocrine disruption can be felt at the levels of individual cognition and emotion, considering these impacts invites us to think about and feel the effects of endocrine disruption, even though our thinking and feeling has already been disrupted by these effects—encouraging highly subjective and deeply personal accounts of endocrine disruption. In doing so, such consideration can open up a space for addressing the effects of endocrine disruption from situated, personally engaged, and emotionally charged points of view, which are vital for fostering and exercising solidarities in opposition to nonconsensual chronic exposure to endocrine-disrupting chemicals.

Exposures and Emotions

The first workshop with a small group of three participants comprised two four-hour sessions on 21 October and 4 November 2022. The participants, selected through an open call, included: Eliška, a female university student of environmental chemistry, Ondra, a male university student of international relations and

European politics, and Pavel, a recent graduate of physical education and sport, currently working as a sports instructor for children.¹³ The first part of the workshop focused on the participants' awareness of chemical exposures. The questions and prompts that I shared with them encouraged them to discuss exposure to environmental chemicals, voluntary exposure to synthetic drugs and medicines, and the possible influence of both on their health and well-being. Coincidentally, both Eliška and Ondra are from Ostrava, a former coal-mining and metallurgical center and one of the most heavily polluted areas in the country. During their childhood years, the air pollution in Ostrava was so bad at times that the schools closed, and people were advised not to go out. Eliška detailed how during those years she was frequently ill and suffered from asthma and allergies. Eliška mentioned that she also started to suffer from anxiety and depression while in Ostrava, introducing the topic of mental health into discussion. All the three participants were interested in environmental issues, including water, air, and soil pollution. As Ondra stated, speaking for all of them: "We are aware of it, and we are on the side of those who think something should be done about this." At the same time, they saw the problem of pollution as a future rather than immediate threat. All of them had trust in the system of chemical regulation protecting public health in the European Union and the Czech Republic. That said, they also believed that it is reasonable to try to prevent chemical exposures individually even though preventive and protective measures can be time-consuming and costly. They provided accounts of the ways in which they protect their health by, for example, avoiding food with too many chemical additives or buying fruit, vegetables, and meat from smaller farmers rather than conventional production.

At the end of the first part of the workshop, I gave participants copies of the EDTT, explaining the ideas behind it and how it should be used. During the two weeks before the next part of the workshop, the participants

¹³ Participant information and views are shared here with their permission.

completed the EDTT review by examining the list of emotional symptoms, making observations individually, and noting the emotions in the EDTT chart.

The focus of the second part of the workshop was on the possible influence of chemical exposures on the participants' emotional health. The session started with the participants taking turns to share what they learned about their emotions and the emotions of others while completing the review. The workshop continued with participant-driven discussion of the role of emotions in both their private lives and the public realm, the prevalence and treatment of the feelings of anger, irritation, frustration, and sadness in both of these spheres, and the possibility of their emotions being impacted by endocrine disrupting chemicals, including the prospect of tracking and affirming these emotions, as they are affected by chemical exposure. I offered the participants prompts and questions to guide their discussion, while also encouraging them to steer the agenda according to their unfolding interests and needs. The issue of talking publicly about privately experienced "unhappy" or "negative" feelings, such as loneliness, anxiety, sadness, annoyance, or anger, emerged as the key concern that participants kept returning to throughout their debate. Interestingly, while they claimed to mostly keep these emotions to themselves to avoid bothering others with them, they said that they did not feel bothered when others expressed and shared these emotions with them. In Ondra's words:

If I considered some "negative" emotions, sadness or anger, for example, then I would say, I am affected. But I try not to transfer them to others. I don't want to burden others with them. At the same time, however, I don't mind taking on emotions of others, unless there are too many of them.

Eliška mentioned that she formed a self-help support group with her friends whose life is also marked by mental health struggles. Within their group, they can talk about their emotions freely and honestly:

We found each other because we share this and can talk about it together. It really helps me. I have "normal" friends too but they can never understand this. It is much easier to talk about it with someone who knows what I am talking about.

Eliška also talked about how her struggle with anxiety and depression was dismissed by her family as something that she had made too much fuss about, with her parents insisting that it was just part of her puberty, and she would grow out of it. Eventually, Eliška sought help on her own. With the help of therapy, medication, and support from her friends, she was finally able to get her condition under control. Eliška also explained that while in high school she was unable to hide her condition and everyone knew, she decided to keep her anxiety and depression secret from people at the university and her part-time job. She did not mind people in high school being aware of her condition, as it made her life easier—nobody acted surprised or made a big deal out of it when she broke down in the class and started to cry uncontrollably. At the same time, she deliberated, people knowing can be a double-edged sword, and while it could make her life less complicated in some ways, it could also backfire and harm her career and relationships. Which is why, after giving it a lot of thought, she decided not to tell her current colleagues at school and work.

The workshop succeeded in raising awareness about the possible influence of endocrine disrupting chemicals on emotions. The participants were well acquainted with the problematics of environmental exposures and precautionary measures to prevent them but their influence on thoughts, feelings, and motivations, they admitted, was not something they had considered. Following the workshop debate, they were all convinced that environmental chemicals do affect emotions and mental health, albeit in much lesser extent than other influences, such as study- or work-related stress, relationships with friends and family, or some pharmaceutical and recreational drugs. The workshop concluded with a speculative part in which participants

elaborated on what would change, if we knew that chemical exposures are indeed disrupting our emotions significantly. Responding to the speculative scenario, they said that it could spark significant changes and transform both their private lives and society at large. The ability to talk about privately experienced “unhappy” or “negative” feelings openly in public emerged, once again, as the key point of the debate. Eliška, for example, said:

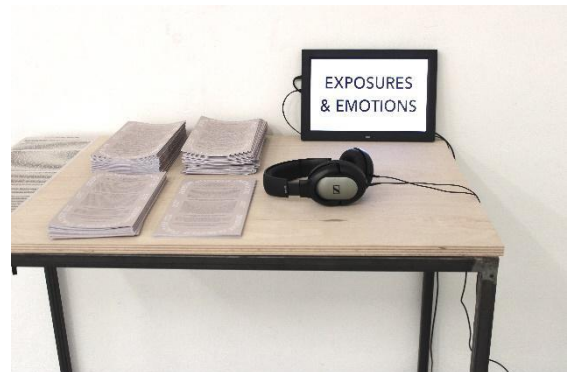
It wouldn't be as problematic for me to talk about them [emotions] because I would know that they were not my fault. And they are not my fault anyway. Like if I had a skin rash from bad water, I would talk about it differently, knowing that it was not my fault. I wouldn't have problem saying that, because of the bad water, I suffered from that. It would be better, I think.

Ondra agreed and added:

I agree that it would make it easier to talk about it. It would also likely be part of a big social debate. It would become something that we could talk about because it would be happening without us being to blame. It would be like, “Everyone experiences it, so we can talk about it. Because everyone knows what it is about.” I think there would also be a social movement to address it and acknowledge it. I don't know what to compare it to. It isn't comparable. But generally speaking, it would gain traction in the society, if it were clear that it was an external influence rather than a problem of each of us individually.

And Eliška responded:

I think that the individualized approach is prescribed by the society. Because my problems are not talked about, it is hard for me to... I don't talk about it when I meet someone new because I don't want to bother them. But if it were normal to talk about it... [...] If it were completely normal, I would also experience my emotions differently.¹⁴



Exhibition presentation of the EDTT project, *Synthetic Becoming*, FaVU Gallery, Brno, 6 December 2022–10 February 2023¹⁵.

Getting Angry with Endocrine-Disrupting Chemicals

¹⁴ Workshop recording *Exposures and Emotions* can be accessed at https://youtu.be/rP9_o9D3j7E. With the focus on the story of one of the participants, the recording captures the workshop discussion concerned with involuntary exposure to environmental chemicals, voluntary exposure to synthetic drugs and medicines, and the possible influence of both on emotions.

¹⁵ Malin Ah-King & Eva Hayward, *Aliens in Green*, Konstantin Biehl, Anjali Rao-Herel & Jacquelyne Luce,

Maddalena Fragnito & Zoe Romano, Annabel Guérédrat, Rian Ciela Hammond, Franziska Klaas & Susanne Bauer, Marne Lucas, Mary Maggic & Perrformat, Byron Rich & Liz Flyntz, Rosæ Canine Collective & Mariana Rios Sandoval, Lenka Veselá, Ker Wallwork & Juliet Jacques, *Synthetic Becoming*, curated by author, Galerie FaVU, Brno, 6 December 2022–10 February 2023.
<https://artalk.cz/2022/12/27/synthetic-becoming-v-galerii-favu/>

Chemical pollution has now reached a dangerous global level. Under the various regimes of Western industrial modernity, all corners of the planet and all parts of our bodies have been exposed to, and affected by, industrially manufactured chemicals. We live in an era of absolute and permanent exposure, where nothing is safe or pure, so the only way forward is to continue with—and despite—the presence of toxic anthropogenic chemicals. Chemical exposure has become a condition of living in/with industrial modernity, and this understanding calls for effective forms of resistance, not only in terms of demanding the accountable production, use, and disposal of chemicals, but also in terms of cultivating forms of resilience that are attuned to the experience and requirements of lives that have already been altered by exposure to man-made chemical agents. What do industrial chemicals bring to our lives? And how do we “make-with” (Haraway, 2016) and continue to live with them, despite their potential for harm?

In the essay, I reflected on a practice tackling these questions with the assistance of a speculative design tool called the Endocrine Disruption Tracker Tool. The EDTT foregrounds that endocrine-disrupting chemicals affect, among other things, our brain chemistry and, as a consequence, our thoughts and feelings. Through the material effects of exposure to them, the physiology of our perception, cognition, and emotions—the very ways in which we encounter and interpret the world around us—is now being reconstituted. The EDTT invites us to attend to and act upon these changes to our sensory and cognitive

capacities, as well as our emotional well-being. In this way, it helps us not only to come to terms with modern life—as it is continually reshaped by industrial chemicals—but also to form the basis of an embodied, experientially and materially grounded politics opposing involuntary chronic exposure to environmentally ubiquitous endocrine-disrupting chemicals.

The speculative approach can be a fitting way to address the issue of environmental endocrine disrupting chemicals, whose harmful effects are uncertain but real. To the extent that we have only looked at the tip of the iceberg, as the WHO–UNEP report claims, the speculative approach can help us confront the uncertainties and ambiguities of our chemicalized existence and underscore the urgent need for systemic precautionary measures. Together with other participants, we examined the likely influence of chemical endocrine disruptors on our emotions and the possible role of these emotions in addressing the hidden, slow-moving, and emerging realities of chemicalized life. We explored the potential consequences of feeling angry, frustrated, and sad with endocrine-disrupting chemicals as they continue to exert their influence on us and the possibilities that the collective and public expression of these feelings could open up. Our collective practice has thus provided the initial bearings for a vision of the future that is liberated from oppressive chemical relations—and for a political project that, by opposing the chemical violence that systematically impairs life in all its forms, has the potential to get us there.

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Author information

Lenka Veselá (ORCID: n/a)

xvveselal@gmail.com

Lenka Veselá is a PhD candidate and assistant at the Department of Theory and History of Art at the Faculty of Fine Arts in Brno, Czech Republic. Her art-based research practice concerns "synthetic bodies" (bodies emerging by synthesis—interconnected with and dependent on the broader collectivity of human and nonhuman life that exists within a shared environment) and "synthetic bodies of knowledges" (knowledges synthesized across multiple sites). She is a lecturer, organizer, and feminist thinker advocating for inclusive forms of transdisciplinary knowledge production. She is an initiator of a collective monograph *Synthetic Becoming* (K. Verlag and Brno University of Technology, 2022) bringing together work by artists, activists, and feminist technoscience practitioners concerned with sympoietic becoming with hormones and hormone-mimicking chemicals.

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The multiple status of food in contemporary feminist dystopias: a neo-materialistic approach to The New Wilderness by Diane Cook

El estatus múltiple de la comida en las distopías feministas contemporáneas: una aproximación neomaterialista a The New Wilderness de Diane Cook

L'estatus múltiple de l'alimentació en les distopies feministes contemporànies: un enfocament neomaterialista de The New Wilderness de Diane Cook

Marta Olivi (ORCID: 0000-0003-0404-0715) University of Bologna

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Abstract

The feminist dystopia has always resorted to material contexts and features to substantiate its political positions. Among these, food has a peculiar position; in relating issues pertaining to both the biologic and affective spheres, it can dismantle oppositions between material and immaterial. These multifaceted aspects can be analysed through New materialism, framing food procurement, preparation and consumption as performativity (Barad, 2003) between human and non-human. The analysis of Diane Cook's (2020) *The New Wilderness* in this direction will show how food substantiates the intersection between the animality of the Wilderness and its scientific framing, merging human bodies with surrounding contexts.

Keywords

Feminist dystopia; food studies; posthumanism; Diane Cook

Resumen

La distopía feminista siempre ha recurrido a contextos y rasgos materiales para fundamentar sus posiciones políticas. Entre estos, la comida tiene una posición peculiar; al relacionar cuestiones pertenecientes tanto a la esfera biológica como a la afectiva, puede desmantelar las oposiciones entre lo material y lo inmaterial. Estos aspectos multifacéticos pueden ser analizados a través del Nuevo Materialismo, enmarcando la obtención, preparación y consumo de alimentos como performatividad (Barad, 2003) entre lo humano y lo no humano. El análisis de *The New Wilderness* de Diane Cook (2020) mostrará cómo la comida fundamenta la intersección entre la animalidad del Wilderness y su encuadre científico, fusionando los cuerpos humanos con los contextos circundantes.

Palabras clave

Distopía feminista; estudios alimentarios; posthumanismo; diane cocinera

Resum

La distòpia feminista sempre ha recorregut a contextos i trets materials per fonamentar les seves posicions polítiques. Entre aquests, el menjar té una posició peculiar; en relacionar qüestions pertanyents tant a l'esfera biològica com a l'afectiva, pot desmantellar les oposicions entre allò material i allò immaterial. Aquests aspectes multifacètics poden ser analitzats a través del Nou Materialisme, emmarcant l'obtenció, preparació i consum d'aliments com a performativitat (Barad, 2003) entre allò humà i allò no humà. L'anàlisi de *The New Wilderness* de Diane Cook (2020) mostrarà com el menjar fonamenta la intersecció entre l'animalitat del Wilderness i el seu enquadrament científic, fusionant els cossos humans amb els contextos circumdants.

Paraules clau

Distopia feminista; estudis d'alimentació; posthumanisme; Diane Cook.

Introduction and state of the art

The relationship between what is commonly referred to as the sprawling genre of the feminist dystopia¹ and our extraliterary, real world is by all means a fraught one. One of the earlier theorists of the genre, Ildney Cavalcanti, recurred to the rhetorical figure of the catachresis to explain how “feminist dystopias display a more deviant relationship with their referents when compared with realistic (mimetic) literary forms” (2003, p. 49). More recently, Sarah Dillon (2020) returned on the topic to point out that many dystopias written in the last decade have been closing the gap between the narration and what Darko Suvin, talking about SF², described as “the “zero world” of empirically verifiable properties around the author” (Suvin, 1979, p. 11).

This connection with the real, empirical world is often created and/or remarked through the usage of concrete objects which make us recognise the dystopian worlds as concretely based upon ours. This connection was already pointed out in the broad field of Utopia³, with Moylan (2021) stating that, in that regard, “the subject matter has always mattered” (2021, p. 108), and through Jameson’s description of materialism as “a haunting which invests even the most subordinate and shamefaced products of everyday life” (2005, p. 6). This “matter that matters”, either by explicit allegory or through the “haunting” of everyday objects, becomes particularly hard to miss in dystopias, and especially so in feminist dystopias, in which what Jameson described as “an attention to the body which seeks to correct any idealism or

spiritualism lingering in this system” (*ibidem*) is often the very core of the patriarchal, misogynistic, objectifying dystopian society⁴. Such concrete attention to the woman’s body takes the form of a matter-of-fact realism that creates “grimly inexorable (...) fictive world(s)” (Dillon, 2020, p. 171): worlds that do not want to strike the reader as different than theirs, but which are characterised by a realism that makes them scarily similar to ours, down to the very objects that constitute them.

Such everyday objects are significantly used to represent and to underline the strong polarisations that lie at the core of the dystopian systems, which are based on the construction of polarised hierarchies by means of that very same allegorical and concrete narrative power of everyday objects. The allegoric power that objects have about creating dichotomies, channelling “the binary and polarizing oppositions of matter/mind and nature/culture” (Braidotti, 2022, p. 111), is thus expressed to forcibly identify women with the material, natural, objectified side of the dystopian society, determining a radical class (as seen in Jameson, 2005) and gender (as seen in Monticelli, 2008) polarisation among those who inhabit the dystopia, who are clearly and materially divided in the eye of the reader⁵.

Starting from this acknowledgment, this paper aims to demonstrate that the utopian horizon that characterises contemporary critical dystopias (Moylan, Baccolini 2003), and which Dillon pointed out as being harder and harder to find in contemporary dystopias is actually still present: it comes to reside in how the female

¹ About the history of the term and in particular the relationship between “genre” and “gender”, see Baccolini (2000) and Cavalcanti (2003).

² Dillon’s important reconnecting of feminist dystopias to the SF is also extremely relevant because it allows us to put the genre on the same trajectory of neo-materialistic philosophy, bridging the gap between theory and literature. SF here is not only to be read as the genre of “cognitive estrangement”, in Suvin’s (and Dillon’s) sense, but also, to recur to Haraway’s words, “science fiction, speculative fabulation, string figures, speculative feminism, science fact, so far.” (2016: 2).

³ Following the attempt to bridge philosophical theory and literary practice stated in the previous footnote, it is useful here to quote Lyman Tower Sargent’s definition of Utopianism: “I define the broad, general phenomenon of utopianism as social dreaming – the dreams and nightmares that concern the ways in which groups of people arrange their lives and which usually envision a radically different society than the one in which the dreamers live.

But not all are radical, for some people at any time dream of something *basically familiar*” (1994: 3, emphasis mine).

⁴ Dillon (2020) gives an example of this matter-of-fact dystopian realism: the TV series *The Handmaid’s Tale*, which premiered on Hulu in 2017. In the series, we see women forcibly identified with, and repressed through, their bodies, through extremely realistic acts and weapons of violence and submission (FGM being only one among the others).

⁵ More fictionalised examples of this object-driven essentialisation can be found in the use of colours and garments in *The Handmaid’s Tale* (Margaret Atwood, 1985), the two-colours tickets in *Blue Ticket* (Sophie Mackintosh, 2020), food which exemplifies wealth differences in *Sweet Fruit, Sour Land* (Rebecca Ley, 2018), the physical restriction within the areas of the school in *Only Ever Yours* (Louise O’Neill, 2014), the concreteness of the walls in *Leila* (Prayaag Akbar, 2017), and the Summer of Fruition dividing young people from adults in *Gather The Daughters* (Jennie Melamed, 2017).

protagonists manage to operate a resemantization of their immediate, material, objectual surrounding contexts, in order to break the dichotomies and the hierarchies they represent, thus escaping the rigid and objectified polarisations which were pointed out as the basis of the dystopian system. This epistemological and ontological search of alternatives to the dystopic binarism of course falls well within the neo-materialistic and post-anthropocentric thought deriving from a “a specific theory of materialism that avoids dichotomies” (Braidotti, 2022, p. 121); in order to do so, the field of inquiry will be restricted to a specific class of symbolic objects which has an unparalleled capacity to bridge the aforementioned divides, namely, food.

Such an analysis of food, which will occupy the first part of the paper, will be of use to carry out a textual analysis of *The New Wilderness* devoted to assessing how this potentially utopian relationship between the female subjectivity and its material contexts can be constructed in a post-anthropocentric sense, so as to “disrupt our habitual humanisation of reality in order to uncover more-than-human realities and the ways in which the human is shaped by and co-evolves with nonhuman matter and object agencies” (Moslund et al., 2021, p. 3). Indeed, Cook’s novel was already pointed out by Atasoy and Komsta as “Anthropocene fiction” (2022, p. 2), which, as Neumann says, “create(s) radically new narrative forms that point toward alternative flat ontologies” (2019, p. 97). Within this novel, then, the objects which permeate the settings (and which not by chance congeal around the semantic field of food and foodways, as will be seen) assume a decidedly allegoric quality, suggesting a possible new ontology; Komsta and Atasoy remark “the text’s allegorical undertones”, as well as “an approach toward nature that contravenes hierarchical and

dichotomous means” and, most importantly, the novel’s “strength and transformative potential which (Cook) blends with fictional and factual elements”. (2022, p. 3-4). Therefore, the novel, through the “sympoietic model” (Komsta, Atasoy, 2022, p. 4) it puts forward, allows us to see how food-mediated relationship between human and non-human are a crucial step in order to deconstructing the “dichotomous mind-set” (Komsta, Atasoy, 2022, p. 5) of the dystopian system, creating a connection with the extraliterary, factual world of the readers through the familiarity and commonplace quality of the objects, and therefore managing to inspire in them a concrete critical and transformative response that goes beyond the literary text.

A particular type of object: food

Having framed the material dimension of dystopias as something that can potentially be subject to a resemantization capable of going beyond the dystopian dualistic thought, before going on to see how this is played out in *The New Wilderness* we will narrow our focus on a particular type of everyday object that plays an essential role in interrogating how women⁶ manage to symbolically and materially interact with their dystopian surroundings: food. Food is uniquely pervaded by a conjuncture of multiple symbolic and material capacities, especially concerning its meaning and its relationship to women’s existence. Relating issues pertaining to both the biologic, bodily sphere and the psychological and affective one food can often become a locus of creation for new, positive, resistant meanings in bleak, dichotomous settings as the dystopian ones which were sketched earlier.

For this reason, the negotiation between interpretations of food as both a concrete and

⁶ The choice of focusing on the social category of “women” is dependent on my reliance on the findings of feminist food studies as the starting step of my analysis. As will be clearer later, according to such views food is no mere object, but it is something which is always layered with social interpretations and meanings, as well as contributing to shape further preconceptions about genders and about the social status of women in various sociocultural contexts. This implies “the way that gendered discourses on food and eating reinforce body-policing cultural narratives aimed at women” (Jovanovski, 2017: 1) as well as including the

acknowledgment that “women have unique relationships with food in care work (of people, animals, and the natural environment); as food providers in the private and public realms; or in many cases as farmers, fishers, hunters, and gatherers. In these important relationships with others, the earth, and with our bodies, we *embody* our relationships with food and our food practices define who we are. Food speaks to the core of our identities and to our relationships with each other and to the world around us.” (Parker et al., 2019: 5).

metaphorical symbol can be seen as performative (Barad, 2003), with regards not only towards the body/mind dichotomy but also towards the wider material/immaterial and human/non-human binaries. The performativity of food's procurement, preparation and consumption, as well as the numerous meanings that are produced and attached to it, are based on a constant interplay of human and non-human agents that correspond to what Barad (2003) describes as intra-activity, linking together who consumes and who/what is consumed and destabilising the binary opposition of subject and context.

A neo-materialistic interpretation of food, especially concerning its use in dystopias, will allow us to see that, while food is part of our surrounding economic, social, natural and material contexts, its intra-activity with countless human and non-human agents undeniably makes it a peculiar type of material object: through all the phases of its production and both the material and symbolic act of eating, it becomes part both of the human biological body and of one's identity. The very act of eating can thus be framed as an intra-action that entwines the human body and identity to its material, non-human and contextual surrounding.

Let us see up close how food in dystopias contributes to the dismantling of these binaries. First, food is clearly linked to the biological, bodily sphere of human embodiment, and as such it can be used to symbolise how the economy of the dystopian system impacts the everyday life of the dystopian citizen. This aspect of food as a marketable product was already pointed out by the sheer economic focus of Jameson (2005) and by the first analysis of the theme of food in dystopia carried out by Tower Sargent (Tower Sargent, 2015, 2016) and by Fátima Vieira's work – it is relevant here to quote her co-edited volume, aptly titled *Utopia Matters: Theory, Politics,*

Literature, and the Arts (2005). Yet within feminist dystopias food becomes of paramount importance and recurrence⁷. Food is a constant theme within the genre, and it is used to stress the materiality and precarity of the women's bodies, whose survival is threatened by the system and often depends upon how women can offer their bodies back to said dystopian system. The process of producing food according to the tenets of an economic context and the physical act of eating it, thus having it become part of a biological body, can therefore be interpreted not merely as a hierarchical interaction between a consumer and a consumed object, but as part of a performative network of intra-actions (Barad, 2003) that blurs the boundaries between the subject and the object of consumption. Through the socially determined act of food retrieving, preparing and producing, women contribute to creating the food, just as the food they consume ends up becoming part of their body and their identity, both materially and symbolically. In this way, women themselves are shaped by the society to which they collaborate (often forcefully, if they want to survive, as is the case of *The New Wilderness*) and by the food they must contribute to prepare. This apparently subordinate position actually gives them the agency that comes from being part of the meaning-creation potential that characterises food as a peculiarly symbolic object.

For this reason, food, through its powerful and unique symbolic capacity, always layered with immaterial meanings, demonstrates perfectly New materialism's essential tenet that no material, biological feature is merely so. Food is not only imbued with economic and social meanings, but it is also loaded with symbolisms linked to the affective and identitarian sphere, and is the core of a network of intra-active relationships which mutually change numerous subjects. As such, it can be framed as the perfect locus of the aforementioned resemantization process that constitutes the

⁷ Other novels which demonstrate this connection between food and the existence of women within dystopias are: *Under the Skin* by Micheal Faber (2000); *The Handmaid's Tale*, but especially its sequel, *The Testaments* (2019); *Sweet Fruit Sour Land* by Rebecca Ley (2018); *The Water Cure* (2018) and *Blue Ticket* (2020) by Sophie Mackintosh; *Gather the Daughters* (2017) by Jennie Melamed; *Blonde Roots* (2009) by Bernardine Evaristo; the *MaddAddam*

trilogy (2003 – 2013) by Margaret Atwood; *Only Ever Yours* (2015) by Louise O'Neill; N. K. Jemisin short stories "Cuisine des Mémoires" (2018) and "Give Me Cornbread or Give Me Death" (2018). It is not a coincidence that many of these texts overlap with the previous list of dystopias in which objects have a great symbolic value: food's heavily symbolic potential is often recognised and narratively exploited in dystopias.

core of the utopian opening of dystopias. In dystopian contexts, women find a way of rewiring the materiality of the food that is such an important part of their daily life by means of changing the meanings attached to it and in this way changing their own positioning within their oppressive context, finally overturning the dichotomous hierarchies of consumers and consumed.

This potentially positive and performative capacity of the relationship between women and food was underlined by feminist food studies during the course of the last twenty years (Voski et al., 2005; Brady et al., 2019), which have stressed the productive ties between women and food well beyond the previous negative interpretations of such relationships and have focussed on its social, communitarian potential. Yet, analysing these ties from a more ontological point of view, the discussion about food has also entered, although still marginally, the area of New materialism. One example of this is Anna Tsing's influential work on the matsutake mushroom (Tsing, 2015), which demonstrates the capacity of food to have multiple roles and meanings, from being a commercial product, to a scientific object of study, to the fruit of a given natural environment, and, finally and most importantly, also something that can shape human lives and become part of the human body, blurring the boundary between subject and object. The complicated process of gathering, selling, buying, giving and receiving the matsutake mushroom is based on a network of reciprocated influences: for example, during her extensive discussion of the mushroom foragers and how this activity has shaped their culture and ways of living, Tsing states that "the mushrooms become part of the foragers, just as if they had eaten them" (Tsing, 2015, p. 121). The interplay that Tsing builds between human and non-human agents of assemblages is extremely varied, but the act of eating and being eaten is always present, often being the first element that comes to mind: "how the varied species in a species assemblage influence each other—if at all—is never settled: some thwart (or eat) each other; others work together to make life possible; still others just happen to find themselves in the same place" (Tsing, 2015, p. 22). Moreover, here, the act of

eating is never seen as a unilateral consumption but always as an action imbued with meanings and with the capability of changing worlds, subjects and contexts, bringing the act of eating on a post-anthropocentric dimension and opening interesting connections between how humans and non-humans eat and are eaten. For example, the non-human act of eating can be described not merely as consumption, but as world building: "Yet fungal eating is often generous: It makes worlds for others (...) Fungi are thus world builders, shaping environments for themselves and others" (Tsing, 2015, p. 137-138).

The textual analysis of *The New Wilderness* that follows will be based on these theories we have briefly outlined, offering us the possibility to see how this potentiality of food is played out in a novel in which the theme of food is used in a distinct post-anthropocentric direction. Located at the centre of the intersection of the animal world, scientific discourses and bodily processes, food in *The New Wilderness* is the locus of a continuous negotiation and renegotiation of meaning, shifting from concrete to metaphorical, from material to immaterial. In the novel, food is the central feature and preoccupation of a world that continuously unsettles the dichotomy of human and non-human, of who eats and who is eaten, sketching a post-anthropocentric episteme that is expressed through the always present possibility that the human who hunts and eats today will be hunted and eaten tomorrow. The retrieval, preparation and consumption of food in the novel will thus be framed as a Baradian performance, acting as the hinge of the relationship between contexts, bodies and identities, while humans who make food are at the same time made by that very food, which shapes their bodies and identities while allowing their survival. All of the interactions between human and non-human in the novel, as we will see, are hinged on the act of eating, which concretises the process of becoming-with (Haraway, 2016) of the protagonist, ultimately outlining the possibility of a different, post-anthropocentric way of living. Its protagonist learns a "sympoietic model of identity that implies the entangled and blurred boundaries rather than dichotomies" (Atasoy,

Komsta, 2022: 5); the following analysis will be aimed to assert to what extent the dichotomy eater/eaten comes to constitute a part of such a newfound sympoietic identity. In order to do so, I have broken down the protagonist's process of becoming following Braidotti's (2013) important definitions of "becoming-animal" and "becoming-earth": this will also help us to see how food is fundamental in the process that Haraway terms "worlding-with" (p. 58), both within and beyond the literary text.

***The New Wilderness* by Diane Cook – a food-based, neomaterialist analysis**

Conflicting, dichotomic contexts

The novel is entirely set within the Wilderness, a pristine space among mountains, hills and rivers where a Community of twenty people live without any sort of modern technology and must survive on a hunting-gathering lifestyle. Yet we soon learn that this context is not actually "natural": it is the framework of an experiment, conducted by the scientists of an unnamed City, in order to see if humans are still capable of living within a natural context without having to destroy it to ensure their own survival. Therefore the protagonists need not only survive, but they must do so while complying to the rules given by the Rangers, who act on the scientists' commands. These numerous rules include the command to keep to a nomadic lifestyle and "leave no trace" (p. 125) – although it is clear from the start that mutual, intra-active changes between subjects and contexts are impossible to avoid.

The protagonist, Bea, decided to take part in the experiment with her very sick daughter Agnes in order to save her from the polluted and decaying environment of the City which was killing the child. In the Wilderness, Bea and the rest of the Community are constantly on the go, walking from a Post to another, and all of their time is dedicated to survival – which, as it is immediately clear, equates to the search of food, and to the attempt not to become somebody else's food. Hunting animals in order to eat and stay warm with their skins; gathering herbs and fruits; escaping predators who,

moved by their same scopes, want to prey on them. They attain this lifestyle "not because it was thrilling, but because they could. And because they were *hungry*. Had they ever really been adventurers?" (p. 277, emphasis mine).

For this reason, food – and the survival it symbolises – is framed as the entity that drives and influences every movement within the Wilderness, both human and non-human. Each setting of the novel, both the Wilderness and the City, is described through the availability (or scarcity) of food that it presents, suggesting how the materiality of food is not only shaped by each context, but actually contributes performatively to shaping each context. The scarcity of the City is depicted by "Lines snaked out of every shop. Fights breaking out over something like broccoli" (p. 252), while meat is now industrially produced as "Meat™" (p. 255). After Bea goes back to the City for a period, the first questions she is asked are "What did you see? (...) What did you *eat*?" (p. 251, emphasis mine). Even the transition from one world to the other is described in food-terms, aimed to symbolise the clash between the two dimensions. The arrival of the Community in the Wilderness is described as follows: "on their first morning (they) made pancakes. They sprinkled sugar on them. They flavored their early stews with bacon. None of that stuff lasted long, though" (p. 51-52). In this sense, the description of the two contexts echoes New materialism's

commitment to remain invested in the question of context (...) no longer a flat or smooth surrounding, but spiky and interfering in different ways, constituted by multiple relational and competitive agentialities. When taken as 'context', environment, spatiotemporality, territory, bodies of literature and transcorporeal bodies as fleshy, leaky, unbounded and involuntary assemblages, home, public sphere, cell, petri dish and so on, achieve a multiplicity of prominences (Åsberg et al., 2015, p. 150).

The contexts of the novel achieve such prominence through the very materiality Åsberg et al. (2015) talk about, which here takes the form of a food-based materiality that plays a

vital role within the becoming of human and non-human agents, as will be argued later.

If at the beginning the two contexts appear dichotomically opposed, we are soon introduced to the similarities between them: they are both food-based and survival-based. Yet the two environments never manage to merge; the City enters the Wilderness only by means of the liminal spaces of the Posts, where the Community receives letters and gifts – often food – from their families at home who know perfectly well they will never see them again. Food again plays a characterising role, as it not only embodies the affection coming from unseen agents, but it also demonstrates that the bodies of the Community have changed forever, and cannot digest the food of the City anymore. It is therefore significant that the impact that the Wilderness had on their bodies needs the interaction with food to be clear to the reader. Their mail includes “stale cookies” and “a brownie that was now rock hard” (p. 125); the decay of these gifts mirrors the changes the Community’s bodies have undergone as well, as they cannot eat such food anymore without feeling sick: “she couldn’t eat things like that (chocolate) anymore without becoming ill, her body overwhelmed by what it used to crave in their old life” (p. 11).

Yet food is extremely present within the Community: their first appearance features a lengthy list of their cooking setup, which is even repeated twice, to stress its material heaviness and concrete presence (p. 13, 16). As a matter of fact, the only objects that the Community holds and cherishes from beyond the Wilderness are, not by chance, a teacup (20) and a Cast Iron (52)⁸: objects linked to the semantic area of food and, accordingly, objects capable of bringing with them a wide array of meanings and symbolisms. Both of them, in fact, gained this status through the performativity of communal eating: “With little discussion they voted to leave it (the Cast Iron) behind. It was an obvious decision. But that night they cooked in it. And they’d been carrying the Cast Iron ever since” (p. 52) and the frail,

delicate teacup, which “they’d used during ceremonial moments for rituals they had made up early on for the different milestones of their new life” (p. 20).

Within the Wilderness, food is used to embody feelings of affection and protection, contributing intra-actively to creating bonds. Glen shows love to Agnes by “always giv(ing) her more meat than he gave himself” (p. 25). Even Ranger Bob does the same; he cannot give objects to the Community as that would be against the rules, but he gives Bea a lollipop for Agnes (p. 39), demonstrating again the qualitative difference between mere objects and food, and the special status of the latter. The performative capacity of food as a peculiar type of object is moreover underlined in the description of the immediate changes that Bea experiences in her body when she decides to protect Agnes and eat it herself: she feels “her heart rev(ing) from the green sugar” (p. 41).

Having analysed these two contexts from the point of view of food, it is clear that they can be defined as materially and epistemologically dichotomic: yet it is hard to distinguish between a utopian and dystopian pole. The utopian perspective of the Community (with the exception of Agnes, as will be argued) does not lie in the Wilderness they inhabit, but in yet another place which might not even exist, the Private Lands: “The Private Lands were the opposite of the City and had all the freedoms the City could no longer offer, and you either believed in it or you didn’t” (p. 46). Moreover, it is also significant that every description of the City happens in retrospect, through memories or recountings. This going backwards and forwards in time not only stresses the dissonance between the Wilderness and the city, between a material present and an abstract memory, as if they are unable to coexist in the same material framework, but it also represents the Wilderness as the only possible present, eternal and concrete: “Eventually it dawned on Bea that the ground they trudged wearily upon day after day would be endless” (p. 20). On the other hand,

⁸ Regarding the use of capital letters and the heavy symbolism it suggests, is relevant here to note also that “the Anthropocene-related, ideological foundations of the Community are established by means of strict regulations

as well as objects, such as the Book Bag, the Cast Iron, or, most importantly, the Manual, capitalized in the narrative to highlight their status as artifacts of anthropocentric dominance.” (Komsta, Atasoy, 2022: 8).

notwithstanding the similarities which were outlined, the City comes across to the reader as characterised by the same incorporeal quality of the Private Lands, as it is described only in retrospect through tales and memory. This gives an ephemeral quality to its materiality as it no longer has the power of shaping the bodies of the protagonists.

For this reason, the Community itself appears as existing in a fragile in-between, a material enclave within an abstract world that they can no longer turn back to. The Wilderness, a context characterised by its material specificities just as much as those specificities have shaped the Community, defies any sort of pre-existing dichotomic thought, that very thought which will be argued as characterising the dystopian episteme of the city. The Community exists in a liminal space between life and death, between utopia and dystopia. A blank slate, a “precarious living” (Tsing, 2015, p. 163) which can be used to imagine and create new assemblages, new ways of “living and dying well” (Haraway, 2016, p. 56), as will be argued shortly.

The dichotomy of survival: eat or be eaten

As previously outlined, food is the agent that determines every movement of this very alive and active entity that is the Wilderness, made up by every living thing inside it, human and non-human. There is only one rule: to eat and survive, doing “what you’ve always done: walk, hunt, live.” (p. 353). The hardships of life within the Wilderness and the reversal to this hunting-gathering lifestyle determine an epistemology of survival based on eating, which creates an opposition between prey and predator, between who eats and survives, and who is eaten and dies. This dichotomous polarisation between prey and predator is a constant textual metaphor that courses especially throughout the first section of the novel, the one narrated by Bea. In her words: “some watching wolf had seen the carrion birds, was signaling prey” (6), the prey being the stillborn daughter of Bea; “Bea imagined that as Agnes grew up this would change. She might feel less like prey and more like a predator” (p. 7). Agnes is later described as “(going) limp like prey” (p. 256),

and again: “Agnes stood rigid and still as though her mother were a predator and she were prey” (p. 336-337).

The same dichotomy is reiterated through the binarism of “friend or foe”, described as the call of the Wilderness: “like a coyote listening for the calls of the Wilderness—*friend or foe, friend or foe*” (p. 14); “Far off, behind some butte, coyotes yodeled to one another, *friend, friend, friend*, and Bea felt bereft at the sound of such communion” (p. 23). Again later: “Even the deer that munched dewy grass on the outskirts of the camp were listening. They bleated to their young, to their mates, to make sure they were there and safe. Then they snorted out into the night beyond their sight, *Friend or foe? Friend or foe?* to warn off the unwelcome. In the distance Agnes was certain she heard the wolves howl back. *Foe.*” (p. 271).

Such binarism, although it may seem to be an adaptation to the rules of the Wilderness, actually reproduces the capitalistic, objectifying logic of the City where human life and death are part of a binary system which falls within the City’s scientific episteme. Every death that takes place within the Community is taken note of, according to the City’s necessity of counting and classifying everything, following its accumulating episteme that conceives of life and death as entities of their own, detached from the environment where they take place. An example of this is how Ranger Bob reacts to the stillbirth of Bea’s daughter while taking note of the deaths:

“Wait,” Bea croaked. “One more. Madeline. Stillborn.” Her face blazed. She stammered, “I didn’t know if it counted.” Ranger Bob gazed at her for a moment, then looked at his form, flipping it over and back. “Well, seems like it doesn’t count. Good to know. So let’s just call it three, shall we?” He scratched out the 4 in the column for Total Deaths, smiling a mayor’s smile, tight, all lip. Bea sputtered in agreement so she wouldn’t whimper. Her little unfinished girl was not quite finished enough to count. (p. 37)

According to the City, some deaths “count”, and some do not. The classification and

commodification of life and death is also clear when we are told that, according to the Manual, there are fines for everything, even dying:

It was the part about the Wilderness State's system for fines. (...) The most absurd one to Agnes was the hefty fine for dying. She doubted as they read they even understood that's what it meant, it was so odd. Carl had explained it to her one day, skipping stones into the river. How even though your body would hopefully be scavenged, your clothing and personal items would need to be retrieved in order to lessen the impact, and that usually amounted to a rescue mission, the tab for which the dead person's family or next of kin would have to pay. "Yet another reason to stay alive," Carl had said to her. (p. 171).

The tendency of the City to control, punish and define everything, through bureaucracy, physical exams, drones, reroutings "meant as punishment" (p. 29) and addenda to the Manual including "ever narrowing interpretations of wildness and wilderness" (p. 109), even compelling the Community to use a clicker to count their steps while walking (p. 43), are demonstration of the rigidity of the scientific eye of the City, which does not accept nor understand that the life in the Wilderness cannot abide by such quantitative rules. This stance mirrors Tsing's description of the scientific view of the predator-prey relationship: "until quite recently many people—perhaps especially scientists—imagined life as a matter of species-by-species reproduction. The most important interspecies interactions, in this worldview, were predator-prey relations in which interaction meant wiping each other out", a vision wherein "mutualistic relations were interesting anomalies, but not really necessary to understand life" (2015, p. 139). Such a dichotomic view about life and death, about eater and eaten, a vision equating survival with accumulation and reproduction, is soon demonstrated as unfitting for the Wilderness where everybody is prey and predator at the same time, where eating is framed as a mutual, intra-active performance which shapes the human bodies as well as the Wilderness itself:

this will be clear especially in the second section of the book, narrated by Agnes.

Indeed, the difference between Agnes and Bea lies in their different ideas concerning death – and therefore their relationships to eating, which was already described as synonymous to survival. Agnes, who effectively faced death, and whose life was saved by the Wilderness experiment, appears as the only one capable of overcoming this binary logic between death and life, merely conceived as an accumulation of what Braidotti would define as "bios", as opposed to "zoe". Braidotti "oppose(s) zoe, as vitalistic, prehuman, generative life, to bios, as a discursive and political discourse about life" (2008, p. 177). Braidotti's differentiation, "by making the notion of life more complex, implies the notion of multiplicity. In turn, multiplicity allows for a nonbinary way of positing the relationship between same and other, between different categories of living beings, and, ultimately, between life and death" which is therefore framed as "that aspect of life which, though it goes by the name of death, is nevertheless an integral part of the bios/zoe process" (2008, p. 178). Agnes, having grown up in the Wilderness, breathed its air and eaten its food, understands that she, as well, can become the food of something or someone else; she is predator and prey at the same time. She actually conceives of death as a sort of game: "Agnes giggled with delight as she pantomimed slicing his (Glen's) abdomen open and pulling out his entrails" (p. 42). Even her way of playing this game shows the difference that sets her apart from the rest of the community:

It was just like what Carl did when he and Agnes played Hunted! When he was the hunter, he liked to give long speeches about mercy and compassion and would catch her and let her go several times before he killed her. When she was the hunter, she just killed him immediately. From the ground, pretending to be dead, Carl would whisper, "You're supposed to play with your prey a little—it's the best part." He liked the drama. But she didn't see the point. (p. 164)

For Agnes, death is not something cruel, but something which ensures someone else's survival through eating: this is totally and completely integrated in the posthuman framework she lives in, as it often equates with the only possibility of eating and surviving.

The animality of zoe, underlined by Braidotti, becomes clear as we discover Agnes' survival strategy: she communicates with animals, following them to find sources of food and water, and she is the only one that presents her drive to survive as a post-anthropocentric materialist vitalism, refusing any type of hierarchy between species and accepting the reciprocity and fluidity of the relationship between human and non-human. She states "The animals are always right, and when I do what they do, nothing bad happens" and, after they lead her to a source of water, Bea, surprised, tells her "Next time we're hungry, thirsty, or lost, I'll follow you." (p. 68-69)

Agnes' capability of "living and dying well", as Haraway would describe it (2016, p. 56) constitutes the cornerstone for a network of harawayan "response-ability" (*ibidem*) according to which Agnes lives and survives in the Wilderness, which indeed Haraway describes as being "about both absence and presence, *killing and nurturing, living and dying*" (2016, p. 28, my emphasis). Haraway's description of the concept of "wilderness" is also extremely fitting in this case; she talks about the necessity of "imagining and caring for other worlds, both those that exist precariously now (including those called wilderness) (...) and those we need to bring into being in alliance with other critters, for still possible recuperating pasts, presents, and futures" (2016: 50). The Wilderness is something inherently precarious and filled with precedent and contaminated histories, and it is not something that exists in and of itself. Its existence bends the dichotomy between human and non-human, human and animal, life and death, self and other, "mind" and "body" as postulated by Braidotti (2008).

Becoming-animal (Braidotti, 2013)

As we have seen in the last section, the act of eating in the novel is endowed with the potentiality of breaking dichotomies between prey and predator, friend and foe, who lives and who dies. We will now see that this is particularly effective in breaking the boundary between human and non-human through Agnes' blurred identity. Agnes is the hinge of the relationships between the Community and wildlife; she is the most capable in communicating with them and she understands that, in order to survive, the Community has to learn from animals. Yet the Community has a different orientation than hers, which is described here:

Over time, they learned when to hide by listening to birds. They learned to be cautious by watching deer. They thought they learned to be bold by watching a wolf pack take down a healthy moose. But then they learned how to see the almost imperceptible limp that a healthy-seeming moose was hiding. (...) They knew the different flavors of leaves depending on the season; knew the secret sweetness of the red-tipped grasses in the fall, and the bitterness of last season's grass, buried in winter snow but somehow still green, like how poisonous mushrooms have alluring colors. Those colors only beckon the foolish. Colors are warnings. They learned that too. *They learned what to eat by watching the animals eat.* (p. 53-54, emphasis mine)

While the rest of the Community is content with "learning" techniques regarding hunting and the recognition of wild herbs (as underlined by the repeated anaphora in the preceding excerpt), a process which implies a hierarchical, accumulating perspective which is still part of the episteme of the City, Agnes is the only one who abandons the anthropocentric perspective that the Community has inherited from the City and undergoes a real process of becoming-animal⁹ (Braidotti, 2013), again hinged on the

⁹ I am here resourcing to the long history embedded in the concept of "becoming", as a term which was originally used by Deleuze and Guattari to describe a "dynamic and rhizomic subject-in-becoming" (Braidotti, 2006: 14), and

which was first transposed into "ethics of becoming" in Braidotti's work *Transposition* (2006). It was then further elaborated in a post-anthropocentric direction in *The Posthuman* (2013), and this text and the categories

act of eating. A process of co-becoming of companion species, whose etymology, as Haraway fittingly reminds us, comes from “cum panis” (Haraway, 2015, p. 55): species who eat together (and who, in this case, occasionally eat each other), co-become together. In this sense, Agnes is the perfect embodiment of Braidotti’s description of becoming-animal, which is based on the “zoe-egalitarianism” that was identified as characteristic of Agnes:

deterritorialize, or nomadize, the human–animal interaction, so as to bypass the metaphysics of substance and its corollary, the dialectics of otherness (...) The posthuman in the sense of post-anthropocentrism displaces the dialectical scheme of opposition, replacing well established dualisms with the recognition of deep zoe-egalitarianism between humans and animals (Braidotti, 2013, p. 71).

The network of interrelations Agnes weaves with her animal surroundings is grounded in communication, a posthuman, interspecies language which she and only she among other humans can understand and produce:

When Agnes woke, she saw the prairie dog that had sung lullabies in her ear all night on its haunches, watching her with a question on its face. She rubbed her eyes and the dog recoiled but kept asking the question. “I’m Agnes,” she answered. “And yes, I belong here.” The dog cocked its head. Wrinkled its snout. “I do TOO belong here.” Agnes flicked a stone with her bony fingers at the dog, whose face scrunched in protest before it disappeared into its hole. The lullabies had been meant to haunt her dreams and scare her away, any dumb thing could figure that. Chittering and cooing to make a dreamer think her ear was being invaded by something awful. To feel unsafe. But they had soothed her. They were sounds she understood. (p. 139)

This different way of communicating implies not only a different episteme but a different

ontology, which is again communicated to the reader through food: although Agnes has nightmares of being forced to eat an animal whose song she liked killed by a foreign thing like a truck, she drools at the sight of the fat Newcomers, recently arrived from the city. The performativity innate in Agnes’ posture towards eating is therefore made clear: her eating, through the intra-actions that it establishes, shapes worlds and ontologies. Indeed, she appears as unable to distinguish between wanting to be fat like them and the impulse of eating them, impersonating one of the many predators of the Wilderness:

That truck followed her in dreams. Just before she woke, that truck had run over the prairie dog singing in her ear. Guts across the broken asphalt. Carl scraping it up and feeding it to her and the other children as dinner. She’d liked the singing and so would not eat it. They tried to make her. But she woke up before they pushed a tiny drumstick past her clenched lips. (p. 140)

They looked like they would not last long. With their fat stomachs and thighs. (...) Agnes could barely remember when they themselves had been that fat and *delicious-looking*. But she knew they had been. A line of *drool* fell out of her mouth and into the sand. (p. 163, emphasis mine)

The post-anthropocentric posture of Agnes concerning eating, which emerges from the aforementioned excerpts, mirrors and demonstrates her own post-anthropocentric and distinctively animal identity. She is often described through animal metaphors, “Like an animal, Agnes froze when fearful and bolted when endangered (...) Was Agnes behaving normally for her age, or was it possible she believed she was a wolf?” (p. 7-8); “Agnes was like a colt, bounding, curious” (p. 20). Although the Community itself shares Agnes’ context, this animality is not always regarded as a favorable quality in the eyes of the Community, and her mother especially: “Probably Agnes had been awake this whole time because it

postulated in it is the one on which I am mainly basing my analysis.

seemed like Agnes was always awake, attentive, watching. Bea nudged her hard with her foot. "Even animals sleep, you little spy," she said under the covers" (p. 65). When Bea speaks ill about herself, she compares herself to animals: "Ranger Bob regarded her like a wild animal. He said cautiously, "Well, she just died . . . yesterday, you said?" He might as well have been saying, *Hey, bear, hey, bear* to calm a beast." (p. 37) and again "She'd hated the feeling. So exposed, used, animal-like" (p. 4). This, according to Komsta and Atasoy, depends on the fact that "Cook's narrative imbues Agnes the stray with the transformative potential, as Agnes's mind, unlike Bea's, is not yet molded by the Anthropocentric, hierarchical, and essentialist categories of the City." (2022, p. 5).

Yet Agnes' relationship to the animal world endows her with better survival chances: "But Agnes scampered along, certain of the feel of ruts below her feet. She saw them like an owl might see a mouse under a covering of leaves or a sheet of snow." (p. 151) And, to the reader, it is clear that Agnes feels good in her animal identity: "She felt like an animal of few words but imperative work. She felt like the alpha." (p. 152) Agnes feels at home in her food-based becoming, in the never-ending performances taking place in the Wilderness, and in the in-betweenness that characterises the whole Wilderness, although everybody wants to normalize, settle and define it, from the City to the Community itself. Agnes' food-based relationships to the animals are thus framed as part of a network of intra-actions between the various agents inhabiting the Wilderness, comprising both human and non-human ones, and actually blurring the line between them. Thus overcoming the binary logic, Agnes manages to effectively break the boundary between human and non-human, recognising that her nourishment depends on animals as much as their material life depends on how humans treat their habitat.

Becoming-earth (Braidotti, 2013)

Agnes' process of becoming-animal, analysed above, is however not limited at this recognition. This becoming-animal comes to

constitute part of her nomadic subjectivity – the adjective "nomadic" is here particularly accurate – which Braidotti describes as "(being) in love with zoe. It's about the posthuman as becoming animal, becoming other, becoming insect—trespassing all metaphysical boundaries." (Braidotti, 2008, p. 178). This multiplicity which is contained by the aforementioned becoming-animal comes to the fore gradually in the novel, as we understand that her becoming finally transcends all boundaries and strives to become a becoming-earth, "visualiz(ing) the subject as a transversal entity encompassing the human, our genetic neighbours the animals and the earth as a whole, and to do so within an understandable language" (Braidotti, 2013, p. 82). In recognising the complex intra-actions (Barad, 2003) of eating and surviving in the Wilderness, Agnes' becoming-with suggests the possibility of new relationships between human, animal and contexts: an attempt towards a neo-materialistic utopia.

In fact, the City's scientists blindly go on trying to impose their short-sighted analytical method to quantify life in the Wilderness, and finally determine that the experiment was a failure because humans turn out to invariably affect the context they are in: "'The Wilderness State is changing. It has a new mandate. No one can be here.'" Agnes scoffed. "How can you have a Wilderness without any people?" The Boss answered. "The study has clearly shown that you can't have a Wilderness with people" (p. 355). Agnes is the only one that stubbornly opposes the city's epistemology, as she understands that it is actually impossible to live in any context without changing and being changed by it. This perfectly channels Braidotti's definition of becoming-earth: "In the age of Anthropocene, the phenomenon known as 'geo-morphism' is usually expressed in negative terms, as environmental crisis, climate change and ecological sustainability. Yet, there is also a more positive dimension to it in the sense of reconfiguring the relationship to our complex habitat, which we used to call 'nature'." (Braidotti, 2013, p. 81). Her behaviour is also resonant of Tsing's description of the wilderness as something that may actually profit from human intervention, just as much as humans need the influence of their natural

surroundings in their lives: “As an American tutored in wilderness sensibilities, I thought forests were best at restoring themselves. Kato-san disagreed: If you want matsutake in Japan, he explained, you must have pine, and if you want pine, you must have human disturbance.” (2015, p. 151)

For this reason, where the City sees the failure of the Wilderness, as it was designed to keep humans and nature in two separate spheres, Agnes can see something more, thanks to the ability to do what Tsing would define as living on a damaged planet. This capacity to live on – and to be part of – the Earth is perfectly embodied by Agnes’ continuous insistence that it is possible to live, survive and eat in the Wilderness while acknowledging the intra-actions between human and non-human on which this eating/surviving potentiality is based, outside of the rationalistic logos that underlies the rules imposed from the City, and refusing any sort of hierarchy between species. Notwithstanding the tragic end of the novel, Agnes’ epistemology can be interpreted as the utopian opening of an otherwise extremely bleak novel, prospecting a sort of neo-materialistic utopia through her running away from the Rangers. While the Utopia of the Community, the Private Lands, turn out to be a place only for the ultra-rich, built on the outskirts of the Wilderness itself, Agnes wants to recreate her utopia within such Wilderness, as her way of surviving, meaning her way of creating food-based performative intra-actions with the non-humans of the Wilderness, has deeply changed her and has created an entanglement which cannot be severed: “The ones who remained, Agnes saw herself in their eyes. She was too wild, something uncontrollable and wholly selfish, and while that had served them well in the past, now her survival instinct seemed to disgust them” (p. 362). Her private, enclosed utopia is born when she cuts all ties with everybody else in the Community, even her mother, as everybody mistake her post-anthropocentrism with selfishness: they always want more and do not understand Agnes’ reluctance to leave the Wilderness, her contentedness with eating and surviving among her fellow animals. For this reason, Agnes runs away and for three years she will survive on her own with her adopted

daughter, aptly named Fern. Fern, whose becoming-earth is already symbolised by her name, accepts death just as Agnes did, having witnessed the death of her mother and sister. The two girls, through their alliance, finally merge with the surrounding nature, recreating their own nomadic utopia – the actualisation of the unnamed X on Fern’s map, where “Everything good” is to be found (p. 378).

Conclusions

The final aim of this paper was to analyse one of the most interesting feminist dystopias of the last years in order to underline how the symbolism conveyed by real, matter-of-fact objects within the genre of the feminist dystopia could be the locus of a resistant, critical capacity which the reader can bring forward in his own, extraliterary world. Within a wide array of realistic objects, I identified food as a specific class of objects which not only is extremely pervasive within feminist dystopias but can also be interpreted in a distinct neo-materialistic sense as something which is capable to dismantle the binaries which lie at the basis of many feminist dystopias. Indeed, the chosen novel, *The New Wilderness*, being an example of Anthropocene fiction, offered a peculiar analytical angle: food was not only highlighted as the hinge of the relationships between human and non-human, but also as a class of objects that can drive the protagonist through her process of becoming, following Braidotti’s (2013) categories of becoming-animal and becoming-earth.

For this reason, such thematic and metaphoric recurrence of the theme of food, which was, up to now, not closely analysed within the field of feminist dystopias specifically, does not only strive to dismantle the fixed binaries that characterise the oppressive systems of dystopias, but can also be interpreted as a significant neo-materialistic tool to resemantize a material context by entwining women’s bodies with their non-human contexts, framing food as “demonstrat(ing) and perform(ing) the material meaningfulness of earth processes and critters” (Haraway, 2016, p. 2). Food can thus be used to resemantize women’s different politics of location both within and outside the literary text and create not only new, posthuman relationships but also a posthuman female

identity, which can serve as the basis to build the prospect of a neo-materialistic critical Utopia in the sense outlined by Dillon at the beginning of this paper: although in the novel Agnes will not, eventually, manage to make her and Fern's private post-anthropocentric Utopia last, the scope of the novel transcends the ending of the novel, and can be arguably said to reside in the rekindling in the readers of the possibility of building one's own Utopia starting from one's own material, immediate context. In order to do so, the symbolism of food was pointed out as a powerful vector of performative meaning, capable of bringing neo-materialistic

philosophies to life as a concrete, transformative practice through literature.

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Author information

Marta Olivi (ORCID: 0000-0003-0404-0715)
marta.olivi2@unibo.it

Marta Olivi (1996) is a second-year PhD candidate at the University of Bologna (Italy). She is currently researching how food is connected to women's bodies and existence in a corpus of contemporary Anglophone feminist dystopias which aim to bend and break the conventions of the genre. She is enrolled to EDGES, a European curriculum devoted to Gender Studies, under a joint supervision with Utrecht University (Netherlands). Her research interests cover feminist dystopias, food studies, neomaterialist and posthuman philosophies. She is also a literary translator.

MATTER

journal of new materialist research

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ALMANAC
7TH ISSUE

Vitality and affirmative difference

Vitalidad y diferencia afirmativa

Vitalitat i diferència afirmativa

Devyn Remme (ORCID: 0000-0003-4392-6615) Center for Climate and Energy Transformations,
University of Washington

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The following text first appeared in 2017 as separate entries for 'Affirmative Difference' and 'Vitalism' in the online almanac for the New Materialism — Networking European Scholarship on 'How Matter Comes to Matter' COST Action IS1307 project (www.newmaterialism.eu). They have been combined and lightly edited for this special issue on Feminist New Materialisms.

"Your effort to remain what you are is what limits you" (Ghost in the Shell, 1995)

Unpredictable, mutative difference is the fundamental and ongoing condition of life. Thinking with Henri Bergson through Gilles Deleuze (1966) and Elizabeth Grosz (2004), the vitality of life is the tendency of living matter to move towards greater complexity. Put another way, living matter moves counter to entropy, towards maximizing pure difference. Pure difference is both an ontological and an ethical concept.

Vitality is entangled with other aspects of relational differing such as emergence and sympoiesis (Donna Haraway, 2016). The properties of life cannot be fully described in terms of the properties of the associated material constituents. Nor can life be reduced to mechanistic processes. New Materialist vitalism does not construct a special kind of substance which is added to matter to produce life. Rather, vitality emerges from within and between matter. There is nothing outside the world that makes the world. The world worlds itself.

Grosz develops Darwin's "account of the real that is an open and generative force of self-organization and growing complexity. A dynamic real that has features of its own which, rather than simply exhibit stasis, [...] are more readily understood as active vectors of change" (2004, p. 19). In *The Posthuman*, Rosi Braidotti describes matter as intelligent in addition to self-organizing. Emphasizing the self-organizing vitality of all living systems decenters the Anthropos without collapsing difference, replacing species hierarchy with decentralized immanence (2013).

Feminist New Materialisms traverse the dualisms of modernity, which are structured by a negative relation between terms. We are

learning how to think difference structured through an affirmative relation. A difference structured by affirmation does not work with predefined categories, for example between mind and body or nature and culture, nor does it involve a hierarchy between terms. Affirmative difference does not presuppose that the original ontological difference is between that which is and that which is not. Life, in an affirmative sense, does not proceed by lack but by mobilization of positive difference along internal lines of divergence where all categories are such by virtue of their relating, not negating.

This way of thinking difference invites attention to previously sterilized category deviants. Vitality is queer. As Claire Colebrook states, "The task of thinking is not to see bodies in their general recognizable form, as this or that ongoing and unified entity, but to approach the world as the unfolding of events" (2009, p. 83). Or as Grosz writes, "biology dictates that to the degree that sexually dimorphic beings emerge, their sexual differences diverge more over time" (2004, p. 259). However, thinking with the rhizome, biology may be even queerer than that. There could come a time of sexual convergence as well, who knows what cyborg sexuality will look like, for example? It can be analytically useful to define fixed categories and essential characteristics, our 'nomological machines' excel at this (Cartwright, 1998), but these seemingly durable constructs can easily deceive – change is constant. Failing to remember this is to confuse the map with the territory.

If differences ceased unfolding in the material configuration of the universe, would time still exist? What could we mean by 'time standing still' other than an absence of change? Does time somehow make difference? The causal relationship, if there is one, is unclear yet we can observe material differing directly, which is more than we can say of time. Differing moves in the direction of increased complexity not only between what is now but also between what was, is and will be. Thus, even if most of earth's life supporting systems collapse and there are only a few forms of life left, the simplicity of that arrangement adds to the complexity of the whole.

Differing also occurs between things that can be, the latent possibilities that Grosz (2004) calls virtual reality: Consciousness and intelligence open up the material world to the play of virtuality" (p.212). That is, vitality encompasses more than what is actually, currently living. This allows for a commitment to justice that accounts for future generations. As Grosz urges, we must learn to think about what will have been possible; a skill that nourishes radical, progressive politics (2004). Braidotti codes the vital force of Life as Zoe, that which imbues all living matter impersonally. She insists: "Zoe-centred egalitarianism is, for me, the core of the post-anthropocentric critical turn: it is a materialist, secular, grounded and unsentimental response to the opportunistic trans-species commodification of Life that is the logic of advanced capitalism" (2013, p. 22).

Vitality is what is hidden when life is reduced to 'biodiversity', or worse, 'ecosystem services'; a pool of fungible resources to be controlled and exploited. While Braidotti cautions against the contemporary 'white man lament' (2019), she encourages engaging with trauma and suffering through affirmative ethics. Similarly, affirmative difference is a way for critical thinking to grow beyond condemnation and oppositional dialectics. Thinking with process ontologies, re-worked through feminist and postcolonial theories, we change the frame of reference. This entails processing the pain of loss by seeking understandings across difference that can forge new possibilities, new ways of living and dying together.

A primal scream emanates from a cave,

wherein the smell of sweat, tears, blood, shit,

animal and genesis hang heavy in the air.

Minerals become tooth and claw

shells begin growing on the inside.

Later, the smell of death, decay, decomposition

and later still soil and new growth;

reaching out to turn solar energy into material order

for a time

Synonyms: Zoe, sympoiesis, life force, forces of composition

Antonyms: entropy, divinity, reductionism, automata (Descartes), discrete entities

Hypernyms: magic, defiance, joy, desire, animate

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Author information

Devyn Remme (ORCID: 0000-0003-4392-6615)

devyn.remme@uib.no

Devyn is a Phd candidate at the University of Bergen. Her current research focuses on the materials and natureculture contexts that are made and unmade to mass produce electric vehicles. She has also worked with research projects on social justice and sustainable mobility (JUSTMOB), digitalization and decarbonization (ROLES), and nature based solutions in cities (VARCITIES). She is the founder of Norway's first bus rider's union – a democratic organization and an art-science-activism project.

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INTRA-VIEW

7th ISSUE

City-blindness Manifesto, for an evocation of the invisible body of the city

Manifiesto de la ceguera de la ciudad, para una evocación del cuerpo invisible de la ciudad

Manifest de la ceguera de la ciutat, per a una evocació del cos invisible de la ciutat

Lucia Di Pietro (ORCID:0009-0007-5561-7525) IUAV University; **Teresa Masini** (ORCID:0009-0000-2093-4386) IUAV University

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the concrete the cement the bitumen the petroleum the iron the asbestos the plaster the lime the tuff the marble the travertine the sandstone the cobblestones the wood the phonolite the clay the sand the glass the resin the soles of the shoes the soles of the feet the fascias the blood the veins the nerves the bones the marrow the lymph the circulation the water the condensation the dew the stagnation the shadow the bottom of the wells the ferns the moss the lichens the slime the mud the oligominerals the magnesium the potassium the mineral salts the barks the phloem the apical buds the holm oaks the firs pines the ash trees the plane trees the chicory the dandelion the oats the borage the pellitory-of-the-wall the roots the molds the mushrooms the truffles the rhizosphere the fossils the ammonites the tunnels the underground the sewers the pits the catacombs the foundations the shelters the nests the beehives the holes the woodworms the bulbs the cracks the faults the cavities the sewer system the pipelines the methane gas the diesel the oil the copper the rust the nickel the lead the cobalt the petrified lava the ash the dust the silicon the condoms the sperm the cameras the gps the drones the sensors the antennas the chemtrails the bluetooth the spores the wi-fi networks the batteries the depleted uranium the beetles the ants the bumblebees the water retention the earwax the durons the secretions the figs the pussies the tampons the nappies the ivy the ginkgo biloba the poplars the opium the pollen the nettles the sparrows the robins the blackbirds the goldfinches the pigeons the webs the beaks the feathers the skin under the feathers the parasites the mites the spiders the spiderwebs the bats the bacteria the viruses the rats the claws the tails the flu the hiv the sars-cov-2 the vomits the incisions the incense the traumas the pigments the spits the skin under the fur the syringes the diapers the chewing gums the glue the aluminum the bugs the processionary the moths the shells the liveries the stingers the lizards the tears the spikes the soil the subsoil the sulfur the oxygen the nitrogen the dioxide the lights the sunlight the uv rays the ozone hole the sweat the smell the breath the hormones the glands the phytohormones the pockets the underwear the

documents the visas the fingerprints the white skin the other side of the skin the keys the locks the date of birth the tongue the gums the lungs the roof of the mouth the testosterone the pheromones the estrogen the aura the moods the thoughts the expectations the desires the botox the collagen the kidney-stones the internal organs the coronary bypass the cancer the cells the toxins the radiations the ghosts the ectoplasms the quanta the electromagnetic fields the eyes behind the sunglasses the stalkers the clandestines the detectives the photobombers the sex workers the porn cinemas the butts the beer corks the hairspray the gel the sexual attraction the north the south the west the east the colonialism the jinx the 'ndrangheta the freemasonry the chlorophyll photosynthesis the atoms the molecules the ovulation the chromosomes the beginning of pregnancy the transitions the metamorphosis the ageing the rotting the decomposing the vanishing the dying the naked body the larvae the vertebrae the carbon the lipids the nectars the juices the serum the transistors the earth motion the sun turning off the pesticides the homeless the burglars the urban-heat-island the humus the lice the horizon the third eye the places where the echo bounces the graffiti writers the public-space-care-givers the clouds the whispers the sky the atmosphere the erosion the skin pores...

{{{ what happens if, following the teachings of "the lesbian body" by monique wittig, we re-write the body of the city? not the impersonal body, the obvious one, in a sense, made of buildings, streets, traffic lights and signs, but the invisible, inner, underground and hidden one. the body which escapes the *homo oeconomicus*' functional attention, focused on the efficiency of actions, movements, transactions. here, invisibility becomes a r/existence factor; here, escaping the regime of visibility means escaping control, and generating, in a karstic way, alternative knowledge to the one that is produced by domination over bodies }}}}

they are the matters, the bodies, the individuals, the processes, the issues that manage to escape human cognition in our daily living in urban spaces. they are at the margin of an attention: how did they happen to be there? and how do they keep staying in there? how is this **technology of subtraction** to localization able to inform our political doing, our artistic practice?

invisibility is a determined condition; one is not invisible on an ontological level, but because marginalized from a focus, from a perspective, from the look of someone's eyes. we choose to **disconnect from this genealogy of attention** - which eventually takes control over bodies, thoughts, voices and their different ways of existing.

instead, we choose to re-claim an **agency of invisibility**, to acknowledge its generativity and, looking from this margin of attention, to convey a field of forces.

city-blindness is a form of cognitive bias we formulated in reference to the human tendency to exclude from the attention, and therefore to ignore, a series of subjectivities of the ecosystem-city.

this concept is an extension of the one of *plant-blindness*, theorised by the U.S. botanists schussler and wandersee. it refers to a chronic **inability to perceive the presence of plants** for people living in contemporary cities unless those plants become an obstacle and create a visual or spatial dysfunction: an obstruction of the landscape view from the window, or a thread for the highway viability.

city-blindness is therefore the human's blindness to the plural body or the materiality of the city. we believe that this endemic tendency to relate to the city in an exclusive way leads to a form of detachment and of **progressive alienation from the matter, the body that we are.**

that body is constantly pushed back in the unawareness, into a dumb materiality which does not require attention, which does not entail the capacity or the will of action.

in the ecosystem-city, this state of "**invisible materiality**" applies to a considerable number of individuals, animate and inanimate, organic and inorganic, including humans, animals, plants, atmospheric and electromagnetic fields, inert matter such as rocks, street furniture, cars, etc...

there is no such thing as an objective, one-for-all, perception of reality. however, from the perspective investigated here, a possible form of repositioning in a **precognitive awareness of perception** unfolds.

a precognitive state is intended as a subjective, innate, **bioempathetic**, capillary spread. perception, which, although mostly ignored, still remains present in every human and non-human body.

it is a sort of invisible network where we long to position ourselves, a space of sensitive relationships between the individuals who make the city.

we long to re-claim the power of invisibility, to develop a bioempathetic awareness, to position ourselves into a constant and careful training towards a **new materialist thinking** about the city, the beings and the world.

we propose the re-channeling of a precognitive affective state, a sensitive zoom-out practice that allows the eye to open and the human to be no longer the centre of attention: a training in decentralising attention, letting it explode, dislocate, flow and spillover.

we claim that invisibility can be a positioning of resistance rather than a passive condition. invisibility can be a state of refuge and a practice of protection from the colonialist gaze and its aim to set things into taxonomies, extirpating them from the margins of the streets.

the list that opens this manifesto is not an attempt to create a taxonomy, but it rises as an **evocative rite**, a "calling" of the invisible subjectivities. who, in our vision, are currently carrying on a practice of *r/existence* in the urban spaces. these individuals are nominated by us not to be placed, profiled, forced into a regime of identification, but to be evoked, materialised and **opacified** (in the sense of recognised in their diversity and in their illegibility) as the subjects who they are.

differences are opaque places that we need to perceive, cross and inhabit: places of porosity, traffic of matter, fluids and thoughts, even when marked by silences and wounds.

reviewing the city through the saturation of individual and different subjects, we aim to reverse the proportions and facilitate the decentralisation, (**finally!**), of human presence.

we evoke bodies both as containers and contents (organs, cells, substances, species, varieties), we let the body of the city, its

creators, its performers, explode. we mix body, rhythm and image, in an attempt to dismantle the two-dimensionality of the names.

we desire to open, hack, diffract, extend, exhaust the one-sided and exclusive human perception.

in this manifesto, non-human subjectivities are teachers to us:

they allow us to imagine new possibilities to transform a condition of oppression into an instrument of resistance through **artivism**.

new practices and rites of re-materialisation and re-inhabitation of the invisible are needed. we cannot wait to get in touch with the souls and sensitivities of non-human teachers.

therefore we evoke

the unseen the unfelt the unheard the unknown the unlabeled the unfocused the uncentralized the unidentified the ungraspable the uncontrolled the unrecognised the untouched the undetermined

{{{ CAN YOU ALREADY HEAR LEAVES AND DEAD BUTTERIES TELLING STORIES? }}}}

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Author information

Lucia di Pietro (ORCID: 0009-0007-5561-7525)

lutiapicedro@gmail.com

Lucia Di Pietro is a choreographer. In her artistic practice she combines theory, performance, site-specific art and somatic practices. She is attending the Master Degrees in Performance and Gender Studies at the IUAV University, in Venice (IT). www.luciadipietro.com

Teresa Masini (ORCID: 0009-0000-2093-4386)

t.masini@iuav.it

Teresa Masini is a Ph.D. candidate in Theatre and Performance Studies.

Her research moves around disciplines such as performing arts and ecology, with a focus on interspecies co-creative body practices in the Anthropocene. She constantly practices with writing and singing. She lives in Venice.

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BOOK REVIEW
7TH ISSUE

A Plea for “Bodyfulness”: Book Review of the Atlas of Databodies I (eds. Bart, Breuer, Freier)

Una súplica por la "consciencia del cuerpo": Reseña del libro Atlas de Databodies I (eds. Bart, Breuer, Freier)

Una súplica per a la "corpositat": revisió del llibre de l'Atlas de Databodies I (eds. Bart, Breuer, Freier)

Swantje Martach (ORCID: 0000-0001-6452-5154) Independent researcher.

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For long understood in dichotomy to the soul, mind, and reason, the body has been belittled within theory as well as practical self- (see Richter in atlas p. 48f.) and other-conception (see atlas contribution “Artificial Tears”, p. 116f.). We have just recently rebegun to theorize the fact that literally every experience we make and every action we take (even the most mental and abstract ones, e.g. thinking) is dependent on our bodies (see Johnson, 2007). Yet seeing it ‘merely’ as the material part of the self, we tend to subjugate bodies. We use bodies, our own and others’, for work and leisure, pain and pleasure. We use bodies, but we seldom take account of them. During most actions, bodies are ready-to-hand and never thought about as such. By paradoxical implication, we perceive bodily actions to be ‘body-less’. When cooking, we think about the ingredients, the resulting dish, the pots and pans; but we do not think about how we are to pose and move our body in order to be able to cook (see Rünker’s atlas contribution, p. 18f.). When dressing, we think about the weather, the occasion, the outfit combination; but we do not think about the bodily actions necessary for dressing (i.e. ducking, jumping, sitting down and standing up). When working (these days: remotely), we are glued to our computers, entangled in emails and presentations, and observant of other tiny heads appearing on our screens during conference calls; but we hardly ever become reflectively aware of the role our bodies take in the meantime. An intent to make bodies re-gain an active and thus important role in the age of teleworking are the geometric eggs presented in the atlas contribution by Held (p. 74f.).

Often enough, we care too little about our bodies. It affords much discipline to do sports on a regular basis — discipline that we already depleted in the construction and inhabitation of our professional and medial selves. It consumes a lot of (shopping, storing, preparing, cleaning) time to nourish our body healthily — time that we never have in this accelerated world. In a crucial phase of a project, we subordinate sleep to the latter’s finalization. And for many of us, the thrill of living with inspiring people in the city is more important than breathing the countryside’s fresh air on a daily basis. In the atlas, based on a design approach that is located “at” the body, Rückeis

and Thurow present their “amphibolic objects”: Objects that avoid any single definition of their purpose, and rather are made to explore always other handlings, whereby they intend to incite new and autologous ways of bodying. In this way, they offer us help in re-converging (a new materialist kind of “re-”) with our bodies (see p. 128ff).

We thus subjugate bodies to our personal, often mental, rational, professional, spiritual aspirations. And bodies allow us to subjugate them — certainly up to a certain point, where they make themselves present, push to the forefront of our awareness by their specific means of dysfunction: being sick. Bodies indeed have their methods to make us see their limits. Yet today, there are drugs to supersede these, at least in the short run. The step from a body’s use to its abuse, personified in the Nazi-dentist in Bart’s and Breuer’s atlas contribution “Is it safe?” (p. 92f.), here appears to be tiny.

But let us remain in the wide spectrum of subjugated-yet-functioning bodies, that permit us to conceive them as means for ever other ends. I claim that precisely in this too-easily-taken-for-granted admittance lies the body’s peculiar power: In and by functioning, bodies withdraw from us. Given that bodies function for us, namely while we function via them, the body can be conceptualized as the “object” (which Harman defines by means of its “rift” from/in reality, Harman, 2007, p. 193) par excellence, and thus becomes a primary matter for speculative theories (to which I count new materialism): The body is the object we always carry with us, the object as and through which we exist.

In this sense, its functioning can be understood as the strategy a body implies in order to secretly act back on us, to cunningly condition our conceptions and very pragmatically shape our movements. Already in biblical terms, the body was ‘the flesh’, yet precisely as such, so I argue, the body always is “a little bit nasty” (see Bart discussing the art of Mathisrud, atlas p. 100f.), always at risk of “drowning in its own materiality” (see Freier writing about Swanson’s art, atlas p. 164). As clean as it might be, and as sleek as it might be (medially) presented, the functioning body retains what Braidotti would

call a “teratological” potential (Braidotti, 2000), viz. a chance to disobey, to become disgusting, to reveal its cyborg-nature (in the way Haraway defined it, see Haraway, 2016). In moments in which a body exploits this power, whether we witness it or not, it truly lives up to its own existence, viz. it literally is ‘body-ing’.

To draw attention to works attending to bodies in their withdrawal, and the withdrawing of bodies, is the driving force of the bilingual *Atlas of Databodies I* [original German title: *Atlas der Datenkörper I*], edited by visual artist Marlene Bart, designer and design researcher Johannes Breuer, and philosopher/psychologist Alex Leo Freier. At the side, the present review dares to introduce the *Atlas* only now, so late in this text, as it believes a structure in which the reader gets hit by the matter (here: the body) before being handed over the form (here: the atlas) as a scaffold for judgment (until now, the review’s title had to suffice the reader for the latter purpose), to correspond most to the new materialist manner of thought.

The impetus that unites all contributions presented in the *Atlas*, which are written by a variety of authors including artists, designers, curators, photo- and scenographers, (digital) architects, engineers, philosophers, neuroscientists, taxidermists, and anthropologists, is to not counter or impede, but to rather watch and learn about the body’s withdrawal. And the strategy they use is to think the body not anymore as means for ends, but as an end in and for itself. The *Atlas of Databodies I* hence comes down to a plea to be mindful, namely of the body, whereby the Buddhist-turned-esoteric-commonsense concept of ‘mindfulness’ becomes congruent to what could be called a ‘bodyfulness’.

However crucially, the *Atlas* nowhere arrogates for itself to capture the body in its fullness. As initiation of a series, the *Atlas I* rather sets out to register the richness of the body’s enactments and entanglements (in and with the digital), which validates the atlas itself as a suitable method (introduced by the editors, see p.10-11) for a research of bodies.

The *Atlas of Databodies* has its focus not on bodies as they have been or historically became, but on bodies in the here and now,

especially their speculations (situated not only in the future). In the present age, which paradoxically is at the same time all the less bodily (rather: digital, mental, computerized) while being all the more bodily (aesthetic, cultic, fanatic), I see bodies as more complex than ever before: In addition to continuing their intra-actions with the social, the environmental, the medicinal, the architectural, the temporal, etc., today, bodies are also digital. Attending to bodies-as-ends might thus have never been more urgent.

And the *Atlas*’ claim is not just: Bodies create and nourish data. But thinking the body as end, it also states: Bodies are shaped by data. Very new materialist in style, it thus circularly concludes: Bodies produce data produce bodies. Reading it less evaluative than Freier and rather plainly ontological, Swanson’s artwork “Repent” (p. 165), interpreted by Freier as a self-consuming Ouroboros (see p. 164), hence is felicitously located at the *Atlas*’ provisional end.

Data here become just another body liquid, effluent like saliva, blood, or urine. And we become another, dependent upon the data that our bodies produce, that are constantly collected, interpreted, and used against/for us by an Other (digital capitalism), and that flow (not ‘back’) into and alter what we used to call ‘selves’. For this reason, Lee and Holzheu write: “people become organs of a larger body” (p. 156), and “Data and databases ... have entangled us in a way biopolitics could never have” (p. 160). Not the result, but the ever only temporary halts in which databodies become manifest are what Freier cautionary calls “branded bodies” (p. 170).

The danger of data, streaming directly from the term’s etymology (plural of Lat. *datum*, “a given”), is that they erroneously make the body appear as a fixed fact, while the body rather is constitutively open, always in the making, ontologically becoming — apparently a commonsense for the atlas in discussion. It bravely engages in a play with this danger by entangling “data” with/in the neologism “databodies”, whereby both data and bodies are intra-actively becoming an/other.

It could be said that the Atlas of Databodies I seeks to stress the need to conceptualize the body not as a datum in data, but to rather take this verb out of its past participle form (datum) and back into its infinitive (which by no way is neutral): the Latin dare (“to give”), from which the English term “to dare” derived. It says: Let us take our bodies to dare (bodies as means, at times, yes). Let us dare our bodies in order to become (take the body as end), namely what Deleuze and Guattari called “rhizomatic” (Deleuze and Guattari, 2004, p. 13) bodies: “Is it really so sad and dangerous to be fed up with seeing with your eyes, breathing with your lungs, talking with your tongue, thinking with your brain [...]? Why not walk on your head, sing with your sinuses, see through your skin, breathe with your belly” (ibid., p. 167). Let us allow our bodies to dare (allowing the body to become means for its own ends). Let us exist as daring bodies (queering mind/body in their fullness).

So why should new materialists engage with this atlas? Attending precisely the matter that is (not exclusively) us, the Atlas of Databodies I reveals the body as vividly mattering, even slobberingly mattering since becoming a databody. In so doing, the Atlas queers the methods of art and research, contributes to the re-appreciation of our own ordinary (a feminist endeavor), and eventually releases us in awe of

present-day’s multiplicities of becoming — “taught to those who dare to see” (Freier p. 170, *italics added*).

What could be done more? Databodies are matrices consisting of their entanglements with/in multiple practices. Some of them have already been approached in the Atlas I, and I hope to see differing approaches in a (already announced by calling the book “Atlas I”) coming Atlas II, such as, and here I openly propose: dance and trance, (4D-)transportation, databody/sex, ‘datasports’, “cyborg fashion” (see already atlas-included artist Amy Karle’s (p.22f.) latest exhibition in Kuwait), and postmodern medicines. For its self-legitimation in the body as a field of study, I suggest a second atlas to further couple with (as initiated by Richter p. 48f.) state-of-the-art embodiment theories and/in the philosophies of mind. And in a new materialist direction, I would welcome to follow further conceptional work on queering the body/mind.

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Author information

Swantje Martach (ORCID: 0000-0001-6452-5154)

swantjemartach@gmx.de

Of German origin, Swantje Martach received a PhD in Philosophy at the Autonomous University of Barcelona/University of the Arts London, where she worked on a new materialist rewriting of the daily human/clothes intra-action. She was able to initiate her postdoctoral period at the University of Presov, Slovakia, is an editorial member of the journals IMAGE (German journal for interdisciplinary image theory) and ESPES (Slovak journal for aesthetics), and recently has been involved in New Dawn, an arts/theories-queering research of gloves. Currently, she is on her second maternity leave. You can find Swantje on Academia and Instagram: @swantjemartach.