Technoetic Arts: A Journal of Speculative Research
Volume 20 Numbers 1 & 2
 https://doi.org/10.1386/tear_00084_1
Received 17 December 2021; Accepted 22 March 2022

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Vulnerability as a queer art

ABSTRACT

The idea of 'arts of vulnerability' (AoV) reclaims the fact of being inherently open (never sealed) and becomes a tool to navigate such a lack of closure. It is art *because it comes from art practice, and it is* of vulnerability *because it comes from materials that are vulnerable and defy control. The idea is rooted in bioart practice understood as artistic research and read through feminist and queer studies about embodiment and ecology. This article traces how the artwork series* Wombs *contributed to the development of the idea. AoV is a way of understanding art practice, yet it becomes an ethical and intellectual tool that pays attention (and tribute) to more-than-human ethics and aesthetics. It may thus contribute to a critical discussion of today's surging ecological complexity.*

KEYWORDS

arts of vulnerability
queer studies
queer ecology
environmental humanities
artistic research
bioart

PRELUDE

Word(s) matter(s). Words express world-views and shape relations and ethical paths. Words fashion the way environmental disruption is dealt with. Art may spur radical rethinking, open questions and birth new vocabularies. In this article, I engage with the prompt raised by the title of this Special Issue by offering the words 'arts of vulnerability' (AoV). AoV emerges from artistic research in bioart with a theoretical framework of feminist and queer studies. It was formulated during the realization of *Wombs*, a series of artworks that involve biological matter: bioart.[1] *Wombs* addresses hormonal contraception from an environmental perspective. It does so by imagining bodies and environments – both human and more-than-human kinds – as permeable and leaking into each other.

I open this article with some reflections on the words used to describe global phenomena, why they remain troublesome and how experimental art

1. While I adopt the terms *bioart* and *biological art* as synonyms, the debate on the terms remains lively. See Hauser (2005), Gessert (2010) and Beloff et al. (2013) among others. My understanding of the term embraces the theorization of the 'non/living' (Radomska 2016).

has re-appropriated and reformulated them. Next, I outline my understanding of artistic research as a way of knowledge production which exceeds the creation of artworks. Then, I engage with the four concepts that sustain my argument: *leaks* as a mark of bodies and methods; *vulnerabilities* of humans and environments; the *non/living* as a space of indeterminacy and *queer* intended as a verb and a method. Finally, I describe how *Wombs* contributed to the formulation of AoV. On such substrate, I expand on the AoV and discuss how AoV may become an epistemic and ethical tool in times of environmental disruption.

THE 'A-MEME' AND THE NEED FOR NEW WORDS

With 'a-meme', I comment on the wordplay 'anthropomeme' by Macfarlane (2016), a word also used by Braidotti (2019) and Berger (2018). 'Meme' refers to pictures or terms that spread rapidly, often with variations. The term it refers to was originally suggested in the field of geology to indicate how the (human) use of fossil fuels has left a mark on the planet's geological strata (Crutzen 2002; Steffen et al. 2007). Through a metaphor, the term suggested how human activity since the inception of powered machines has acquired planetary relevance. Its meaning then extended to the consequences of human activities on ecosystems, as in Jeschke (2021). The term points to the extraction and use of fossil fuels as the main cause of such processes. By so doing, it also indicates the magnitude of the consequences of the use of fossil fuels, which are today acknowledged to be the primary cause of climate change (IPCC 2021).[2]

The term's allure lies in its projection of limited human temporality onto a geological timescale and planetary landscapes. For its evocative power, the a-meme has flared in the humanities and the public arena with numerous publications, with re-appropriations that test and challenge the concept. The term has also been used to outline ecological complexity as a context for artistic practice (Davis and Turpin 2015).

Yet, the idea remains problematic. On the one hand, it may be argued whether some centuries are enough to be significant on geological timescales (Brannen 2019). On the other hand, the term retains a bias which can be addressed with the question: 'Is it really *all humans* who are causing this?'. Critique to the concept has come from areas of the humanities that have deconstructed how uneven distribution of power affects knowledge production: it is *not all* humans who have exploited fossil fuels, not in the same way. Fossil fuel consumption, while presented as a global occurrence, is linked to industrialization and capitalism; the term may be more appropriate if it acknowledges its origins (Haraway 2015; Moore 2016). Different human cohorts have different responsibilities and consequences.

Stylistically, the term is a synecdoche, a figure of speech, in which a part is made to represent the whole or vice versa (Pevere 2018a). The term is imbued with anthropocentrism, a view of the world of Greek and Christian heritage, which sees humans as the centre of the cosmos – but only privileged humans, those who administer normativities. In a radical quest for an alternative, philosopher[3] Patricia MacCormack offers the 'ahuman' as a necessary shift to unlatch humans from such a central position: the signifier 'a-' implies an active removal. The wish is to utilize human privilege for all life on Earth, not for a single species (MacCormack 2020).

With diverse degrees of irony and critique or perspective shifts, artists and scholars have variously re-appropriated the term. Artist Erich Berger has traced the proliferation of a-memes in a list (Berger 2018). As of November 2021, the

2. It must be remarked that climate change is but one effect of a wider environmental disruption, which includes pollution, toxic accumulation and biodiversity loss (IPBES 2019). As each phenomenon has its specificities, limiting discussion and action to climate change would be misleading.

3. The transdisciplinary research presented here goes hand-in-hand with the acknowledgement of how perspective counts in research. I engage with ideas which come from the arts, humanities and science. Acknowledging their diversity is a way to outline how knowledge is produced. For the relevance of the perspective, see Haraway (1988) and Liboiron (2021: 3).

list includes 88 entries, and counting.[4] To erode anthropocentric biases, some of the a-memes shrink the human in the picture and expand what I refer to as 'that which is still called nature'. Among those, the *Aquatocene* project by artist Robertina Šebjanič dives into underwater realms. There, humans are occasional dwellers, yet their activity infiltrates marine life through chemical and acoustic pollution (Šebjanič 2016).

The proliferation of a-memes suggests a quest for alternative visions and vocabularies for current planetary changes. Dialogue and frictions among science, arts and humanities may birth novel words and attunements to that which is still called nature. Through irony, provocation or re-appropriation, they erode anthropocentric biases which are at the root of environmental disruption.

4. I am thankful to Erich Berger for providing the list to me.

LEAKING, MATTERING: METHODS

Crucial both to *Wombs* and AoV are the words 'leaks' and 'vulnerability' (which matter). It is useful to clarify two methodological points of this research before describing the artwork. The first outlines the chosen feminist and environmental take on leaks and vulnerability within a contemporary western philosophical landscape, engaging with the idea of bodies that are: open; in relation with other entities; and both subject to and agent of effects (see Deleuze and Guattari 1983, 2004; Kosofsky Sedgwick 2003; Braidotti 2013 among others). The second point expands on artistic research as a way of producing knowledge rooted in artistic practice.

Vulnerability has been variously addressed for social or political critique (Butler 2004) or to address environmental implications (Clark 2010). Philosopher Margrit Shildrick takes leaks and vulnerability towards ethical and ontological planes. Drawing on bioethics and disability studies, Shildrick (1997) deconstructs the understandings of subjects and bodies as a *normatively* self-enclosed, self-sufficient, rational entity. She then unlatches leakiness and uncontainability from the feminine, which they were traditionally attributed to. Bodies are not only open, they are leaky, for there is an inherent resistance to containment.

Shildrick (2002) takes then a further step in deconstructing how vulnerability is usually projected onto 'the other' and thus a tool to administer normativities with the result that potential harm should be kept at bay. She deconstructs this relation and moves from the idea that vulnerability is something to control, with the acknowledgement that it enables the encounter with the other. Her writing erodes the separation between bodies which comply to normativity and those which are vulnerable: those categories are undone in the moment when all bodies are vulnerable in their own terms. Importantly, she addresses the ethical and epistemic consequences of such re-evaluation.

Leaks and vulnerability exceed human-only realms in the work of Myra Hird in the environmental humanities. Hird takes on landfills as 'ubiquitous places of forgetting' (2013: 106). Built to hide and contain waste, landfills never fully comply to their purpose: they spill. Their leaks counter the idea of waste containability and present unprecedented combinations of bacteria, decaying matter and chemicals, which percolate and re-enter the environment. Hird calls for an 'environmental ethics of vulnerability' that bridges responsibility with an environmental context. She discards simplistic assumptions that leaks should be avoided, because this is not always possible. Hird takes on the specific leakiness of dumps to call for a responsible and critical engagement with the meaning of these leaks for society, communities and environments.

Leaks and vulnerability hint at a certain transgression of order and potential for excess, as well as the possibility of being hurt. From different entry points, Hird and Shildrick engage actively with vulnerability and leakiness. They become something neither to try to seal, for this is not really possible, nor to shy away from, for they enable the encounter with the other and signal transformations. A displacement originates from the potential excess from assigned borders and the irreducible possibility of being hurt. Such displacement comes with an ethical call and possibly a way to deal with it.

The ideas outlined above have informed the methods chosen for the artistic research conducted through the realization of *Wombs*. Artistic research is understood here as a process that exceeds the realization of an artwork and includes a self-critical contextualization of the artistic practice by the artists themselves (Hannula et al. 2005; Biggs and Karlsson 2011; Varto 2018). Thus, artistic research creates artworks, but it contextually produces knowledge about the way works come to be and the topics they engage with.

Artistic research remains rooted in the practice through production and exhibitions in art contexts, but also dialogues with academia through specific programmes (such as Ph.D.s), conferences and publications. Through this interplay, artistic and academic practices iteratively and mutually affect each other (Hannula et al. 2005). This research was exposed to scholarly feedback in feminist humanities, queer death studies, bioscience and environmental studies.

Within this research, self-critical reflection is understood as 'situated knowledge' (Haraway 1988). Feminist science and technology studies problematize *how* knowledge is produced and *by whom*, and thus challenge narrations of universally and univocally objective knowledge. Only when its author is locatable, does knowledge becomes accountable – and thus objective. Situated artistic research addresses the ethical implications of working with biological matter and technoscientific means.

The artistic ideas of leaks across bodies and environments mark also the methods adopted, informed by bioart practice, feminist and queer studies and environmental humanities. Leaks and vulnerabilities guide the artistic creation from initial intuition to the choice of processes and materials. It is through engagement with those intuitions, processes and materialities that theoretical reflection happens and the idea of AoV emerges.

What matters for the formulation of AoV is, on the one hand, the intuition behind the artwork (the interrogation of a non-menstruating body with a womb) and, on the other hand, the materials that come with the artworks (hormones, vaginal epithelial cells, slug bodies). These materials offer an intimate negotiation with fluids and uncontainability which connects to the leaky and vulnerable entities of Shildrick and Hird. What emerged in the artistic creation is the impossibility of complete control of these materials, with, however, a variable degree of attunement and negotiation – a skill, some arts of doing it.

LEAKING, MATTERING: QUEERING CONCEPTS

Leaks and vulnerability are *made to matter* by two further conceptualizations that resist either/or categories. The first is the concept of 'non/living' by Marietta Radomska (2016, 2018). The second is the understanding of 'queer' as a verb, borrowed from scholarship in queer ecologies (Giffney and Hird 2008; Mortimer-Sandilands and Erickson 2010) and queer death studies (Radomska et al. 2019).

Radomska offers the concept of non/living within a feminist critique of the philosophy of life (biophilosophy) and through engagement with bioart works. She elaborates on life and death processes which would not exist outside the enmeshment of biological, cultural, artistic and technological facts that sustain bioart. Non/living artworks defy categorizations as either life or death, and therefore exceed what is commonly and normatively understood as life. The concept applies to other entities that exceed classical definitions of life, such as protocells and viruses, a relevant point in current pandemic times (Radomska et al. 2021). The gerund form of the term refers to the processuality, rather than fixed states of being, and the slash refers to the enmeshment – rather than opposition – of the processes of living and dying.

This research assumes the non/living as *the* dimension inhabited by bioart works like *Wombs*, for they bring the enmeshment of life and death to the fore. The works acknowledge the biotechnological fact that supports them, but unpack further their inherent leakiness and potential of excess. Bioart works are always exposed to potential contaminations, death or excessive growth. They may defy control (Pevere 2018b). The instability of bioart works magnifies vulnerabilities and opens further ontological and ethical realms.

The erosion of normativities adopted in this research draws further on lines of queer ecologies and queer death studies. While acknowledging it, these lines understand the term 'queer' beyond its focus on sexuality and gender. Queer becomes 'a verb and an adverb': *to queer*, meaning both 'a process and a methodology' (Radomska et al. 2019: 6). As it did with sexuality and gender, queer can undo normativities and binaries such as pure/contaminate, human/nature or life/death. It 'fashions alternative imaginaries' (Giffney and Hird 2008: 4) and opens to multiplicity (MacCormack et al. 2021).

Adopting queer as a verb and a method for this artistic research responds to and extends the ethical call of Hird and Shildrick. Responding to Shildrick, it unsettles the distinction between bodies which comply to normativities and those which do not, for all bodies are inherently vulnerable. Echoing Hird, it frames the discussion from a critical environmental perspective, where leaks may manifest a troublesome combination of elements that defy control and call for negotiation. Clearly, the way leaks and vulnerability are distributed in the relationship matter; I will return to this in the description of the artwork.

While leaks and vulnerabilities acknowledge how bodies of humans and environments are never sealed, to queer them suggests what to do with such lack of closure. The potential to be harmed is not alarming, but is considered and celebrated. It unsettles normativities and reclaims alternative imaginaries and may fashion other ways of understanding relationships, thus becoming an artistic and epistemic tool. Acknowledging them is political, for it calls for an ethical engagement with such unsettlement that acknowledges diversity. Queering leaks and vulnerabilities reclaim them, and make art out of them.

LEAKING, MATTERING: ARTWORKS

Wombs takes on a gesture that accompanies the sexual life of many: taking 'the pill'. Despite having a womb, my body does not menstruate for the progestin-only contraceptive I take does not trigger bleeding (unlike most oestrogen-based pills taken with interruption). The prompt for the work transgresses this individual experience and opens to more-than-human, more-than-subjective experiences. The artwork acknowledges the social rights movements and history behind hormonal contraceptives, as well as how access and availability

are a matter of privilege still today. *Wombs* also acknowledges biopolitical implications and biases of medical history with regard to non-male bodies, while engaging with sexuality and gender from a more-than-human and more-than-subjective perspective.

The question behind *Wombs* is not merely to understand what specific hormones do to my body, but what they do to that which is more-than-myself. To address these questions, I looked at the leakiness of my body and beyond it. What relationalities do hormones enact in more-than-human terms? Hormones enter my body via the mouth, every morning; do they leave through urine after metabolic processes? What other bodies do they come from? What other bodies may they flow through? What happens to my glands and organs once the hormones enter my endocrine system? What happens to the molecules? Are they only in my body?

To outline the more-than-human spectrum of the project, preliminary research involved tracing what animals are used in the production of hormones and in research or therapy (Kirksey et al. 2016), and what happens when human-made hormones or molecules mimicking them (called endocrine disruptor compounds, EDCs; Combarnous and Diep Nguyen 2019) enter the environment (Ah-king and Hayward 2013; Braunstein et al. 2011; Frye et al. 2012; Jobling et al. 2003; Scott 2018; Shore and Shemesh 2016).

Wombs was realized over four years through interconnected interventions of biological art, performance and photography. Its plural title refers to multiple possibilities of embodiment and manifestations. The series features three instances: *W.01, W.02* and *W.03*. Although executed by a body with a womb, the work does not refer to the actual reproductive organ, but *opens from it* to peruse the space between sexuality, gender and the environment. It does so through material engagement with diverse bodily matters: urine and vaginal epithelial cells from my body; a progestin-based contraceptive pill; a bacterial strain; skin; slugs; slug eggs and slime; various bioreagents; a DIY-bioreactor and scientific glassware. This practice is indebted to the many artists experimenting on their bodies in performance and those working with biotechnology in media art and bioart.

The choice to work with bacteria and slugs opens to ecologies of sex beyond human normative binaries. Bacteria reproduce asexually by cellular division; terrestrial slugs are hermaphroditic. Science is unclear regarding the effects of mammalian sex hormones on terrestrial slugs and more research is done about sea gastropods (Zou 2019). There is a space of indeterminacy which brushes against established assumptions, and which the piece reclaims.

I realized the artworks in biolaboratories, combining established scientific protocols with DIY and biohacking techniques. *W.01* and *W.02* manifest as non/living installations, and *W.03* as a photographic series from a performance for camera. In *W.01*, I obtained an extract of my urine containing hormone metabolites and other residues by adapting older methods of hormone extraction from urine (Schöneshofer and Fenner 1981). In the installation, the extract is added to the culture medium of a cellulose-producing bacterial strain. In *W.02*, I extracted cells from my vaginal epithelium and cells from slug eggs. I tested different culture conditions for both cell types by adjusting temperature, acidity and nutrients. Eventually, I set both cells in a hybrid culture which is part of the installation.

The aesthetic of both non/living installations in *W.01* and *W.02* evokes extra-bodily organs rather than techno-scientific imaginaries: they are fleshy, distorted, to a certain extent obscene. The seriality and aesthetics of these

hybrid extra-bodily organs respond to the multiple in the project's title. *W.01* comprises scientific glassware hanging from a canopy of silicone tubes. The features of *W.02* (Figure 1) are based on the anatomy of human and slug sexual organs. Tendrils grip on the ceiling and sustain an extra-bodily organ, a gestating body that contains a DIY incubator. The incubator creates an enclosed environment at a stable temperature. Inside, organ-like distorted scientific glassware hosts the hybrid human–slug cell culture.

Figure 1: Margherita Pevere, Wombs W.02*, 2021. Installation view. Picture by Maja Bačić.*

A round glass flap on the installation allows the visitor to look inside the incubator. I intentionally did not include a microscope to magnify the cells. The aesthetics of the work invites the viewer to engage with open questions. To do so, a careful sculptural and chromatic composition guides the gaze from the outside shapes and textures to the inside of the installation. The outside is rough, glistening, red; the inside is soft, with a suffuse light and gleaming surfaces. A Fresnel lens mounted on the flap distorts the vision of the inside: the visitor may tilt or move to find their best visual angle. While the visitor moves, the optical distortion creates flowing lines and uncontainable shapes (Figure 2). Yet, looking closely, small cell chunks and their whitish haze can be seen inside the glassware.

Artistic work with non/living matter asks for negotiation rather than control. Established protocols indicate how to steer the process. Indications of temperature, acidity, reaction times and rotations per minute constitute the substrate for independent work. Yet, non/living materials retain a specific agenciality that must be taken into consideration. Non/living matter can get contaminated, die, grow too little or too much and present anomalies. Actions such as starting a new culture through inoculation, controlling its parameters or killing it by autoclaving become rituals aimed at negotiating with living matter. In this regard, the collection of vaginal epithelial cells and the intimacy with a slug in the performance for camera have been meaningful.

I obtained vaginal epithelial cells by scraping the vaginal lining with a plastic spatula. I performed this in a separate room next to the biolab, and placed the scrape in a sterile container. I then entered the biolab and put on my protective attire (coat, gloves, goggles). I transferred the biomatter to

Figure 2: Margherita Pevere, Wombs W.02, *2021. Details of the glassware containing the cell culture. Picture by Maja Bačić.*

centrifuge tubes, added buffer and proceeded to centrifuge and rinse several times to remove the vaginal mucus that came with them. Next, I added antifungals and antibiotics to suppress the vaginal flora, let these work and rinsed the culture. I created several batches from the initial batch, using some to test suitable conditions for the hybrid culture. Finally, I froze the remaining batches under glycerol to store for future exhibitions.

Previous research suggests that in hermaphroditic gastropods, like slugs, different hormones may activate 'female' or 'male' sexual organs (Kruatrachue et al. 1996). Recent publications indicate that science is undecided on the topic (Zou 2019). The lack of a resolute answer opens a fertile space of indeterminacy which can be artistically explored. Slugs are mostly considered a crop pest to be exterminated. Audiences express diverse reactions to slugs: some recoil; some describe how slugs are killed in gardens – dehydrated in salt traps, or lured and drowned in beer traps. Others emphasize, instead, that slugs are 'cute'. Because of this grey area in science, because of hermaphroditism and because of the contrasting emotions associated with the animal, slugs became allies in my exploration.

For the performance *W.03*, I stretched a piece of fabric on the coarse wooden floor and took the leopard slug from the terrarium I built for it. Lying on the floor with the slug, I watched it explore the space around us. The slug was awake and its slimy soft body was fully stretched. I felt some aversion, even after all the time I spent observing and feeding it. Contrary to my expectations, the slug was not 'shy' and felt heavy when sliding on my skin. It reclaimed the surface with silvery trails. Aversion dissipated into a silent interplay of mucus, skin texture, bones and cavities (Figure 3).

Figure 3: Margherita Pevere, Wombs W.03, *2019. Inkjet print on archival paper. 375 mm × 245 mm. Picture credit by Sanjin Kaštelan and Margherita Pevere.*

ARTS OF VULNERABILITY

Wombs weaves queer ecologies through bioart and performance. It takes on the feminist idea of leaky and vulnerable bodies and contextualizes it in today's surging environmental complexity. Yet, it counters normative narrations of purity that still surround common ideas of nature or body. It reclaims the choice of hormonal contraception, contesting the idea that a body in hormonal therapy is not 'natural'. The artwork is a queer intervention for it draws from the intricacies of gender and sexuality, but not only. It adopts 'queer' and 'leaks' *as verbs and methods to trace and negotiate with vulnerabilities* of bodies and environments, artistically engage with them and learn from them.

Both when working with vaginal epithelial cells and in the performance for camera I was in a position of power. I carefully prepared a terrarium to host the slug with comfort, yet that was not its choice. I fed the slug, controlled moisture and moved the terrarium to a cool place when the outside temperature rose. I took the slug from the terrarium for the performance. Eventually, I placed the slug in a garden. In the case of vaginal epithelial cells, I was dealing with materials extracted from my body, not a full organism. I administered nutrients, temperature and humidity. I used antibiotics and antifungals to suppress vaginal microbiome in the cell culture. I rinsed and centrifuged the cells, re-plating them when necessary. I froze some batches and killed others. Each of the gestures described is biopolitical, as they intervene onto life processes. I take the responsibility of such gestures as an artist, thus making myself accountable for the knowledge that I gain and share through my practice. I work with matters – organisms or parts of them – which tend to defy control and are uncontainable. They are vulnerable.

At the same time, those unstable, uncontainable, non/living matters *make me vulnerable* because they require attention and physical attunement. Knowing the protocols is not enough: one must develop a sort of *listening to* materialities and processes. It is not an auditory *listening*, because it is a way of paying attention to processuality. It is a non-verbal listening that requires one to be open and perceptive to changes in a nutrient media's colour or the smell of a cell culture. In the case of the slug during the performance, the attunement was to its behaviour, its slowness, its stretching out or protective retracting. I had to be unsealed and take responsibility for others' vulnerability. This was possible by making myself vulnerable to them.

AoV originates from the manipulation of biomatter, partly through biotechnology, for artistic purposes. A situated reflection upon artistic creation amplifies the ethics and complexities of such manipulation. Artistic creation operates in a liminal area which resists functionality. Yet, the artist needs to accommodate agencies of the materials and simultaneously steer them towards an artistic vision. In work with non/living matters, the need for negotiation rather than the presumption of control becomes more evident.

Being vulnerable implies 'listening' to the materials, organisms and ideas as a way to 'get to know' them. Such a process comes with time and experience. It is not something that can be understood only by words, even if words play an important role. Dealing with unstable and vulnerable materials requires understanding where and why they are vulnerable, what makes them vulnerable and what they need to be taken care of. One needs time, failed experiments in the biolab, installations to be fixed, cell cultures which do not react

as wished. One needs to learn the smell of things and become vulnerable to it: what does it mean if a cell culture in the incubator (for example) smells a certain way? 'Listening' to these signals and understanding their implications can be trained, as a skill. With time, one can grow skills – arts – for dealing with these vulnerabilities.

Self-reflective, situated practice offers the privilege and responsibility of *engaging* with questions such as 'When to intervene? What to control, what not to? What to kill? Why? And how?'. Some of these questions are *implicit* in procedures that mark bioart practice and have variously unpacked them (Catts and Zurr 2002; Kratz 2013; de Menezes 2015; Mackenzie 2017). Whereas questions and (im)possible answers are inherent, art amplifies them, make them accessible and sometimes hopes to unpack them.

In the realization of *Wombs*, adopting vulnerability as an entry shifted the way questions emerged. Rather than observing, for instance, how cells reacted to culture conditions, or how an experiment worked under a certain protocol, the questions became 'Vulnerable to what? And why?'. The shift extended to inquiring what would happen if vulnerabilities were to steer relations.

AoV addresses the ethics and complexities of engaging with non/living matter by reclaiming the precondition that bodies are leaky – be they human, more-than-human, non/living or bodies of knowledge. Such leakiness makes bodies vulnerable, although not all in the same manner as the distribution of power is never flat. As an artist, I tried to make myself vulnerable to the artistic process in the same manner I make myself vulnerable to hormones I take as a contraceptive, and embrace these choices.

AoV has developed through leaks. Artistic practice has leaked from artistic to academic contexts and back in an ongoing process of mutual affect. It has also proceeded through material leaks, as bioart implies negotiations with liquids. The carefulness of pipetting bioreagents or rinsing cell batches, for instance, requires a particular bodily attunement aimed at steering flows and avoiding spills which may result in failed experiments. Leaks are always potentially present, and sometimes happen despite careful training and attunement to the working space. Leaks mark the bodies I observed for the realization of the artworks – a body with a womb which does not menstruate because of specific hormonal contraceptives, cell bodies and a slug's body. Leaks are material leaks; leaks are epistemic leaks.

I propose AoV as a queer way to engage with the complexities arising from the leak and the uncontainable. The expression is situated in my experience of being both an artist and a researcher. 'The practice is the catalyst'[5] of my discussion and sustains my arguments. When I write arts of vulnerability, or AoV, I mean art that guided me here, that I made or others made: art practice, artistic research, artworks and exhibitions. At the same time, I also mean art as the skill at doing a specified thing, usually acquired through practice. It is plural *arts*, though, never singular, as there is no univocal mode of doing it and rather encourages multiplicity.

AoV leaks from and transgresses the realm of artistic creation, though. It is *arts*, because it comes from art practice, and it is *of vulnerability*, because it comes from materials that defy control. AoV prompts the embrace of vulnerability as a contemporary political and ethical gesture in times of anthropocentric memes. Embracing is not enough, though. I also offer AoV as a way to reclaim vulnerability and make something out of it.

5. I owe this wording to Marietta Radomska.

CONCLUDING REMARKS

AoV coagulates from uncontainable matters and concepts that resist normativities. Leaks and vulnerability emerged throughout the project with diverse ethical implications. Rather than trying to seal those leaks, working with non/living and more-than-human matter taught me to *listen* to them. Non/living matter is *and* makes me vulnerable, thus I can perceive others' vulnerability and understand what is to be done. Vulnerabilities remain unevenly distributed, yet to queer them means to adopt the potential to be harmed as an entry point.

AoV reclaims a space where the human is not in control, but is asked to listen and negotiate. It does not foreground narrations of human artists who shape futuristic scenarios by intervening with nature through (bio)technology. Rather, it engages with uncontainability and the politics thereof.

Furthermore, AoV advances the urgency of vulnerability in the current changing ecologies. It engages with questions such as 'What can be done differently? How can I accommodate and listen to others' vulnerabilities?'. AoV becomes a tool to erode human dominance, or rather, to queer such dominance as it refuses binaries where one is, after all, entitled to exploitation. It reclaims an ethical engagement based on a quest for leaks and vulnerabilities. What do these do? It is a call for action to listen and care.

What this research has not yet explored are other extended implications of AoV. For instance, further research may inquire into the implications of manifesting vulnerabilities in case of emergency, or how to mediate acutely contrasting needs. In this regard, it would be interesting to maintain AoV as an entry point to extend the idea's nuances.

Like some among the a-memes mentioned at the opening of this article, AoV comes from art and opens to possible ways of dealing with more-than-human matters. Different scales of complexity and power dynamics create an inescapable gap between artistic creation and global phenomena. As a person from the Global North, accessing certain resources for art positions myself within those broader dynamics and results in a situated way of art making. Nevertheless, making art with vulnerable, leaky, non/living matter has fashioned AoV as one possible way of dealing with them. It has formulated a possible artistic and ethical path to be further explored.

Surging ecological disruption calls for action too. Its call may surpass exploitative anthropocentric narrations, vindication of resource scarcity and environmental techno-fixes. AoV has the ambition to offer alternative visions, but also the awareness that art alone cannot change the world. It reclaims, though, art as an agent of change and a call to action. Humans may retreat from this dominant position, reclaim their leaks and vulnerabilities, listen to the leaks and vulnerabilities of others and leave the Anthropocene behind.

POSTSCRIPT

This text leaks from my doctoral dissertation, whose defence was originally scheduled for 2021. The consequences of the COVID-19 pandemic delayed the manuscript submission to the second half of 2022 (Beccaro et al. 2021). AoV is one of the main contributions of the dissertation. However, how AoV positions itself towards the Anthropocene exceeds the dissertation and finds discussion in this article.

FUNDING

The research for this article was supported by Kone Foundation. *W.02* and *W.03* were realized within the framework of the European Media Art Platforms EMARE programme at KONTEJNER | bureau of contemporary art praxis, co-funded by the Creative Europe Programme of the European Union.

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SUGGESTED CITATION

Pevere, Margherita (2022), 'Vulnerability as a queer art', *Technoetic Arts: A Journal of Speculative Research*, 20:1&2, pp. 95–110, https://doi.org/10.1386/tear_00084_1

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