



Agential realism meets feminist art. A diffractive dialogue between writers, theories and art

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Abstract

This article invites readers to follow our diffractive dialogue, which reflects on our interdisciplinary collaboration in thinking and writing with Karen Barad. Working with Barad's diffractive methodology, we bring her agential realism, insights from quantum physics and feminist theories to contemporary feminist art. The aesthetic practices of three art works are discussed, and we argue that these call for an understanding of eco-, capitalist-, colonialist- and feminist critique as interrelated phenomena in the sense of agential realism. This is because it is not only the art works themselves that create encounter-moments of being-entangled with the bodies and discourses that surround them. From a methodological perspective, we are also interested in marking diffractive moments of encounter with the art works and between us, given our different disciplinary backgrounds. So, we intend to open up a space of encounters between Barad's work, the work of the three artists and the work of ourselves as writers.

Keywords

Karen Barad; feminist art; diffraction; diffractive dialogue; agential realism.

Our article draws on a framework of collective diffractive reading and writing, based on an ongoing and ongoing collaborative process between us. As two PhD students and friends, we are both interested in feminist materialisms and are both torn between working on our projects and care work in times of Corona pandemic. Collective diffractive reading and writing is our framework for this article, based on many telephone calls, videoconferences, and many versions of our text. We want to focus on the entanglements of our own (inter)disciplinary backgrounds. Situated within media culture studies, and working on feminist media art (Alisa), and situated within gender studies and working on a project which connects epigenetics and Karen Barad's works (Lisa), we bring in different perspectives. In discussing the connecting points of feminist art and theories of feminist new materialisms based on Barad's 'agential realism' (Barad, 2007), we will mark where our backgrounds and views come into touch. Because '[t]heorizing, a form of experimenting, is about being in touch. What keeps theories alive and lively is being responsible and responsive to the world's patternings and murmurings.' (Barad, 2015a, p. 154).

This quote from Barad points to the core of a 'diffractive reading'. Coming from quantum physics and working with feminist theories and science studies, Barad uses the physical phenomenon of diffraction to point to the many different influences her work and the world is composed of. Her diffractive methodology is about bringing disciplines and perspectives which seem far apart into conversation. With the help of the epistemological studies of the physicist Niels Bohr, Barad is attempting an ontological reorientation that gives matter a new and participatory status. Based on this reorientation, Barad formulates a performative, post-humanist theory which she calls 'agential realism' in which the arrangement of matter is challenged as a causally given fact or as a mere effect of human activity. This demands a far-reaching rethink of how we can conceive of the relationship between matter and its representation (Barad, 2007). To not assume that human and non-human, matter and discourse or epistemology and ontology are antagonisms but to instead think of differences as being performatively entangled and intertwined is distinctive of agential realism. Here diffraction opens up another way of thinking about differences which is not about dismantling differences but rather about allowing differences 'to blossom' (Thiele 2020) and to be aware of constitutive entanglements that they entail.

We are guided by Barad's 'agential realism' and in particular her idea of 'diffractive reading' which we will explain later. In an ongoing process of becoming, our ideas, our knowledge, our observations and affects meet respectfully and a resonating space of diffraction is created which is fundamentally open.¹ Our approach is based on a dialogue that consciously marks the ability of the other to respond and thus operates on a constant opening.² The idea of a dialogical encounter is applied in relation to theory and practice, as well as to the art works themselves. We want to be aware of our involvement in an 'opening' and a continuous construction of the world. Being involved implies our responsibility of what comes (not) to matter. If diffraction implies openness, the question arises, how do we manage to be open? Our approach is an acting out of entanglements, whereby we consider them to be productive. This is what we understand by diffractive reading.

Diffractive dialogue asserts for us that we name the moments of our encounters at the interfaces of the individual patches. The article will introduce our readers to Barad's main strands of argument (written by Lisa) and illuminate some of the potentialities at stake in these perspectives with regards to contemporary, feminist oriented art (written by Alisa). Committed to diffractive thinking, our approach is similar to sewing a patchwork blanket: moments of encounter between our respective approaches are deliberately not ironed out, but in the sense of diffractive thinking it is the seams on the patches that we consider productive. As some parts emerged, we named them patches.³ The text grew and as we read it again and again, we suddenly recognised that Barad describes one of her articles as patchwork too: 'This article is a patchwork. Made of disparate parts. Or so it may seem. But why should we understand parts as individually constructed building blocks or disconnected pieces of one another forms of original wholeness?' (Barad, 2015b, p. 406).

¹ We are very glad that due to corona crisis and the switch to digital events we got to know Katrine Meldgaard Kjær and Mace Olaja from IT University of Copenhagen and want to thank the two for fruitful discussions about diffractive methodology and helpful comments to our manuscript. In addition, we would like to thank Judith Aston from the University of the West of England who took the time to proofread our article. Last but not least, our thanks go to the two reviewers and their appreciative and helpful comments.

² Rachel Handforth and Carol A. Taylor take a similar approach to writing as we do in their essay *Doing academic writing differently: a feminist bricolage* (2016), which is oriented towards a diffractive, new-materialistic thinking. There is a feminist tradition of proposing situated, speculative counter-offers of alternative writing, beyond hegemonic epistemologies and methodologies. See e.g. Donna Haraway (2016), Anna L. Tsing (2015) or Audre Lorde (2007).

³ The different colours of the patches refer to the physical phenomenon of the diffraction pattern that occurs when light falls on a diffraction grating (e.g. a CD disc). The white light splits into rainbow colours. So, it is not about linearity and chronology, but about a colour spectrum that refers to the relational nature of the differences.

From these considerations the following questions arise from which we are guided: How can we be aware of and open to responses coming from different academic fields? What kind of responses of Barad's agential realism like material-discursive entanglement, in/determinacy and diffraction do we find in the work of contemporary artists? And how does Barad's agential realistic thinking relate to contemporary art practice and theory and vice versa? We have selected the three artists Katherine Behar, Morehshin Allahyari and A.K. Burns because they enable us to experience much of what Barad teaches us in an aesthetic way. Alternating between analyses of art works and theory, a patchwork is created that brings art and theory into dialogue. We should note that one of the artists worked outward from a knowledge of Barad's work (A.K. Burns), whilst another moved into confluence with Baradian thinking (Morehshin Allahyari), and the other used a mixture of both (Katherine Behar). We begin with Behar and show the extent to which her artistic work displays something that we want to call an aesthetic of material-discursive entanglement (Barad, 2007).

Red patch – Katherine Behar and an aesthetic of material-discursive entanglement

Katherine Behar is a media and performance artist, working with video and interactive installation, whose works address feminist issues, materialism and digital culture. In her artistic and theoretical practice, she aims to combine the acknowledgement of constructed knowledge with the acknowledgement of matter. Both are involved in processes of signification and their work is generative. As the editor of the volume *Object-Oriented-Feminism* (Behar, 2016), Behar brings together contributions whose orientation can be prescribed in the connection of a new materialism, feminism and art practice. According to Behar, this object-oriented feminism is an intervention in dominant philosophical discourses. It aims to 'consider all objects as having bodies already in their thingness' (Behar, 2018, p. 156). Under the sign of a new, object-oriented feminism and the emphasis on the physical thingness of things, these interventions explore the ecological effects of the purposeful objectivation of the earth as a human habitat. In addition, they question the networking of human and non-human actors within a fluid data network in a digitally permeated world (Behar, 2016,

p. 4). According to Behar, OOF moves 'its operational agencies from a 'politics of recognition' of a standing out to a politics of immersion, of being with' (ibid. p. 9).

Behar's works follow a logic of the inseparability of being (ontology) and knowledge (epistemology), that is, of the material and the discursive, as introduced theoretically in particular by Barad (2007). The moment of the interweaving of the natural and the cultural are at the core of Behar's artistic explorations. The relationship between nature and culture, which she aims to centre in her artistic practice, does not follow the approach that something apparently pre-exists as 'natural' and is shaped by something 'cultural'. Behar is, however, still concerned with looking at 'the natural' through cultural, discursive lenses. In the artistic practices of Behar, intra-actions (Barad, 2007) of nature and culture can be experienced.

Barad's perspective of material-discursive entanglements of matter, things, people, apparatuses and discourses is impressively reflected in Behar's robot performance *Roomba Rumba* (2015). In the performance, two vacuum-cleaning robots (model name Roomba) 'dance' around a large, grass-green carpet in the exhibition space, vacuuming (see Fig. 1 and 2). Both are loaded with a potted rubber tree and move with apparently rehearsed choreography to the children's song *High Hopes*, which was made famous by Frank Sinatra in the late 1940s. It almost seems as if the dancing robots take the initiative and ask the spectators formed around the carpet to move to the beat of the music. Visitors to the performance, on the other hand, see themselves pushed to the edge of the room, which may cause irritation, uncertainty or even amusement. Thus, the vectors of the affective power of the robots or the moving plants remain open.

According to new materialist Jane Bennett's vitalist approach, 'thing power' is thus based on the ability of these robots/rubber trees to affect (Bennett, 2010, p. 6). Agency is divided into human and non-human entities, such as the performance visitors, robots and rubber trees (Bennett, 2010, p. 38). By producing effects and affects on the (non)human bodies, these entities do something and, in this doing, produce themselves. In and through the intra-action of humans, plants and robots in the performance, bodies or material-discursive phenomena are created (Barad, 2008, p. 141). The human body first becomes a dancing body through the technical/plant body

and the technical/plant body becomes a staging actor and instigating dancer through its audience and co-dancers in space. The insight of the human body, the machine and even the plants share an experience which paves the way for an awareness of the vitality (in the sense of Jane Bennett) of non-human beings.

In this socio-technical entanglement of human, plant and technological actors, processes of materialization on the one hand and symbolizations on the other, are thus at work. Behar latently relates this to gender, colonialist and political power relations. Both the invisible black-box work of machines and the housework and cleaning work (in this case vacuuming), which is coded as female in hegemonic discourse, remain invisible to this day. Behar is critical of the increasing humanization of technology and states:

‘Our sense that the cute, leafy Roombas are anthropomorphic betrays that we humans see ourselves in these machines. [...] This pas de deux aims to upset distinctions between natural and artificial, biological and machinic, behind-the-scenes service work and performative display, and to prompt solidarities across these categories.’ (Behar, 2015, n.p.)

The previously mentioned symbolizations or discursive references and cross-references cover a wide spectrum in *Roomba Rumba*. In the exuberantly marked setting of a dance of Cuban origin, the Rumba may refer to a political tension between communist Cuba and the USA. As tropical plants used to extract rubber, the rubber trees may remind us of capitalist workers’ internal exploitation in the global South. The children’s song *High Hopes*, which accompanies the performance acoustically, tells of an ant whose hard work would be rewarded with the fulfilment of the American Dream. The song is about ‘high hopes’ for a better life and higher social status by boosting the capitalism of US citizens in the 1940s and 1950s; ‘high hopes’ of fulfilment should always be reserved for the white population. The semiotic and discursive processes unfolding here are inseparably linked to processes of materialization and affection; they condense, interlock and interfere with each other. In order to grasp the material-discursive entanglement of intra-acting phenomena - as Katherine Behar demonstrates in *Roomba Rumba* - Barad takes up the physical

phenomenon of diffraction, which she introduces as a method to shed light on the indefinite nature of boundaries (Barad, 2008, p. 122).



Figure 1. Katherine Behar, *Roomba Rumba* (2015). Robotic performance installation with Roombas, potted rubber trees, carpet tiles, sound, variable dimensions. Photograph: Soohyun Kim.



Figure 2. Katherine Behar, *Roomba Rumba* (2015). Robotic performance installation with Roombas, potted rubber trees, carpet tiles, sound, variable dimensions. Photograph: Soohyun Kim.

Orange patch – Barad’s agential realism and diffractive reading

Through Alisa’s introduction to Behar it is possible for me to identify a number of connecting factors to Barad’s agential realism in the artist’s works. Barad and Behar, as with many other feminist theorists and artists, problematise the role of differences and criticise dualistic thinking. To deal with differences Barad uses the diffraction phenomenon to point to the nature of entanglements and ‘does not figure difference as either a matter of essence or as inconsequential’ (Barad, 2007, p. 72).

Diffraction patterns arise when you drop a stone into water, describing the overlapping waves produced. Diffraction qualifies the behavior of water, sound or light waves when they move into an obstruction and overlap. In contrast to particles, waves can overlap at the same point. But under experimental conditions particles, e.g. electrons can behave like waves, too, as they show a diffraction pattern in the famous double-slit experiment (Barad, 2007, see chapter 3). The setting of the experiment entails a wall with two slits and a screen behind it. On the screen a diffraction pattern appears regardless of whether waves of light or particles like electrons are sent through the two slits, the so-called wave-particle duality paradox. This experiment led to controversies about the influence of a measuring instrument on the object of observation. ‘So while it is true that diffraction apparatuses measure the effects of difference, even more profoundly they highlight, exhibit, and make evident the entangled structure of the changing and contingent ontology of the world, including the ontology of knowing.’ (Barad, 2007, p. 73) With regard to the concept of diffraction, Barad brings together two levels: diffraction as constitutive of the world (ontological level) and diffraction as scientific practice (epistemological level). Each is relevant to her diffractive methodology.

Referring to Haraway, Barad takes up her critical perspective on representationalism. Both trained in natural sciences, they distance from the view of nowhere, meaning the possibility to study an object as a neutral observer from outside and present one’s findings in an objective way. According to Haraway (1992) there is no exterior position

and therefore no way to represent or mirror an object of observations. Consequently, there are no independent objects which can represent or reflect their properties. There is no way to mirror the true acceptance of a phenomenon as there is no such thing at all. Instead of reflection which refers to sameness, Haraway focus on diffraction which relates to differences. Both Haraway and Barad not only have scientific practice and knowledge production in mind but also the very essence of world-making.

Barad suggests a diffractive reading by bringing theories from different disciplines into conversation 'to produce an account of natural cultural practices and agencies' (Barad, 2007, p. 232). Important for this account is an equal and respectful reading through one another. Coming from quantum physics, Barad brings together perspectives from natural sciences, feminist science studies, philosophy, queer studies and postcolonial studies. Understanding agency not only as something humans have but also as something non-humans *are*, she develops an agential realism. In contrast to a traditional realistic account of 'discovery' (Barad, 2007, p. 41) there are no pre-existing entities and phenomena become (re)configured through intra-active agential cuts.

Barad introduces the neologism intra-action 'in contrast to the usual 'interaction' which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action.' (Barad, 2007, p. 33). As separate agencies do not exist inherently, they become constituted because of agential cuts which never separate for once and all. Human and non-human agencies participate in the making of agential cuts. According to Barad, phenomena are constituted through cuts that are agential and do not exist because of inherent distinctions. She distances from the notion that there are consistent entities which have immanent meaning and boundaries. The reason why we recognize differences is therefore due to the enactment of agential cuts. Cuts, in this sense, separate what is entangled but not forever. Therefore, differences are separate and not separate simultaneously and never identical. So are cuts: 'Different agential cuts produce different phenomena.' (Barad, 2007, p. 175). Agential realism opens up a relational understanding of difference and offers a diffractive methodology to realise this in our thinking and working.

Yellow patch – Morehshin Allahyaris' diffractive approach to re-figure a colonial past

Lisa's remarks on diffraction according to Barad and the meaning of agential cuts have led me to the following questions: how can diffractive thinking be expressed in artistic works and what strategies do artists pursue to do justice to a Baradian form of critique? Basically, we argue that Barad and the artists discussed here share a specific moment: a moment of affirmation. Following Haraway's and Barad's concept of diffraction, Kathrin Thiele describes this moment of affirmation as a kind of complication and as a strategy of increasing complexity.

'Critical thinking has to be transformed in a complicating step into the affirmative practice of creating interference, which brings us (in Latour's sense) back to the things in which we are now understood as always already implied and thus can never only understand them 'from outside''.

(Thiele, 2015, p. 106, transl. AK)

This quotation illustrates to what extent diffraction is to be understood as an affirmative practice and, as such, having a political effect. A new-materialistic, feminist art of the present day thus strives to 'bring us [...] back to things in a new and different way' (Thiele, 2015, p. 106), to bend and scatter our gaze; it wants to open up to new entanglements and to relate ourselves to the things that make a difference in the world - as does the art project described below.

The Iranian artist Morehshin Allahyaris' multi-media installation *She Who Sees The Unknown* (2016-2018)⁴ shows, in an exemplary manner, the extent to which contemporary feminist art refers to the discourses of new materialism and agential realism. But it also aims to demonstrate, how contemporary feminist art addresses, independently of the vocabulary from these contexts, the stubbornness of matter and how, in addition operates in a diffractive way of thinking. *She Who Sees The Unknown*

⁴ <https://mackenzie.art/experience/exhibition/morehshin-allahyari/>

brings 3D-printed sculptures, video art and archive materials into dialogue with each other.

In order to be able to think of a feminist and postcolonial present, Allahyari conjures up mythical pasts and speculates on utopian potentials for the re-figuration of mythical, (pre)Islamic beings - dark, monstrous goddesses, such as Huma. In numerous Middle Eastern tales Huma is a three-headed, horned djinni with sharp teeth, snake-like tail and large human-like breasts of the ardent warmth that brings great fever to humans (see Fig. 4). In a video⁵ (see Fig. 3), as the centrepiece of the installation, Allahyari tells anew the Huma's demonic story and links Huma to the central catastrophe of our present, global warming. The six-minute video begins with a deep black background that is acoustically interrupted by a quiet, echoing female voice from offstage: 'She who had seen what there was and had embraced the 'otherness'.' In white letters, the spoken word is simultaneously brought to the screen as text. Accompanied by a vibrating, whirring sound, the shadows and contours of the mysterious figure, gendered as 'she', which seems to be the subject of conversation, grow fragmentarily in the centre of the picture; her name is immediately mentioned: 'Her name is Huma. She who is of flame and blaze.' Undefined contours of her body appear and disappear again in the dark. Admonishingly, Huma's voice exposes Huma's dreaded power and relentless threat to humanity, until finally her whole figure appears in the centre of the picture and the impetus of her rage finds an explanation: 'All to give birth to a parallel world between the ill and the healthy flesh.' The dark, mysterious video corresponds atmospherically with the dark exhibition space. The sculpture of Huma is enthroned on a pedestal - surrounded by glass talismans hanging from the ceiling and set in motion by air movements in the dark exhibition room.

Allahyari understands the artistic practice of re-figuration as an act of going back and restoring a colonial past, which she retells from there. In the encounter between past and present, new connections are created that involve patterns of diffraction; a spectrum of speculative feminist, post-colonial sketches of the future emerge which in the processual act of diffraction results from the overlapping of past and present.

⁵ <https://vimeo.com/342057560>

The reproduction and re-appropriation of mythical figures, such as Huma, follows the idea of gaining power from black women's bodies, whose monstrosity the artist wants to highlight and bend their stories.

Haraway refers to the optical metaphor of diffraction in order to make the interplay between figural and literary meaning fruitful for the creation of new stories (Haraway, 1992, p. 299). Allahyari's work corresponds with Haraway's understanding of diffraction in that the sculptures invite the viewer to understand differences not as the other of the one, but rather as an effect of relational structures. As a result, old 'colonised' stories can be designed and told in new ways. Allahyari's colonised, mystical beings operate diffractively by providing other (feminist, postcolonial) stories. Thus, their art project not only deals with the historicity of these beings and breaks with a model of linear historiography, but also opens new possibilities for representing Iranian and Persian mythologies.

Haraway recognizes that 'figures collect up hopes and fears and show possibilities and dangers. Both imaginary and material, pure root peoples in stories and link them to histories' (Haraway, 2004, p. 1). But Allahyari's diffractive approach also manifests itself on other levels: She is not interested in talking about monstrous goddess figures of the past, but rather in talking with mythical, supernatural beings. In other words, Allahyari gives the Middle Eastern goddesses a voice on the one hand and a material form on the other hand, thus reversing a subject-object relation and de-centering the (human) subject. This follows on from Barad's criticism of radical constructivism, which conceives of materiality merely as a product of discursive practices and grants objects only a passive status. Allahyari's objects also deny a status as passive surface and inscription surface of meaning attribution; as material 3D sculptures in the exhibition space as well as immaterial 3D animations in the video, they themselves come into play.

Finally, Allahyari's installation demonstrates a third level of diffractive possibilities. Diffraction phenomena are heterogeneous patterns of light and shadow and occur when waves are diverted from their normal movement by obstacles. These phenomena call into question mirror-image relationships between subject and object, original and copy. Allahyari's art project deals decidedly with a questioning of the

Western, ethnological researcher-subject and its colonialist practice in relation to its object of research, the mythical, brown female body of the Far East; but also with a dominant museum view of the auratically staged ethnographic object from a distance in a reflecting glass case. The objects - in this case those female creatures and dark goddesses - are conventionally examined, classified, numbered and thus controlled as the other. The artist bends this practice to the extent that she consciously makes use of this careful conservational practice, but at the same time thwarts the traditional incorporation of the artifacts by the cultural institution museum. It bends this colonialist practice by transferring its excavated and (im)materially processed beings into a phenomenologically conceived connection of body and perception. In material and media practice, the boundaries between meaning-bearing object and meaning-giving subject seem to blur - or, to put it another way, a heterogeneous pattern of light and shadow seems to emerge, undermining certainties.

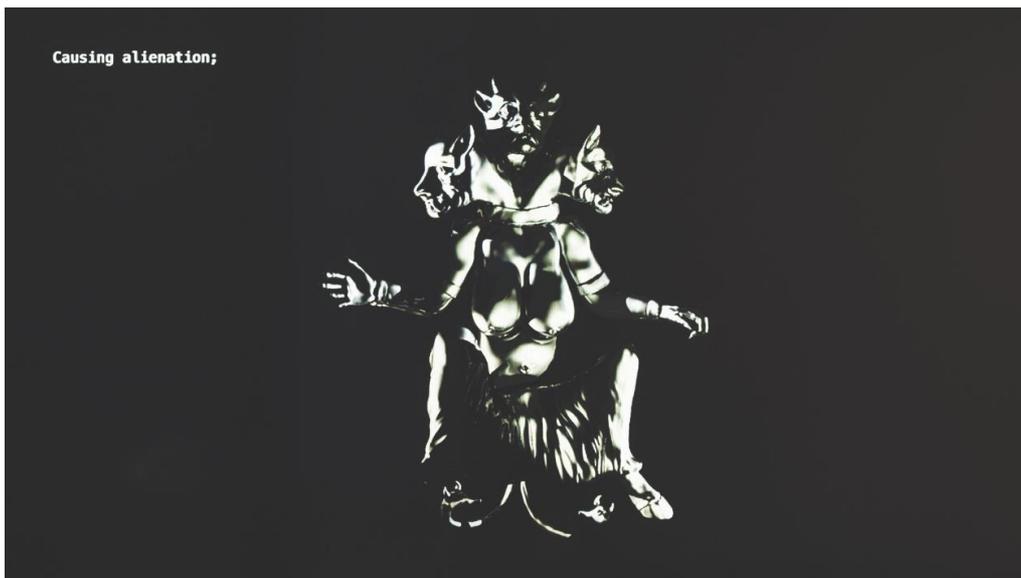


Figure 3. Morehshin Allahyari, *She Who Sees The Unknown: Huma* (2016) Install shot, HD video projection with audio, image courtesy of artist and MacKenzie Art Gallery..



Figure 4. Morehshin Allahyari, *She Who Sees The Unknown: Huma* (2016) 3D printed black resin sculpture, image courtesy of artist and MacKenzie Art Gallery.

Green patch - Barad's in/determinacy, respons_ability and spacetime matters

As most of Barad's work focus on examples from natural sciences I first was uncertain about how to bring Barad and feminist art into conversation. In my PhD project I work with scientific studies from epigenetics which seem to be closer to Barad's objects of study. A diffractive methodology is not about staying in one discipline but emphasise the meaning of entanglements. In what follows I will examine more of Barad's concepts pointing to the entangled nature not only of her thinking but of the world.

For Barad science is not only about epistemological challenges. Scientific practices are also influenced by ontological in/determinacy and being attentive to this is an ethical approach, too. What Barad develops is called an ethico-onto-epistemological framework as these three levels overlap in an agential realistic account (Barad, 2007, p. 185). To distance from a human exceptionalism and being attentive to other agencies 'requires a methodology that is attentive to, and responsive/responsible to, the specificity of material entanglements in their agential becoming' (Barad, 2007, p. 91).

According to Barad, knowledge gaps do not exist because of epistemological deficiency, meaning the inability of researchers to understand and explain something exactly or of finding the right tests and experiments, yet. What Barad assumes is an onto-epistemological in/determinacy. There are no pre-existing entities with

determined values which can be fully revealed. That means that phenomena can never be determined for once and all because they are intra-actively constituted. Phenomena are indeterminate and determinate simultaneously. Barad writes:

‘Just as there are no words with determinate meanings lying in wait [...], neither are there things with determinate boundaries and properties whirling aimlessly in the void, bereft of agency, historicity, or meaning, which are only to be bestowed from the outside, as when the agency of Man pronounces the name that attaches to specific beings in the making of word-thing pairs.’ (Barad, 2007, p. 150).

According to Barad there are several agencies involved in the move between determinate and indeterminate. A responsible scientific practice to her as to other scholars from feminist science studies means to be attentive to other than human agencies involved in the making of the world. And this is part of Barad’s concept of responsibility as Haraway also suggested: taking it literally as ‘ability to respond’ (Barad, 2015a; Haraway 2008, 2012). The ability to respond is not something only humans have, it is extended to more than humans. But how to trace these abilities and agencies? According to Barad and Haraway this is not possible in traditional disciplines and therefore everyone needs to stay open minded and decentre one’s own perspective.

And this is what a diffractive reading is about: being as open as possible to the world’s becoming and attentive to the many agencies involved. This is a post-humanist and an inter-disciplinary approach. Following Trinh T. Minh-ha, Haraway makes clear that diffraction phenomena are about a ‘critical difference within’ (Haraway, 1995, p. 20) - not in the sense of binary difference of being identical with oneself. Minh-ha pursues a diffractive, non-binary conceptualization of difference by choosing a non-separating, non-dialectical model of difference.

Differences, and especially dichotomies, are criticised in many feminist theories leading to hierarchies and discriminations. This is the reason why the difficult question of how to deal with differences is asked and discussed again and again. Barad’s recognition of differences does not work with the idea of final, unchangeable, determinate entities. In an agential realistic account differences are the result of cuts

meaning they never exist for once and for all. One can recognise different entities, but they are never totally separated. According to Barad differences are based on entanglements as she writes (see Barad, 2007, p. 36).

Understanding differences as a result of agential cuts and not as inherent separability points to their connections which Barad calls entanglements. Her entangled way of thinking brings together nature and culture, inside and outside, past and present or material and discursive. As Haraway talks about 'naturcultural', Barad's account is material-discursive: 'Discursive practices and material phenomena do not stand in a relationship of externality to each other; rather, *the material and the discursive are mutually implicated in the dynamics of intra-activity*. The relationship between the material and the discursive is one of mutual entailment.' (Barad, 2007, p. 152, emphasis Barad).

In many of her terms Barad uses the hyphen and the slash which points to entanglements of matter and discourse or determinacy and indeterminacy. Several terms she writes in one word as she does with 'spacetime-mattering'. Barad follows Haraway's critique on thinking room as container or context and points to the 'dynamic and contingent materialization of space, time, and bodies' (Barad, 2007, p. 224). Neither space nor time or matter are pre-given, unchangeable parameters but are constituted intra-actively as other phenomena. Or to say it the other way around: 'phenomena are entanglements of spacetime-mattering' (Barad, 2012a, p. 32). This implies that agential cuts lead to in/determinate materializations in a given space for a given time which do not exist in this way forever. Spacetime-mattering is about the intra-active becoming that cannot be completed.

According to agential realism, neither space nor time are understood as an external parameter. Therefore, distinctions such as past, present and future are results of agential cuts too. In a recent article Barad also brings in temporal diffraction showing that something can be in different times simultaneously and not only in different positions as the overlapping waves: 'a given particle can be in a state of coexisting at multiple times – for example, yesterday, today, and tomorrow. [...] There is no determinate time, only a specific *temporal indeterminacy*.' (Barad, 2018, p. 218, emphasis Barad).

As already shown for other phenomena, time is not a constant item but is conceptualized as ongoing. As an example, researchers in epigenetics are interested in the influence of environmental factors on gene activity. According to environmental epigenetics, influences like stress, trauma or nutrition can modify gene activity and, in some cases, also the gene activity of the next generation(s). This implies that traumatic events of grandparents can lead to diseases in their grandchildren. And this is not just about heritage, as time becomes confused here. When the trails of one generation can be found in a modified way (e.g. as disease) in the descendants, past, present, and future cannot be understood as totally separated from each other. (see for example Susser & Shang, 1992).

Through getting in touch with Allahyari's work by Alisa's writing, another important aspect of Barad's agential realism came into my mind: the cut between human and non-human. As space, time, and matter, the differentiation of human and non-human is intra-actively enacted too. To be human or not seems to be a fundamental distinction. But according to Barad human and non-human bodies do not differ from each other: 'What constitutes the human (and the nonhuman) is not a fixed or pregiven notion, but neither is it a free-floating ideality. [...] The differential constitutes the human (and the nonhuman) is always accompanied by particular exclusions and always open to contestation.' (Barad, 2007, p.153, emphasis Barad). It is an ethical (and political) approach to call into question the relevance of this differentiation and decentre one's own (human) perspective. This is the only way to be open to the becoming of the world and to the many non/human agencies involved in this. Barad's agential realism emphasizes the possibility that diffraction opens up: 'Diffraction unsettles colonialist assumptions of space and time, beginnings and ends, continuity and discontinuity, interior and exterior.' (Barad, 2018, p. 229).

Blue patch – A.K. Burns and the question of the measurability of nothingness

Lisa has made it very clear, Barad insists on an 'ethico-onto-epistemology' and agential processes that cause matter to coagulate as phenomena. Thereby, Barad's discussions do take scientific findings very seriously at the atomic level. In her article

What is the Measure of Nothingness? (2012b) she continues the discussion of the appearance of photons in and out of the void, as is currently understood within the study of quantum physics. In the video installation *A Smeary Spot (NS 0)*, the artist A.K. Burns uses Barad's reflections on nothingness and the void as a starting point for her work.

A Smeary Spot (NS 0) is a video installation of the four-part series *Negative Space* by the US American artist A.K. Burns. The multi-channel video installations *Living Room (NS 00)*, *Leave No Trace (NS 000)* and *Mirror Collages* revolve, both in terms of content and concept, around the core work *A Smeary Spot (NS 0)*. This is constructed as an audio-visual panorama and serves as an introduction to the cycle *Negative Space*. The title is taken from Joanna Russ' feminist science fiction novel *We Who Are About To...* from 1977. It describes the aftereffect of looking directly into the sun, a black temporary hole that inevitably follows the field of vision, a punctual void in the form of a black dot.

The scenes in the video take place in two places: in a desert region in the southern US state of Utah and in a black-lined theatre space. Both the desert and the theatre are to be understood as a real and, at the same time, psychological space. According to Burns, they represent the infinite infinity and the unfixed qualities of sheer emptiness.

Burns was substantially influenced to think about the infinity of nothingness and those qualities of emptiness by Barad, who in her essay of the same name asks the question: *What is the Measure of Nothingness?* (2012b). Starting from this question, Barad sketches a possible experimental set-up - a quantum-physical thought experiment - to measure the emptiness, 'no thing, no thought, no awareness' (p. 4). Once again, as in her monograph *Meeting The Universe Halfway* (2007), Barad emphasizes the play of intra-action in any measurement that creates worlds - there is no preceding matter and meaning, but rather it is only brought forth performatively in the process of measuring. What is decisive for Barad is that certain 'boundaries and properties of objects within phenomena and determinate contingent meanings are enacted through specific intra-actions' (Barad, 2012b, p. 7). This results in an 'ontological indeterminacy' (p. 7) at the core of matter, which is always only partially resolved in materialization processes. Determinacy is 'materially enacted in the very constitution

of a phenomenon'. It 'always entails constitutive exclusions (that which must remain indeterminate)' (p. 7). In other words: in intra-actions, a phenomenon materializes, whereby something is inevitably excluded. This is ontologically and epistemologically essential. Also, productive ambiguity and the interwoven structure of simultaneous inclusion and exclusion in dynamic materialization processes is what Barad attempts to capture typographically with the character of the slash. Thus, the 'play of in/determinacy accounts for the un/doings of no/thingness.' (p. 8). Barad returns to her initial question of the measurability of emptiness and thus states that emptiness is not nothing and at the same time it is not something. By sketching quantum field theory and explaining the qualities of so-called virtual particles, Barad comes to the conclusion that it is 'key not only to the existence of matter but also to its non-existence, or rather, it is the key to the play of non/existence.' (p. 13).

How can these complex philosophical and quantum theoretical considerations of Barad be applied to A.K. Burns' video installation *A Smeary Spot (NS 0)*? First, as has already been mentioned, the scenes of desert and theatre represent places of emptiness and infinity. On the other hand, Barad's introductory words in *What is the measure of nothingness?* also mark the first minutes of the video work. On one of the projection screens of the three-channel work we first see a musical solo by the saxophonist Matana Roberts. In the dazzling light of the blue and purple spotlights, only the silhouette of the musician with her saxophone on a dark stage becomes visible - the atmospheric visual and acoustic environment in the picture multiplies as the other two projection surfaces illuminate and show billowing wafts of mist spreading out in the room on the stage. On a third projection surface, *Mother Flawless* (the alter ego of the late drag queen Jack Doroshov) then enters the picture and begins to ponder on nothingness in a monologue taken from Barad: 'How can anything be said about nothing without violating its very nature, perhaps even its conditions of possibility? [...] Perhaps we should let the emptiness speak for itself.' This is immediately followed by the beginning of the aesthetic attempt to let this emptiness speak for itself: Long shots capture a barren desert landscape from different perspectives, acoustically underlaid by muffled sounds. Again and again we encounter so-called 'Acting Agents' from different camera perspectives who, according to Burns, are embodied in the different roles of the performers and act in a discursive as well

as in a real space. Among the 'Acting Agents' are, for example, the so-called 'Free Radicals'. As political activists as well as molecules, the term 'Free Radicals' has an ambiguity: they are looking for electrons and aiming to bring about change. In the video, they collect discarded objects in the desert landscape, which make a provisional (survival) life possible, as well as material resources such as water, air and sunlight. The so-called 'ob-surveyors' also cavort among the 'acting agents', whose aim is to observe the desert region instead of surveying it, as the composite term of observation and surveyor suggests. Repeatedly the same 'acting agents' appear in the desert, as in the second scene of the video, the black-clad theatre space. In the middle of the room, a high pile of rubbish is piled up from which the performers fish their props, only to throw them back there again later. In the theatre space it seems as if Barad's concept of material-discursive entanglement is being tested in an aesthetic practice: the performers make use of the discarded objects (the material world) while reciting a screenplay made up of several texts (the discursive world).

The texts are written by theoreticians and writers such as Karen Barad, Guy Hocquenghem and Ursula K. Le Guin. In each recitation the performer deals with things in a humorous and subtle way, whereby the meaning of what is said is changed or even expanded performatively. In order to connect with Barad, the performers' actions are guided by an interest in the unambiguity of terms and the in/determinacy of things. The performers interact with their props to the extent that they only acquire meaning in the dynamic process. In polyphonic recitations of the texts, a manifesto unfolds in the course of the 53-minute video that, according to Burns, is rooted in an ontological fluidity and difference. Here it becomes clear that Burns is not concerned with overcoming difference (matter-discourse, matter-meaning, subject-object) but rather with viewing difference as an essential aspect of a functioning ecosystem. The artist is thus not concerned with processes of equalization and thus assimilation, since this calls upon marginalised groups of people to adapt to an established and hegemonic system. Rather, the focus is on an affirmative attitude of crossing difference - a 'different difference' according to Thiele.

For Thiele, this urge towards a shift, towards 'another difference', towards a difference 'that no longer focuses on a 'differing from' but shows 'difference differing' or

'difference in itself' (Thiele, 2014, p. 11). What is decisive, therefore, is that a borderline (an agential cut) does not condition a fixed border but a non-binary self-difference. In other words: contrary to the binary appropriation of difference, which presupposes subject and object as two given, independent ontological realms, difference in itself refers to an interwovenness and a co-constitutive relationship between subject and object.



Figure 5. A.K. Burns, *A Smeary Spot (Negative Space 0)* (2015) Video still from *A Smeary Spot*, a four-channel video installation. Videos 1-3, HD color, 6-channel sound, 53:13 minute synchronized loop; and video 4, SD b/w, silent, 4:00 minute loop. Courtesy of the artist.



Figure 6. A.K. Burns, *A Smeary Spot (Negative Space 0)* (2015) Video still from *A Smeary Spot*, a four-channel video installation. Videos 1-3, HD color, 6-channel sound, 53:13 minute synchronized loop; and video 4, SD b/w, silent, 4:00 minute loop. Courtesy of the artist.

Violet patch – Our patchwork: a diffractive dialogue

We have introduced you to Barad's agential realism and to some other feminist theorists who are assigned to the so-called new materialism(s). In a patchwork-dialogue of selected artworks and Barad's theories, our contribution revolves primarily around the question of whether similar new materialistic tendencies are emerging in contemporary feminist art. But simply asking this question changes the perspective on art, which is why our interpretation of a specific artwork inspired by Barad cannot be separated from its own new materialistic alignment. While Katherine Behar drafts an Object-Oriented-Feminism in her art in reference to a new materialistic thinking, Morehshin Allahyari moves beyond the vocabulary of Barad. In her work *She Who Sees the Unknown* we were able to identify different levels of diffraction. In the work of the third featured artist, A.K. Burns, the direct reference to Barad and her reflection on the void and the nature of difference became clear.

From these examples from feminist art we are able to show that there are a lot of factors which connect feminist new materialism(s) to in/human agency, onto-epistemological in/determinacy and other diffractions and entanglements. In recent years, numerous artists have dealt directly or indirectly with Barad's thinking. For us bringing together feminist art with perspectives from feminist new materialisms is promising and meaningful. New Materialism(s) provide(s) thinking technologies and vocabularies to think through and to name the aspirations of traversing dualisms in contemporary feminist art.

A leading concept that accompanied us through the work on our article was that of the (diffractive) encounter. On the one hand, it was about bringing contemporary feminist-oriented art and Barad's theory into conversation and on the other hand, we were interested in a diffractive dialogue of our interdisciplinary perspectives as an abbreviated experiment. We are staying with the question in further work: how to read and write diffractively? The background to this idea of encounter is our concern, which Barad taught us to point out to a world beyond binaries through in/determinacy and entanglements. Coming back to Barad's description of a patchwork we would like to close with the following in mind: 'After all, to be a part is not to be absolutely apart but to be constituted and threaded through with the entanglements of part-ing' (Barad, 2015b, p. 406). So, if parts are created by set cuts, this does not necessarily mean that

cuts break things off. In the sense of Barad, this means that there is no absolute difference between assumed entities like here and there or this and that. Rather, these agential cuts emphasise the connection in a new and diffractive way, as we have tried to show in this article.

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