Response-Able Trees. On Permaculture Ethics of Responsibility in the Films of the Exhibition *Cambio* (2020)

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Abstract

The extensive research project *Cambio* (2020) by the Italian designer duo Formafantasma focuses on the tree, the forest in its function of securing the existence of humans, animals and other plants. The project uses various forms of critical representation and storytelling to explore the connections between exploitation, consumer culture and colonialism in the face of the industrial timber industry. The question is: What responsibility do we bear in relation to the treatment of trees and what response-ability do trees themselves have? Based on three essayistic short films and other objects from the Cambio exhibition, my contribution addresses these questions of responsibility and respons-ability with regard to the relationship between humans and trees. In the sense of Donna Haraway, the what and how of artistic representation and narration itself becomes a question of response-ability - i.e. the possibility of becoming responsible in responding. Here, with Haraway in mind, the ethically necessary perspective unfolds of not having to distinguish between a real world and a world of stories and narratives, but of being able to think material-semiotic worlds in a (responsible) situated way and allow them to emerge. This paper proposes response-ability as a conceptual and analytical rubric and as a guiding ethical practice for the new materialist-inspired endeavor to rethink human and non-human interdependency in relation to trees. I will introduce the exhibition *Cambio* and three of its films as an exemplary site of narrative and representational modes that have the potential to sensitize us to those relations of interdependency.

Keywords: Forest, trees, permaculture ethics, response-ability, critical posthumanism, new materialism.

Resumen

El amplio proyecto de investigación *Cambio* (2020) del dúo de diseñadores italianos Formafantasma se centra en el árbol, el bosque en su función de asegurar la existencia de humanos, animales y otras plantas. El proyecto utiliza diversas formas de representación crítica y narración para explorar las conexiones entre explotación, cultura de consumo y colonialismo frente a la industria maderera. La pregunta es: ¿qué responsabilidad tenemos en relación con el tratamiento de los árboles y qué capacidad de respuesta tienen los propios árboles? A partir de tres cortometrajes ensayísticos y otros objetos de la exposición *Cambio*, mi contribución aborda estas cuestiones de responsabilidad y capacidad de respuesta respecto a la relación entre los seres humanos y los árboles. En el sentido de Donna Haraway, el qué y el cómo de la representación y la narración artísticas se convierte en una cuestión de capacidad de respuesta, es decir, de la posibilidad de responsabilizarse al responder. Aquí, con Haraway en mente, se despliega la perspectiva éticamente necesaria de no tener que distinguir entre un mundo real y un mundo de historias y narraciones, sino de ser capaz de pensar mundos material-semióticos de una manera situada (responsable) y permitir que emerjan. Esta ponencia propone la capacidad de respuesta como rúbrica conceptual y analítica y como práctica ética orientadora para el nuevo empeño de inspiración materialista de repensar la interdependencia humana y no humana en relación con los árboles. Presentaré la exposición *Cambio* y tres de sus

películas como un sitio ejemplar de modos narrativos y representacionales que tienen el potencial de sensibilizarnos ante esas relaciones de interdependencia.

Palabras clave: Bosque, árboles, ética de la permacultura, capacidad de respuesta, poshumanismo crítico, nuevo materialismo.

Introduction

"Our survival is the survival of trees," warns philosopher and botanist Emanuele Coccia in the short film *Quercus* (2020). Although we know that our life, all life on earth, depends on trees, our view of them is determined by a resource logic: Trees absorb large amounts of CO_2, they are resources for food, construction, and fuel. It seems logical, therefore, that humans should work to preserve and protect trees and forests to secure their existence. However, this conclusion, although necessary, conceals an anthropocentric logic that contrasts the active human subject, who has the power to act and provide protection, with the passive plant object, the tree, which is incapable of acting and in need of protection. This divisive logic echoes a hegemonic, anthropocentric relationship that has defined the interpretation of the world in Western modernity. For some time now, posthumanist and new materialist theoretical approaches have been challenging modernist systems of thought that rely on binary relationships such as subject/object, nature/culture, or body/mind. Similarly, since the 1960s at the latest, artistic interventions have been breaking down rigid boundaries in favor of relational and dynamic relationships between these supposed pairs of opposites. At present, artists are increasingly incorporating non-human agency into their investigations and operating at the interfaces or intersections between subject/object, nature/culture, in order to shift our perspectives on existing ontologies, self-contained entities and, above all, ethical certainties towards complex, symbiogenetic and permacultural worldings.

The extensive exhibition project *Cambio* by the Italian design duo Formafantasma, led by Andrea Trimarchi and Simone Farresin, also bears witness to this. Their exhibition focuses on the relationship between humans and trees to question and destabilize established hierarchies between human and arboreal life. Encounters with individual works in the exhibition (including the short films in particular, as I will show) can certainly be described as potentially disturbing, in the sense that they counteract aestheticizations and naturalizations of a "wild," "natural" and "untouched" forest and instead make our responsibility towards and the response-ability of the tree world palpable as quite unpleasant. At the center of their large-scale research project, which began in 2020 and is still ongoing, is the tree or forest, not only in its function of securing our existence as humans, but also as a gigantic organic life form in egalitarian relationship with the human species. With this focus on interrogating a reshaped human-arboreal relationship that looks at their agency, value and self-worth, the exhibition joins the renewed attention on the life of

trees in the arts, in literature and academia (Nitzke and Braunbeck 341). Commissioned by the Serpentine Galleries in London and the Centro Pecci in Prato, the Cambio project operates at the intersection of science, art and design, using various forms of critical representation and storytelling to explore the links between exploitation, consumer culture and colonialism in the face of the global industrial timber industry. In the polyphony of scientific, philosophical and artistic knowledge, the project is characterized by the search for future orientations of social, political and economic ways of living with trees. It asks what responsibilities we bear in relation to the treatment of trees, and what response capacities trees themselves may have. With the help of three essayistic short films in the exhibition, I would like to pose questions about responsibilities and response-abilities in the relationship between humans and trees. In the sense of Donna Haraway, the *what* and *how* of artistic representation and narrative itself becomes a question of response-ability—that is, the possibility of becoming responsible in responding. With Haraway in mind, the ethically necessary perspective unfolds here of not having to distinguish between a "real" world and a world of stories and narratives, but of being able to think and let material-semiotic world creations emerge in a responsibly situated way (Adorf and Gau).

In my paper, I will first propose "response-ability" as a conceptual and analytical rubric, as well as a guiding ethical practice, for the neo-materialist endeavor to rethink human and non-human dependency relations here in relation to trees. I will then draw on María Puig de la Bellacasa's posthumanist-feminist concepts of care and alterbiopolitics in order to make them productive for the subsequent formal-aesthetic considerations of three short films of the exhibition Cambio. In doing so, I emphasize Puig de la Bellacasa's expansion of the concept of care through the integration of the permaculture (movement) approach and link it to her plea for a permaculture ethics for more-than-human worlds. In a second, analytical part of the article, I will present the three essayistic films *Quercus* (2020), *Seeing the Wood for the Trees* (2020) and *1858* (2020) from the exhibition as examples of audiovisual narrative and representation methods that have the potential to make permaculture ethics thinkable and tangible and to sensitize us to the interdependencies between humans and trees. These three exemplary short films particularly contain aesthetic figures that reflect the question of response-ability in a special way.

The Intimacy of Becoming-with and the Ability to Respond

When visitors entered the exhibition rooms of London's South Gallery in 2020, the first thing they saw was a sprawling object: oak planks stacked on top of each other and lashed together to form the shape of a tree trunk. The branches and most of the bark have been removed, the trunk sawn into planks and air-dried. These first steps show the tree in its transition from a living being to an object. On the wall next to it, a short text explicitly invited visitors to the exhibition to touch the sawn oak; to experience the rough, unruly materiality of the wood.

In her monograph *When Species Meet*, Donna Haraway poses the question of touching her dog: "Whom and what do I touch when I touch my dog?" (35). For Haraway, this question is related to the question of how becoming-with is a practice of worlding, of becoming worldly (3). This leads her to a profound exploration of the natural-cultural relations that make contact between different species, but also between things, possible. Her speculative approach is to search for possible non-human configurations when these chains of contact, of touch are perceived and taken seriously. Contrary to Descartes' dictum of *cogito ergo sum*, Haraway argues that epistemology should not be dissolved into a mental and thus one-sided activity, but that a transformative epistemology of touch should be recognized. Species touch each other and are thus transformed in encounters: "They touch; therefore, they are" (263; Hoppe, *Die Kraft der Revision* 262). With Donna Haraway, we might ask: who or what am I touching when I touch this oak in the exhibition space? In Haraway's sense, the tactile encounter with the sawn oak in the exhibition space has a transformative potential, inviting us to distribute and transfer ethics to multilateral, asymmetrical agencies that do not follow unidirectional patterns of individual, human intentions (Puig de la Bellacasa, *Matters of Care* 122). Haraway combines her relational ontology of becoming-with with a non-normativist ethics of kinship. At the heart of her argument is an ethical intimacy of becoming-with that thwarts a static, separative positing of self and other, for, as Sara Ahmed and Jackie Stacey write in their volume *Thinking Through the Skin* (2001) "through touch the separation of self and other is undermined in the very intimacy or proximity of the encounter" (6).

Haraway's ethics of kinship and her figure of the companion species are based on two fundamental premises: On the one hand, that responsibility and ethics cannot be related to fixed or fixable blocks of norms, and on the other, that an autonomously acting, prior subject cannot be assumed. It is these basic assumptions that Haraway adopts from Emmanuel Levinas and transfers into her relational ethics concept of "response-ability." Essential to Haraway's figure of the companion species, but also to her plea to tell Chthulucene stories in distinction to the Anthropocene (Haraway, *Staying with the Trouble*) is a profound relationality that human, non-human, and more-than-human entities share and configure together. Such an understanding of relationality is grounded in processes of responding (to the present), which is an extremely messy matter (Hoppe, "Composting the Anthropocene" 9). With the term Chthulucene, Haraway indicates not so much an age, but a mode of storytelling about and in the present, which is a genuinely ethical task. In the mode of the Chthulucene, it is less a matter of abstracting stories than of condensing the present based on concrete interdependencies (10). With Haraway in mind, we are always in the middle of it; we cannot remove ourselves from the manifold and complex relationships. Haraway's plea for Chthulucene storytelling is also a plea for *doing* ethic of response-ability, an ethic of responding and taking responsibility in and for the world. "Thriving must be cultivated as cross-species response-ability and without the arrogance of the sky gods and their minions," Haraway writes:

> Flourishing will be cultivated as a multi-species response-ability without the arrogance of the sky gods and their minions, or else biodiverse terra will flip out into something very slimy, like any overstressed complex adaptive system at the end of its abilities to absorb insult after insult. (*Staying with the Trouble* 56)

Haraway's posthumanist project of the need to recognize a companion species and her call for a storytelling mode of Chthulucene must not, however, be misunderstood in relation to the question of ethics to the extent that humans and non-humans must bear equal responsibility. Although Haraway's relational-ontological figure of the companion species refers to a basis of relational constellations, a clear prior differentiation between the human and the non-human is nevertheless circumvented. This is similar to Bruno Latour's concept of symmetry, which is not about presupposing asymmetries, but rather, as he states, bypassing the subject-object dichotomy altogether and instead assuming the intertwining of humans and non-human beings (Latour 168). However, this does not apply to the area of ethical behavior and imputability, as Katharina Hoppe emphasizes, following Haraway and Latour (*Kraft der Revision* 247-248). For Haraway, responsibility is a human task. Hoppe observes a "strategic anthropocentrism" in Haraway's thinking that is of crucial importance for her post-anthropocentric political ethics (248), which stands in contrast to a normative ethics. The ethics we need to adopt as human beings in Haraway's sense, and from a multispecies perspective in general, is a relational ethics that María Puig de la Bellacasa calls permaculture ethics, which amounts to a different biopolitics.

Towards a Permaculture Ethic of Response-ability

As a specific type of circular economy in agricultural use, permaculture stands for sustainable forms and ways of living. It is about creating sustainable human habitats by following the patterns of nature. Permaculture is diametrically opposed to the destruction of natural habitats for the use of functional monocultures.[1] Using the example of permaculture, Puig de la Bellacasa discusses the caring treatment of soils in contrast to conventional agriculture, which uses artificial fertilizers and monoculture to deplete and destroy soils in the long term in the progressive logic of progress. Up until the 20th century, maintenance and repair was the paradigm of conventional agriculture. It was only with modernization and the green revolution that the "maximization of soil beyond the renewal pace of soil ecosystems" became the new ideology (Puig de la Bellacasa, "Making time for soil" 699; Volkart 14). In her monograph *Matters of Care. Speculative Ethics in More Than Human Worlds* (2017), Puig de la Bellacasa relates a permaculture ethics of circulation, slowness and plurality to a feminist understanding of care:

> Connecting the practice of permaculture ethics as everyday ecological doings with a feminist notion of care displaces biopolitical moralities, allowing us to envision *alterbiopolitics* as an ethics of collective empowerment that puts caring at the heart of

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[1] One may think, for example, of global deforestation for the cultivation of soy and palm oil.

the search of everyday struggles for hopeful flourishing of all beings, of bios understood as a more than human community (22).

The feminist notion of care that Puig de la Bellacasa addresses here refers both to the practice of care and nurturing and to an affective sense of care for human and non-human others, both dimensions being elementary for the assumption of response-ability in caring relationships. According to Puig de la Bellacasa, care is an ethical-political doing and is based on the conviction that every human relationship—to ourselves, to others, to the organic and inorganic world—is characterized by overlapping needs and care necessities. Response-ability thrives on the inevitable being-in-relation and being-in-relation with human and non-human others. Such a feminist conception of care paves the way for a decisive twist regarding biopolitical questions.

Derived from Michel Foucault's concept of biopolitics, alterbiopolitics is about the biopolitics of the other. Puig de la Bellacasa's emphasis on "alter" refers to the permaculture movement and its strategies and struggles of so-called alterglobalization. This movement, strongly driven by ecofeminist and activist Starhawk, emphasizes the intertwined webs of organic life and explores ways to intervene in the ecocidal, capital-centric and colonial logics of the globalized world (165). This ethics of collective empowerment is based on three principles, as Puig de la Bellacasa quotes from the Earth Activist Training (EAT), in which she herself took part: "Care of earth, care of people, return the surplus" (125). Puig de la Bellacasa anecdotally describes her participation in a course on permaculture technologies at the 2006 EAT program near San Francisco as an initial experience that led her to ask fundamental ethical and political questions in her research and to develop a speculative and permaculture-inspired ethics for more-than-human worlds. Following Haraway, Puig de la Bellacasa argues for an understanding of relationality that is determined by multilateral reciprocity and is thus almost never symmetrical and bilateral, but rather messy and muddy. Permaculture ethics is an attempt to decenter the human ethical subject: it is not about our self-image as protectors of trees and other plants, but as participants in the web of living earthbounds.

Quercus (2020) – Film I

The essayistic short film *Quercus* (2020), which exhibition visitors are invited to watch projected in portrait format on a screen, sensitizes them to this interweaving in the web of the earthbound. It invites us to leave the well-trodden paths of thinking about our relationship to trees, in which we "rational beings" view them as our non-human counterparts, and to immerse ourselves in the world of trees.

At the beginning of the thirteen-minute film, the imaginative camera looks down from above onto a wild river meandering through the landscape. Apart from the black curved line of the river, the color spectrum of the film image moves between white and red. It gives the impression of seeing recordings from a thermal imaging camera from a bird's eye view, with the trees in white and the ground in red. "You are

probably surprised to hear me speaking," begins a male voice from off-screen, while the imaginative camera glides at an extremely slow speed over the treetops and immediately approaches the forest floor (fig. 1). It immediately becomes obvious that the voice is speaking from the perspective of an oak tree (lat. Quercus) and, representing the collective of trees, addresses a posthumanist demand to the undefined human, receptive "you" in the exhibition space: "You have extended your human privileges to [animals]. Now we are claiming those rights." While the warm voiceover creates a certain acoustic intimacy and urgency and launches the experience of the world of trees, the visual level also draws on an immersive aesthetic. By means of immersion, the film destabilizes the sovereign, responsible subject position of a forest conservationist and invites us to experience the world of trees from their perspective. As an aesthetic of diving-in, immersion as an emphatic physical experience is a calculated play with the dissolution of distance, as Laura Bieger (2007) writes. In the short film *Quercus* (2020), the viewer is drawn into the interior of the trees, not least through the movement of the imaginative camera. The visual space is light and dark, abstract, and realistic at the same time. A seemingly infinite number of points of light form the contrasting contours between the outside and inside of a tree, through whose trunk the gaze is guided by the camera. As if in a chimney of thousands of brightly glowing particles that stand out against the blackness of the surroundings, the viewer travels up into the treetop; gliding disoriented through the living, breathing, gigantic organisms made of wood.

This short film was created by manipulating a so-called Lidar scan of an oak forest in Virginia. Lidar technology, which is derived from the term "Light Detection and Ranging," uses lasers to scan and record large areas. It is primarily used in cartography, archaeology, autonomous driving and in the timber industry to selectively fell trees. In the short film, the technology is used in a completely different, aesthetic way. Here, it offers the opportunity to view the human species, which observe trees merely as resources, from the perspective of an imaginary tree. During the disorientating tracking shot through the points of light, the spoken philosophical text from off-screen, spoken by Emanuele Coccia, deconstructs the believed seclusion and sovereignty of a "self" in favor of a processual-ecological becoming: "I am a being whose self takes place in hundreds of parts of my body simultaneously. I am an organism that is plural but not schizophrenic. From this point of view I am not only an 'I.' I am much more 'I' than you and all of you." The poetic text questions a human sense of dominance and a fundamental anthropic exceptionalism and clarifies the extent to which humanity is dependent on the materiality and physicality of trees: "My body is with you and in your life in the most unexpected forms." With this unexpectedness and uncontrollability that is emphatically addressed here, a moment comes into play that can be described as potentially disturbing. Fundamental assumptions of existence are called into question: As a human being, I do not belong to an encapsulated species, the human species, and that my physicality is not separated from the ones of the plants. But what does it mean to encounter a talking, thus anthropomorphized tree in the film? Which role does anthropomorphizing non-

human organisms play? A "strategic anthropocentrism" in Haraway's thinking, which I outlined before, paves a way for an answer to these questions, which is taking shape with Robin Wall Kimmerer and her focus on a reality-constituting power of language. As a citizen of the Potawatomi Nation, Kimmerer describes a profound influence of her indigenous language on the imaginations, practices and epistemologies of being included and intertwined with the non- and more-than-human world. In a comparison between European languages, which she describes as distancing and objectifying, and the verbs-heavy Potawatomi language, which does not distinguish between masculine and feminine, animate and inanimate, Kimmerer emphasizes a significant difference, which places her in theoretical proximity to Haraway: Potawatomi language "use[s] the same words to address the living world as we use for our family. Because they are our family" (Kimmerer 55). "[T]o make kin" (*Staying with the Trouble* 102) with trees, to speak with Haraway, is also a matter of language, as Kimmerer agues.[2] Hearing the oak tree speak, embodied by Coccia's voice in the film *Quercus*, detaches the tree from its *it*-status; it stages a "grammar of animacy" (Kimmerer 58) that detaches itself from human exceptionalism.

Guided by the imaginary tracking shot and conveyed linguistically by Coccia, the short film proposes a crucial shift in perspective if humans transform their ways of living and dying with these complex ecosystems—one based on the understanding that humans and trees are intertwined on an ethical-onto-epistemological level. Due to their material nature, trees have neither a neuronal system nor a brain and are therefore not to be understood as socially active beings per se, but there is a growing number of scientific and posthumanist voices that argue that trees and other plants are living beings that act in complex ways and are organized in community networks that create worlds (see Trewavas; Chamovitz; Mancuso and Viola; Gagliano). The biologist and cell researcher Lynn Margulis, to whom Haraway's concept of becoming-with refers, has already argued for the overarching idea of a symbiogenetic world context (Margulis). Margulis' so-called endosymbiotic theory focuses on symbiogenesis, which describes the evolution of new life forms through symbiotic hybridization processes. The biologist assumes that prokaryotic organisms (organisms without a cell nucleus) have entered symbioses with each other, from which more complex, eukaryotic organisms with a cell nucleus (such as plants, animals and humans) have emerged. According to this theory, all constituted life forms are preceded by bacterial plays. In processes of bacterial heterogeneity, co-evolutionary links and interpenetrations of all life forms occur. For Margulis, otherness and strangeness take the place of identity at the cellular level and become the prerequisite for what Haraway calls becoming-with. As an alternative model to the theory of evolution, the endosymbiotic theory is about an "earthly play"[3] and not

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2 Similar to Kimmerer, anthropologist Nurit Bird-Davis argues that the hunter-gatherers of Indigenous communities have an animistic view of worlding, which manifests itself above all in their language, which assumes that the natural environment is a community of related humans, non-humans and more-than-humans (Bird-Davis).

3 With the "earthly play" according to Lynn Margulis, I join the reflections of media scientist Lisa Handel, who in her contribution "Irdisches Spiel – Queer messmates in mortal play" explores the

about the survival of the fittest according to Darwin's natural selection principle. Symbiogenesis is not to be understood as fusion in the sense of the formation of distinct, identical units. Rather, it addresses an earthly, never-ending play of multiplication and differentiation at all levels, where something new emerges.
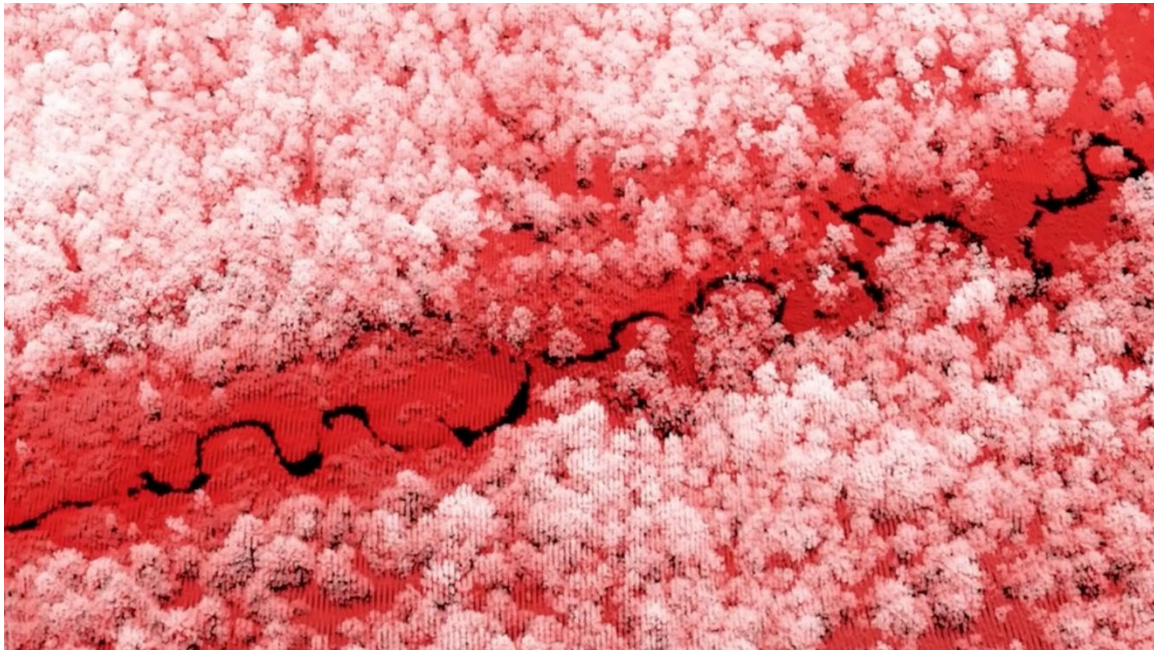

Fig. 1. *Quercus* by Formafantasma, 2020.

An ethics that emerges from such a symbiogenetic worldview of becoming-with, I would argue, is an ethics of entanglement in Karen Barad's sense, for which the awareness of responsibility plays a central role in the constitution of boundaries (*Meeting the Universe Halfway* 160) between humans and non-humans. However, responsibility is not limited to the sphere of human action and experience (160) but arises in the entanglements that simultaneously (re)constitute phenomena. Responsibility is therefore not an obligation that a subject chooses, but a bodily, pre-conscious relationship, woven into the process of becoming-with, in the process of worlding.

The misunderstanding could quickly arise here that responsibility is independent of human beings and arises so to speak automatically with the phenomena (and thus has nothing to do with us). On closer examination, it becomes clear that Barad's view is based on a fundamental link between ontology and ethics, between questions of science and questions of justice (Barad, *Verschränkungen* 205). This means that in all our actions and in our practices of defining and theorizing, i.e. in our knowledge production, we bear responsibility at every moment (*Meeting the Universe Halfway* 178). From our very existence, from the fact that we understand ourselves as "I" and consider ourselves as interacting with the world, we bear an

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question of the extent to which the metaphor of symbiogenesis acts as a string figure/cat's cradle in Haraway's sense.

ethical obligation (178). Barad explains: "[E]thicality is part of the fabric of the world; the call to respond and be responsible is part of what is" (182).

Barad's conception of ethics is therefore not only about responsible action in relation to human experiences (in) the world, but ethics becomes a genuine question of material entanglements. How does every intra-action make a difference in the (re)configuration of these entanglements? Or with Barad: "[I]t is a matter of the ethical call that is embodied in the very worlding of the world" (160).

Seeing the Wood for the Trees (2020) – Film II

I will now demonstrate how another short film of the exhibition *Cambio,* entitled *Seeing the Wood for the Trees* (2020), stages such a practice of knowledge production. The almost 16-minute film deals with the political, social, and economic structures and mechanisms of the global forestry and timber industry. *In Seeing the Wood for the Trees*, green, rectangular sheets of paper are laid out by two hands of an anonymous person against the background of a forest ground for the entire duration of the film, acting as green screen backgrounds for various moving image formats. The perspective of the static camera is consistently directed downwards and thus picks up on the forest management "from above" criticized by the voice-over. The atmospheric, echoing noise at the beginning is interrupted by a female voice from off-screen, lent by Vanessa Richardson from the environmental protection organization EIA (European Investigation Agency). She begins by explaining that there are thousands of different ways to define a forest. "This diversity primarily reflects the different scales and concepts of land use and management priorities," she continues. This circumstance of an underlying utilitarian logic in attempts to define the forest marks the starting point of a documentary-essayistic film work that brings together a broad collection of documents, measurement data, artifacts, historical photographs - from moving image sequences of forest clearings, wood storage sites and industrial pellet production to micro shots of wood cell structures and macro shots of forested areas - against the backdrop of the forest ground. In Kimmerer's view, defining a forest is, as I explained above, a question of language, which is reflected in this film in a double sense: On the one hand, the film stages a visual language of western ordering, structuring and defining. On the other hand, the film reflects what Kimmerer calls the Western scientific language of objectification. She writes: "Science can be a language of distance which reduces a being to its working parts; it is a language of objects" (49).

Imagining, visualizing what a forest *is*, or how the human gaze is directed towards it, is taken literally at the end of the film: Here, someone "takes a picture" (in the sense of visualizing) of a forest in a way of systematically laying out photographic image sections of a forest, which are placed on the forest floor in the background (Fig. 2). The laying hand apparently imitates the systematic, repetitive act of planting trees as we know it from tree nurseries, which is beyond the natural ways and spaces in which trees develop. I read this imitation as a film-aesthetic realization of a critical ambivalence of cultivation methods as in rank and file, cultivated, bred and oriented

towards forestry yield—of cultivation methods that are contrary to a messy, permacultural forest use and ethics in the sense of Puig de la Bellacasa. It is this economic, resource-driven system of exploitation that is thematized here by means of the aesthetic image-within-an-image strategy. The mise en abyme, this image-within-an-image setting, functions as a figure of reflection for nested, interrelated (spatial) levels and for the ambivalent character of present and absent spaces. In the film *Seeing the Wood for the Trees*, the mise en abyme reflects the complex entanglements and interdependencies, invisibilities, and impossibilities between human and arboreal life.

Fig. 2. *Seeing the Wood for the Trees* by Formafantasma, 2020

The green screen or chroma key technique runs like a red—or rather green—thread through these and other essayistic films of the exhibition as a further figure of reflection. This technique is usually used in the post-production of video and film to "cut out" figures and mount them in front of virtual backdrops or to create temporary backgrounds. Green screens are therefore screens without images; screens that wait for images or hide them. The consistent use of green-screen technology here is not in the sense of using a temporary background, but refers to an open field of imagination and, with Barad, to a "call to respond and be responsible" (160). What "other images" of trees and forests, beyond their industrial economic justification of existence, can and do humans as responsible beings want to take and create for the future? Which responses from the trees do humans ignore? The film *Seeing the Wood for the Trees* raises such questions and challenges us to find answers to them.

1858 (2020) – Film III

Finally, I would like to briefly discuss one last short film from the exhibition *Cambio*, entitled *1858*. The film consists of two parallel parts which are projected side by side: One quarter of the entire projection forms a cut-out, shown in portrait format and filmed by a static camera, onto a lying tree trunk into which a screw thread is turned from top to bottom by two anonymous hands; advancing downwards into the depths of the wood. The remaining three quarters of the projection on the right-hand side show hilly landscapes with monocultural coniferous forests, acoustically accompanied by a metallic roar. Most of the thinly grown conifers shown, over which a hovering camera glides in a bird's eye view, are dead or felled—a panorama of the monocultural timber industry that silently and inertly bears witness to the capitalist logic of "louder" and "faster" (Fig. 3). The inexorability of ecological violence lies precisely in the slow camera pans, zooms and movements. This finally brings a hitherto untouched motif into the discussion about responsibility and care (in Puig de la Bellacasa's sense), namely that of the temporality of "response-ability." The pace required by our ecological relationship with forests may be at odds with the accelerated, future-oriented responses that characterize the pace of technoscientific innovation. Interlinked temporalities are at work in contemporary scientific research concepts of forest management and care. Increasingly, alternative practical and ethical ecologies of response-ability and care are emerging that question the traditional logic of uninterrupted progress and the accelerated pace of productionist, future-oriented interventions and focus on slowness. The global permaculture movement, on whose fertile ground María Puig de la Bellacasa's speculative, alter-biopolitical ethics thrive, brings such ecologies of response-ability and care to bear by moving away from the notion of forests and soils as resources to be exploited and emphasizing their status as living environments. (Puig de la Bellacasa, *Matters of Care* 23).
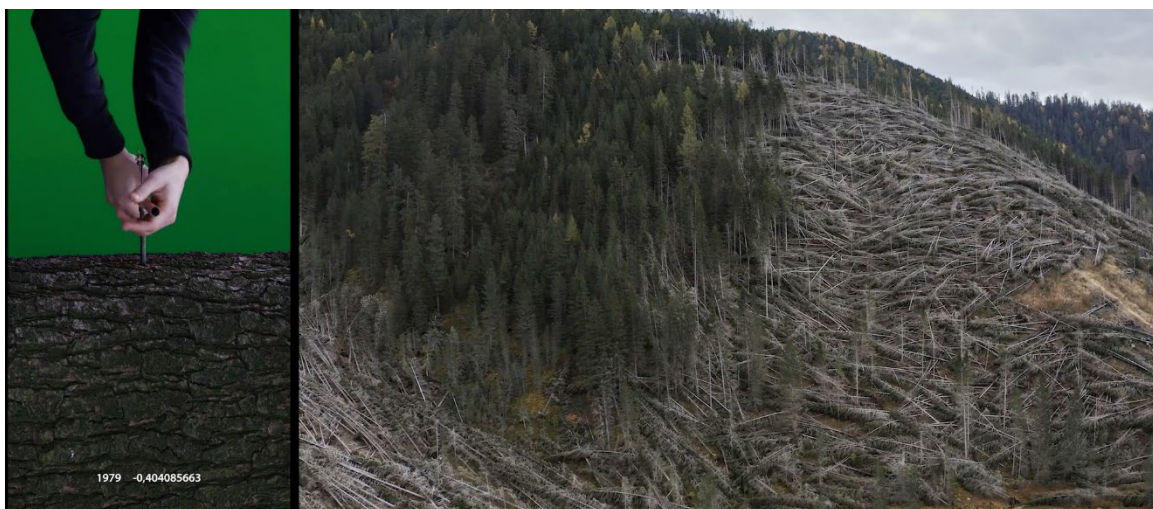

Fig. 3. *1858* by Formafantasma, 2020.

It is not only the slow camera movement in the film *1858* that refers to the temporality of trees; to their slowness, which only becomes visible to humans at all with the cinematic realization of time lapse. The film title indicates the lifespan of the tree that can be seen in the left quarter of the projection. 1858 is the year in which the tree created its first ring. The footage shows the wood sampling technique used by dendroclimatologists to analyze growth to document the effects of climate change on the tree's life cycle. Depending on temperature and precipitation, widely spaced rings indicate pronounced growth, while closely spaced rings are the result of minimal growth. The lower part of the left-hand projection shows a combination of numbers that indicate the rise in temperature in this region as measured data from some trees in the Alps.

It is only after looking at the exhibition catalog that exhibition visitors learn more about the topographical images on the right-hand side of the projection. It shows a forested section of the Val di Fiemme valley in northern Italy, which has been maintained and managed by local communities since the Middle Ages. In 2018, this area was devastated by Storm Vaia, which toppled more than thirteen million trees. To prevent an unforeseen amount of CO^2 from being released into the atmosphere as the wood decays and to safeguard the communities' livelihoods, a community project was initiated for the extensive growth of biodiversity; an exemplary project of ecological response-ability and care.

Coda

Derived from the Latin term *cambium*, which means both change and exchange, the title of the exhibition project *Cambio*, initiated by Formafantasma, refers to the potentially transformative political forces of art and design; to change in the still open futures for which we bear responsibility in our present, in the here and now. The curators of the exhibition at the Centro Pecci in Prato, Rebecca Lewin, Hans Ulrich Obrist and Cristiana Perrella, appeal to the responsibility of design with regard to its role in advancing climate change and plead for a translation from a thriving environmental awareness to a fundamental understanding of interdependence with other organic forms of life, which it must provide: "The exhibition underlines the crucial role that can be played by design with respect to our environment, and its responsibility to look beyond its boundaries: in the future, design can and must attempt to translate emerging environmental awareness into a new understanding of our relationship with nature, also on a philosophical and political level" (Lewin et al. 2).

The ethical-political impulses of the exhibition, which I tried to focus on with an analytical perspective on the three short films *Quercus*, *Seeing the Wood for the Trees* and *1858* (all three from 2020), focus on the relationship between humans and trees as cosmic, interspecies and symbiogenetic interrelations. Using different narrative and representational methods, they aim to fundamentally reject the self-assured and self-identical subject of the forest protector [sic!]. The films, and certainly

also other artifacts of the exhibition *Cambio* are receptive offers to be sent into thinking about a different, relational way of thinking between humans and trees. I have shown that these thought-provoking impulses are sometimes initiated in the form of irritations when watching the films - for example, by unsettling and disrupting the seemingly clearly definable and delimitable status of the human ego. This different way of thinking holds the possibility of resulting in different response-able and accountable action. On such a permacultural breeding ground of thinking, a non-normativist ethics of respons-ability, of cross-species responsability, of response-ability and care can flourish which, if we follow Haraway and Puig de la Bellacasa, is always a practice, a doing.

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