

Botanical Microphotography in the Perspective of the Philosophy of Culture



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The aim of this article¹ is to present my personal cognitive experience of transdisciplinary work, which can also be understood as knowledge transfer and aesthetic experience. My BioArt uses the *microphotography* technique – my instruments being LEICA E 24 and LEICA DM 750 microscopes, with an LEICA ICC50 HD camera and a Dino-Lite Pro HR AM 7000 5 Megapixel manual microscope. The preparations and objects I have photographed so far have been mainly plant and insect material (dry and wet) and my own biological material.

This text is the first non-artistic thematicization of my work² and as such it signposts the possible direction my future research could take. The first, short section also indicates the direction my reflections, based on the philosophy of culture, will not take.

1. “Botanization”, or the Primacy of Language

In 2007, Arvo Pärt, one of the most important contemporary composers, was awarded the International Bridge Prize of the European City of Görlitz. The composer’s speech was addressed to an audience consisting mainly of politicians and scientists-humanists, and it included a painterly, biological-anthropological comparison: on observing materials from

1 This article is the outcome of my paper “Mikrofotografia botaniczna: Transfer wiedzy a doświadczenie estetyczne” (“Microphotography: Transfer of knowledge and aesthetic experience”), delivered at the conference “Why do we need posthumanism?,” which was held on 30.11-01.012.2018 at the Adam Mickiewicz University in Poznań.

2 I presented photographs from the series “Mikrowelten” (wet and dry plant material) and the work “Landschaft” (Photo 60) as part of the Sequenzen 2018 workshop (Lower Austria) and at the culminating exhibition (Atelier Alte Weberei, Ebensee) in July-August 2018. I presented Photographs 37-54, this time with a commentary (i.e. a record of the knowledge transfer on the line of: botany – artistic photography – bio art – philosophy of art – philosophy of science – environmental ethics) as part of the festival “sicht:wechsel”, an organized artistic and research cooperation at the University of Arts in Linz on 3-7.06.2019.

plants and human beings under a microscope. Here is a fragment:

[...] if we look at any substance through an electron microscope, a magnification of a thousand will obviously look very different from that of a million. But if we move slowly through all the possible gradients of magnification we may discover unimaginable, fairly chaotic landscapes. Yet, at some point there is a border—somewhere in the region of a magnification of thirty million. Here all the fantastic landscapes disappear and we see a strict geometry, a sort of network, very clear and very special. What is surprising is the fact that this geometry looks very similar, even in very different substances (Pärt 2007).

The similarity referred to by Pärt ultimately indicates the identity – the essential identity – inherent in the multiplicity of objects. Physically or ontologically, Pärt is right: a 0.5 nm object viewed under a scanning tunnelling microscope (STM) is a molecule. There will be no indication in the image of whether we are looking at a blade of grass or a ceramic tile – the microscopic image of both objects will be reduced to this “strict geometry”. The composer continues, in a very interesting way, to talk about God as the theme of his music – a cognitive and artistic experience – and about the unity of that which is human. In his interpretation, the human eye is more attuned to differences between objects/individual people, i.e. random and incidental variances – the basis for our imagination or even misconceptions concerning other people – than it is to the essence of what (every) human being is. Pärt gives a speech about art, religion and ethics, as befits a winner of a peace prize. Pärt’s text itself does not constitute any diffusion of knowledge, but at the same time it inscribes itself within what I would describe as the characteristic “humanist plantality discourse”.

Arvo Pärt is able to inspire the imagination of cultural scholars just as much as the classic authors behind the contemporary dilemmas of “dendriticism” (from Greek *déntro*, tree) and “rhizomatism” (from Greek *rhízoma*, horizontal stem) – the oft-cited Heidegger (*Holzwege*) and Deleuze and Guattari (*Rhizome*). Their canonical texts do not deal with plants at all, because “plants” are merely metaphorical for them. And such metaphors persist in the writings of Polish authors: the tree trunk as the beginning of thought, but also, unfortunately, the source of “ligneous sense”; it is necessary to postulate “vegetal philosophy” or “vegetable thinking” (Marzec 2008a) and even “rhizomatic tumours of thoughts”, “the messy thoughts of plants”³, etc., etc... In the spirit of poststructuralism, and also in anthropocentric (self)consciousness, the intention is to “return plants to their rightful place in philosophy” (Marzec 2008, 8), which means, as it turns out, to “botanize” the language of philosophy (or culture). For sure, this is/would be a discursively interesting project, but ultimately it is again itself an *artificiality* – a project within language, perhaps already reflecting or inspiring the “liberation of thought” (which fortunately is not subject to the “genealogy of tree”, classifications, meaning there is a “philosopher-lumberjack” at work, armed with an “axe of logic”) (Marzec 2008, 9), but in no way giving any indication

³ All expressions referred to in these citations are from Andrzej Marzec (Marzec 2008, 8-16). The second article, which I think proposes a representative approach to the historians of philosophy, is by Daniel R. Sobota (2015, 11-30).

of either acquiring or extracting new knowledge, nor making an effort of to apply and disseminate it – and yet such an interpretation of the rhizome metaphor could indeed be useful for something.

In place of these tales and their repetition, I offer a report on my own work, but in the end it will also turn out to be a form of *interpretation*, of *history*. Starting from an account of a place, moving to the philosophical concept of *atopy/alterity* (from Greek *atopía* – “without a place”, unclassifiable/from Latin *alter* – the other) and then to criticism of naturalism: it is evident that my account is itself not free from the weakness of humanist discourse about plants – “humanist plantality discourse”. However, despite this, and regardless of whether my idea is considered to be an artistic failure, my account tells of an attempt to transdisciplinarity and *ideas of creation* – as an alternative to the model of reproducing knowledge that is found in the literature.

The microphotography of natural material described here is an outcome of cognitive-scientific processes and improving skills. This artistic product is not meant to “ask” the viewer a series of questions about anatomy, morphology, the histology of plants, mineralogy, topomineralogy or petrology, or about photography, digital image editing, luxography or photograms, but these aspects are parts of the artist’s necessary experience. This knowledge is a continuation of some first, simple intentions – the desire to have one’s own experience of interacting with the examined material, then further with optical equipment, and most importantly: the experience of one’s own agency, starting with an as yet untrained hand that collects the material and readies the preparation.

2. The Atelier: Space and Disposition

In principle, scientific reflection on the course of one’s own contact with non-human life, e.g. with vegetation – its disturbance, transformation, protection – should have a transdisciplinary character. For example, starting from environmental ethics and drawing on the postulates of posthumanism, one can reflect on the philosophy of art, where, in turn, enquiring about the aesthetic experience itself, the researcher undertakes artistic activities. This aesthetic experience may entail:

(1) transforming a biological being, an element of nature, into an artefact by placing it in a specifically human context, e.g. in an exhibition space or simply in one’s own aestheticized living space, public or private;

(2) working with independently collected, selected and prepared natural material (or possibly already processed material, for example, crystallized sugar rather than sugar cane), which is then subject to artistic interpretation (microphotography, as opposed to the model of reflection).

Add. (1) This model of aesthetic experience was not intended in my work, but it was revealed to be necessary: *the transformation of the environment* turned out to be the basis for everyday laboratory work, including artistic work; a condition for its *inhabitation/*

familiarity (Lévinas 1979, 152-154) – instead of merely mediating. It was, of course, about the development of the workshop, its new tools, and, as it turned out, the transformation – de facto: conditioning further experience – of one’s own workspace, which in this case also means the space of everyday life. In part, *the Everyday Life* or *the Life-World* was transformed, phenomenologically speaking. The horizon of situations (tools, activities, habits) was set, which in their repetition and typical character make up this world of everyday life. It is characterized by a *modus of stance* or *attitude*, which is more important than a *modus operandi*. Meaning that a specific location – here: research, creative, located in a concrete environment; here: a workplace which is both a library and a laboratory, as well as a private sphere – creates a certain attitude, an enduring disposition, and also beyond the mode of action/work/production, the place in question expresses the researcher’s disposition, and for her sake expresses the character of this particular *oikos*. I believe that the very experience of the authentic – unplanned, but *actually happening* – transformation of a place constitutes an example of post-humanistic practice.



Figure 1: Atelier. Photos 1-6, 2017⁴: Study/Atelier is transformed from a classical library into a laboratory, which then changes the character of the work and home.

Add. (2) It was the second of these types of aesthetic experience that was my true intention – cognitive, artistic-research. In the next section of the article, I want to present the idea behind this experiment, and an account of its course – in the form of its products: artistic photography.

4 For all photographs: © Małgorzata Bogaczyk-Vormayr.

3. Transdisciplinarity: From Alterity to Interpretation

The experience of transdisciplinarity and knowledge transfer was typical for the thinking of Modernity – and, therefore, until the nineteenth century⁵, it was essentially not thematized in the methodology of the sciences being practised. Nowadays, however, the transfer of knowledge is of course strongly encouraged, but in the work culture of a historian of philosophy the interdisciplinary transfer of knowledge remains essentially just a postulate. Looked at from a broader perspective, the interdisciplinary research in which philosophers are involved – usually representing their discipline/subdiscipline in the group of humanities – is usually treated as an experience of transdisciplinarity. This synonymous treatment of inter- and transdisciplinarity is a common mistake. The cognitive experience of transfer and – later on, much later – transdisciplinary research is made possible either by: (i) the competence acquired through an at least two-track academic education, including professional work experience in these two spheres (which is not common), or by: (ii) the specific experience of the “absolutely new” – an elementary lack of knowledge in a field that is not ours (for example, in my case: plant biology, e.g. its morphology; and microphotography, e.g. the operation of lens equipment).

A genuine initiation of knowledge transfer cannot therefore be constituted by the compilation of data from different disciplines, a typical “plywood” grown in social sciences faculties, but rather entails the *experience of ignorance*. An important element, not only psychological, but also cognitive-methodological and epistemic, is a specific *atopy*, which means contact with completely new matter, on the basis of the new discipline, without any certainty of success (at the threshold of acquiring skills).

Interestingly, this *alterity* – otherness, “not being in one’s own place” – is not only the experience of a philosopher working with a microscope, but is also the experience of human being in relation to other life forms, other organisms, as well as to oneself (when one explores one’s own body, e.g. one’s own epidermis, tissue fragment, fluids). I will stop at both these types of experience in order to indicate the important distinction between working with biological material and laboratory instruments (Photo 8) and one-time use of biological material and equipment prepared in such a way that the user who does not understand its operation can achieve an effect (Photo 7).

I took “Retina Photo” during my visit to a museum, namely the Ars Electronica

⁵ A certain early version of our current methodological disputes in which, on the one hand, comparative literature is rejected – erroneously, in my view – as syncretism, while, on the other hand, interdisciplinarity is treated as a cliché, being attributed to each “grant” (along with supposed “innovation”), can already be found in Joseph Maria Degérando’s *Histoire comparée des systèmes de philosophie* from 1804. However, an example of realized comparative studies, with knowledge transfer as the working method itself (I would say: as a research attitude and attitude *in the world*), from the field of natural and social sciences, is Alexander von Humboldt’s *Cosmos* (1845-1862). Therefore, the only thing it is necessary to say about interdisciplinarity is: it seems to be a truism, while it is in fact a real challenge (I refer here to the title of the plenary session of the Pedagogical Sciences Committee of the Polish Academy of Sciences “Interdyscyplinarność w nauce jako truizm, alibi i wyzwanie” [Interdisciplinarity in science as a truism, alibi and challenge], Warsaw, 19.03.2009).

Centre in Linz/Austria, which did not require any knowledge of the equipment used for this purpose, which was monitored by the employees of this “Museum of the Future” and set up in such a way as to realize only one function (the simplest corrections such as setting zoom, contrast, change or intensification of colours were not possible). In this sense, this multifunctional medical camera has – paradoxically – the character of a museum object; although it is located within an interactive exhibition, it primarily serves as an exhibit.

It is also worth emphasizing the naturalism of this photograph – it is to be used only as a reflection; it is for this purpose that it would be taken in a clinic. Of course, this type of material (like X-rays, MRI scans) is used in artistic projects – either as part of one installation or as a standalone exhibit of a larger thematic exhibition. However, treating this photograph as a separate work and assigning it to the BioArt genre would be unjustified. Also, placing “Retina Photo” within the framework of a BioArt exhibition – literally: placing it in the vicinity of other objects or artistic actions that would thematize the human body – seems to me to be too simple a procedure. There is no transfer of knowledge, no research. Has something come to be known? Possible experience of one’s “own reflection”, some theme of testing or decoding one’s own body, the „experience of alienation” or perhaps of „identity” etc., would become, as an existential statement, a topic for reflection in the philosophy of culture, but it would then be yet one more metaphor⁶.

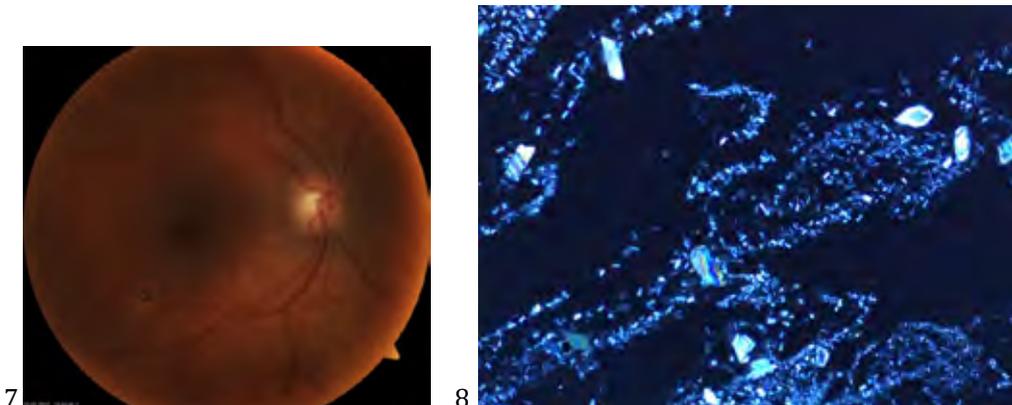


Figure 2: The artist’s body and overly simple BioArt. Photo 7: “Retina Photo” – right eye retina photo taken with a VISUCAM NM camera (BrainLab of Ars Electronica Centre Linz, 2017)⁷; Photo 8 from the “Galaxy?” series – colored microphotography of polycrystalline, crystallized urine, 2017; LEICA DM 750.

Let us stick to the question of “naturalism”. Artistic microphotography does not serve to reproduce (it does not “serve” anything). I have repeatedly witnessed situations where, for example, the information that a microphotograph of algae “does not show the truth” genuinely disappointed the viewer who had previously been moved by the photograph. Despite the fact, to their eyes, it was an interesting abstraction, the viewer

⁶ Of course, I would not deny the importance of such metaphorical artistic or—simply—literary values – an example would be the meanings that the heroes of Thomas Mann’s *The Magic Mountain* ascribed to the X-ray image.

⁷ For a description of how to use the camera on the Ars Electronica Center website, see: <https://ars.electronica.art/center/en/visucam/> (accessed on 5.02.2019).

wants the image to be a reflection, a confirmation of reality (cf. e.g. Figure 3: Photos 18-21 present algae; even Photo 18 is not naturalistic, a realistic image would be a much brighter grey).

Meanwhile, the human eye is not particularly interested in such images, which usually show either a dense, compact structure in three or four shades of grey-white or a light grey, a faded image, giving the impression of individual ponds (these are bubbles of air trapped between the microscope slides), in which it is not possible to see numerous microorganisms moving in the sample or on the computer screen. It is usually the change of colours, their intensity, contrast, etc. that brings out what is in the image; not only does it not change what is authentic (alive) in the image, but it only shows it to us (cf. Figure 3: Photo 22 is an original shot; 23 is the result of a change in one colour; only 24, following the thorough editing of colour, light contrast and colours, produces an image of microorganisms).

However, it happens – in my experience, most often with dry plant material – that this first photo, i.e. the authentic image in the microscope eyepiece or on the computer screen (which is bigger, automatically with better sharpness, but without any further quality), may turn out to be more interesting, it may be *more appealing* than its later versions, the results of editing the photo (see Photos 14-17) or integrating it into other images, collages, etc. (see Photos 14 and 21).

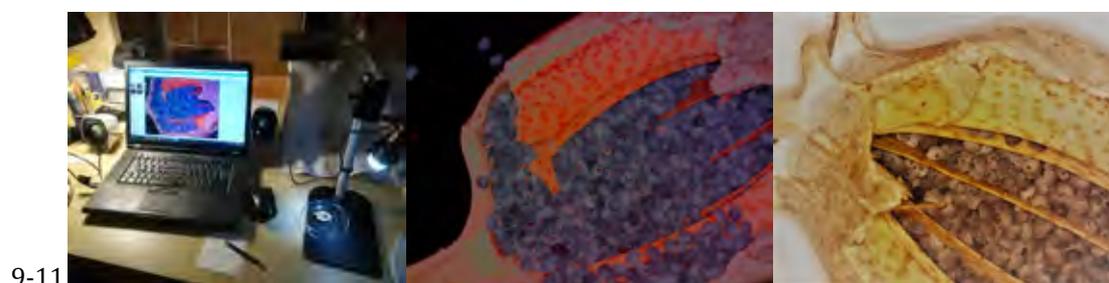


Figure 3: Trials. Photos 9-24⁸. . Photos 9-14: “*Papaver somniferum*” – colourless microphotography (i.e. without changing the original image – 9, 10, 12) and colour microphotography (11,13,14) with graphics (14); opium poppy – flower section and seeds; Dino-Lite Pro AM 7000. Photos 15-18: Untitled – colourless microphotography (15-16) and coloured (17) polycrystalline photography – crystallized honeydew honey. Photos 16-17 are an example of an “unsuccessful” attempt – when at a far remove from the original they become less and less interesting. Photos 18-20: “*Alga. Ophiocytium*” – again microphotography in the process; from the change of contrast and colour intensity (18) to graphics (21) – algae from a moss sample taken on a peat bog. Photos 22-24: The “Dance” series - *Gloeotrichia* sp., cyanobacteria from a sample taken from a peat bog. Photos 15-24: LEICA DM 750.

⁸ All photos 9-24, 27-36, 61-64 were taken in 2018; photos 26 and 65 are from 2017, while photos 37-54 are from 2019.

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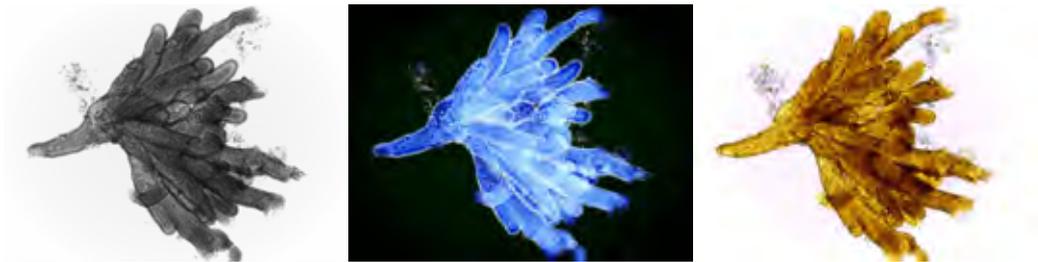
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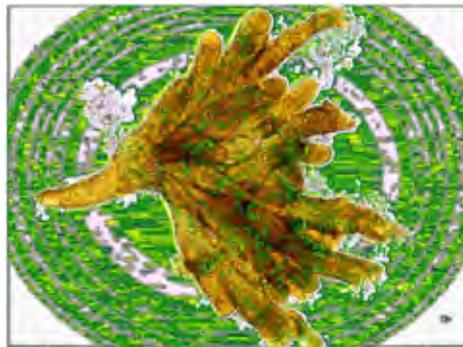
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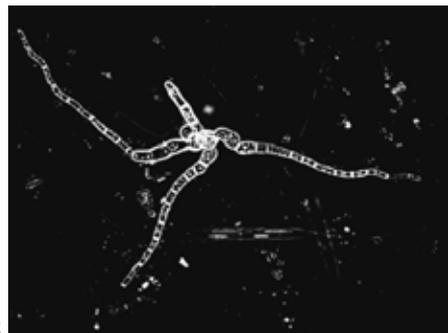
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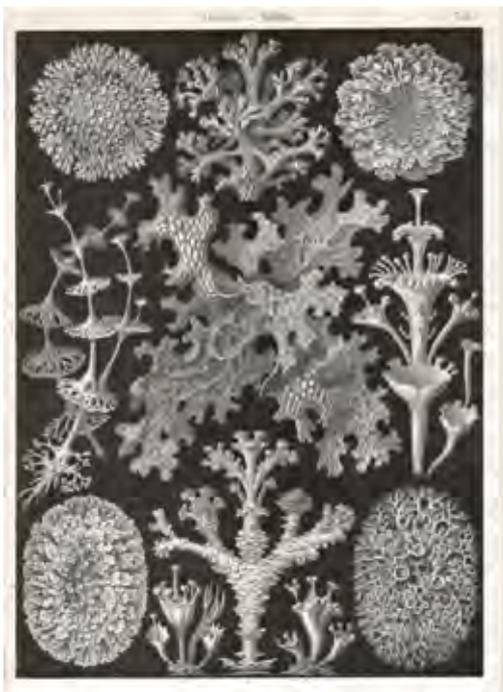
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Moreover, if we take the primacy of representation within the framework of a certain conception of a research experiment and/or artistic work, this places basic requirements on us, with regard to tools and competence – which is different to just using without understanding (e.g. optical microscopy, e.g. X-ray imaging). There is, I think, a certain analogy here – the task of reproducing what is natural – places demands on the artist that do not seem to be so easy to meet. The classic of 20th century modern botanical drawing is an interesting example of an authentic transfer of knowledge – I have in mind the works of Ernst Haeckel from the collection *Kunstformen der Natur* (1899-1904). His botanical and mineralogical lithographs are included in his output not only in comparative biology, but also in drawing and painting practice – they are a catalogue, an atlas of the plants and microorganisms examined by Haeckel, but they are also works of art (cf. Drews 2011, 121-123).



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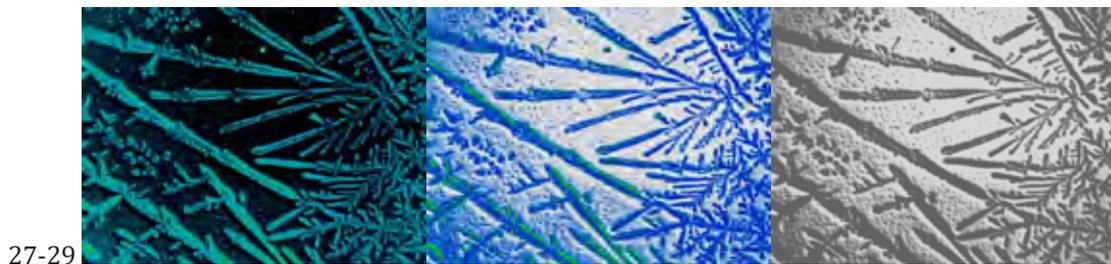


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Figure 4: Artistic reproduction. Photo 25: Ernst Haeckel's lithograph "Lichenes" – Table 9 (Haeckel 1914, here the canned original); Photo 26: "Orchidaceae 3", 2017 – colour microphotography, orchid seeds; LEICA DM 750.

“Orchidaceae 3” is a geometrically faithful microscopic image, but the change of colour (the original image is pale grey) allows us to see the structure of the photographed preparation. The image can be further processed – changing the colours of the seeds, changing the background, using 3D, etc., but it was this raw version of the photo that I found aesthetically most interesting; its informative value (representation) was irrelevant to me in the final selection of the photo.

My decisions about the motifs/themes of photography have so far been made in an unsystematic way. They do indeed form series – as has already been shown – but this takes place without the adoption of any preliminary thematic assumptions. It is always the first shot of a given preparation that leads to either further photographic attempts with it, or the extension of the image of the sample under the microscope (though the material is never swapped). For example, Photo 27 is a shot of a pure microscopic preparation, without any interference on my part; it imposes a simple association – the photograph takes on the character of a *representation*. The preparation used here is a completely different substance (in the physical sense, i.e. the chemical composition), although the chemical process itself is similar – the separation of sodium ions and chlorine ions took place in water (a drop of water, as ice, snow). However, one can ask whether this image is a completely different form and structure – after all, we are not really dealing with a representation here; I would say that “this landscape is not naturalistic”, it is rather a geometric abstraction. In this sense, in spite of the obvious association and my work on the photograph – when in versions 28-29 I was getting closer to a banal picture – it is nevertheless a geometric abstraction (cf. also Photos 32-33). Editing the photograph (and not separating the material in the microscopic preparation itself) in order to best illustrate the preparation (so that the eye “recognizes” what it sees) may lead to the creation of interesting microphotography, which is different from the original image, but aesthetically it will be interesting precisely because it cannot be reduced to a representation (cf. Photos 34-36).



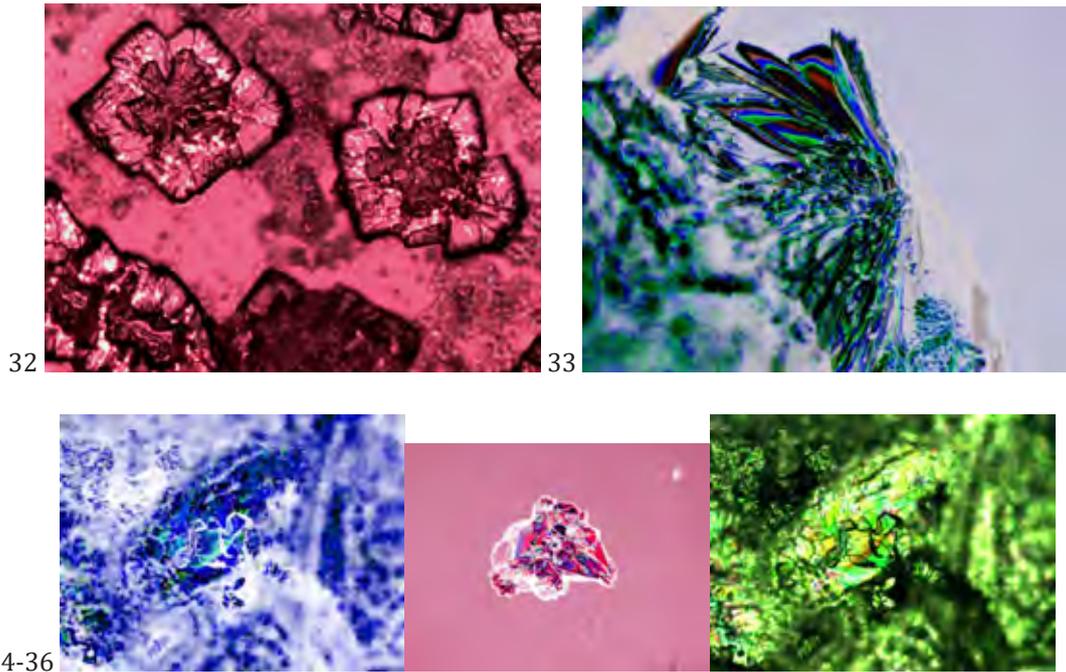
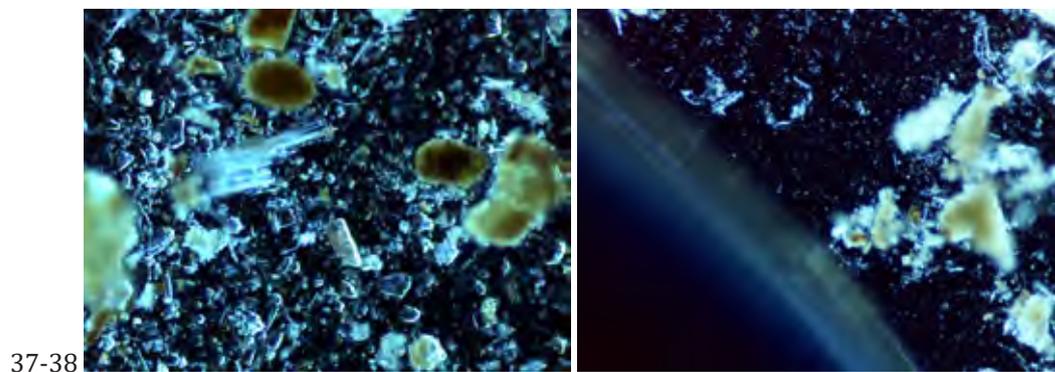
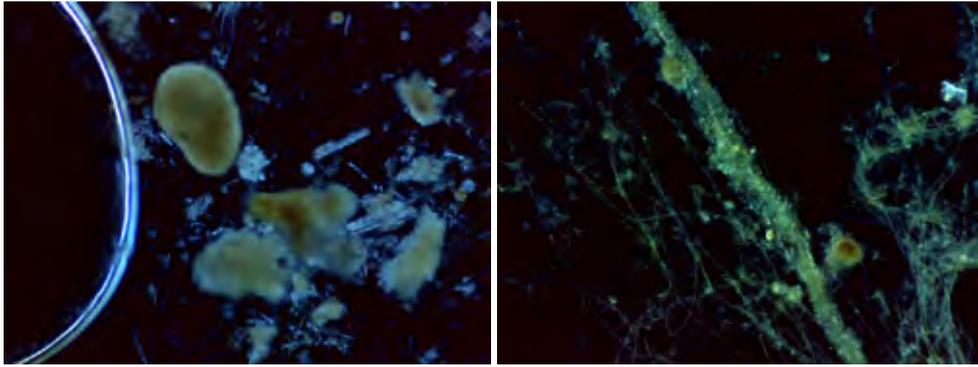


Figure 5: The primacy of abstraction. Photos 27-29: The “Snow” series – colour microphotography, crystallized kitchen salt. Photos 30-31: “Symmetry” series – colour microphotography, Bacillariophyta/Diatomos – peat bog test (image with visible cell division). Photos 32-33: The “Flowers” series – colour microphotographs of crystallized citric acid (32) and sugar (33). Photos 34-36: The “Crystal” series – colour microphotographs of crystallized sugar; in photo 35 a larger crystal was extracted, which can be seen less clearly than in other photographs. Photos 27-36 – LEICA DM 750.

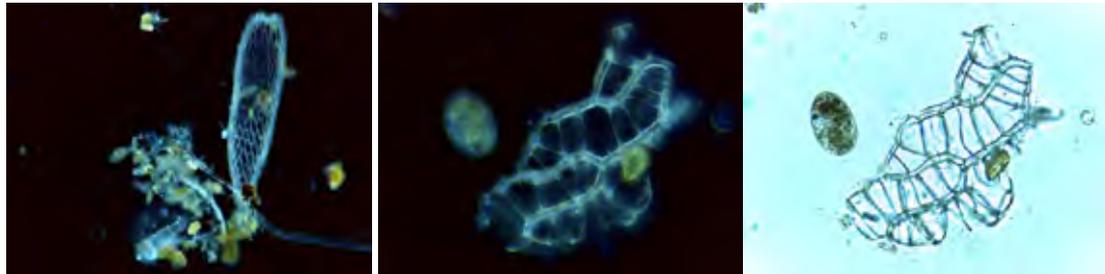
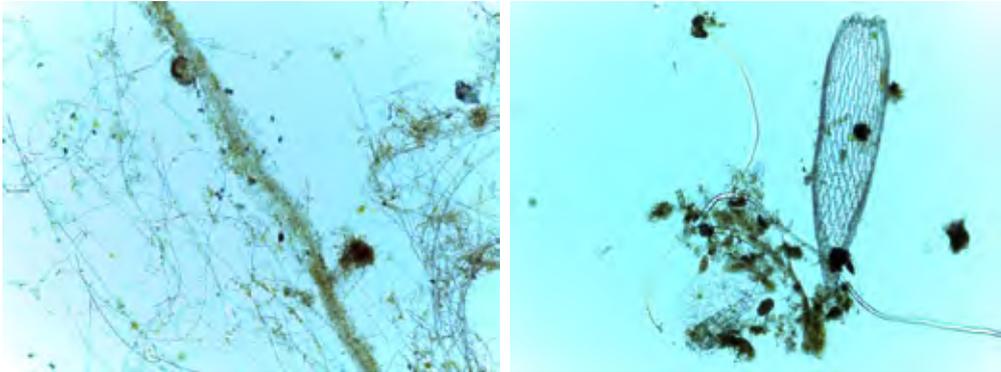
This is the direction my work will take now: I am creating a series of botanical photographs in which I start from a faithful reproduction of the preparation and in subsequent minimal steps (contrast, change of magnification, or another detail, rarely changing the background or colour) I seek to get closer to artistic photography, abstract photography (see the series “Underwater 2019”, Photos 37-45), and even to the “oil painting effect” – as in the “Vase” series, Photos. 46-54.



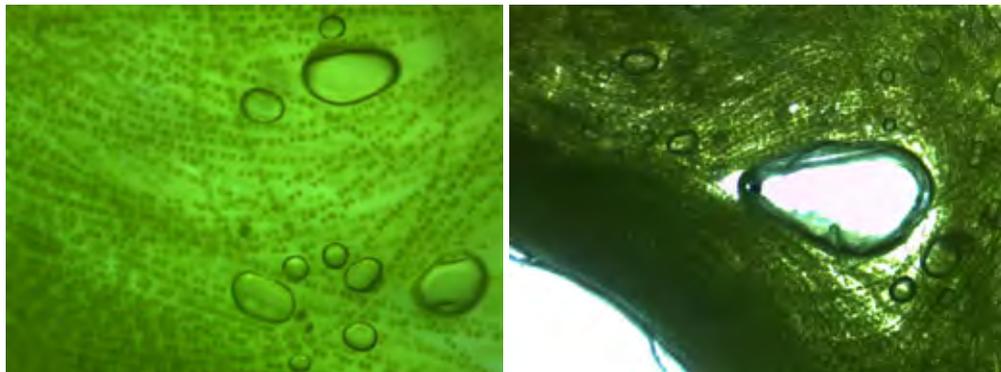
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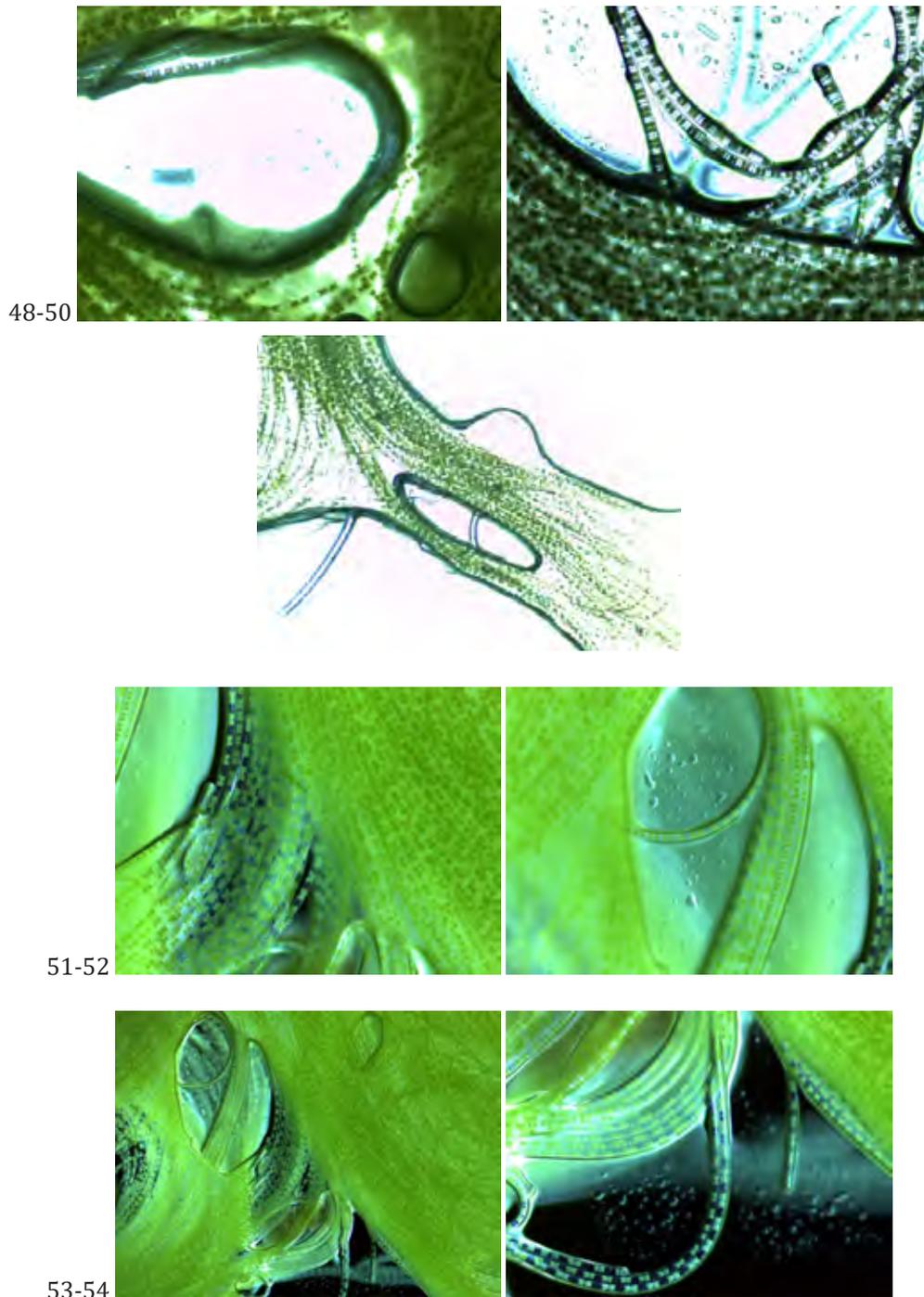


Figure 6: Perfecting the working technique – restricting the tool (microscope, LAS EZ computer program), focusing on the object, inspiration with the first image. Photos 37-45: colour microphotography, the “Underwater 2019” series; quite an impure water sample from a peat bog, containing sphagnum (the dark elements are earth). Photo 46 -54: uncoloured microphotography (sic!), “Vase” series; green algae – *Microspora* sp.; test of puddles on a peat bog. LEICA DM 750.

3.1 Excursus: Alterity – an Example from Art Brut

I would like to expand the subject a little, by citing two examples from outside BioArt: the drawings by Gregor Weiss and Andreas Krötzl, Austrian artists from the Art Brut circle (cf. Bogaczyk-Vormayr 2017, 307-317). The subject of their artistic work is not

any life form, but in the opinion of the artists they present the natural world – Weiss, the structure of organisms, and Krötzl, landscapes. Gregor Weiss (born 1947) is an autodidact who, after more than twenty years of homelessness, lived in VinziDorf, a small homeless shelter in Graz constructed from containers. Apart from a bed, his 10m² container houses a collection of stones, minerals and plants. Weiss works sitting on a bed, his drawings are usually 35 x 50 cm in size, and most often, in the artist's opinion, they represent nature as it really is. Weiss believes that he communicates with nature and that his works illustrate, among other things, the interior/cross-section of plants (the artist does not make any preparations; cf. Photos 55-58). However, what is significant, for the theme of the “artistry of representation” versus the “primacy of abstraction” under discussion here, is that Weiss's works have developed from the most naïve landscape (Photo 55) to abstraction, always tackling, the artist insists, the same theme (Photos 56-58).

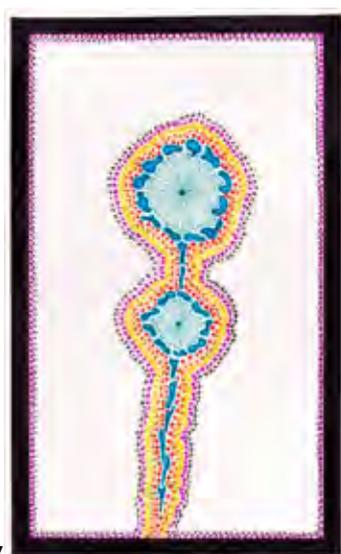
The works of the autistic artist Andreas Krötzl (born 1971) are landscapes, which are abstractions in formal terms. Krötzl does not work within the framework of art therapy, but is a member of the artistic group of the Tacheles Gallery (Gmunden), which operates within the framework of Lebenshilfe, a state therapeutic and care institution. Working in a studio, always at the window, Krötzl focuses on the repetitiveness of his movements, on the following rhythm: looking at the park outside the window, drawing a line, taking his hand off the paper, looking out of the window, and so on. The artist makes almost no other movements, he does not draw on any fragment of the sheet of paper; he draws only single lines, devoting a period of about 10-12 days to one work. Krötzl, whose creative processes I have been observing and analysing from the perspective of the philosophy of art since 2015, agreed with my opinion that my microphotographs are similar to his own works. As part of the project “Sequenzen 2019: Collaboration” Andreas Krötzl chose one of my photographs for our joint exhibition (Photo 60; see footnote 2).



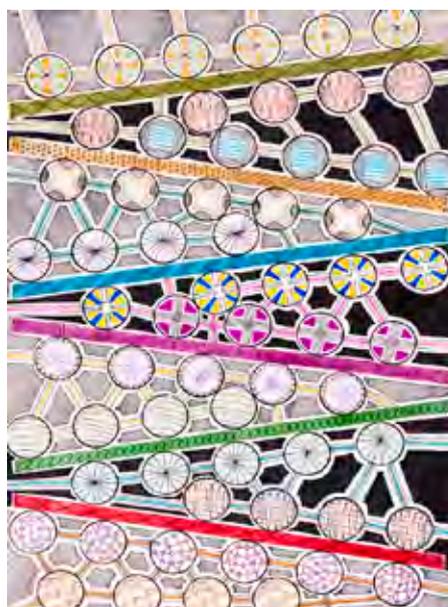
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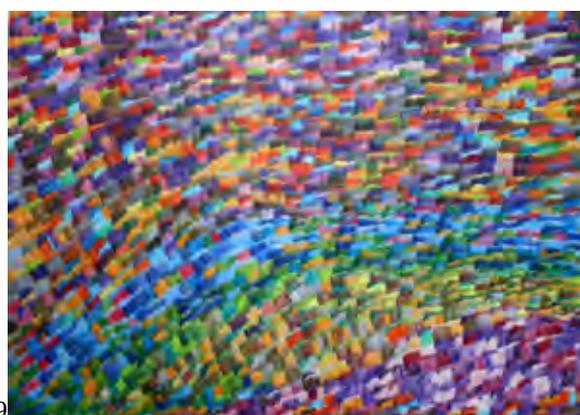
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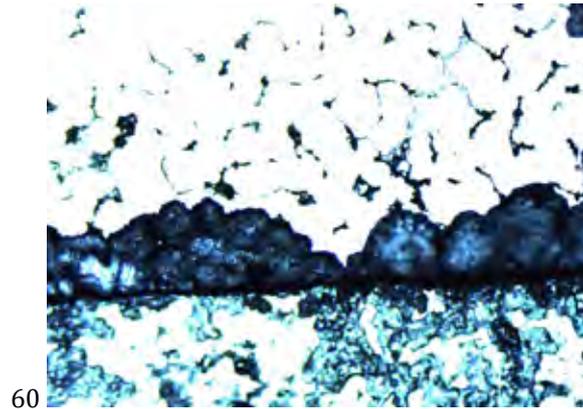
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Figure 7: Alterity and abstraction. Photos 55-58 – Gregor Weiss, *untitled*, 2006, 2011, 2008, 2008; crayon, marker on paper (owned by the author); Photo 59 – Andreas Krötzl, *untitled*, 2016, crayon on paper, 50 X 70 cm (owned by the author). Photo 60: “Landschaft” – colour microphotography, crystallized citric acid. LEICA DM 750.

The exclusion experienced by Weiss and Krötzl is the *alterity* determined by mental illness, but, in turn, the experience of self-identification and empowerment is a movement involving the sovereign takeover of this *alterity*, as practiced by choice (living independently vs. a clinical environment; one’s own artistic practice instead of group “art therapy”). Just like in the theories of Art Brut and Outsider Art, in the theorizing of BioArt, alongside the concept of neuro-art and posthumanism, there is the issue of the canon of the visual arts – the question of including in it what is different, i.e. what is either (i) not considered to be generic-specific and/or culturally-specific for human beings, or (ii) comes from a non-human species.

4. Conclusion: Bio

Interdisciplinary research on otherness/difference has in recent years been subject to systematic philosophizing, which, among other things, has entailed the abolition of this category of “aesthetic canon”. However, for the post-humanist thought that is now prevails in Alterity Studies and Diversity Studies, it is important to maintain the legacy of cultural anthropology. The criticism that contemporary “concepts of the human” – for example, theses on the paradigms of social norms, concepts of mental health, relations between human and non-human beings – put forward in relation to classical cultural and philosophical anthropology are apposite, but at the same time are characterized by a lack of a deep reference to the anthropological classics.⁹ A philosopher of art, pointing to the

⁹ I stress that I am not taking issue with the criticism of twentieth-century philosophical anthropology – even its strong biological current did not help in any way to break the anthropocentrism of this discipline. The framework of a common idea for anthropology and posthumanism would be determined by the comparative studies already mentioned, ranging from A. von Humboldt (as an ethnographer, linguist, zoologist, botanist, ecologist), to the modern philosophical school of posthumanism, which, however, reaches back to classical philosophy only in its reception (e.g. Spinoza or Leibniz as expounded by Deleuze), to Nietzsche, Marx and Foucault, but rarely to Darwin and, above all, Humboldt.

category of *atopy/alterity* – irrespective of the catalogue of works they would study, such as Art Brut or plant microphotography – extracts the metaphysical and epistemological content that a given work manifests, the common content of classical anthropology and contemporary (post)humanities: the idea of *the primacy of difference*.

From the above results in the following attempt to define and assign: The “botanization of language” is in fact its de-philosophizing; what I called the “humanist discourse on plants”, *artificiality*, encloses itself in the mode of “vegetation” and “the artistry of representation”, as a reflection, a metaphor-carbon, a photo without interference or interpretation. I would oppose this with anti-illustrative (abstraction) and *atopy* as an anthropological and post-humanistic ideal. Exploring *atopy/alterity* cannot be achieved through another “discourse on method”; it is only possible through practice – and the artistic-research practice of knowledge transfer seems to have the best chance of success.

Preparing for the last two years to expand my future academic work to BioArt, transforming my workshop and learning the tools and language of a research discipline outside of the social sciences, I found out how quickly I could become proficient in many aspects of this work – thanks to the apparatus itself. Producing very good photos is not a difficult task, it is more difficult to obtain material for samples, and it is really hard to understand what kind of material you have. But the most important task, I think, is not to use these photographs as a self-justifying product (as a work of art), but as a report on the process of acquiring knowledge and transferring it – then the artistic outcome may be less impressive, but the testimony of the work is honest.

In post-humanist discourse about plants one can hear a certain false tone. The adaptive behaviour of plants – including information storage, learning – is described in the pseudo-affirmative spirit of anthropomorphism. This is a bit like deep ecology, a bit like a discourse on animal rights in the context of behavioural psychology. The discovery of intelligence in primates by humanists in the 1950s was just as embarrassingly delayed as the naïve postulates for the discretionary treatment of plant life formulated on the basis of the philosophy of culture in the 21st century.

How to avoid these false tones? Or steer away from the easy outcome of the product, achieved without the effort of research? I think that this is possible thanks to the disposition developed in the phenomenological *change of attitude*. What historians of philosophy or cultural philosophers as environmental ethicists, etc., ultimately care about is *another life* – seen, touched, understood, but also destroyed (Photos 61-64).

I recall one of the first photographs I took: after washing a watch glass (on which there had been a *Musca domestica*; at that time, I was working with insect material), without wiping it thoroughly, I put it under the microscope without any preparation. All the editing of this photograph was based solely on the choice of a dark background. The picture simply shows bubbles of air – and as such it seems to me to express the most important idea of BioArt: *attention* to all forms of life (Photo 65).

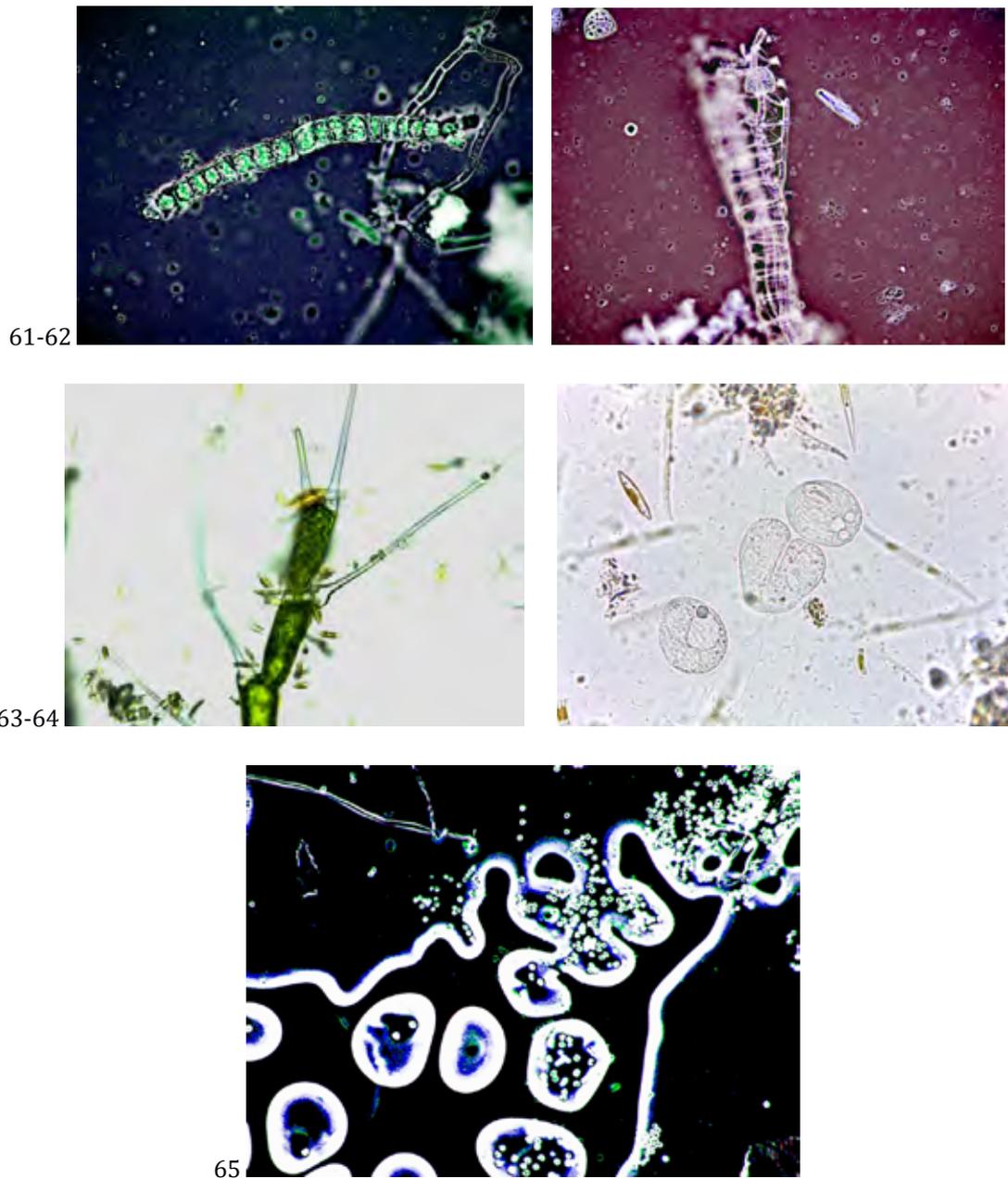


Figure 8: Bio. Photos 61-64: The "Creatures" series – algae from moss samples taken from a peat bog. Colour microphotographs. Photos 61-62: Unknown; 63 – Bulbochaete; 64 – Unknown (with visible conjunction). LEICA DM 750 – Photo 65 from the "Galaxy?" series (2016-2018). LEICA E 24.

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Botanical Microphotography in the Perspective of Philosophy of Culture¹⁰

Abstract: The aim of this article is to briefly outline my own cognitive experience, characterized by knowledge transfer and aesthetic experience, which arises from making BioArt. Specifically, I do nature photography, using the micro-photography technique. In this article, I distinguish – in terms of methodology and value — between interdisciplinary research in the social sciences and the postulate of transdisciplinary research, which leads me to reject the so-called plantality model — a linguistic concept employed by G. Deleuze and F. Guattari (*Rhizome*). I argue for a critical approach to this line of post-humanist reflection on non-human life that is not characterized by knowledge transfer. The article includes a report on the course of my research (parts 2 and 3), and a reflection of its relevance to the philosophy of art and philosophy of culture (parts 1, 3, 3.1, 4). The report from my own research and artistic activity includes a description of the transformation of my working space, the process of acquiring new disciplinary tools and skills — an experience that I call *a change of attitude* — and a presentation of nature microphotography (mainly plant photography). I provide a technical commentary on the presented photographs with regard to the process of their creation (e.g. botanical and optical information related to the microscopic slides and equipment), as well as philosophical comments. The philosophical reflection includes the postulate of alterity, which, in my view, is endemic to post-humanist thought, as well as a postulate called the primacy of abstraction, which reflects the non-naturalistic, anti-illustrative, and interpretative character of artistic microphotography (in contrast to the illustrative nature of “the plantality discourse of philosophy”).

Keywords: microphotography; botanic; Bio Art; alterity studies; environmental ethics; posthumanism; fine-art photography; philosophy of art; philosophy of culture.

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