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Review

M. Beatrice Fazi, *Contingent Computation: Abstraction, Experience, and Indeterminacy in Computational Aesthetics*, Rowman & Littlefield International, 248 pp.

Algorithms run our world. Their operational logic infiltrates all material, living, social and symbolic structures of contemporary world establishing automated modes of governmentality, decision-making and overall systematisation of the chaotic and unruly matter of life. The growing realisation of their ubiquitous power raises deep anxieties, hopes, speculations and fantasies in the psyche of people. Yet, what are algorithms? In 1936 Alan Turing defined the algorithm as a procedure of finite sequential steps designed to solve a problem. It is assumed that such a procedure follows preprogrammed rules in the form of iterative repetition until a designated goal is achieved. Ada Loveless, considered the first person to have ever written a computer program, expressed this view of computation as early as 1843: «The Analytical Engine has no pretensions whatever to originate anything. It can do whatever we know how to order it to perform».

With this opening quote begins the book of M. Beatrice Fazi, only to radically and creatively challenge that deep-seated classical understanding. *Contingent Computation* embarks in an investigation of the ontological conditions of computational thought, or put otherwise, on the question of being and becoming of algorithmic logos. When we speak of algorithms we usually have in mind the executable instructions (i.e. software programmes) performed by digital computers. However, Fazi looks beyond the binary logic of digital computation to find its more fundamental nature as a method of abstraction and systematisation of reality through logico-quantitative means. Computation is before anything a discretisation of reality into abstracted entities, suitable to be arranged into quantities which can be measured, combined and manipulated in various mechanical operations. The goal of such operations is to lead to a decisive conclusion from initial premises. However, there seems to be a dimension specific only to contemporary digital computation

and that dimension is what makes it so urgent to investigate its potential agency. As Fazi notes, discretisations embedded in digital computers today go beyond the discretisations of mathematics and logic, «for they become a means through which they can be effectively functional (that is, a means through which they can take decisions efficiently and in a limited amount of time)» (pp. 48-49) And – it should be added – their *modus operandi* is becoming increasingly automated and quasi-autonomous.

For Fazi, following Deleuze, to ask about the conditions of being and becoming of computation means to explore its capacity to experience potentiality and generate novelty. Therefore, the discourse via which she pursues her quest is aesthetics. By engaging with aesthetics, she performs an innovative conceptual operation at several planes. First, she displaces the popular notion of aesthetics as a theory of taste, beauty and art drawing on a deeper etymological meaning of *aisthēsis* as the science of sensation. Next, she expands yet again the limits of this definition by advocating for computational aesthetics which would overcome the onto-epistemological fracture between logic and aesthetics as two opposing ways of systematising the multiplicity of the real.

For developing her argument, she turns first to Deleuzian philosophy, where aesthetics is the central point of access to potentiality. For Deleuze, the generative potential of being lies in the virtual plane of the sensible. Thought, in order to be productive, has to be immanent to the sensible, and as such, it has to be a non-representational thought. However, such understanding immediately excludes the digital from the production of the new. The reason is that algorithmic logic is a technique of discretisation and abstractive representation which blocks the ontogenetic deterritorialisations of becoming with its fixated significations. Here, logic is taken in its traditional Aristotelian sense as a «rationalist discipline that codifies the inferential principles of valid reasoning into preset norms for prediction and validation» (p. 32). Thus, at the heart of digital media studies Fazi identifies a deadlock between continuity (aesthet-

ics) and discreteness (logics), which she recognises as an expression of an even longer-standing philosophical divide between rationalism and empiricism. The discourses of digital aesthetics, centred around Deleuzian philosophy, have tried to overcome this deadlock by inducing computational formalisations with the affective dynamic of living bodies and material intensities. However, Fazi finds such an approach insufficient as far as it subsumes the quantitative nature of computation to the qualitative plane of the virtual. She decides, instead, to look directly at the heart of the algorithmic procedure to see if she could find there a dimension that while logically formal could be expressive beyond representation. While doing so, however, she distances her position also from the type of computational aesthetics characteristic for mathematical idealism, which puts logic at the heart of aesthetics and regards axiomatic truths as ontologically superior to contingent empirical events.

In her search for the potentiality of computation she investigates the limits of computability as they are outlined by Gödel's incompleteness theorems and Turing's theory of incomputability. According to her ingenious reading of their findings, it follows that formal axiomatic systems are not entirely closed and predetermined, but rather open-ended. Moreover, not only are they open to empirical input from external agencies, but even more so internally, towards their own infinity and indeterminacy. This open-endedness of axiomatics suggests that computational procedures could not be considered as fully preprogrammed, and thus fixated in advance, but are instead actualised in a process of becoming. As a result, «logic steps out of its representational and reductionist role and opens to its own inexhaustibility» (p. 136) and in this way aesthetics enters the heart of computational logos in the form of its own experience and self-actualisation.

In order to explicate how computation experiences its own actualisation Fazi draws on Whitehead's idea of *prehension*. Prehension is a non-cognitive grasping of potentiality, which unlike Deleuzian affect, could be both a sensation appre-

hending physical data and a thought apprehending abstract ideas. Thus, as a self-actualising event computation is initiated by sensible relations between actualities and accomplished by a conceptual determination. This dipolar nature of the experience of actualisation allows algorithmic procedures to «logically think, and not just to affectively feel, the unknown» (p. 135). The conclusion is that axiomatic systematisation of multiplicity is far from a simple reduction of complexity. On the contrary, it creates a complexity of its own, which leads Fazi to conceive of «another aesthetics of the intelligible» (p. 136) and, hence, of «another modality of thought altogether: one that is processual yet impersonal, non-existential and extra-empirical» (p. 135). Therefore, thus elaborated onto-aesthetic perspective of computation allows Fazi to look for the conceptual capacity proper to algorithms.

Contingent Computation challenges the core assumption about digital computation as a mechanical extension of human cognitive capacities. It urges us to reflect on the possibility of fundamentally different modes of *aisthesis*, conceptualisation, and reasoning. The necessity to assess computation in its own terms is pressing in light of the growing determination and automation of technical systems, fuelled by artificial intelligence, machine learning, and various technologies of surveillance. A philosophical study of computational logos will challenge the mainstream technocratic and transhumanist ideologies from inside their systemic discourses so that alternative futures and multiple “cosmotechnics” (to use the term coined by Yuk Hui) could be imagined. One of the advantages of this book is the way it transgresses disciplinary boundaries without losing grip of its rigorously developed conceptual apparatus and argumentative framework while at the same time demonstrating deeply engaged reading of its diverse sources. Fazi’s inventive approach rethinks the problematics of the analytical tradition via the intuitions of the Continental philosophy and this speculative operation radically rewrites established concepts and interpretations. *Contingent Computation* is a valuable contribution to an emerging par-

adigmatic shift in philosophy of technology, performed by other young philosophers such as Yuk Hui. Acknowledging the necessity of contingency in the process of computation both Fazi and Hui, albeit in different directions and scopes, challenge the anthropocentric understanding of rational thinking as well as the classical divide between subject and object and, hence, point towards alternative regimes of reasoning and ontological production.

Contents: Acknowledgements. Introduction: Novelty in Computation; Part 1: Aesthetics. 1. Continuity versus Discreteness; 2. Computation; 3. Processes; Part 2: Abstraction. 4 Computational Idealism; 5. Axiomatics; 6. Limits and Potential; Part 3: Experience. 7. Computational Empiricism; 8. Factuality; 9. Actuality; Conclusion: Computational Actual Occasions; Bibliography; Index

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[by Nevena Ivanova]

Averting Enlightenment’s History: Octopuses as Societal Challenge

As often when it comes to nonhuman animals in the humanities, interest in octopuses has focused mainly on their role as symbols, to give access to the human mind and its inner conflicts, or as metaphor, to think the human mind. Comparative psychologists bring octopuses and their complex behaviour into focus –

but still produce more questions than explanations. Thus, octopuses are an epistemological enigma. Okto-Lab. Laboratory for Octopus Aesthetics, a collaborative project which currently receives funding from the DAAD and is supported by the University of Kassel (Germany) and the University of Tasmania (<https://www.okto-lab.org>), addresses this enigma. It picks up on Theodor W. Adorno's idea that societal conditions, such as enlightenment's tendency to dominate nature, are psychologically reproducing against signs of their failure. We argue, that the specific enigma the octopus presents might disrupt this reproduction cycle. By approaching octopuses aesthetically, Okto-Lab avoids translating them in definite terms and categories and thus intends to prevent the reduction of their otherness, that is, their cognitive taming and appropriation. Thereby, it aims at appreciating them for-themselves and more importantly, in their difference to humans.

In 1956, Jacques Schnier – at one-time architect, engineer, then finally artist – wrote extensively in *American Imago* that the range of sources, from Victor Hugo to Mycenaean pottery, reminds us that the monstrous cephalopod in literature and visual culture retains a dualism and ambiguity that is ripe for symbolic functions of the octopus. Schnier's eclectic interpretation:

Like the vampire, the sex of the octopus is also overdetermined, but in most instances it is obviously feminine. A young lady who had used an octopus motif in an art design, when questioned by a child as to the sex of the animal, answered "female", without much thought. On second consideration she was not sure why it should be so. A young man when talking about the octopus stated, "when it is moving about beautifully, I think of it as female, but when it is attacking, it is male".¹

Schnier's wild and highly anecdotal psychoanalyzing of the octopus' symbolic function tended to focus on the morphology of pictorial resemblances that exchange octopus for dragon, spider, and the Medusa. Schnier summarises that though the octopus as symbol varies greatly in its inter-

pretative spread – from male castration anxiety through to female penis envy – it remains a highly "overdetermined"² symbol that underpins multiple readings of the unconscious.

Though not a psychoanalyst himself, Schnier published regularly in *American Imago* throughout the 1940s and 50s, mostly on the symbolic function of dragons, birds, and octopuses and their employment across culture. As a key disseminator of Freudian thought in the US through multiple journals of art history and psychoanalysis, his position cannot necessarily be immediately disregarded. Schnier's reading of the octopus as negative mother symbol was reinforced by multiple psychoanalysts over subsequent decades.³

If Schnier revelled in the octopus' symbolic monstrousness, for his younger French contemporary Jacques Lacan the octopus enabled a much more nuanced and engaged symbolic function. For Lacan, as recorded in his second seminar series held in 1954-55, the octopus' highly distributed neural system served as a powerful analogy for the capacities of the city to communicate its memory through a decentralised network of laneways and arrondissements:

Thanks to [Jacques] Riguet, on whose recommendation I read the work of an English neurologist, I became very interested in a certain octopus. It seems that its nervous system is sufficiently simple to have an isolated nerve which governs what is called the jet, or the propulsion of liquid, thanks to which the octopus has this delightful way of moving. You can also think of its memory apparatus being pretty much reduced to this message circulating between Paris and Paris, on tiny points of the nervous system.⁴

Subtitled 'The Circuit', this section of Lacan's

² Ibi, p. 29.

³ S. Robinson, *Oyster and Octopus: Choices, Constraints and the Couple*, in «Sexual and Marital Therapy» 11, 2 (1996), pp. 153-63.

⁴ J. Lacan, *The Seminar of Jacques Lacan Book II: The ego in Freud's Theory and in the technique of Psychoanalysis 1954-1955*, Cambridge University Press, Cambridge 1988, pp. 89.

¹ J. Schnier, *Morphology of a Symbol: The Octopus*, in «American Imago» 13, 1 (1956), pp. 3-31, here 16.

seminar serves as the central thesis of his critique of Freud's pleasure principle, which Lacan disputed for its highly structured and anthropocentric approach to consciousness in favour of a more 'machinic' model that recognised the significance of interrelated yet independent parts. For Lacan, the industrial emergence of the 'machine' between the ages of Hegel and Freud provided a new structure for imagining the productions of the unconscious. In Lacan's cephalopodic thought, the octopus served as powerful model for rethinking the mind as an organic machine, capable of highly distributed neural movement.

It is here, where *Okto-Lab* as a multi-dimensional and interdisciplinary research laboratory picks up and intervenes. However, rather than tracing the psychoanalytic thread, we turn to the psychological and epistemological challenge as which the octopus manifests through Schnier's consideration of the octopus as symbolic monstrosity on the one hand and Lacan's reflection on the creature's unconscious as a high-powered neural machine on the other. Octopuses, we argue, disturb and confound our ways of making rational sense out of the world and repressively appropriating it thereby. This statement requires explanation.

It is obvious (and largely unquestioned), that (some) humans have produced a crisis of planetary proportion, where, if not the planet itself, all life on, in and above it is threatened and affected by deep and grave changes in its ecology. While there might be some beneficiaries to these changes, some cephalopods potentially among them,⁵ the sixth mass extinction that is currently proclaimed shows that overall the results will be dire⁶. It is equally unquestionable that people are differ-

⁵ R. Rosa et al., *Global Patterns of Species Richness in Coastal Cephalopods*, in «Frontiers in Marine Science», 6, 469, 2019, doi: 10.3389/fmars.2019.00469.

⁶ IPBES (2019): *Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, ed. by E. S. Brondizio, J. Settele, S. Díaz, H. T. Ngo, IPBES secretariat, Bonn, Germany: <https://ipbes.net/global-assessment> (accessed 21 August 2020).

ently implicated in both the production of the crisis as well as affected by it.⁷

Speaking about student revolts, and with the memory of peoples' ready support for fascist, totalitarian regimes, Theodor W. Adorno argued in 1969 that «ever since the market economy was ruined and is now patched together from one provisional measure to the next, its laws alone no longer provide sufficient explanation» for the state of society. Without the additional consideration of psychology, «in which the objective constraints are continually internalized anew, it would be impossible to understand how people passively accept a state of unchanging destructive irrationality».⁸ In *Dialectic of Enlightenment*, Adorno analysed and described the development of this psychology together with Max Horkheimer in terms of the history of enlightenment. According to Horkheimer and Adorno, «enlightenment, understood in the widest sense as the advance of thought, has always aimed at liberating human beings from fear and installing them as masters»⁹. The way in which humans have sought this mastery, at the least in the west, is by disenchanting and determining the world in order to subjugate it as an instrument for human survival. Thus, «a philosophical interpretation of world history would have to show how, despite all the detours and resistances, the systematic domination over nature has been asserted more and more decisively and has integrated all internal human characteristics».¹⁰ In other words, global, capitalist human culture in late modernity is reproducing its

⁷ For example A. Malm, A. Hornborg, *The Geology of Mankind? A Critique of the Anthropocene Narrative*, in «The Anthropocene Review», 1, 1, 2014, pp. 62-9, doi: 10.1177/2053019613516291.

⁸ T. W. Adorno, *Marginalia to Theory and Praxis*, translated by H. W. Pickford, in *Critical Models: Interventions and Catchwords*, Columbia University Press, New York 2005, pp. 259-278, p. 271.

⁹ M. Horkheimer, T. W. Adorno, *Dialectic of Enlightenment: Philosophical Fragments*, translated by E. Jephcott and edited by G. Schmid Noerr, Stanford University Press Stanford, CA, 2002, p. 1.

¹⁰ Ibi, p. 185.

drive to dominate nature psychologically through being subjected to this very culture.

The cultural history of octopuses (or cephalopodic creatures) as monstrosities, we want to suggest¹¹, represents a rupture in this cycle by pointing us to the limitation in our subjugation of the other. Even in *Moby-Dick*, Melville's masterful exploration of that other mystical creature, the whale, the chapter on the squid sits like an open, unutterable wound, an impenetrable barrier in his attempt to decipher the whale.¹² In the more recent fascination with octopuses, finally, they remain equally enigmatic, but we see them as creatures with deep, unfathomable souls with which we can interact and connect with.¹³

Two things connect here, where *Okto-Lab* turns to octopuses as potentially rupturing the reproduction of the psychology of enlightenment as a force of dominating nature through its disenchantment: the challenge to disenchant something that manifests in both the history of the cephalopodic monstrosity and the creatures' mental unfathomability and the increasing recognition of this challenge in their cognitive idiosyncrasy, or soulfulness. As space does not permit us to go into much detail here, we hope that a number of octopus features that challenge our epistemological appropriation of the creatures will exemplify and substantiate our guiding assumption.

Almost all octopus species have an outstanding ability to change the colour of their skin and imitate their surroundings in a way that makes them almost invisible. What coordinates the change is still unclear – whether the cells in the skin themselves respond to their surrounding or whether the change is an action centrally orchestrated by the

brain. Scientists find themselves in a similar situation when trying to examine to what extent the actions of octopus arms are centrally monitored. Part of the difficulty is that the nervous system of octopuses is not as centralized as in humans. While they do have a brain, three fifth of their neurons are not in the brain but in the body of the octopus. The question about coordination is further complicated by the fact that octopuses do not rely as much on vision as humans and are more chemo-tactile oriented.¹⁴ Hence the uncertainty about the need for a central brain to coordinate between arm-movements, skin-display and vision.

Although such a description might invite a machine-like Cartesian explanation, the recognition of distinct personalities challenges such a solution to the octopus enigma. While studying juvenile common octopus in Bermuda in the early 1990s, the foremost expert on octopus psychology Jennifer Mather recognized certain consistent differences in behaviour over time among the individual octopuses she was observing. Around the same time biologist Roland Anderson noted that the zookeepers in the Seattle Aquarium gave names to the three octopuses living there, based on the behaviour they were displaying. Giving names to octopuses in aquariums was rather unusual around that time. Inspired by these circumstances, Anderson and Mather started to study individual differences in octopuses scientifically.¹⁵ They exposed small red octopuses in an aquarium tank to three situations: alerting them by opening the tank lid and looking at them; threatening them by touching them with a brush; and feeding them with a crab. Every octopus was seven times exposed to each situation and all reactions were noted. In 44 tested octopuses 19 different behaviours were recorded, which resulted in three different personality dimensions for the octopuses: avoidance (avoiding-bold), reactivity (anxious and

¹¹ H. Tiffin, *What Lies Below: Cephalopods and Humans*, in *Captured: The Animal Within Culture*, ed. by M. Boyde, Palgrave MacMillan, London 2014, pp. 152-174.

¹² H. Melville, *Moby-Dick*, edited and with an introduction by C. C. Walcutt, Bantam Classic, New York 2003.

¹³ For example S. Montgomery, *The Soul of an Octopus: A Surprising Exploration into the Wonder of Consciousness*, Simon & Schuster, London 2016.

¹⁴ J. A. Mather, *What is in an Octopus's Mind?*, in «Animal Sentience», 26, 1, 2019, pp. 2-10.

¹⁵ J. A. Mather, R. C. Anderson, J. B. Wood, *Octopus: The Ocean's Intelligent Invertebrate*, Timber Press, Portland 2010, pp. 113-4.

calm) and activity (active-inactive). Mather and Anderson concluded that octopuses possess “personalities,” by which they mean that they found consistent patterns in the behaviours of the octopuses that distinguished each one from the other octopuses over time.¹⁶ The study was one of the first that brought the question of personalities into the realm of invertebrates.¹⁷

Further psychological studies such as on play, exploration and habituation in octopuses¹⁸ as well as studies on their capacity to distinguish between humans¹⁹ eventually let Mather conclude that cephalopods have a form of primary consciousness; that their neuronal structures are linked to their behaviour, that they are depending on learning from their environment, and that they are choosing their actions based on an evaluation of their environment, further supports this conclusion.²⁰ Part of Mather’s argument on primary consciousness in cephalopods is the fact that octopuses sleep. With reference to Papineau and Selina²¹ she highlights that «sleep is an indication that an

animal has primary consciousness, since there is a time when it is aware and a time when it is not».²² Indeed, there are a number of other octopus researchers that equally support this perspective. David Scheel from Alaska Pacific University, for example, kept the internet busy with a video of an octopus called Heidi.²³ In the video, Heidi is obviously sleeping but is changing the colour of her skin at the same time. This behaviour led to the question whether Heidi was dreaming.²⁴ Scheel himself said it could also be «(...) nothing more than the twitching of muscles that control her color-changing organs», but Heidi was not the first octopus who raised the possibility of dreaming in cephalopods. Philosopher Peter Godfrey-Smith describes a cuttlefish, a close relative of octopuses, changing colour while apparently being asleep.²⁵ That some animals such as rats, birds and cuttlefish dream can be concluded from scientific studies.²⁶ How this idea of dreaming in nonhuman animals is related to a nonhuman unconscious remains an open question.²⁷ From his research into octopuses, however, Godfrey-Smith draws the conclusion that octopuses represent an alternative evolutionary path to that of humans in the development of higher consciousness.²⁸

¹⁶ J. A. Mather, R. C. Anderson, *Personalities of Octopuses* (*Octopus rubescens*), in «Journal of Comparative Psychology», 107, 1, 1993, pp. 336-40.

¹⁷ For subsequent studies with a focus on temperament, see for example D. L. Sinn et al., *Early temperamental traits in an octopus* (*Octopus bimaculoides*), in «Journal of Comparative Psychology», 115, 4, 2001, pp. 351-64. The authors further develop Mather and Anderson’s test and suggest ‘active engagement,’ ‘arousal-readiness,’ ‘aggression,’ and ‘avoidance-disinterest’ as four distinct personality dimensions.

¹⁸ J. A. Mather, R. C. Anderson, *Exploration, Play, and Habituation in Octopuses* (*Octopus dofleini*), in «Journal of Comparative Psychology», 113, 3, 1999, pp. 333-8; M. J. Kuba et al., *When do octopuses play? Effects of repeated testing, object type, age, and food deprivation on object play in Octopus vulgaris*, in «Journal of Comparative Psychology», 120, 3, 2006, pp. 184-90.

¹⁹ R. C. Anderson et al., *Octopuses* (*Enteroctopus dofleini*) recognize individual humans, in «Journal of Applied Animal Welfare Science», 13, 3, 2010, pp. 261-72.

²⁰ J. A. Mather, *Cephalopod consciousness: Behavioural evidence*, in «Consciousness and Cognition» 17, 1, 2008, pp. 37-48.

²¹ D. Papineau, H. Selina, *Introducing Consciousness*, Totem, New York 2000.

²² Jennifer A. Mather, *Cephalopod consciousness*, p. 39.

²³ See for example E. Preston, *Was Heidi the Octopus Really Dreaming?*, in «New York Times», 8 Oct 2019, <https://www.nytimes.com/2019/10/08/science/heidi-octopus-sleeping.html> (accessed 21 August 2020).

²⁴ See the documentary: A. Fitch, *The Octopus in My House*, in «Natural World», August 22, 2019, <https://www.bbc.co.uk/programmes/m0007snt> (accessed 21 August 2020).

²⁵ Godfrey-Smith, *Other Minds*, pp. 133-135.

²⁶ See for cuttlefish: T. L. Iglesias et al., *Cyclic nature of the REM sleep-like state in the cuttlefish Sepia officinalis*, in «Journal of Experimental Biology», 222, 1 (2019), jeb174862, doi: 10.1242/jeb.174862.

²⁷ M. Ellmann, *Psychoanalytic Animal*, in *A Concise Companion to Psychoanalysis, Literature, and Culture*, ed. by L. Marcus, A. Mukherji, pp. 328-50, John Wiley & Sons, West Sussex 2014, p. 332.

²⁸ P. Godfrey-Smith (2017), *Other Minds: The Octopus and the Evolution of Intelligent Life*, William Collins, London.

Here precisely then, Lacan's consideration of the octopus mind resurfaces and connects with Adorno's diagnosis of the reproduction of a status quo in our individual psychology by way of being somatically submitted to a culture and society that embodies this very status quo in its material structure. Or rather, Adorno and Lacan connect in the challenge of reshaping this psychology. The status quo that is being reproduced, we have suggested via the *Dialectic of Enlightenment*, is that of a need to dominate nature, to control nature through its disenchantment, rather than to acknowledge its own idiosyncrasies and desires; hence our ecological difficulty in acknowledging the very independence and spontaneity of nonhuman actors and processes. The octopus appears to us historically, psychologically and biologically as archetype of such independence. Might it then be possible to disrupt the reproduction of our psychology that is geared towards making everything definitive, by immersing ourselves into the question of the octopus's mind, as Lacan did, and even more so by trying to immerse ourselves into the other mind and consciousness of the octopus?

The octopus here becomes a blank space not to be colonized by us – something that, if we trust its depictions in culture and the recent science on its mental capacities, appears impossible to achieve anyways – but to whom we have to approximate ourselves. This requires, however, to find new ways for conceptualizing octopuses, their minds and consciousness, as well as to approximate our own processes of thinking to that of the octopus. *Okto-Lab* is a laboratory for testing these objectives. The traditional place for experiments of this kind are the arts. Thus, *Okto-Lab* seeks to establish interdisciplinary research programs that rely on the arts to immerse us into the world of octopuses.²⁹ Thereby, we suggest and explore, octopuses might give rise to a different path in

²⁹ For example, in our first project we deployed curation as a method of interdisciplinary research to develop together with artists and scientists two exhibitions that aimed to initiate such an exploration of octopuses (see <https://okto-lab.org> for more information). The results will be published in a book.

enlightenment, one wherein we can recognize ourselves in the other without the need to make it fully determinate.

[by André Krebber, Maike Riedinger, Toby Juliff³⁰]

³⁰ All authors contributed equally to this paper.