

“The jellyfish must have precedence!”:  
The Diaphanous Animal as an Optical Medium

Daniel Strozynski, jellyfish specialist at the Berlin Zoo explains: “A fish can look at you, after all. But a jellyfish? It’s simply a jellyfish and that’s it. Jellyfish do not make any noise, do not show any feelings, cannot even look at you”<sup>1</sup> (qtd. in Goebel 35). His former career plan was rather aimed at working with elephants than cnidarians. From a human perspective, eye-contact seems to be indispensable to establish any kind of human-animal relationship. Even if jellyfish themselves do not have “eyes”—or at least not visible to the observer—they often emerge in the arts and sciences as objects of human sight: Jellyfish can enable seeing without eyes, and do so in fluorescence microscopy, in which the green fluorescent protein (GFP) is obtained from a jellyfish and is able to make cell components visible in the human body (Flach 283). And in a poem by the German poet Jan Wagner the diaphanous animal is addressed as being endowed with visual capabilities: the jellyfish feature as a “voracious eye” and a “magnifying glass that enlarges the Atlantic”<sup>2</sup> (95).

On the one hand, this article follows the tentacular traces of jellyfish in a wide variety of contexts. The individual segments of the article are autonomous and at the same time related, comparable to the countless interdependent but distinct polyps that make up siphonophores. On the other hand, this article follows a maxim which was already formulated in the novel *The Rat* by Günter Grass in 1986: “The jellyfish must have precedence!” (125). Tasked with surveying the “jellyfish density” (13) in the Baltic Sea, five researchers observe singing moon jellyfish. As a literary animal, the jellyfish is attributed audiovisual properties transcending “real” jellyfish characteristics. This animal soundscape makes the researchers begin to recognize jellyfish as an ecological indicator. Jellyfish, as my article tries to show, appear as the epitome of ecopoetics: As a media figure of thought and movement, the jellyfish is used as an ocular to direct the gaze

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<sup>1</sup> “Ein Fisch kann dich angucken, immerhin. Aber eine Qualle? Die ist halt eine Qualle und fertig. Quallen machen keine Geräusche, zeigen keine Gefühle, können dich nicht mal ansehen.” All following translations from the German are my own.

<sup>2</sup> “[G]efräßiges auge” and “lupe, die den atlantik vergrößert.”

via and through the animal to the human, its body and to its environment. Therefore, the article sketches diverse stages of the history of knowledge of jellyfish and follows the epistemological and aesthetic figurations in which jellyfish appear as an ecocritical figure.

### The Birth of Jellyfish Research

The exceptional traits of the jellyfish have already surprised early nineteenth-century naturalists. In his contributions to the anatomy and physiology of the medusas dating back to the year 1816, the German naturalist Heinrich Moritz Gaede wrote about a strange view regarding the benefit of these animals: They clean and purify the sea “because all the impurities find their way to them, stick to them, like burrs on a cloth”<sup>3</sup> (11). Gaede ascribes a cleansing function to the cnidarians insofar as they function as an oceanic vacuum cleaner, ingesting dirt, trash and filth. Gaede’s allusion identifies the jellyfish as a bioindicator, as an organism by means of which conclusions can be drawn about environmental impacts of humans. The jellyfish becomes readable as an indexical figure since they appear to refer to their environment by going beyond themselves and their body. Thus, an increasing jellyfish population or also the individual pollutant-loaded organism can be read as an indicator of increasing pollution of the seas. Gaede’s reference shows that jellyfish are considered as ecological indicators since the birth of jellyfish research.

Jan Altmann dates the birth of jellyfish research (175) to an expedition undertaken to the *Terres Australes* (1800-1804) under the command of Nicolas Baudin, accompanied by expedition artist Charles-Alexandre Lesueur. Altmann emphasizes that during the Baudin expedition, the jellyfish family was generally established as a zoological entity (5). The cnidarian points beyond itself here as well and acts as somewhat of an *interface* which strikes a balance between dichotomous moments. Positioned as a hybrid organism between plant and animal and dismissed as being an “unknown mollusk” (“unbekanntes Weichtier”; Altmann 178), the jellyfish as an object of investigation led to a reflection and revision of usual observation and research practices: With the participation of an expedition artist, the visualization of the observed was no longer simply examined scientifically, it also took on an artistic—more specifically pictorial—examination. Since the preserva-

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<sup>3</sup> “[W]eil sich alle Unsauberkeit an sie setzt, die an ihnen hängt, wie eine Klette auf Tuch.”

tion of the ephemeral mollusks, which were also designated as “organized water (“organisiertes Wasser”; Altmann 200), was not successful, the drawings were based on immediate observation, on living models and not on preserved specimen. Thus, these portrayed jellyfish were shown as moving animals—in other words—as living animals. It is possible that the “moving pictures” also contributed to the irrevocable classification of these gelatinous living beings as animals, and no longer as plants. Beyond pure “nature management”—meaning a classification of that which can be seen—motion studies became a focus of interest as well.

### Polyps

In an article on jellyfish, the examination of the polyp, a developmental stage of the jellyfish, should not be missed. Linked to this is the maxim of Jacques Derrida which does not have a homogeneous whole behind “the animal.” Just like jellyfish, the polyp—also a generational stage of many medusas—is ascribed a bioindicator function as well, since it allows for conclusions about water quality. Since the polyp was also used to do research on the division and regeneration of organisms, Bühler and Rieger declared it a super-animal (9)—meaning a figure of knowledge—and thus an integral part of their “Bestiary of Knowledge”: “The animal with one head and many limbs, which are described as arms or tentacles, is put under the knife and thus exposed to a whole series of experiments”<sup>4</sup> (188). According to Rieger, it is especially the morphology of the animal that abets variable cutting sequences (“Polyp” 196). The cut was then followed by monstrosities (193). Rieger’s mental association somewhat leads from the polyp as super-animal to the polyp as a demonic animal. In *A Thousand Plateaus. Capitalism and Schizophrenia*, Deleuze and Guattari distinguish between “three kinds of animals”: the “individuated animals, family pets, sentimental, Oedipal animals each with its own petty history,” the “animals with characteristics or attributes; genus, classification, or state animals” (240) and “more demonic animals, pack or affect animals that form a multiplicity, a becoming, a population, a tale” (241). Furthermore, a reference to the polyp in *A Thousand Plateaus* puts human and animal anatomy in relation to each other:

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<sup>4</sup> “Das Tier mit dem einen Kopf und den vielen Gliedern, die als Arme oder Tentakel beschrieben werden, gerät unters Messer und wird so ganzen Serien von Experimenten ausgesetzt.”

A single abstract Animal for all the assemblages that effectuate it. A unique plane of consistency or composition for the cephalo-pod and the vertebrate; for the vertebrate to become an Octopus or Cuttlefish, all it would have to do is fold itself in two fast enough to fuse the elements of the halves of its back together, then bring its pelvis up to the nape of its neck and gather its limbs together into one of its extremities, like “a clown who throws his head and shoulders back and walks on his head and hands.” (255)

Even if one is only referring here to bisection, the acrobatic exercise is attached to the “combinatorics of experimental subroutines”<sup>5</sup>, i.e., experimenting on polyps, to graft them, stick them onto each other, to admit them to strange combinatorics (Rieger, “Polyp” 196).

The more or less monstrous cut and the demonic animal, which could also include the vampire, according to Deleuze and Guattari (241-42), takes the polyp into the proximity of early expressionist film and not just associatively. Hence, it is not surprising that in Friedrich Wilhelm Murnau’s 1922 version of *Nosferatu*, Professor Bulwer holds “a course on the secrets of nature and their strange correspondences to human life” using a polyp—and a carnivorous plant—as an example, while *Nosferatu* sets out for Wisborg—and with him a kind of plague that appears to be a riddle to scientists. The film features the following line about polyps: “And now, gentlemen, here is another type of vampire: a polyp with claws ... transparent, without substance, almost a phantom.” Professor Bulwer does not draw an analogy between vampires and polyps; form and color of *Nosferatu*’s claws resemble that of the claw-like polyp which Bulwer and his pupils study. At any rate, no technical apparatus is revealed to the film’s audience. In *Nosferatu*, the movie camera simultaneously acts as a microscope. The camera perspective switches from the classroom and surroundings of the professor and his pupils to a microscopic close-up of the polyp. Since the spectators as well as the corresponding apparatus are removed from the field of vision, the audience operates as a spectator. The first item to penetrate the animal’s organism is therefore not the scalpel performing the dissection of the polyp but the sight-giving lens. Thus, the polyp appears to merge with the sight-giving apparatus and the human observers. According to Karen Barad this means that the outside boundary of the apparatus does not coincide with the visual terminus of the instrumentation (142-43). It is much more necessary to understand human, animal and apparatus as not being individual entities but rather a figuration.

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<sup>5</sup> “Kombinatorik experimenteller Subroutinen.”

## Jellyfish and Dance

The beginning of Paul Valéry’s essay “The Dance”: “Why not ... turn to the art of the dance for a while ... an art based on all those human movements” (13) is not, first and foremost, formed by the question regarding animal locomotion (Rieger, “Tiere” 32)—a question that, according to Rieger, had a decisive influence on the relationship between animals and humans; it is more the question regarding *human locomotion*, or, to be more precise: dance. Valéry pits the goal-oriented, economic movements of everyday life against the movement of dance: energetic, led by repetition. Their divergence can be shown in the level of importance of both forms of movements ascribed to the absence of movement or stasis: That which is quite natural to everyday movement is most deeply unnatural in dance (“Dance” 16). Valéry is prompted to immediately draw analogies between a body in stasis and the animal: “An animal, weary of being confined to immobility, dashes off snorting; ... it *lets itself go* in galloping and wild courses” (15). To him, the animalistic exhaustion is a pre-cultural act, a moment “before the dance.”

“Jellyfish on the big screen”<sup>6</sup> (*Cahiers* 256)—a short note in Valéry’s *Cahiers*—provides information about the more or less predictable turn in the text that brings the reflections regarding dance theory to an end. Even though Valéry reflects on Eadweard Muybridge’s chronophotography only a few pages later in “Horse, Dancer, Photograph,” it is the floating jellyfish that is the basic idea responsible for the new paragraph in his essay, not the galloping horse: Human, animal, and medium establish themselves in one figure of thought. The moving image of the quasi liquid lifeform within the liquid (*Cahiers* 257) is used by Valéry as a medium for scenic research and establishes the interface between human and animal locomotion. The jellyfish appear to him as

beings of an incomparably translucent and sentient substance, flesh of furiously sensitive glass, domes of floating silk, hyaline wreaths, long thongs traversed by rapid unfolding; while they whirl, unshape themselves and shoot away, as fluidly as the tremendous fluid which harries, embraces and sustains them on all sides, yielding to their slightest inflections and restoring them their forms. There, in the irreducible volume of water that seems to offer no resistance, these creatures can enjoy the ideal mobility, expanding and contracting their radiating symmetry. No base, nothing solid to support these supremest of dancers; no boards, only

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<sup>6</sup> “Quallen auf der Filmleinwand.”

an element in which they press on all the yielding area allowing them passage where they will. Nothing solid, either, in the crystalline elasticity of their bodies; no bones, sinews, no inflexible ligatures or segments that can be distinguished.... ("Dance" 17-18)

Valéry understands the anatomy of the mollusk in textile associations which he couples directly with the fluid environment of the diaphanous being. Thus, animal and environment form a choreographic figuration which is led by reciprocal impulses. The gelatinous form of the jellyfish which only slightly differs from its environment, makes the mollusk virtually appear as an ecological figure *par excellence*, making it impossible to behold the animal detached from its environment. Just as Valéry's contemporary, the zoologist Jakob von Uexküll, observed: Environment and the inner life of animals necessarily depend on and influence each other (5).

"Organ coqueties" ("Organkoketterien"; *Cahiers* 256) subsequently entice Valéry to abandon the asexual creature and make sexual analogies. To him, the diaphanous being becomes a desirable dancer. Inspired by the medium of film and with the eye of a voyeur, Valéry zooms in on the female genitalia which the jellyfish seems to embody and displays so "furiously open" ("Dance" 18):

No woman dancer, inflamed, exalted by the rhythm, the toxic force of her own overwrought energy, and by her consciousness of the ardent charge of desire in the eyes of her audience, ever expressed the imperious oblation of sex, or mimed the challenging urge to prostitution, like the great medusa, transforming herself into an erotic phantasm, with an undulating shudder passing through the scalloped flounces of all her skirts, which she lifts and lowers with a strange and shameless insistence; and then, suddenly flinging back all her shivering finery, her robes of servered lips, inverts and exposes herself, laid furiously open. ("Dance" 18)

This "genital illusion" allows the gaze to wander—from human locomotion to animal locomotion and back to human locomotion.

### Jellyfish Are Twelve-Toners

There is also something illusory to the singing jellyfish in Günter Grass' dystopian novel *The Rat*: As the five researchers leave the harbor of Visby in Gotland, Sweden, after a hasty shore leave, they happen upon "a large field of jellyfish that cut down their speed" (187). They "seem to hear a rising and falling sound over the waters, a wordless singing ... as though millions of medusae ... had suddenly found their voice in the shallows or been mi-

raculously set to singing by a higher will” (187). *Aurelia Aurita* seems to be predestined to lend her voice here. As an animal which travels in schools, it easily lends itself to analogies to choirs and polyphony. It belongs to the class of Scyphozoa, and so its body is bell-shaped. *Aurelia Aurita* received its common German name “Ear Jellyfish” due to its ear-like genitalia which are located above its diaphanous umbrella. The name includes the auditory aspect as well, enabling it to sound its voice in connection to the sirens that are found in Greek mythology.

Even though the terms “inexplicable phenomenon,” “cosmic influences” (189), and a “woven fabric of voices hovers over the sea” (190) are mentioned several times, and auditory illusions could be diagnosed, it is actually a tape recorder that provides the proof here. “[N]ot only Bach cantatas and organ preludes, but also Joan Baez [and] Bob Dylan” (190) are simply just recorded over and instead the “singsong” (188) of the jellyfish is recorded on tape. It is possible to play the tape again and again—the “song of the medusae” (188) has been recorded. The only thing that seems to vary between the medially reproduced jellyfish song and the “original sound” (188) is the pitch. Whether Gesualdo (189), Bach (190), twelve-tone music (189), or “electronic sounds” (191)—familiar sounds of older and newer music are ascribed to the *poiesis* of animal voices. The researchers are “hearing what they want to hear” (191), as the narrator comments. The jellyfish song serves as an auditory projection screen.

The suspicion of an auditory illusion also persists as the five researchers meet a border patrol of the German Democratic Republic. Even though the jellyfish are still singing, the border officers tell them that they “hear no singing” (190). Since the researchers refrain from presenting them with a demonstration of the tape recording, the female crew remains the only witness to the medusae’s song. Thus, the animal voices are not only able to exist as an “Electronic Voice Phenomenon”—as voices recorded on tape by Friedrich Jürgenson who had originally set out to record bird voices in 1959 (Smarzoch 194), they are also able to elude state wiretapping methods. It could even be suggested that auditory events in the pre-media age supply “appearances of specters” (Kittler 12).

Taking a step back: Even when they are left on their shore, the female crew spontaneously decides to join a passing demonstration against animal testing and yells loudly: “Jellyfish counting is ridiculous. It should be stopped” (Grass 186). In a way, the slogan verbalizes the dilemma of their very research mission: “Of course the cause of the infestation is not to be investigated, but only its quantitative fluctuation” (13). The female crew

has been given the task to collect mere data; searching for causes was not part of the agenda. As if the order had been codified, the researchers almost seem to find the thought of going beyond the recording and storing of the jellyfish song odd: To decode it as both an ecological indicator as well as a signpost to the long awaited “Utopia Atlantis Vineta” (97), or as a siren-like warning from the alleged utopia does not make sense to them. The singing jellyfish in *The Rat* urge for more than mere data collection—for the tracking to be taken seriously as well as of the research in bioacoustics as a method of gaining new knowledge in times of climate change (172).

### Siphonophorous Matrix

The special scientific interest in siphonophores stems from their composition, which consists of a multitude of polyps featuring special morphological and functional characteristics. Each animal is an individual yet their level of integration is so strong that the colony takes on the character of one large organism. In fact, most of the zooids are specialized to a degree that would make it impossible for them to survive on their own. Siphonophorae tread the fine line between colonial and complex multicellular organisms. (Gomes and Thermann 110)

Mário Gomes and Jochen Thermann, the authors of *Mountains, Jellyfish*, use a reference to an essay film on siphonophores (80), the paragraph given above from a fictitious scientific essay called “Book of Jellyfish” (“Quallenbuch”; 110) and a dubious Polish artist whose nature can be associated with that which is gelatinous (224) in order to introduce the siphonophores in their debut novel entitled *Berge, Quallen* (“Mountains, Jellyfish”). The diversity and pace of the central story lines—ranging from twilight economy and hired assassination to rape and human vivisection—make the jellyfish fade into the background of the story, a little hasty as it seems. The journalist Ronald Düker therefore jumps to conclusions when he maintains that the tarantinesque novel was given a rather stupid title (56). Strictly speaking, the cnidarian is not just the animal motif in *Mountains, Jellyfish*—the siphonophore provides the matrix for the novel’s action. Clues for this are sometimes given by the motivic borrowings themselves:

“Portuguese Man-of-war,” a film by the novel character Viola Medlar, which seemed to be like “a subtle provocation featuring the elegance of the diaphanous”<sup>7</sup> (Gomes and Thermann 80) acts like a siphonophore—

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<sup>7</sup> “[E]ine subtile Provokation, mit der Eleganz des Diaphanen.”



a conglomerate of a variety of organisms which form an interconnected entity (81). Another scene in the novel states that not only are all strings pulled by Kottwitz, the Polish artist, but that he himself was nothing “but a jellyfish, aiming at ingesting the human body and the corporate bodies of society, at dissecting and cutting them apart”<sup>8</sup> (224). In both cases, the siphonophore serves as a figure of self-reference. Subsequently, the animal reveals the novel’s narrative process: like the figure of *mise en abyme*, the micro-structural reflections reference the novel’s macro-structure. *Mountains, Jellyfish* as a siphonophorous matrix: The overlapping story lines, discontinuities and doubling of figures effectively behave analogously to the specialized polyps of a siphonophore which are not able to survive on their own any longer and therefore need this union (164). Another instance that reveals the nature of the novel’s siphonophorous matrix is the synthesizer concert: Blaszczykowski and Schmittkopf, two of the three names used repeatedly in the novel, attend an appearance of the composer “Jochen Gomes” (88), a humorous reference to the duo of authors: “There was Gomes, working on a wall of cables, controllers and levers, running back and forth between four towers which he cabled bit by bit”<sup>9</sup> (89). The four synthesizer towers are covered in the neon-painted names of the following areas which also act as titles for the novel’s chapters: Marderheide, Mexico, Poland, Italy. The siphonophore and synthesizer–animal and technology–thus serve as the matrix for the novel’s structure.

A further indication of the organic text is provided by the book “Goldmann’s *The Worlds Within*,” which appears in all of the story lines and, along with the so-called “Quallenbuch” is among Schmittkopf’s nighttime reading. The fictitious title not only confirms the *mise en abyme*, the world within worlds, it also evokes memories of Alan Weisman’s *The World Without Us*. Here, Weisman states the hypothesis that the flora will reconquer our cities in a post-human era. It might not be a plant but the siphonophore occupy the novel in a similar manner. In the case of *Mountains, Jellyfish*, to “think” the animal—with a reference to Lévi-Strauss—means to comprehend the text as an organism which is guided by the animal and eludes narrative conventions.

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<sup>8</sup> “[E]ine Qualle, die danach strebte, den menschlichen Körper und die Körperschaften der Gesellschaft aufzusaugen, zu zergliedern und auszuscheiden.”

<sup>9</sup> “Man sah Gomes, wie er an einer Wand aus Kabeln, Reglern und Hebeln hantierte und zwischen vier Türmen hin und herlief, die er nach und nach miteinander verkabelte.”

To conclude with the composer Felix Kubin, we can claim: “We are all jellyfish.”<sup>10</sup> More specifically, we use the literary animal as a magnifying glass to view ourselves and our environment from an ecological point of view. Because of its similarity with an eye, the jellyfish is particularly good for it. Thus, the jellyfish appears as a literary animal and as an ecocritical figure *par excellence*: it is continuous with its environment and therefore cannot be considered detached from it.

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<sup>10</sup> Take a closer look at the music video *Wir alle sind Qualle* (Brillowska).

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