In Touch with the Sea: Art Nouveau Interiors, Marine Biology, and the Octopus

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Au XIXe siècle, la pieuvre est devenue un symbole omniprésent des profondeurs inconnues et insondables de la mer. La peur de cet inconnu se manifeste par sa transformation en une créature monstrueuse dans les œuvres de Victor Hugo, Jules Verne et autres romanciers. Cet article soutient que, parallèlement à ce récit, une interprétation différente de la pieuvre, inaperçue jusqu’à présent, émerge. Dans le cas des intérieurs et objets Art nouveau, le céphalopode incarne constamment le sens du toucher, longtemps négligé dans la théorie de l’art. La physiologie et la biologie marine du XIXe siècle expliquent cette lecture. Lorsque des amas denses de terminaisons nerveuses ont été découverts dans les tentacules de l’animal, la pieuvre est devenue une entité haptique hyperbolique. Dès lors, les spectaculaires représentations en relief de l’animal sur des objets tangibles tels que vases, assiettes, petits bronzes, timbres et manches de cannes reflètent précisément cette association, scientifiquement fondée, avec le sens du toucher.
The octopus is a mysterious creature. Ever since Pliny and Plutarch it has been considered a clever hunter. Later, during the early modern period, the legend of the deadly sea monster, the giant Kraken, was substantiated. Yet it was not until the beginning of the 19th century that Pierre Denys-Montfort’s Histoire Naturelle established its image as a consciously vicious and evil beast, on a supposedly scientific basis. Despite the severe criticism that followed Montfort’s publication, the image of a dangerous monster persists today. The following essay, however, addresses a hitherto overlooked narrative that runs parallel to the stigmatization of the octopus. This narrative sets around the middle of the 19th century and reaches its apogee in the object culture of Art Nouveau, leading Paul Morand to the notion of ”style pieuvre” (octopus style). The Belle Époque’s general fondness for the eight-armed sea dweller cannot be grasped — as I will argue — without the large-scale marine zoological studies of the time. My aim is to demonstrate that Art Nouveau artists transferred the scientifically discovered haptic sensitivity of the octopus to products of the decorative arts.

"LE STYLE PIEUVRE"

Upon close inspection, countless artworks reveal an omnipresence of the octopus motif around 1900. In a whole series of artistically modelled everyday objects in the Art Nouveau and Jugendstil line, however, its representation is given a particularly haptic quality. This is the case, for instance, with a vase designed by Eduard Stellmacher and successfully distributed by the Amphora company from 1899 onwards. Strikingly, the octopus dominates the flamboyant design. The object, which in most versions displays earthy colours, measures over a metre in height and tapers upwards along its length. At the lower end, which is reminiscent of red marble, the vase rounds off in a bulge that also serves as its base; at the top it opens into a shell shape, reminiscent of a hand with just four fingers. At the centre of the design a small, golden-brown crab faces an octopus stretching across the entire length of the vase. The coat-like body of the animal, oscillating between beige and reddish brown, is held in a rather flat relief, which further emphasizes the massive tentacles that protrude from the vase body. Executed fairly thinly near the vase’s lower end, the tentacles evoke large ceramic waves on the upper half and form two broad, spectacular curved handles. In striking contrast to the crab shell, the flat reliefs and the handcrafted design of the ”mussel fingers”, the tentacle handles are distinctly scaled and, in further contrast, lined with knob-like suction cups. Nap-like elements and vesicles cover the skin, becoming just four fingers. At the centre of the design a small, golden-brown crab


FIG. 1


4 This article is a condensed chapter of my still unfinished doctoral thesis.


6 Apparently, the extravagant piece was part of the Amphora collection for the 1900 World Exhibition in Paris. In 1902, a similar model was exhibited in the Nordböhmisches Gewerbe-Museum in Reichenberg. See Pazaurek, G.E., ”Unsere keramische Ausstellung”, in Mitteilungen des Nordböhmischen Gewerbe-Museums 25, Reichenberg, 1902, p. 85 and Scott, R.L., Mengi, J., and Merglová Pánková, L., Ceramics from the House of Amphora, Sidney, Ohio: Scott, 2004, p. 100.
Décorations in 1898, are also based on a physical interaction of the user with the octopus. Only a few years later, Georg Simmel’s essay on handles called such sophisticated mediation between aesthetics and instructions for object-handling as “Überästhetische Schönheit” (‘ supra-aesthetic beauty’). A ceramic inkwell from the hand of Joseph Mougin, for its part, adds an erotic charge to the haptic appeal of the biomorphic octopus form. The rounded edges of the object (in the collection of the Musée de l’École de Nancy) are defined on one side by the powerful tentacles of the animal. These then merge with elongated legs and two female bodies, embracing each other on the side opposite to the central octopus head. Numerous other objects could be cited here. All have in common their refusal to fit into Montfort’s narrative of the abyssal sea monster.

In Victor Hugo’s Les travailleurs de la mer (1866), the octopus still appears as a dreadful monster: “Orphée, Homère et Hésiode n’ont pu faire que la Chimère; Dieu a fait la pieuvre.” Accordingly, the protagonist is involved in a life-threatening confrontation with an octopus in the second volume. There, Hugo insistently refers to the sense of touch: before the fight breaks out, the fisherman can only perceive the animal in a small unlit cave with his hands. The octopus brings his body into play only later, first palpating his victim’s body before initiating his embrace. Hugo describes this embrace from a decidedly tactile point of view. Such a palpation of the male victim is also eroticized to a certain extent, since Hugo switches the grammatical gender of the octopus, from the male “poulpe” to the female “pieuvre”. The entire novel is infused with biological terminology, willfully suggesting a scientific foundation to the books. This distinguishes Hugo’s writing from Jules Verne’s underwater novel of 1870, for example, which contains far fewer scientific references and conventionally characterizes the octopus not as tactile but exclusively as an amorphous monster.

PHYSIOLOGICAL INSIGHTS

During the second half of the century the understanding of the human body underwent decisive reconstruction. The emergence of a scientific physiology following the influential work of Johannes Müller and Hermann von Helmholtz affected not only related disciplines such as aesthetics, but also artistic practices. By taking the body in its physical presence into account, an ennoblement of the tactile sensorium took place, making the sense of touch a key field of study. Hugo’s focus on the sense of touch reflects a corresponding gradual shift in the analysis of the octopus from a biological perspective. Furthermore, from the middle of the 19th century, physiological studies had to meet entirely new scientific standards. At the famous and currently still active zoological station in Naples, empirical research on living cephalopods — rather than on preserved preparations — has been carried out since 1872. An international research network investigated a whole range of the creature’s physical and psychological characteristics. In addition to the chromatophores, the tentacles and their haptic capacities were a constant focus of interest, as highlighted in the Dictionnaire de la langue française as early as 1875. The underlying reason lies in the presence of dense clusters of nerve ends within the tentacles. This discovery quickly led to an association of the octopus with the sense of touch per se. At this time the animal revealed an incredibly delicate sense of touch, almost surreally exaggerated by its eight arms and sometimes more than 200 suction cups. Indeed, in 1848 Carl von Siebold and Hermann Stannius wrote in their textbook on the comparative anatomy of invertebrates:

8 Mougin’s emphasis on the octopus’s eroticism is strikingly reminiscent of Hokusai’s Dream of a Fisherman’s wife and Félicien Rops’s drawing La pieuvre, which depicts an octopus with phallic tentacles tying up and raping a naked woman.
12 The abundance of studies on the rise of physiology and its impact on the culture and especially the arts in the late 19th century has grown to unmanageable proportions. For the productive connection of the physiological paradigm with the fine arts see, for instance, Brain, R.M., The Pulse of Modernism: Physiological Aesthetics in Fin-de-Siècle Europe, Seattle, London: University of Washington Press, 2015;
14 This discovery quickly led to an association of the octopus with the sense of touch per se. At this time the animal revealed an incredibly delicate sense of touch, almost surreally exaggerated by its eight arms and sometimes more than 200 suction cups. Indeed, in 1848 Carl von Siebold and Hermann Stannius wrote in their textbook on the comparative anatomy of invertebrates:
FIG. 3 Patissié, C., design for a seal stamp, Art et Décoration 4, Paris: Librairie centrale des beaux-arts, 1898, p. 61 © Thomas Moser.
"§243 The tactile sensitivity of the cephalopods, apart from the general covering of the body and the fringed membranes of the lips, is particularly developed in the arms."17

As a consequence, marine biologists and zoologists such as John Marshall and George Tryon, but also Frank Colby, Daniel Gilman, and Harry Peck shifted their focus to their tactile sensorium.18 For a long time, there has been no doubt about what Silvestro Baglioni first summed up in 1909 in the Zentralblatt für Physiologie: the octopus’s sense of touch is far more developed than that of humans.19 It is also noteworthy that Baglioni describes in another essay how an octopus under observation remained capable of catching prey after losing its eyesight, due to its tactile reflexes.20 It is therefore not surprising that the designation of the octopus’s limbs as "tentacles" — from the Latin term for "to touch" — became established only in the 19th century. In fact, the eight limbs were originally not regarded as arms but as legs, which the etymology of the term “octopus”, signifying eight feet, still reminds us.

Soon, the sense of touch became so closely related to the octopus that in the 1860s Julius Carus, Carl Gerstäcker and Wilhelm Peters suspected that it was highly developed all over the octopus’s body.21 It was not until the 1880s, however, that marine zoologists confirmed that the entire surface of the octopus is highly sensitive to the touch. Tryon reported as follows: "This [the sense of touch; note from the author] is, of course, the most widely diffused of the senses in the mollusca, every portion of the body being extremely sensible of contact with external objects."22

Tryon exposes the general scientific assumption that the octopus can be considered an exceptionally touch-sensitive being. If the tentacles take on the role of the primary tactile organs, the octopus as a whole must be understood as a single, highly precise tactile organ. Even after the turn of the century, this premise still remained valid.

22 Tryon, Structural and systematic Conchology, op. cit., p. 75.
Regarding its physio-zoological transformation from an incorporeal monster to a creature consisting merely of tactile instruments, it becomes clear why the Art Nouveau style was so thoroughly fascinated by the octopus. Its countless representations on the objects of this decade reflect the sense of touch in two ways: both in their material and haptic quality — which addresses the sense of touch of the beholder — and on a symbolic level.

BOURGEOIS SCIENTISTS

Although I am suggesting an impact of marine biological considerations on popular culture, it cannot be assumed that the Belle Époque immediately came into contact with the octopus through the scientific publications of Siebold, Tryon, Carus and Joubin. Nevertheless, Darwinism, for example, had massively influenced the fin-de-siècle culture in Europe, as has frequently been shown.23 Darwinism created new fields of interest and offered unexpected sources of artistic inspiration. The resulting, entirely new perspective on the theory of humankind’s evolutionary origins sparked a far-reaching fascination for the sea and the secrets of nature hidden beneath its surface. This fascination was by no means limited to scientific research but also applied to the arts and the general public.24 On the one hand, popular scientific monographs such as Arthur Mangin’s best-selling Les mystères de l’océan contributed to making scientific questions and findings accessible to a broad non-professional audience. On the other hand, the experience of the ocean in public aquariums in the second half of the century, which had a mass impact and increased its overall presence, was a crucial factor.25 Artistic curiosity about the physiology of the octopus did not, therefore, appear from nowhere — rather, it was closely tied to the spectacle of the aquarium.

Following some initial technical difficulties in the first half of the century, the private aquarium finally gave way to the large public aquarium in the 1860s. In tandem, interest moved from the shoreline and shallows to the open sea, whose depths and secrets were far more alien to everyday life. The first large-scale aquarium was opened to the public in London in 1853 and immediately sparked a wave of enthusiasm. Yet, it was only with the installation of the first permanent aquarium in Paris in 1860 that a Europe-wide competition kicked off, which even the German-speaking nations could not resist.

Natascha Adamowsky recently emphasized the epistemic character of aquariums.26 Taking the new scientific paradigm of depicting nature in miniature into account, they enabled completely new insights into submarine flora and fauna. In the case of aquariums, the media-specific gain of knowledge mirrored a new empirical practice, based on observation in isolated experimental contexts. An immediate relationship between public aquariums and oceanology was not only acknowledged by contemporaries, but considered a distinct desideratum:

"Mais voici que la science moderne, non moins ingénieuse dans ses procédés de vulgarisation que patiente et hardie dans sa recherche des secrets de la nature, a trouvé un moyen de nous faire assister aux scènes du monde sous-marin. Elle a créé de petits océans en miniature, de petites mers d’appartement, où l’on peut voir à travers des murs de cristal les poissons, les crustacés, les mollusques et les zoophytes vivre de leur vie normale."27

Turn-of-the-century artists met the octopus in precisely this setting, one that was marked by new kinds of sensory stimulus, carried the nimbus of science and, at the same time, became a mystical site of artistic reflection. The popular scientist Mangin mentioned the octopus in passing as an animal

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24 Adamowsky has only recently reconstructed the decisive effect of the demystification of the sea on modernity in general. See Adamowsky, N., Ozeanische Wunder: Entdeckung und Eroberung des Meeres in der Moderne, Paderborn: Wilhelm Fink, 2017. Ursula Harter, in turn, has thoroughly examined the artistic implementations of these understandings. See Harter, U., Aquaria in Kunst, Literatur und Wissenschaft, Heidelberg: Kehrer, 2014.


26 See Adamowsky, Ozeanische Wunder, op. cit., p. 225.

frequently found in aquariums; the natural scientist Henry Lee, who worked in the Brighton Aquarium, dedicated an entire book to this creature, including an account of the sensation surrounding it at the time. No public aquarium could afford not to own an octopus. All these aspects have influenced its reception and representation, rendering it one of the most sensual aquatic creatures, not only in marine zoological studies, but also in popular culture.

WATERY INTERIORS

The object culture around 1900 embodied an alternative image of the octopus that did not perceive it as a fearsome sea monster. Just a few years prior, marine research stations had started to study the physiology of the octopus in great detail, soon discovering its outstanding tactile capabilities — both haptic (actively touching) and tactile (the passive object of touch). Thus, the sensitivity of the surface distributed over the octopus’s body became the key feature of the animal that scientifically disproved the infernal myth.

The interest in the eight-armed sea dweller was further perpetuated by a long-lasting fascination with the study of the ocean in aquariums, closely associated with state-of-the-art empirical science. Like Gallé’s aquatic vases, Art Nouveau cephalopods transferred the aquarium experience into the private sphere, so that underwater life could be studied and presented, in analogy with marine biological research institutions, in one’s own home. This is particularly striking in the staircase of the Ryabuchinsky House [FIG. 5]: the submarine design and the central floating jellyfish lamp create the impression that the entire room is located beneath the water surface. The importance of the octopus objects was, therefore, twofold: they not only transformed the interior according to fin-de-siècle oceanophilia, but also underlined its somaesthetic quality in Art Nouveau and Jugendstil. As was shown recently, Art Nouveau’s applied arts opposed traditional, body-abstinent art appreciation with a decidedly physical — primarily haptic — one. The prominently presented tactile affinity of the octopus thus reflects the fact that the inhabited Gesamtkunstwerk is not only addressing the sense of sight, but at least to the same extent haptic capacities. In the end, Morand’s labelling of some Art Nouveau as “style pieuvre” must be seen in close connection, not only with its biomorphic vocabulary, but also with its programmatic preference for the sense of touch.

FIG. 5  Schechtel, F. O., Medusa-lamp and Staircase of the Ryabouchinsky House, Moscow, 1900–1902 © Maxim Shesterikov, distributed under a CC-ASA 4.0 international license.