Studi di estetica, anno L, IV serie, 3/2022
ISSN 0585-4733, ISSN digitale 1825-8646, DOI 10.7413/18258646223

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A missed encounter between species
The interplay of scientific realism and aesthetics in Painlevé's cinematographic experiments on the octopus

Abstract
Jean Painlevé's films blend aesthetic concerns and scientific realism operating a micro-turn within the broader cinematographic turn that occurred in the sciences in the 20th century. By engaging with his films on the octopus, an animal studied to illuminate human consciousness and firmly grounded in the popular imagination through literature and the arts, this article demonstrates how Painlevé embraced a politics of life organised around the concept of a missed encounter between life forms.

Keywords
Aesthetic and scientific realism, Missed encounter, Octopus

Received: 18/07/2022
Approved: 09/09/2022
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1. *Introduction*

Originally trained as a biologist and a founding member of the French Surrealist movement, Jean Painlevé (1902-1989) became interested in filmmaking and film festival programming in the 1920s. He was politically active and interested in democratising science by means of cinema. Throughout his long career, Painlevé experimented with a variety of media, different music genres (from jazz to avant-garde and electronic music) and technologies. In 1938 he made a satirical stop-motion movie called *Blue beard* with clay figures and pop colours; in the 1970s, at the onset of the video making era, he started working on a series of self-portraiture videos called *Scrutinise yourself*. Among the new technologies Painlevé became interested in was television – which was a new medium after the second world war. In 1948 Painlevé was the first person in France to broadcast a live science program; by connecting a camera to a microscope he demonstrated the life contained in a single drop of water. A month later, he was asked to repeat the program for the BBC in London.

Film theorist André Bazin refers to Painlevé's absorbing nature study films as cinema's "purest aesthetic" (Bazin 2000: 146). They are not only accurate research works on nature's life forms, but educational tools to popularise science for different audiences. Painlevé seeks to integrate science and culture, engaging onlookers with the broader cultural context of life forms he encounters. Thanks to camera work, soundscape and carefully arranged scripts, he creates resonances between humans and other animals, envisaging a more equalitarian relationship between life forms without falling into clichés of a certain kind of anthropomorphism found in nature study documentary films or children's animation. Scholarly literature on the relationship between science and non-fiction cinema abounds, with a focus on early cinema analysed using a historiographical approach (Curtis 2018, 2015 and 2013; Gaycken 2015, 2013 and 2012; Landecker 2006 and 2005; Lefebvre 2007, 2006, 2004 and 2003; Olszynko-Gryn 2016; Wellmann 2011). The relationship between cinema and science has also been explored by scholars of science communication who focus on fiction cinema (Frayling 2006; Kirby 2011) and documentary cinema (Gouyon 2016), and by historians of science who focus on specific documentary traditions (Boon 2008)[1]. Despite taking

[1] Tim Boon's study on British scientific and medical documentaries or, as he calls them, "films of fact", adopts a historical approach to focus on the work of Paul Rotha, a pioneer

into consideration the formal features of those films, a sustained reflection on the role played by aesthetics has been side-lined, most likely due to "the mistaken assumption that nature filmmakers do not reveal any philosophical or cinematic vision in their work, that nature films merely present facts" (Macdonald 2009). There are a few notable exceptions. Bernabei (2021) examines the early days of scientific cinema using a historical approach combining it with the tools of visual culture, aesthetics and cinema. Vidal (2018) bridges the gap between science communication, cinema and aesthetics in his study on aesthetic realism and public understanding of science by means of cinema. Seminal work for a theoretical grounding of the relationship between cinema, aesthetics, and science/technology has been carried out by scholars working in and across philosophy and film studies/visual culture. Montani not only pushes our thinking on the relationship between intermedial imagination and the politics of form in his work on the authenticity of cinematographic images (Montani 2010), which I put at work in the article, but he also tackles creativity in its threefold forms of technē, art and politics (Montani 2017) forging the concept of "techno-aesthetics" (Montani 2019 and 2020)[2]. Diodato and Somaini (2011) understand communication not as a straightforward process of information transmission between an active sender and a passive receiver, but as a relationship, which occurs via media, between imagination, intuition and sensitivity that activates both the intellect and the perceptual apparatus. Cinema, among the media, not only enables this aesthetic experience but makes it possible to share it with others. Pinotti and Somaini (2016) have investigated the archaeology of visual culture as the field of convergence for cinema, art, photography, media and communication, illustrating the tension at work in the situated act of seeing which is increasingly mediated by technology.

Despite these studies, more work needs to be undertaken to examine how the epistemic and aesthetic dimensions of scientific cinema are often productively intertwined and what effects this connection has for public understanding of science or, better said, for nurturing a public intelligence of science (Stengers 2018: 4). In order to do so, a close read-

documentary filmmaker, critic and historian active in the post-war period as well as on television programs such as the series *Horizons* launched in the 1960s.

[2] For a thorough introduction to the reflections on technology put forward by Italian philosophers of technology including the work of Pietro Montani see the volume edited by Chiodo and Schiaffonati 2020 and, more specifically, their introduction.

ing of the film form should go hand in hand with broader epistemological considerations borrowing concepts and methodologies coming from the disciplines of philosophy, science studies and media communication studies. An example of this type of work is Cattaneo's granular discussion of Werner Herzog's films as figurations in which scientific knowledge becomes embodied and capable of co-existing with aesthetics, imagination and feelings (Cattaneo 2020). What follows is a discussion of Jean Painlevé's films that exemplify how science can be presented as a cultural form whose underlying framework is deeply entrenched with aesthetic concerns.

Here I embrace the definition of aesthetics as the distribution of the sensible or, to use Jacques Rancière's original French locution "*le partage du sensible*":

> I call the distribution of the sensible the system of self-evident facts of sense perception that simultaneously discloses the existence of something in common and the delimitations that define the respective parts and positions within it. […] This apportionment of parts and positions is based on a distribution of spaces, times, and forms of activity that determines the very way something in common lends itself to participation and in what way various individuals have a part in this distribution. (Rancière 2004: 12)

In this respect, making a science documentary film is a practice that parcels out the domain of what can be seen, felt, sensed, experienced. As an aesthetic intervention, the making of a scientific documentary discloses certain ways of seeing and forms of visibility that reconfigure the existing organisation of the sensible, such as the separation between life forms, between nature and culture. Rancière theorised how a certain type of cinema is an aesthetic-political practice capable of emancipating the onlookers in so far as it can reconfigure the sensible, that is the spatial-temporal structure, the relationship between things and words, between bodies and sentences (Rancière 2011; Adnen 2013). As for Painlevé, for Rancière cinema is political not because of its content-related topics, but because of its formal features.

Utilising Rancière's meaning of aesthetics (Rancière 2004), this article presents two closely connected arguments. First, that Painlevé embraces a specific politics of life organised not around anthropomorphism but around the concept of a missed encounter between life forms, a concept that becomes visible through specific aesthetic choices. Unmasking reality as sur-reality, merging realism with what André Bazin called the "beauty of chance" (Bazin 2000), Painlevé chooses to cherish

and nurture the secrets of the life forms he encounters, thus avoiding falling into the trap of anthropomorphism. The attention to science is accompanied in Painlevé by the surrealist drive to preserve the mystery of the natural world. In his nature documentaries, animals respond to logic and have reasons and motives that remain ultimately unavailable to us. Drawing inspiration from the role played by the avant-garde movements in the series *Secrets of nature* (1922-1933), a pioneering British documentary film series exploring animal, plant and insect life, Painlevé shows how nature remains beyond our human reach. This first argument questions responsibility in how scholars, filmmakers and science communicators respond to representation of animals on screen even when we do not fully understand their languages, behaviours and motives.

Second, this article argues that Painlevé works to emancipate onlookers of natural science films by reconfiguring the relationship between cinema, aesthetics, and science communication. As will be discussed, Painlevé integrates the cultural and the scientific, realism and surrealism, attention to both scientific accuracy and aesthetic form in engaging the public(s) with science and the natural world. Form and content are entangled in his whole production which embraces a poetics akin to the one found in the early days of cinema: the medium itself is both the subject and the object of research given that "it would never have occurred to the pioneers of cinema to dissociate research on film from research by means of film" (Painlevé 2000: 162). This article, therefore, demonstrates that being attentive to issues of form in cinema, to how moving images are created and assembled to reconfigure the existing partition of the sensible (aesthetics) can help overcome a simplistic view of documentary science films as a communication vehicle used to inform the general public about science.

Rancière's work does not embrace a posthuman perspective. Nevertheless, his thought on aesthetics is occupied with "instances of partakings in unspecialized capacities that restructure the perceptual milieu of any coordination of persons, places, events, spaces, and sensibilities" (Panagia 2018: 23). The attempt to emancipate the spectator from certain ossified ways of seeing and perceiving makes Rancière's work on aesthetics relevant and suitable for analysing Painlevé's camera-mediated encounter between humans and octopuses. Spectators become emancipated, to use Rancière's locution (2011) from certain clichés that come attached to natural science films such as: scientific ob-

jectivity as a monolithic concept, aesthetics as a mean to merely embellish factual content, and the passivity of the onlooker who is fed scientific information by the expert.

Examining Painlevé's oeuvre would not be feasible in the context of a stand-alone research article. Furthermore, the legacy of his work as a whole or of individual films has already been the focus of comprehensive studies (Cahill 2019; Bellows, McDougall, Berg 2000) and of several articles (Berg 2004; Cahill 2012; Calcagno-Tristant 2005; Gaycken 2012; Smaill 2017 to name a few). My focus is on the two films that Painlevé devoted to the octopus, *The octopus* (*La pieuvre*, 1927) and *The love life of the octopus* (*Les amours de la pieuvre*, 1965). The reason for this choice is twofold: first, these two films cover a significant period of Painlevé's prolific film production, with the first film on the octopus made in the 1920s and the second one in the 1960s. Second, the films on the octopus lend themselves particularly well to an examination of the interplay between scientific realism and aesthetics by moving beyond the clichés of a certain anthropomorphism. The octopus has been studied to illuminate the origin and nature of human consciousness while recognising its otherness (Godfrey-Smith 2016); furthermore, as a non-human animal, the octopus is firmly grounded in popular imagination. Painlevé's two films demonstrate how the surplus of meaning typical of all cinema - including nature films - can coexist with a realistic stance. The attempt to get close to the universe of the octopus whilst preserving its alterity is the cipher of Painlevé's films that record a missed encounter between life forms.

2. *Jean Painlevé's micro-turn in the sciences*

There are no differences between minerals, vegetables and animals and men, they are all linked through evolution, there are parasites everywhere. Among humans: babies and old people. There are also temporary parasites: the ill and the crippled. I've managed to fit into both categories. All it takes is one atom to go and stick itself into 2-3 to become a parasite of a system. This is how we get gold, diamonds, oil, asbestos. It is a continuous evolution. I am very proud that we live in an era that finally recognizes its dependence on shit. All of genetics relies on colon

bacilli, which in turn rely on our feces. All experiments are done on it. We're deep into the shit. (Painlevé 2000: 175)[3]

Jean Painlevé (1902-1989) was trained in anatomy and histology at the Sorbonne and was deeply influenced by French Surrealism. A friend of Louis Buñuel, Antonin Artaud and Jean Vigo, Painlevé became a founding member of the French surrealist movement in 1924. In the 1930s he also founded *Les documents cinématographiques* – now an independent archive – with the goal of producing his own films. Painlevé's study films were made for both researchers and lay audiences. Some films have a different version specially made for the type of audience and the purpose they had (educational-instructive or research-based). Politically active during and beyond the Second World War, Painlevé initiated a scientific film institute dedicated to supporting and disseminating science films. His impressive body of work (he made over 200 films) was deeply influenced by his background in biology, by the avantgarde movement of Surrealism and by his interest in new cinematographic techniques to document nature. Well before Jacques Cousteau explored marine landscapes in *Silent world* (1956), Painlevé invented the first underwater camera and equipped his studio to be able to film aquatic life. Rather than anticipating the genre of nature documentaries, his films subvert scientific objectivity in favour of a more experimental approach.

The citation by Painlevé suggests that all life forms are connected to one another, one of these connections being the presence of parasites which are organisms that live on or in a host organism. Whilst the parasite benefits from this arrangement, the host suffers as a result. The co-evolutionary history of the interactions between parasites, hosts, and their associated microorganisms shows how the parasite uses microorganisms to develop strategies for exploiting the host. Biologically, a human being is an individual who has grown from a fertilised egg which contained genes from both father and mother. A growing number of biologists, however, think this definition incomplete. Humans and other macro-organisms are not individual entities, but biomolecular networks composed of the host plus its associated microbes, i.e., "holobionts"[4].

[3] This excerpt comes from an interview with the French newspaper *Libération*. See Bellows, McDougall and Berg 2000.

[4] The term *holobiont*, first introduced by Lynn Margulis, mainly describes a long-term physical association between different living organisms (Margulis 1991). However, in most cases, the term holobiont is restricted to the host (being it an animal or a plant) and its associated microorganisms (Dheilly 2014). The hologenome theory of evolution con-

People are ecosystems that are in close relationship and constant exchange not only with the world at macro-level but also with parasites and bacteria that are our "companion species" to use a term that Donna Haraway introduced in her *Companion species manifesto*[5].

As for several other concepts, Painlevé puts at work both the literal and the metaphorical meaning of the biological concept he employs, such as the parasite. In Painlevé's film *Le vampire* (1945), for example, the South American vampire bat, desmodus rotundus, is the parasite sucking blood from its host (a guinea pig). Painlevé turns the relationship between the host and its parasite into a metaphor by positioning an affinity between the behaviour and influence of the bat and that of Nazism. Well before any reflections around the co-evolution of different life forms were in place, Jean Painlevé contributed to shaping a novel theory of life forms that is a unique blending of biology and surrealism.

Painlevé's cinematographic studies on animal kingdom operated a "micro-turn" within what scholars such as Landacker (2005) and Wellmann (2011) have defined as the cinematographic turn that occurred in the sciences and, more specifically, in biology. In the first decades of the twentieth century a novel theory of life emerged thanks to the advent of cinematographic techniques and technologies for visualising the unseen, such as microcinematography, time-lapse and under-water filming. The example of microcinematography, which was pioneered by the French scientist Jean Comandon, is significant in this respect (Lefebvre 2003). In 1908 Comandon coupled the ultramicroscope – the precursor of today's dark-field microscopes – to a camera to film cells, bacteria, etc., thus moving from a static to a dynamic medium to study life. Early microcinematographic films not only contributed to the raise of the new discipline of microbiology but much more they shaped a new theory of life built around the idea of life as "endless and boundless growth and proliferation" (Landacker 2005: 927). Moving images became, thus, a visual

siders the holobiont as a unit of selection in evolution. The hologenome is defined as the sum of the genetic information of the host and its microbiota (Zilber-Rosenberg, Rosenberg 2008).

[5] Haraway (2003) uses the locution "companion species" because humans, historically, socially, and culturally, have been affected by several species not just by animals, although the focus of her manifesto is on dogs. In her manifesto Haraway re-tells the history of evolutionary biology of humans by examining how our companion species have grown with us. On the connections between biology and culture, and on the continuity between human and non-human animals, see the collection of essays by key feminist critical thinkers curated by Balzano, Bosisio, Santoemma 2022.

epistemological tool to construct knowledge not just about an object but about a temporal event, capturing life in its unfolding.

Among all sciences, biology observed physiological processes (such as movement, digestion, cell division, reproduction, metabolism, growth) in their temporal dimension but not visible to the naked eye. Cinema was as a research tool inside the laboratory and a means to enact change in how life and living phenomena are conceived. Focusing more closely on biological research, Curtis points out how cinema was never simply a means to document the findings of scientific practice: "[A] close examination of appropriations such as those of Braus and other biologists indicates that their use of moving-image technology not only helped to form their research agenda, but also their image of life itself" (Curtis 2013: 46). Moving images were not simply means of illustrating or engaging the lay public with biological research but actively shaped the development of modern theories of life. The fascination with visibility and movement that marked the preceding decades of nineteenth-century Western science (Cartwright 1995: 7), is perceivable by watching a film made by the Scottish scientist John Macintyre in 1896. A radiocinematographic recording of a frog's leg projected in loop onto a big screen, the film was shown at the Glasgow Philosophical Society Ladies' Night in front of a mixed audience comprising scientists and the lay public. The film was a close-up sequence of movements: there featured neither characters nor a narrative it embodied the spectacle of life forms, the "cinema of attractions" (Gunning 1986). The combination of cinematography and all the afore-mentioned techniques (radiography, microcinematography, time-lapse motion) facilitated the popularisation of science through the cinema of the early twentieth century (Lefebvre 2004 and 2006). The year after the film by Macintyre, the surgeon Eugène-Louis Doyen used the camera to film his surgical work for both educational and historical documentation purposes (Lefebvre 2004). Étienne-Jules Marey's studies on animal and human physiological locomotion were crucial to his assistant Lucien Bull, who made a series of films using chronophotography and slow-motion, such as his 1904 film showing a bullet entering a bubble. All the above films made visible private dimensions not accessible by human senses. They were a great source of inspiration for Painlevé, who paid tribute to these science filmmaking pioneers in his work.

As mentioned before, Painlevé operated another micro cultural turn within this broader cinematographic turn in the sciences. If micro-

cinematography, time lapse technique and under-water filming allowed a new theory of life forms to emerge whose main trait was total visibility, Jean Painlevé believed that explaining and revealing a natural phenomenon with the camera should not remove its mystery. Resisting total visibility (and, therefore, accessibility and control) in approaching the life forms he filmed, Painlevé prompted onlookers of different backgrounds to re-frame the relationship between species, blending realism with surrealism, the mechanical objectivity of the camera (Daston and Galison 2010) and affective subjectivity deriving from the first-hand encounter with an animal and from the chain of connections. Ultimately, the peculiar micro turn operated by Painlevé is supported by the unique way in which he conjures aesthetics with scientific realism.

3. *The poetics of aesthetic realism in natural science films*

The combination of aesthetics and scientific realism could nurture a different approach to the public understanding of science by means of cinema, an approach less driven by the deficit model and more by aesthetic theories of imagination. The deficit model is a term used to describe projects and models of science communication that seek to bridge the gap in knowledge and lack of scientific literacy (Millar and Wynne 1988). According to the deficit model, the transmission of a large quantity of accurate and correct information from the expert to the lay public is the method to bridge the divide between the two communities. In their studies on the relationship between science and cinema, Frayling and Kirby focus on fiction cinema arguing, on the one hand, that the gap between the expert and the lay public, between specialised knowledge and public understanding "lies at the root of most fictional cinematic representations of the scientist. […] The gap has usually been filled by stereotypical representations of one kind or another" (Frayling 2006: 11). Kirby shows how scientists and science topics can contribute to shape the content of a film enhancing its verisimilitude and accuracy. Conversely, scientists can use cinematic visions and metaphors to better articulate future scenarios for their research field and raise further public awareness toward themes that can be highly controversial (Kirby 2011). The type of films discussed by Kirby and Frayling is, regrettably, rather limited considered that, as Vidal argues, the relationship between cinema and science is more nuanced than it looks like at a superficial

glance, going beyond the portrayal of scientists or the representation of societal anxieties about science:

> […] movies not so much exhibit as they enact, and thereby function as one of the most culturally significant contexts of science. While the cinema conveys to some extent contents that can be checked for their correctness as samples of expert information, its jointly epistemological, social and political significance lies in its capacity to fashion and perform questions and challenges about the scientific enterprise that lie beyond the criteria at work in the deficit model. (Vidal 2018: 11)

Although there is an established scholarly tradition of criticism to the deficit model in both sociologically oriented studies (Bucchi and Neresini 2007) and in philosophical ones (Stengers 2018), Vidal has shown how the deficit model of public understanding of science remains unchallenged as the main framework used to discuss the relationship between cinema and science. He argues how "cinema is predominantly approached in a 'deficit' perspective that makes it appear as an unreliable means of transmitting scientific values and knowledge or even as a medium that may harm science literacy" (Vidal 2018: 130). To correct this distorted view of cinema, he points out that the "surplus of meaning" rather than correctness in conveying information is, ultimately, what characterises it (Vidal 2018: 145-7). Realism (and its values of accuracy, authenticity, fidelity), does not necessarily bear upon the deficit model, but can co-exist with aesthetic values and concerns. When leaving the normative level and embracing a granular reading of specific scientific films as I shall do in the next sections of the article (that is, combining the tools of film studies with those of aesthetics), one notices how in scientific films the ontological, indexical relationship with reality is often the departing point for showing how science is imbued with fictional elements.

Within philosophically oriented film theory, the reflections of authors such as André Bazin (active in Painlevé's years) and, in our present times, Pietro Montani, can guide us in exploring the interplay between realism and imagination. Bazin analysed the connection between the tenets of realism, aesthetics and the ontology of the photographic image to which film also belongs. In a passage from *The ontology of the photographic image* Bazin argues:

> The aesthetic qualities of photography are to be sought in its power to lay bare the realities. It is not for me to separate off, in the complex fabric of the objec-

> tive world, here a reflection on a damp sidewalk, there the gesture of a child. Only the impassive lens, stripping its object of all those ways of seeing it, those piled-up preconceptions, that spiritual dust and grime with which my eyes have covered it, is able to present it in all its virginal purity to my attention and consequently to my love. By the power of photography, the natural image of a world that we neither know nor can know, nature at last does more than imitate art: she imitates the artist. (Bazin 1960: 8)

For Bazin, cinema (as a photographic medium) can conjoin realism and imagination, letting the viewer having a glimpse of the world anew (Rosen 2003: 42-9). Cinematic realism is rooted in aesthetics rather than being a duplication of reality by means of representation. Merely recording what is happening in front of the camera does not necessarily achieve a realist or, better said, authentic effect. A filmmaker needs to select the profilmic material whilst being attentive to preserving reality as a whole: "Every form of aesthetic must necessarily choose between what is worth preserving and what should be discarded, and what should not even be considered" (Bazin 2005: 26).

In his work on creativity, Pietro Montani argues that politics, techne and art enable the creation of hybrid spaces that can nurture the intertwining between reality and imagination. Audio-visual techniques such as cinema are privileged tools for giving back imagination its central place. The camera is for the filmmaker a prosthetic device enabling perception and creation processes (Montani 2017: 8). Bearing upon the Kantian theory of aesthetics and the phenomenological orientation of embodied cognition theory, Montani forges the concept of "techno-aesthetics" (2020) to describe the extension of human sensitivity (aesthesis) by means of an instrument. Imagination, which is grounded in the techno-sentient body, plays a role in the processes of evolution and adaptation. Montani's reflections on authenticity and moving images can help clarifying what is at stake in natural science films. Moving images do not guarantee a direct and immediate grip on the world. This does not mean that we should embrace what he calls the "post-modern vulgate" (Montani 2010: 22) according to which we live in a bubble of simulacra impossible to escape. The relationship between the image and the world can become authentic (which is one of the tenets of realism) thanks to the work of our technically-oriented imagination that combines (through montage, for example) images and traverse them as documents bearing witness of some events, processes – what Montani calls a process of authentication which is something to strive for, a sort of never-ending ethical task.

Interestingly, if Montani focuses on the active nature of creativity and imagination, Bazin emphasises the ability of the cinematic apparatus to exploit the accidents of nature in new ways, producing a factory of images in an automatic fashion. In his reflections dedicated to science films and, more specifically, to Jean Painlevé, Bazin praises a scientific film festival curated by Painlevé arguing that science film is the repository of cinematic beauty:

> Here, [...], cinematic beauty unfolds like a supernatural grace — the miracle of the science film, and its inexhaustible paradox. […] Is there a brilliant choreographer, a delirious painter, a poet who could imagine these patterns, these shapes, these images? The camera alone possesses the secret key to this universe of images where supreme beauty is identified at once with nature and chance […] The Surrealists alone foresaw its existence, which seeks in the almost impersonal automatism of their imagination the secret of an image factory. (Bazin 2000: 146-7)

The French word used by Bazin is "*hasard*" which can be translated with chance as well as with accident. Bazin's reference here is specifically to the surrealist's experimentation with chance operations such as automatic writing. Not relying only on chance or accident, Painlevé worked hard to place himself in a position to capture the images that we find in his films. But he did not work hard to create these images. The image is, in an important sense, self-posited; it is not merely automatic but autonomous. Bazin emphasizes here the ability of the cinematic apparatus to exploit the accidents of nature in new ways, producing a factory of images in an automatic fashion – without the intermediary of the human imagination. Exploiting the chance operations in nature, the science film manages to approach poetry without human intervention.

In Painlevé the beauty of chance is not entirely the product of the filmmaker's decision/action, but of the encounter between the embodied machinic eye of the camera and the world of nature. This is part of the novel theory of life put forth by Painlevé's scientific documentaries. While watching his films, there are moments in which onlookers witness an event that they cannot assimilate into the archive of what they have already seen and heard. These are glimpses of "ecstatic truth" which has been defined by the filmmaker Werner Herzog as the type of truth that is not the representation of the blunt fact through the observational eye of the camera, but it is the type of truth that is poetic, mysterious and elusive, and that can be achieved only by means of fabrication and imag-

ination (Herzog 1999)[6]. Ecstatic truth, very much like the blending of aesthetic and realism in Bazin, is a deeper, epiphany-like truth that transcends facts, also those of biology and physiology.

To grasp the novelty of the approach followed by Painlevé, it is worth placing it against the background of the British *Secrets of nature* series. At the beginning of the twentieth century, the Anglo-American filmmaker Charles Urban together with the naturalist Francis Martin Duncan set out to create a new type of cinematography called "The Urban-Duncan micro-bioscope". The first production, called *The unseen world*, was screened in London in 1903 (Lefebvre 2009: 85)[7]. The successor of Duncan was Frank Percy Smith (1880-1945), one of the greatest filmmakers of the silent film era and a key contributor to *Secrets of nature*, a series of nature films produced by British Instructional Films between 1922 and 1933, and filmed by a small group of naturalists. Dedication to science, attention to the aesthetics of the images and inventiveness were keys to the series which aimed at developing a form of popular scientific filmmaking, paving the way for today's natural history programmes such as those by Attenborough or Cousteau.

The films of these series pioneered the techniques of time-lapse, microscopic and underwater cinematography and even animation, thus enabling onlookers to glimpse into the natural processes of animals, insects and plants' lives usually barred to our human eyes[8]. As McKernan argues (2010), F. Percy Smith's work is indebted to the avant-garde tradition of artists such as Walter Ruttman, Oskar Fischinger, Viktor Eggling or Fernand Leger who were working in the same period. At a superficial reading, the goal of the series seemed to be that of foregrounding the anthropomorphic ideas of the layman who, for example, sought to find correspondences between the doings of an insect and human behaviour. The aesthetic of the images, however, challenge this superficial reading: Percy's films were concerned with transcending human values, concerns, perceptions. There was less an investment into exploring the

[6] Asked to make a statement presenting his work, Werner Herzog decided to read a declaration, which then became known as the Minnesota declaration: https://walkerart.org/magazine/minnesota-declaration-truth-documentary-cinema-1999 (accessed: April 2022).

[7] On the use of the microscope lantern in Duncan's series *The unseen world* see Gaycken (2013).

[8] See, for examples films such as *Fathoms deep beneath the sea* (1922), *The plants of the pantry* (1927), *The battle of the ants* (1922), *Busy bees* (1926), *The aphis* (1930), *The plants – Floral co-operative societies* (1927), *Peas and cues* (1930), *Romance in a pond* (1932), *Brewster's magic* (1933).

relationship between non-human and human animals than the will to unveil the processes of life as they unfolded in nature. Species share the same planet, but one another's existence and life go unnoticed. The secrets of nature are fully unveiled in this series, revealed in their beauty and independence from humans, they are exposed and, ultimately, turned into visible evidence. Certainly, the stance toward realism and the interplay between visibility and invisibility play a key role in both Painlevé's documentaries and in the films of the British series. As it will become clear in the next section of the article, however, Painlevé pushes the nature films of that series even further by showing how nature, once unveiled, remains beyond our reach. Challenging a certain kind of anthropomorphising drive, Painlevé shapes the possibility of another encounter between biology and film, science and aesthetics, and between different life forms.

4. *Filming the octopus and its otherness*

Among Painlevé's cinematographic work, the films devoted to the life of animals (seahorses, bats, and octopuses) explore the question of demarcation and the relationship between different life forms that was introduced in the previous section. In this respect, in this and the next section I shall briefly consider two scientific films on the octopus made by Jean Painlevé, *The octopus* (1926), a black and white silent film and *The love life of the octopus* (1965) co-directed with Geneviève Hamon, in colour, accompanied by a voice over and by Pierre Henry's compositions. To film octopuses, Painlevé builds a portable underwater camera or, alternatively, arranges an aquarium indoor for the in-studio shootings. Zoological documents and cine-poems at the same time, these two films embody the conception of life forms put forth by Painlevé in his blending of cinema, science and surrealism.

One of the most intelligent invertebrate life forms, the octopus occupies a unique place in the animal kingdom. In his book on the octopus and the evolution of intelligent life, the philosopher Godfrey-Smith argues that cephalopods like the octopus are "an island of mental complexity in the sea of invertebrate animals. […] cephalopods are an independent experiment in the evolution of large brains and complex behaviour" (Godfrey-Smith 2016: 9). The mind of other living beings can be understood by looking at the mind/body relationship in the octopus

whose mind is "the most other of all" (Godfrey-Smith 2016: 10). Methodologically, Godfrey-Smith combines traditional philosophical investigation, which is "among the least corporeal of callings" (Godfrey-Smith 2016: 11), with a first-hand account closer to that of an anthropologist/ethnographer/filmmaker who uses their own bodies and technologies to carry out the investigation. Being a skilled scuba driver, he has the chance of meeting cephalopods in their own environment, using the support of cameras to capture the animals' behaviours, and then write about these close encounters between species. The main question he poses concerns the evolution of mind from organisms other than mammals and birds. Cephalopods have an advanced nervous system which enables them to change colours in response to encounters with both other cephalopods and other species. Rather than being secluded in the skull, the nervous system is spread across the whole body, with a high concentration of neurons in the eight tentacles. In the ocean Godfrey-Smith swims close enough to octopuses to be able to observe them carefully but without ever touching them. The encounter can occur via unaided human vision or mediated by a small underwater GoPro video camera left on site to collect data on the octopus behaviours. Like Painlevé, Godfrey-Smith too seeks to encounter the octopus in its own environment, underwater, stating that the contact with this intelligent sentient being "is probably the closest we will come to meeting an intelligent alien" (Godfrey-Smith 2016: 9).

What is the reality of the life of an animal like the octopus? To answer this question, one needs to encounter the animal by engaging with a close reading of a few sequences from Painlevé's films. This is the only way to appreciate Painlevé's unique approach to the natural world, to stay close to the formal qualities of the images, something that Vidal neglects to do. Painlevé's method is to reduce the distance, by provoking the encounter between the two life forms, between bodies: he would go underwater with his camera, very much like Godfrey-Smith in his book on the octopus goes snorkelling and diving underwater to meet the animal in its natural environment.

The first film on the octopus is particularly indebted to Surrealism – hardly surprising given the credit that André Breton gave to Painlevé as a filmmaker capable of recognising that reality should not be accepted as a matter of fact, but rather as a door to the fantastic. As much as Surrealists dive into the unconscious, Painlevé with his waterproof camera brings to the surface the marvels of the sea. The opening sequence

shows octopuses in both natural and artificial environments, engaging with objects of different kinds demonstrating the octopuses' tactile interest and curiosity toward objects that they know they are not going to eat. An example of this behaviour is the sequence depicting an octopus falling from a window, crawling over a body and then over a skull. It is perhaps not by chance that the surrealist film *L'étoile de mer* (*The sea star*, 1928) by Man Ray used Painlevé's footages of the starfish. Instead of surrealist methods such as psychoanalytical interpretation of dreams, automatic writing, etc., Painlevé adopts rigorous scientific investigation and the use of cinematic techniques: "Does the complete understanding of natural phenomenon strip away its miraculous qualities? It is certainly a risk. But it should at least maintain all of its poetry, for poetry subverts reason and is never dulled by repetition. Besides, a few gaps in our knowledge will always allow for a joyous confusion of the mysterious, the unknown, and the miraculous" (Painlevé 2000: 119).

The new aesthetics that Bernabei invokes as the cipher of early scientific cinema (Bernabei 2021: 229) can be better defined as aesthetic realism that stays close to the natural phenomenon filmed without stripping nature out of its mystery, and that acknowledges the role played by technology, a "techno-aesthetics" to apply Montani's concept to the field of scientific cinema. Aesthetic realism is political in so far it refuses extraction from nature to favour the poetic documentation of natural phenomena and behaviours as well as the juxtaposition of elements that belong to different worlds, highlighting the broader cultural context of phenomena that are never purely scientific.

In *La pieuvre* the footage depicting the octopus crawling on a human skull is an example of the aesthetic of depaysement (displacement, disorientation), a beloved surrealist method of approaching the object to be photographed – which often belonged to the natural world, an animal, a mineral, a plant – isolating it from its context, close cropping it so that its familiarity and ordinariness would suddenly appear under new light. Removing the object from its habitual environment to insert it into an unfamiliar one would enable the onlooker to generate a chain of associations and relationships between the photographed object and other objects so that new meanings would suddenly be unveiled. The sense of displacement and disorientation implies a political project as much as it does an aesthetic one in tune with the surrealist understanding of the two (aesthetics and politics) as close allies. Painlevé's work toward loosening the boundaries between distinct categories of the real, for exam-

ple by blurring the distinction between life forms that belong to different species. The human skull is very similar to the octopus both in shape and proportion. For an instant, the two seem to almost merge perhaps to become a new life form, a "skulltopus". But this does not happen because it cannot happen. The octopus haptically flirts with the skull but the two never merge as they might do if *La pieuvre* were a science fiction film.

Trapping Painlevé's films into a genre such as the documentary one as Smaill does (2017) is tempting given that Painlevé himself grouped his films under the category of "scientific cinema" which was considered a sub-genre of documentary films without any reference to experimental and avant-garde cinema. Brigitte Berg, the director of Les Documents Cinématographiques archive and co-author of the first book ever written on Painlevé, explains that Painlevé recalled the definition of documentary films conceived and agreed in 1947 by the members of the World Union of Documentary: "Any film which by rational or emotional means and with the help of pictures of real phenomena or of their sincere and justified reconstitution is intended to consciously increase human knowledge as well as to expose the problems and their solutions from the economic, social and cultural point of view" (Painlevé in Bellows, McDougall, Berg 2004: 7)[9]. Documentary cinema, long associated with realism, is now theorised differently. Documentary has been theorised as a combination of a realistic glance toward the world with a self-reflexive subjective approach (Bertozzi 2018; Bruzzi 2000; Nichols 2017 and 1991). The documentary form has a poetics imbued with specific aesthetic and rhetorical impulses that emerge from specific cultural, historical, and technological contexts/variables: the tendency to record, to preserve, to persuade, to analyse, and to express (Renov 1993: 21). Cowie (2011) has written about the seemingly paradox of documentary cinema and its reception mode at the crossroad of politics, art, facts, and education. There is nothing paradoxical considered the aesthetic relations that documentary cinema has with the other arts (O' Rawe 2018).

Painlevé was certainly receptive to the documentary aesthetics formulated by Germaine Dulac, the theoretician of "pure" cinema, who banned any interpretation and interference with the filmed object to allow documentary to attain "truth". Nevertheless, he was also aware of

[9] The original citation can be found in Painlevé (1953).

the untenability of truth by means of scientific films, given the interaction between the studied phenomenon, the instruments (the camera, the lighting apparatus, etc.) and the observer (the filmmaker). The point is, rather, to ensure the ethics of the right distance to be kept from the reality under observation. The film *La pieuvre* was partially shot in an aquarium to try to reproduce the natural environment of the animal. The artificial condition the animal finds itself into (different lighting and food, the captivity, the absence of the tides, etc.) would influence its behaviors resulting in the filmmaker having to trigger certain processes rather than waiting for them to occur.

These kinds of concerns are fully theorised in Painlevé's *Ten commandments*, a short manifesto on what a documentary filmmaker should do when approaching phenomena. In the fourth and tenth commandments Painlevé orders: "You will seek reality without aestheticism or ideological apparatus" or "You will not be content with 'close enough' unless you want to fail spectacularly" (Painlevé 1948: 159)[10]. The manifesto makes clear how the label "documentary" does not fit Painlevé's films as they better be grouped under the category of "nature films" (Macdonald 2006) based on the method of aesthetic realism. By doing so, his work can still challenge the more traditional and conservative approach to be found in scientific and nature films. The problem with a lot of science that engages with film for public engagement is that aesthetics is completely neglected, and preference is given to scientific information in the simplest and most straightforward manner. Painlevè shows a road not fully taken either by scientific documentary films or by science communication, which too often mistakenly reduces aesthetics as beauty and pleasure. Painlevé remains the exception in how he uses nature films to engage the public, the rule being the accurate transmission of factual information from the experts to the lay public using cinema as a transparent medium.

5. *A missed encounter between species*

Before moving to critically analyse the second film on the octopus and the intertwining between scientific realism and aesthetics, it is worth

[10] The *Ten commandments* come from the program notes for the lecture *The poets of the documentary* which Painlevé held in 1948. See Archives Jean Painlevé https://jeanpainleve.org/writings (accessed: May 2022).

briefly mentioning that the work of Rancière on cinema (2011) should be always contextualised against the broader rethinking of the aesthetic dimension Rancière carried out since his book on the politics of aesthetics (Rancière 2004; Robson 2005). Here he puts forward a partition of the field of the sensible based first on forms of human activity such as artistic practices: these are political in so far as they make perceivable the multiple ways in which the sensible is portioned and distributed across spaces, times and subjectivities so that allegiances and communities are disrupted and built anew. Rancière identifies three ways of understanding the artistic question within the history of Western thought. None of them exists by itself but rather as a prevailing trajectory in a certain period of time: first, the ethical regime in which images are linked to ethos and truth; second, the poetic regime in which the arts are guided by the pragmatic principle of imitation; finally, the aesthetic regime that is constituted in opposition to the representational one. In this regime art frees itself from all rules and hierarchies between subjects and between genres. The aesthetic regime does not aim at creating a series of artistic representations in accordance with the social position of the subject but, on the contrary, intends to emphasise the total subversion of this very order of organisation of the sensible.

Rancière not only challenges the Aristotelian idea of politics being the concern of only those who possess a language, but also Aristotle's hierarchical distinction between perceptual and sensual faculties, on the one hand, and the intellect on the other (Rancière and Engelmann 2019: 66). Aesthetics create a different visibility for the world we live in, a world inhabited by human and non-human life forms octopuses included:

> Aesthetics isn't the theory of art, the theory of beauty, the observation of beauty. "Aesthetics" defies itself first of all as a way of experiencing a sensory state which has abandoned the hierarchies that normally organize sensory experience, such as the hierarchy between sensuality, which receives, and the mind, which organizes; or between intelligence, which determines, and the hands, which obey. (Rancière and Engelmann 2019: 33-4)

To highlight the alterity of the octopi one needs to first foreground their features as life forms possessing an intelligence (a mind, to use Geodfrey Smith's words) distinct from that of human animals.

Cinema, with its dual character of being a visual and a narrative-based medium, Rancière argues, is the emblematic art of the aesthetic

regime (Rancière 2011). Natural science films, including the second film on the octopus by Painlevé, show the dual character of cinematic art: on the one hand, moving images impose themselves as a visual force, as almost an epiphany capable of suspending the narration of events, the unfolding of the story. On the other hand, this pausing, revelation is possible only against the narrative structure of the film which is reinforced by the soundtrack and the voice over accompanying and commenting the sequences of edited images. Therefore, the purely visual and the story-telling components are both necessary and intertwined. The image, for example a close up of the microscopic movement of cells so often found in natural science films of the early twentieth century, jumps off the screen to throw in front of us what our naked eyes cannot perceive, thus unveiling the intimate nature of phenomena that words (narrative) cannot fully grasp.

The second film on the octopus is focused on its life and behaviours. Scientific realism and aesthetics, abstract metaphors and concrete music are intertwined in this film shot in an aquarium set up in Painlevé's studio, like other of his works devoted to creatures of the sea. Respecting the natural environment and real-life conditions of the octopus was a constant preoccupation of the filmmaker-biologist who was aware that the condition of captivity would influence the behaviour of the animal (Riou 2009). The opening scene begins with an enormous octopus caught in the arms of a fisherman. Then the camera switches to the movement of the octopus along the coast, words on screen and a dramatic voice over describe its appearance: "Octopus [...] Cephalopod [...] Horrifying creature". The octopus is then visually and verbally contextualized within its natural environment: "Painlevé's images and voiceover work to accentuate the aesthetic and behavioural uniqueness of the animals he focuses on" (Smaill 2017: 97). The voice over also describes the relationship the octopus has with the landscape: "It changes colours depending on its surroundings and on its emotions". As it advances on sand, nearby a rock and seaweed, the description becomes more detailed and the camera zooms in on the eye, on the breathing. The animal ends up camouflaging itself under the rocks with shell debris. The filmmaker then draws our attention to the swimming technique of the octopus: it emerges briefly on the surface to then plunge immediately into the water, hiding behind a rock to hide. Then, the octopus suddenly catches a crab and devours it, demonstrating how the world of the octopus is marked by encounters and conflicts with several species other

than its own. The first part of the film is visually frantic, based on cuts and jump cuts, apt for introducing the theme of scale and disproportion: "Eight tentacles [...] Two thousand suckers [...] An octopus sixty centimeters can hold two hundred and fifty pounds". Then the film moves on to the actual "love life" of the octopus, from the courtship to the reproduction cycle with the microscopic views of the embryo until it hatches.

Anthropomorphising was and still is an unavoidable tendency as Godfrey-Smith puts it: "When we imagine the life and experiences of simpler animals, we often wind-up visualizing scaled-down versions of ourselves" (Godfrey-Smith 2016: 10). Painlevé plays with anthropomorphism while showing that a comparison between the octopus and the human is not appropriate – the octopus is an alien form of life, it is an encounter with otherness. The octopus is presented by the images and the voice over as an uncanny hybrid, perhaps a reminiscence of H.P. Lovecraft's fictional cosmic entity, Cthulhu, introduced in the short story *The call of Cthulhu*, published in the American pulp magazine Weird Tales in 1928. Lovecraft described Cthulhu as a gigantic entity which looked like an octopus, a dragon and a caricature of human form. Grace and terror coexist in movements that resemble human gestures ("familiar mannerism of those uncanny creatures" the voice over says). The octopus, a medusa-like creature of horror ("cephalopod, horrifying animal"), is rendered familiar by its expressive eye, Painlevé says through the voice over "it has folds of skin that act as eyelids"; Godfrey-Smith too observes, decades after Painlevé, "An octopus's eye is similar to ours. It is formed like a camera, with an adjustable lens that focuses an image onto a retina" (Godfrey-Smith 2016: 10).

Immediately after recognising the similarities between the eye of the octopus and that of human beings, Godfrey-Smith explains that the brains are totally different and that the mind of cephalopods cannot be compared to any other existing minds. They are alien to us and to other animal species. One of the peculiar features of the mind of the octopus is the fact that its mind is embodied. Painlevé makes visible and explains how the nervous system of the octopus is spread throughout the body with no centrality given to the brain in the skull. There is no central brain system governing the whole body: the arms of the octopus are full of neurons and capable of acting independently from the brain located between the eyes. The octopus's bodily presence is counteracted by the disembodied character of the male voice over describing it, its behaviours, using metaphors and making analogies.

In this second film on the octopus depaysement is created not through the visuals but rather through sound, music and a script which is imbued with metaphors and analogies, sometimes contradicting the blunt realism of the images on screen. Mitigated by ambiguity, by spatial and temporal dislocations, and by the aesthetics of depaysement, anthropomorphism becomes a tool for making obsolete dichotomies explode, such as those between nature and culture, scientific realism and aesthetics, documentary and fiction. Anthropomorphism is used in Painlevé as a hook for facilitating onlookers' curiosity which is the key form of access to nature films as Gaycken highlights: "Curiosity also deemphasizes objectivity as a preeminent principle for understanding popular-science films. […] Thus, this argument expands on Daston's and Galison's observation that the rise of objectivity did not eradicate other epistemic forms. […] a prominent site for the cultivation of curiosity in modernity was the domain of popular science" (Gaycken 2015: 4). The quest for finding correspondences between features and behaviours of human and non-human animals is part of our very nature, it is what happens whenever the lay audience observes nature, feeling part of it. The bond experienced with animals is so strong that cannot be ignored but rather used, often ironically, to encourage a more reflexive and critical stance toward the otherness of the non-human animal.

Drawing upon the apparatus of biology, the presence of the phenomenon under observation (the octopus filmed and thus made visible) as well as upon the dramaturgy of the script, the voice over says, quite ironically: "the male has to insert the end of his special arm […] into the female respiratory's cavity. There is no officially sanctioned position to do that". Immediately after, microscopic images of cells make it clear that we are witnessing a physiological process not available to our human senses. The camera and the filmmaker's choices at the level of framing, editing, music, lighting, etc. renders impossible any direct vision of the phenomenon under investigation. The image, therefore, has a twofold function: it supports scientific research while nurturing imagination. On the one hand, for Painlevé life forms cannot be approached exclusively from a biological and physiological perspective and this explains the use of depaysement, the recurring metaphors with the world of literature, etc. On the other, nature already contains everything Painlevè needed, that is marvel, mystery, the absurd and the uncanny: "For Jean Painlevé, it was in nature that life, sex and death played out

without manipulation, and where the marvellous and mysterious always existed, waiting to be discovered" (Fretz 2010: 50).

In his 1973 essay entitled *La pieuvre*, the literary critic Roger Caillois argued that some phenomena (tentacular, crawly things like spiders, crabs and jellyfish) are incubators of fantasies and belong to a universal, symbolic lexicon to be found across time and culture. Like Caillois, Painlevé believes that there are correspondences between the natural and the human world at the level of behaviour. For Caillois, mimicry is a property found in all of nature, but especially in insects that imitate their environment (other insects, plants, birds, and rocks) to escape predators. Caillois discusses the example of the praying mantis, a beloved surrealist symbol, whose adaptive mimicry is a behavioural form to be found across species, including human animals (carnival and fashion are two examples of mimicry). The point is not to explain certain puzzling behaviours observed in nature in terms of corresponding human behaviours. Rather, it is to investigate human animals (governed by the laws of this same nature) in terms of the more general behavioural forms found widespread in nature throughout most species.

Although this second film *The love life of the octopus* plays around the idea of personification of the octopus, any allegation of anthropomorphism is systematically denied, enabling the recognition of the otherness (and striking personality) of the octopus, and therefore also breaking open the narrow confines of anthropomorphism. This film introduces us with a morphology of becoming, traversing the boundaries between species as well as those between nature and artifice, science and art, objectivity and poetry. No projection is ever possible, but rather a knowing-through-engagement, a making contact with difference. Painlevé's approach seems to support a view for which species are entangled but their relationship cannot be described in ways that rely only on biology and physiology.

It is certainly true that in the second film, in particular, Painlevé offers detailed explanations of the anatomy and the physiology of the octopus. The reproductive system is described in detail as well as the various organs involved in different physiological processes such as breathing or digesting. Painlevé, however, pauses also on the behaviour of the octopus, on its rituals, on its habits, demonstrating how science is culture. Contrary to physiological processes and movements, these are never fully accessible nor fully explained. What remains visible are shapes, behaviours, and the movements of the octopus. Propulsion (like

a jet), crawling, and squeezing into a flat form are some of the movements typical of the octopus whose body has almost no hard parts at all and, therefore, is able to transform its shape and to become "pure possibility" (Godfrey-Smith 2016: 48). Yet, in the instant of maximised visibility and biggest similarity between human and animal rituals, in the moment in which the camera captures the finest nuances of animals' movements, one suddenly wonders to what exactly those visible movements give access to. In the second film on the octopus, Painlevé recurs to words that describe intentions and motives behind these movements, two categories that the camera-aided human vision cannot fully grasp. The words, however, do not quite match the images on screen. Painlevé seems to postulate a degree of similarity between certain behaviours of the octopus and those of humans, for example in mating rituals. At a closer look, however, this similarity between human and animal behaviours is postulated more at verbal than visual level. Any identification with the octopus, any mirroring is constantly subverted, negated. Any analogy with human behaviours is put into question because the animal's motives, the animal's life beyond the appearance remains inexplicable, inaccessible.

To conclude, the distance between humans and the animal under scrutiny is increasingly evident in the moment of biggest similarity. The politics of life that Painlevé's films embrace is based upon an aesthetics of distance, of the otherness of animals. Painlevé, therefore, is not simply using specific cinematographic techniques to make visible phenomena that are invisible or overlooked as the films of the British series *Secrets of nature* would do. Painlevé strives to cherish and nurture the secrets of nature. The camera becomes a tool to document what can be described as a missed encounter between life forms, between species that do not mingle together, that live in separate ecosystems. Nature remains beyond our reach but not in the sense that nature is not affected, tampered by human intervention, but in the sense that it responds to a logic and has reasons and motives that remain ultimately unavailable to us human animals.

The alterity of the octopus is not undermined but rather preserved, there is no projection, in Disney-like fashion, of human emotions and values upon the octopus. This film is an experiment about what it might be like to inhabit a radically different body and experiential frame of reference. Although such experiments are necessarily limited and even doomed to fail – we can only imagine what it is like to be an octopus, we

cannot actually experience it – they challenge the human as a privileged frame for perceiving and knowing the world. Painlevé does not give us full access to the world of animals, to their peculiar way of being in the world, thus dismantling a regime of full visibility. The question onlookers are left with, then, becomes not that of demarcation, but rather, to paraphrase Donna Haraway's (2003) words, the question of how to respond to animals (nature), even when we do not fully understand their questions, their language, their behaviours, their way of being in the world.

Acknowledgments

The author would like to express their gratitude to the anonymous reviewers for their insightful comments and suggestions on an earlier draft of this article.

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Filmography

La pieuvre/The octopus (1927), 35mm film, black and white/tint, silent, 12'.

Les amours de la pieuvre/The love life of the octopus (1965), co-directed with Geneviève Hamon, 35mm film, colour/sound, music by Pierre Henry, 13'.