

Nuridsany and Pérennou's *Microcosmos: The People of the Grass* (1996) as an Invitation to Become-insect

Adrian Konik

<http://orcid.org/0000-0001-5233-3614>

Nelson Mandela University

Adrian.Konik@mandela.ac.za

Abstract

This article problematises assertions concerning the existence of a minor tradition of French wildlife documentary begun in the 1920s by Jean Painlevé and more recently contributed to through Claude Nuridsany and Marie Pérennou's *Microcosmos: The People of the Grass* (1996). What is advanced, instead, is the importance of regarding these directors' respective films as constituting two different minor traditions. In this regard, the impasses to which the often-surrealist features of Painlevé's films were a response, are discussed in relation to Deleuze and Guattari's concept of minor literature and Deleuze's idea of modern political cinema, or minor cinema. Thereafter, focus shifts on to discussion of the different context out of which *Microcosmos* emerged, along with the relevance of its unique cinematography for current environmental concerns—particularly because of its capacity to precipitate what Deleuze refers to as a spiritual automaton that stands to catalyse a more ecologically-orientated people to come.

Keywords: Documentary; macroscopic cinematography; engramme; spiritual automaton; environmental crisis

Introduction

In his “More-Than-Human Visual Analysis: Witnessing and Evoking Affect in Human-Nonhuman Interactions,” Jamie Lorimer (2013) advances the existence of “a rich minor tradition of experimental film-making in French wildlife documentary, which can be traced back to pioneers like ... Jean Painlevé,” whose influence “is clearly echoed” in Claude Nuridsany and Marie Pérennou's *Microcosmos: The People of the Grass* (1996) (Lorimer 2013, 75). Lorimer's intuitive association of Painlevé's, and Nuridsany and Pérennou's, respective films, on account of their similarly experimental approach to analogous subject matter, is entirely understandable, and his



Phronimon

<https://upjournals.co.za/index.php/Phronimon>

Volume 20 | 2019 | #4107 | 19 pages

<https://doi.org/10.25159/2413-3086/4107>

ISSN 2413-3086 (Online)

© The Author(s) 2019



Published by Unisa Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution-ShareAlike 4.0 International License (<https://creativecommons.org/licenses/by-sa/4.0/>)

consideration of “the micropolitical power and promise of moving imagery ... techniques ... to witness and make sense of encounters between people and elephants” (Lorimer 2013, 61), remains both salutary and resonant with the argument of this article. However, a question nevertheless arises from his statement: Does the idea of a continuous *minor* cinematic tradition not reflect the habitual modernist tendency to emphasise continuity and progress at the expense of rupture and nomadism, and accordingly risk eclipsing important differences between the different directors’ works?¹ In what follows it will be argued that this is indeed the case, and that it is important instead to thematise the differences between Painlevé’s, and Nuridsany and Pérennou’s, films, because of the particular critical contribution made through the latter’s *Microcosmos* in the face of the environmental crisis. With a view to exploring this, in the succeeding analyses two of Lorimer’s related suggestions will be responded to: Firstly, critical attention will be paid to Lorimer’s idea that this minor cinematic tradition entails “deconstructive ... critical ... work ... steeped in postmodern irony and cynicism” (Lorimer 2013, 75). Secondly, Lorimer’s contention that Painlevé’s, and Nuridsany and Pérennou’s, films similarly constitute “moving images forged in ... [a] model” that “invok[es] Spinoza,” on account of their analogous “challenging [of] modern divides or ridiculing [of] obsessions with the cute and cuddly,” in a way that “attends to mundane nonhumans and forms of practical, cosmopolitan companionship” (Lorimer 2013, 75), will be contested. In short, firstly, it will be argued that while postmodern irony and cynicism are more a feature of Painlevé’s films, the engendering of cosmopolitan companionship with nonhuman animals is more a feature of Nuridsany and Pérennou’s film. Secondly, while both Painlevé, and Nuridsany and Pérennou, might be said to draw on, or at least echo, certain Spinozan themes in their respective films, it will be argued that they each do so in association with different discourses—Surrealism in the case of Painlevé, and a variant of Deep Ecology in the case of Nuridsany and Pérennou—such that their cinematic lines of flight follow different trajectories.

In terms of the theoretical framework to be used for the analyses, firstly, Deleuze’s distinction between classical and modern political cinema will be discussed against the backdrop of the links that he draws between the latter and minor literature; this will be done to elaborate on the features of minor cinema. Next, the line of flight of Painlevé’s films—both what they responded to and their particular features—along with their Spinozan orientation, will be considered. Thereafter, the line of flight that is Nuridsany and Pérennou’s *Microcosmos* will be examined in relation to the environmental crisis to which it is a response, along with the inflection of Spinozan

1 “Alain Touraine identifies modernity as involving forms of rational knowledge used by agents of progress to overcome obstacles to change,” and he maintains that this “modernist quest” in many respects still prevails as a salient feature of contemporary culture; thus, notwithstanding how “various intellectual and political strands are decomposing classical conceptions of modernity ... [p]ost-modernism is [often] ... unable to defend itself against ... the modernist tendency ... to impose ... rationality” and to effect “conformity” through “repression” for the sake of establishing an ideology of “progress” (Stehr and Ericson 1992, 23–24).

themes that such response has required. Finally, the article will conclude with reflection on the importance of distinguishing between the minor cinemas of Painlevé, and Nuridsany and Pérennou, on account of how the spiritual automaton precipitated by *Microcosmos* stands to catalyse a more ecologically-orientated people to come.

From Minor Literature to Minor Cinema

In *Kafka: Toward a Minor Literature*, Deleuze and Guattari (2000) maintain minor literature to be a response of displaced minorities to the crisis of identity they face within contexts dominated by majorities, who on account of their numerical superiority, wealth, and/or power, have entrenched their identity through major literature to the point of ossification. Accordingly, these minorities face an “impasse”: generally included in the majority they are also specifically excluded because of their difference; and while nevertheless obliged to act they remain incapable of doing exactly what the majority require of them, or of doing anything differently (Deleuze and Guattari 2000, 16). The result—as evinced by Franz Kafka—is the emergence of “a minor literature,” which is not a literature that “come[s] from a minor language” as the cultural expression of those who speak it, but instead a literature “which a minority constructs within a major language” (Deleuze and Guattari 2000, 16). Deleuze and Guattari identify three features of minor literature: Firstly, it is marked by “the deterritorialization of [a major] language” by the minority in question, who shape it creatively through inflections or appropriations of words/phrases to form a dialect (Deleuze and Guattari 2000, 18). Secondly, it “connect[s] ... the individual to a political immediacy,” because the act of speaking differently entails operating within a matrix of intense power relations, where the struggle to express one’s difference through a foreign medium is always threatened by the prospect of assimilation (Deleuze and Guattari 2000, 18). Thirdly, it results in a “collective assemblage of enunciation,” as such expression of difference is never idiosyncratic but rather always tied to the alienating experiences of the minority group in question (Deleuze and Guattari 2000, 18).

Later, in his *Cinema 2: The Time-Image*, Deleuze advances that “the minority filmmaker finds himself in the [same] impasse [as] ... Kafka,” involving simultaneous inclusion and exclusion, and simultaneous demands for action which cannot be complied with (Deleuze 2005b, 209). Deleuze also distinguishes classical political cinema from such modern political cinema—or minor cinema—on the basis of three features which point to further parallels between minor cinema and minor literature. Firstly, as Deleuze argues, “in classical cinema, the people are there, even though they are [initially] oppressed, tricked ... or unconscious,” as in Eisenstein’s propaganda films where the people who are the majority begin to realise *as much* through developing class consciousness, and then establish themselves *as such* through revolution (Deleuze 2005b, 208). In contrast, in “modern political cinema,” contends Deleuze, “the people no longer exist, or not yet,” such that “*the people are missing*,” and he points generally to the example of postcolonial contexts “in the third world”

(Deleuze 2005b, 208–209). Here, people thrown together by the drawing of colonial boundaries often “remain ... in a state of perpetual minorities, in a collective identity crisis,” because they have yet to emerge *as* a people with a cohesive national identity (Deleuze 2005b, 209). But in relation to such emergence, Deleuze again points to Kafka’s “minor literature” through referring to their struggle to “invent ... a people” who have “never been” (Deleuze 2005b, 209). Secondly, while “classical cinema constantly maintained th[e] boundary” between “the political and the private,” in minor cinema—just like in minor literature—the individual’s private world is inextricably intertwined with a political matrix of power relations that “communicate violences” and “make private business pass into the political” and vice versa, through processes of deterritorialisation (Deleuze 2005b, 211). And thirdly, in contrast to the unifying majoritarian “master” voice that echoes through classical cinema, in modern political cinema one encounters reflections of the third feature of minor literature, namely collective assemblages of enunciation (Deleuze 2005b, 213). This entails the “failure of fusions or unifications,” and instead an acceleration of processes of “fragmentation” as ever more micro collective assemblages articulate themselves into existence (Deleuze 2005b, 212–213).

The Minor Cinema of Jean Painlevé

Interestingly, all three of the above features of minor literature/minor cinema were attributed earlier by Jean Painlevé to the seahorse. That is, just as Deleuze describes how impasses can precipitate deterritorialisation indissociable from political immediacy, which, in turn, can result in unanticipated collective assemblages of enunciation, so too, Painlevé describes the seahorse as “a victim of contradictory forces” which obliged it to disguise “itself to escape,” yet in the process of “warding off the fiercest fates” it has ended up pursuing “the most diverse and unexpected possibilities” (as quoted in Berg 2000, 45). And Brigitte Berg poignantly suggests that, in describing the little marine “star [of his film] in 1934” in such terms, Painlevé “was [effectively] describing himself” (Berg 2000, 45). Yet her statement begs three questions: Firstly, what were the contradictory forces that comprised an impasse for Painlevé? Secondly, what were the dynamics of his ensuing deterritorialising responses? And thirdly, what new collective assemblage of enunciation thereby came into play? When one considers possible answers to these questions, the differences between Painlevé’s, and Nuridsany and Pérennou’s, cinematic lines of flight start to become apparent.

From Painlevé’s various texts and interviews, it is clear that the impasses he encountered derived from the conservative attitudes, disciplinary prejudices, political tyranny, aesthetic poverty, and philosophical myopia of his time. Indeed, from the outset, the liberal attitude of his father, Paul Painlevé—who was also a French prime minister—proved “unpopular at the elite schools young Jean Painlevé attended, [and] he was often ostracized” by conservative elements therein (Berg 2000, 5–6). Moreover such marginalisation dogged him even after graduation, when as a filmmaker he

continually ran afoul of the scientific community because of its rejection of cinematic contributions to the discipline (Berg 2000, 17). In terms of political tyranny, the fascism of the 1930s and the Nazi invasion of France in 1940 presented obstacles to Painlevé, who “supported the Common Front: a coalition of communists, socialists, workers’ unions, and leftist intellectuals,” and for whom “supporting artists and scientists was ultimately a political act” (Berg 2000, 31–32). In fact, while “on the day the German troops arrived in Paris, the Gestapo went in search of Painlevé,” which obliged him to spend the “remainder of the war ... in the south of France” (Berg 2000, 33), after the war he encountered the fascism of De Gaulle who “in May 1945 ... dismissed Painlevé” as director of French cinema after only a “nine-month tenure” (Berg 2000, 34–35). Beyond this, for Painlevé, the growing success of commercial films despite their aesthetic poverty also did not augur well for cinema, as he felt that such inculcation of tastes for the banal and the repetitive were negatively affecting documentaries—by forcing them into “the most disgusting type of conformity” to draw audiences (Painlevé 1953, 149). Relatedly, Painlevé also expressed aversion to the philosophical dogmatism of such cinema, in which “the most preposterous anthropomorphism reigns” and dictates that “everything has been made for Man and in the image of Man and can only be explained in terms of Man” (Painlevé 1935, 136).

Painlevé’s deterritorialising responses to each of the above five impasses contributed to the formation of his minor cinema. Already within the conservative environs of his school, he maintains that his “only friends ... were Jews and outcasts” (as quoted in Berg 2000, 6), while during and after his university studies he similarly sought out the more liberal company of “Paris’s flourishing avant-garde ... dominated by the ideas and works of the Surrealists” (Berg 2000, 12).

Correlatively, against the “inherent elitism and stodginess” which informed the academic disciplines of his day, he emphasised the need not only to “complete[ly] undo ... secondary education,” but also to dismantle aspects of “the rigid” university pedagogy of the era (Berg 2000, 7–9, 12). These and other oppositional assertions largely stemmed from Painlevé’s above-mentioned involvement with Surrealism, particularly those Surrealists who advocated “a new type of film” entailing “experimental shorts” (Berg 2000, 12). Yet by applying such an approach to his films on scientific subjects, Painlevé also began deterritorialising the scientific disciplinary bias against cinema as a tool of research, and even gained recognition for his efforts in national television in 1948 and 1956 (Berg 2000, 40).² In certain respects, this entailed realisation of his envisioned “school without walls” (Painlevé as quoted in Berg 2000, 43), which he further achieved through his final film *Pigeons of the Square* (1982), where he teaches children in Batinolles Square about the birds’ movements.

2 As Berg explains, “[o]n June 19, 1948, Painlevé became the first person in France to broadcast a live science program on television,” while in 1956 he gained further fame for bringing to viewers “a live exploration of the human body’s interior in the ... French Public Television program ‘Live Endoscopy’” (Berg 2000, 40).

In turn, Painlevé's deterritorialising of fascism went beyond his film *The Vampire* (1945), which was considered a parody of fascism for, among other things, how the little animal's wing-stretch—"the vampire's salute"—mirrored the Hitlerian salute (Painlevé 1986, 176). That is, "Painlevé's films ... do not simply substitute human characteristics for animal ones ... so much as they mix up our categories of human and animals" (Rugoff 2000, 54), and thereby undermine the possibility of establishing the clear lines of definition upon which any fascist agenda depends. In terms of this, Painlevé even advances the need for "gaps in our knowledge" to "allow for a joyous confusion of the mysterious, the unknown, and the miraculous" (Painlevé 1931, 119). This is because together these latter can function as a curative for the fascistic tendency—in response to the haunting "lack of order that seemingly rules over the planet's millions of animals"—to seek "comfort [in] ... carefully crafted logic and clear delineations" (Painlevé 1931, 119).

On account of such "anarchic tendencies," Painlevé's films entail "hybrid" aesthetic elements that constitute an amalgam of marine animal subjects and human cultural accoutrement (McDougall 2000, xiv), via the associations drawn through voiceovers and accompanying music. And this approach to cinema resonated with the efforts of other Surrealist artists who were at the time "rebellious against what they saw as the banality of commercial cinema" (Berg 2000, 12). As Rugoff explains, "Painlevé delights in presenting his subjects as uncanny hybrids that, for all their foreignness, call to mind things close to home" (Rugoff 2000, 50). Examples of this abound: in *Hyas and Stenorhynchus* (1929) alone, the Hyas recalls a praying Buddha, the Stenorhynchus evokes a Japanese warrior, and the expansion of the Spirograph worm looks like a fireworks display, while in *Acera or The Witches' Dance* (1972), the hermaphrodite molluscs' movements and postures recall the witches' Sabbath of composer Modest Mussorgsky's *Night on Bald Mountain*.³ Such associations and parodies are also as much aural as visual, given the musical accompaniments which Painlevé added. From his *The Hermit Crab* (1929) onward, these ranged from nineteenth-century compositions by Vincenzo Bellini, through Painlevé's "record[ing] of] a group of young people playing pots and pans ... in homage to his friend Edgard Varèse" for his 1954 remake of *The Sea Urchin* (1929), to the inclusion of François Roubaix's Antarctica as the theme of *Liquid Crystals* (1972) (Berg 2000, 20, 40–41, 43). Such music, composed at other periods or not specifically with the films in mind, allows for a sustained experience of the above-mentioned hybridity through the dissonance—and yet at times also uncanny resonance—between the sounds and moving images encountered.

Finally, Painlevé's deterritorialisation of the philosophical dogma of anthropomorphism—and for that matter, anthropocentrism—entailed his recourse to something akin to Spinoza's substance monism. As Painlevé explains: "To me, there

3 At one point—just over four minutes into the film—Painlevé even goes so far as to splice a few frames of a woman dancing in a gossamer gown into the scene of the mobile molluscs, to underscore the allusion.

is no difference between minerals, vegetables, and animals,” because “they are all linked through evolution”; he adds to this, that he is “very proud that we live today in an era that recognizes its dependence” on the humble “bacilli” (Painlevé 1986, 175). Such recognition contrasts markedly with the erstwhile denial of such reality in the interest of advancing the supposed quasi-divinity and centrality of humans.

Today such recognition is becoming increasingly commonplace, precisely because of the enduring struggle to deterritorialise the previously-dominant discourses, dynamics and conceptions which advanced ideas to the contrary. And Painlevé’s responses to the above five impasses through his minor cinema, comprised part of the various interventions that facilitated such transformation of thought. In this regard, though, while Painlevé’s minor cinema thus constituted part of a collective assemblage of enunciation through which a people to come sought to emerge, his work was not entirely idiosyncratic but rather always tied to the experiences of a minority group, namely the Surrealists. As Berg points out, while “Painlevé’s precarious position within the scientific community ... continue[d] throughout his career,” in contrast “the French avant-garde ... embraced his work from the very beginning,” and it was “Man Ray [who] borrowed footage of a starfish ... to use in his own film *L’Etoile de mer*” (Berg 2000, 19). Similarly, André Bazin links Painlevé specifically to the Surrealists, advancing that, while they “foresaw the existence of ... art that seeks in the almost impersonal automatism of their imagination a secret factory of images,” in the hands of Painlevé “the camera alone possesses the secret key to this universe where supreme beauty is identified at once with nature and chance” (Bazin 1947, 146–147). To be sure, as Michael Richardson explains, “very little has been written about the surrealists’ engagement with documentary other than in the context of Buñuel’s *Las Hurdes, Terre sans pain* (1932)”; however, “it was quite an important aspect of surrealist film activity and surrealism was a significant influence in the development of the documentary genre” (Richardson 2006, 77). Moreover, “Painlevé knew Buñuel and was close friends with [Jean] Vigo,” and “he share[d] with other film makers linked to surrealism a fascination with the relationship between humanity and the world” (Richardson 2006, 85). In this regard, while in their films “the world presented is one of disjunction,” it is “a disjunction not inherent to this world, but emerging as a result of humanity’s will to grasp life as a continuum;” in short, “doubt about the human capacity to master the world [remains] ... a characteristic of surrealism that Painlevé shares” (Richardson 2006, 85).

It is important to recall the above because it sheds light on the ethos of Painlevé’s minor cinema that in certain respects remains at odds with the ethos of Nuridsany and Pérennou’s *Microcosmos*, to be discussed next. The ethos, in the case of Painlevé’s films, entailed a Spinozan pursuit of a *sur*-reality, or a greater reality above or around the banal realities of the everyday, and it was sought through contrasting aspects of human culture with the strange domains and dynamics of sub-aquatic creatures. Indeed, so startling are the montage conflicts of sights and words and sounds thereby produced, that Eisenstein himself wrote to Painlevé: “You alone stand as a competitor

to Our Lady of Lourdes, as far as miracles are concerned” (as quoted in Masaki Bellows, McDougall and Berg 2000). But such new modal composition of miraculous images—which could function in turn as conceptual catalysts for the expansion of our reality—in many ways took precedence over the preservation of the environment and/or the prioritisation of nonhuman animal lives. In fact, Painlevé maintained a rather cavalier attitude toward the well-being of the creatures he interacted with, at least by contemporary standards.⁴ That is, from his betrayal of an octopus’s trust—painstakingly developed over time—by one day feeding her a rotten egg just to see what she would do (Painlevé 1986, 174), through his live dissection of a sea urchin in order to film its internal workings through a layer of gelatine (Berg 2000, 40), to his assertion that one of the “consolations” of his work was “the ability to eat [his] ... actors” after filming them (Painlevé 1935, 138), Painlevé exhibits a very Spinozan sensibility. As Gal Kober recalls in “For They Do Not Agree in Nature: Spinoza and Deep Ecology,” for Spinoza, substance monism implied no universal kinship between all beings or between beings and the world (Kober 2013, 58), with the consequence that the assertions to the contrary by Arne Naess in his “Spinoza and the Deep Ecology Movement” (Naess 1982) comprise a reflection of Naess’s own philosophy rather than a valid interpretation of Spinoza’s texts (Kober 2013, 57). Instead, for Spinoza, humans have no obligation to avoid using nature and the animals therein to augment their own happiness, not least because substance cannot be destroyed but can only be transformed at the level of its modal composition. Indeed, if there is any ethical obligation in Spinoza’s philosophy it is to other human beings in the city, so that our encounters can be arranged to maximise active joy and to limit sad passivity (Kober 2013, 58, 61). In this regard, Painlevé—possessed as he was of a wonderful sense of humour—emerges as deeply Spinozist.

Becoming-insect through Claude Nuridsany and Marie Pérennou’s *Microcosmos*

Unlike Painlevé’s films, which were a response to the five impasses detailed earlier, Nuridsany and Pérennou’s *Microcosmos* (1996) responds instead to the impasse of the environmental crisis. After all, Nuridsany and Pérennou’s adult context was that of the May 1968 student revolts and the associated rise of a global counter-culture, in which debunking conservative biases and fascistic tendencies became *de rigueur* along with demands for interdisciplinarity in education and aesthetic experimentation. In addition, theirs was also the time when, after Rachel Carson’s 1962 book *Silent Spring*, awareness of how environmental degradation is increasingly posing a threat to life on Earth began to grow, and related pro-environmental discourses began to gain momentum. There was also increasing recognition of “the role of anthropocentrism in

4 In Painlevé’s defence, though, in his time such an attitude was quite commonplace. For example, in Luis Buñuel’s *Las Hurdes, Terre sans pain* (1933) live chickens are brutally de-feathered in a village ritual, a “donkey [is] killed by bee stings” (Gubern and Hammond 2009, 167), and a goat, which “allegedly loses its footing and slips to its death” down a mountainside, “actually falls because Buñuel had it shot” (Durnat 1968, 56).

environmental degradation” (Sponsel 2017, 91), especially following Lynn White’s argument “in the late 1960s ... that Christianity’s anthropocentrism was the main cause of the environmental crisis,” because of the tenet that “it is God’s will that man exploit nature” (Davies 2013, 8). And this critical response was followed by a growing number of analyses of how contemporary neoliberal “culture [similarly] contains within it the seeds of continued environmental despoliation in the form of individualism, consumerism, and a worldview hopelessly incompatible with long-range environmental stability” (Gundersen 1995, 112).

Nuridsany and Pérennou’s deterritorialising response to the impasse of the environmental crisis resonates with such analyses, insofar as their minor cinema is orientated around processes of de-anthropocentrism, involving the progressive de-anthropomorphisation of nature documentaries. As Heller (2015) points out, “de-anthropocentrization and de-anthropomorphization are two sides of the same process” of undermining the mutually-reinforcing cycle of anthropocentric prejudice, which leads to the anthropomorphisation of nature that, in turn, endorses the centrality of humans, *ad nauseam*. Yet, only a partial resonance exists between Nuridsany and Pérennou’s minor cinema and Painlevé’s minor cinema in this regard, because *Microcosmos* seeks to break through the anthropocentrism which has precipitated the environmental crisis by *connecting* audiences conceptually and emotionally to the tiny creatures whose lives they routinely ignore. Indeed, the forging of such connections with insects is crucial for “Nuridsany and Pérennou [who] remind us that human life needs insect life more than insect life needs us,” and that insects might have lessons to “teach us during coming decades as we confront our growing environmental crisis” (MacDonald 2009, 180). To be sure, on the one hand, like Painlevé, Nuridsany and Pérennou “decry excessive anthropomorphism for turning animals into ‘zoomorphic puppets’”; but on the other hand, unlike Painlevé, they also intimate that a degree of anthropomorphism is often required for the above lessons to be learned, and that “refusing any type of anthropomorphism” can even be problematic when it leads to the assumption “that humans and animals have no commonality, and that human beings are absolutely unique (if not divine)” (Nuridsany and Pérennou as quoted in Rust 2014, 233). Thus, for Nuridsany and Pérennou, there is value in recognising those parallels that *do* exist between human and nonhuman animal life, and through reflecting such recognition in *Microcosmos* they problematise the habitual tendency of humans to set themselves apart from nonhuman creatures. Correlatively, their film has less to do with generating images for the aesthetic Spinozan expansion of an oneiric *sur*-reality through imaginative modal composition *à la* Painlevé, and more to do with advancing recognition of the biological and

ontological reality that human existence is interdependent with and indissociable from nature—in a way that accords instead with aspects of Deep Ecology.⁵

Microcosmos achieves this via its problematisation of the concept of the organism, particularly through its focus on parallels between human and insect behaviour, and insect and plant behaviour. In doing so, Nuridsany and Pérennou cinematically parallel Deleuze and Guattari's problematisation of the tendency to think of any organism in isolation from its milieu. In *A Thousand Plateaus*, Deleuze and Guattari contend that “an animal milieu ... is no less ‘morphogenetic’ than the form of the organism,” in the sense that, although “[o]ne ... cannot say that the milieu determines the form ... [s]ince the form depends on an autonomous code, it can [also] only be constituted in an associated milieu” which “interlaces active, perceptive, and energetic characteristics in a complex fashion” (Deleuze and Guattari 2005, 51). *Microcosmos* in many ways follows Deleuze and Guattari in their endeavour to “blow ... apart the organism and its organisation” (Deleuze and Guattari 2005, 30), in the interest of engendering appreciation of the univocity of being.⁶ Accordingly, for Nuridsany and Pérennou, the insect *Umwelt* is not the hermetically-sealed domain that it was for Jakob von Uexküll, who in his 1934 picture book *A Foray into the Worlds of Animals and Humans*, “imagine[d] all the animals that animate Nature around us ... as having a soap bubble around them ... which closes off their visual space” and in which they “all remain permanently enclosed” (Von Uexküll 2010, 69). Rather, a resonance exists between Nuridsany and Pérennou's treatment of the *Umwelt* in *Microcosmos*, and Deleuze's concept of it, on account of how “Deleuze [similarly] departs from a more literal interpretation of Uexküll” by focusing instead on how any given organism “relates to its surroundings, where the emphasis is neither on the [organism] ... nor on the environment ... but on the affective relation itself” (Buchanan 2008, 156). Analogously, *Microcosmos* reveals how the insect—and for that matter the plant—*Umwelt* is made up of affects which, while they may differ in proportion and complexity from the affects of the human *Umwelt*, are neither unrelated to such affects, nor unimaginable to humans. Moreover, because of the related parallels between humans and animals, and animals and plants, thematised in the film, the very concept of the separate organism as something isolated and autonomous, is problematised. And to the extent that this is the case, *Microcosmos* effectively “penetrat[es] past the phenomenological interest in the ‘lived body’ and ‘being-in-the-world,’ in order to discover the ontological processes that create what we are accustomed to call ... the ‘organism’” in the first place (Buchanan 2008, 151).

5 Deep Ecology emphasises, among other things, the importance of facilitating “[t]he well-being and flourishing of human and non-human life,” of contributing to the “[r]ichness and diversity of life-forms” on Earth, and of curbing human population growth and consumption levels to ensure the flourishing of all of life, which is understood as having intrinsic value (Naess 1987, 18–20).

6 Deleuze in *Difference and Repetition* maintains that “the essential in univocity is not that Being is said in a single and same sense, but that it is said, in a single and same sense, of all its individuating differences or intrinsic modalities,” because while “[b]eing is the same for all these modalities ... these modalities are not the same” (Deleuze 2001, 36).

To understand how this is the case, it is necessary to turn to the cinematography of *Microcosmos*, which entails an engramme akin to that of Dziga Vertov's *Man with a Movie Camera* (1929).⁷ Just as Vertov's film chronicled life in a Soviet city from morning to night through the disembodied perspective of a mobile lens, so too *Microcosmos* chronicles twenty-four hours of life in a meadow through the nonhuman perspective facilitated by macroscopic cinematography. The film begins with a descent through the clouds and the forest canopy, before the grass is entered into, to reveal a rhizomatic world of green stalks and earth, which bear an uncanny resemblance to the world of tree trunks and ground seen and passed through a few moments before. Viewers are then specifically advised, through a brief introductory voiceover, that it will be necessary for the remainder of the film to fall silent in order to hear the voices of the creatures, after which the ensuing images are accompanied only by amplified sounds of the insects (to situate the viewer more closely within their world), and/or music written by Bruno Coulais for the scenes, which follows and resonates with the insects' movements and rhythms, respectively.

As the film proceeds, though, it is as if one has travelled through the mirror of Lewis Carroll's *Through the Looking Glass*—or, for that matter, down the rabbit hole of his *Alice's Adventures in Wonderland*—because a world emerges that ranges from the deeply familiar to the utterly foreign, which Nuridsany and Pérennou create through two means. On the one hand, they visually allude to certain parallels between the micro world of the creatures as they move around the grass stems, and the macro world of the more “charismatic mascot species” of large wild animals, so frequently thematised in more traditional nature documentaries (Rust 2014, 231). This is apparent, for example, when a European rhinoceros beetle's rhythmic lope recalls the movements of a rhinoceros, or when a group of ants around a puddle recall a herd of wildebeest at a watering hole. Yet, having contextualised things in such broadly familiar standard documentary terms, a series of mesmerisingly paradoxical visual analogies ensue, as the insects follow morning rituals that are in many ways akin to those of humans. These range from waking and washing, through sourcing food and caring for offspring, to engaging with and overcoming daily obstacles—as when a dung beetle through trial and error finally figures out that a thorn has impaled his ball of dung, before carefully prying it loose and going on his way. And a significant part of the spellbinding power of these scenes derives from how the insects' gentle movements and gestures, made clear through the macroscopic cinematography employed, render them more like humans in their naked vulnerability than large charismatic animals protected by powerful muscles, fur and teeth. In a 2001 interview about *Microcosmos*, Nuridsany and Pérennou also maintain that they chose to focus on such simple everydayness of insect life not only because—like for humans—such

7 For Deleuze, Vertov's engramme is a “nonhuman eye, the cine-eye” that is “not the eye of a fly or of an eagle, [or] the eye of another animal” any more than it is “the eye of the spirit endowed with a temporal perspective, which might apprehend the spiritual whole. On the contrary, it is the eye of matter, the eye in matter, not subject to time ... and which knows no other whole than the material universe and its extension” (Deleuze 2005a, 83–84).

mundanity is the rule rather than the exception, but also in order to distinguish their film from more mainstream nature documentaries which fixate instead on exceptional scenes of violence and mating for the sake of ratings. Indeed, the now-famous love scene in *Microcosmos* between two snails—accompanied by beautiful operatic music and shot in slow motion with camera angles reminiscent of a classical realist romance film—stands in marked contrast to the often brutal treatment of animal mating in, for example, most National Geographic nature documentaries.

However, anthropomorphic identification with the insects on the part of the viewer is at the same time problematised by the foreign intensities encountered by the insects. For example, the ant that cannot penetrate through the viscosity of a dewdrop, which moreover evaporates before its eyes in the morning sun, and the seven-spot ladybird violently dislodged from a leaf by a raindrop. Similarly, the very idea that the world only exists as it is *seen* by humans is shattered through interspersing the human vantage with a bee's ultraviolet perception of a field of poppies, which emphasises only those things relevant to its survival that accordingly define the parameters of its *Umwelt*. Consequently, when later the perspective is that of ants being eaten by a pheasant, the viewer at once recognises the situation but is obliged to doubt that it looks like that from the point of view of the beleaguered insects. In this way, *Microcosmos* establishes a nuanced connection between the human viewers and the insect actors—as Nuridsany and Pérennou refer to them in their 2001 interview—through the maintenance of a carefully-measured visual tension: one that avoids both the break that would occur through the inability of a human viewer to comprehend a scene, and anthropomorphic assimilation of the insects through an excess of emphasis on their similarity to humans.

Importantly, connection is also established between insects and plants, so that the insects emerge as the midpoint, so to speak, along a bio-continuum spanning the plant and human world; something which problematises the continued validity of the organism as a concept in a world of necessary interdependence, for the reasons already mentioned. This is poignantly communicated in the scene where a male *Eucera* bee attempts to procreate with an *Ophrys* orchid, which over millennia has evolved to look so much like a female bee that the male of the species finds its charms irresistible. This scene also amounts both to a visual expression of Deleuze and Guattari's contention in *A Thousand Plateaus* concerning “[h]ow ... movements of deterritorialization and processes of reterritorialization [are] ... relative, always connected, caught up in one another,” and to an analogy of their example of the “[w]asp and orchid as ... a rhizome” (Deleuze and Guattari 2005, 10). With regard to the latter, Deleuze and Guattari argue that it is not simply the case that “the orchid imitates the wasp,” because “something else entirely is going on: not imitation at all but a capture of code” that entails “a becoming-wasp of the orchid and a becoming-orchid of the wasp”—a consequence of “an exploding of two heterogeneous series on the line of flight composed by a common rhizome” (Deleuze and Guattari 2005, 10). Similarly, in *Microcosmos*, the parallels between the intensities of flora and fauna are

powerfully underscored through the juxtaposition of a caterpillar, at the end of a stalk it has climbed, stretching blindly forward into the empty air in pursuit of additional contact, with a vine that, directly thereafter and through accelerated footage, is shown both ascending a stalk and attempting to exceed it in analogous fashion.⁸

Through such means, the macroscopic focus on the above insects and plants in the film is rhizomatic in two senses. Firstly, in an obvious sense, these shots entail focus on “grass [which] is ... a rhizome” (Deleuze and Guattari 2005, 10). But secondly, and more importantly, they are rhizomatic because they make it “easy to see the grass in things,” or how “[t]here are no points or positions in a rhizome, such as those found in a ... tree,” but rather only “multiplicity” which “expose[s] arborescent pseudomultiplicities for what they are” (Deleuze and Guattari 2005, 8, 23). And this is achieved through how the film “ceaselessly establishes connections between ... organizations ... and circumstances” of flora, fauna, and humans at “perceptiv[al], mimetic, gestural, and cognitive” levels—effectively “connect[ing] any point to any other point” (Deleuze and Guattari 2005, 7, 21).

In turn, the periodic, sudden shifts away from such macroscopic focus, back to the world of human proportions and perceptions, through establishing and re-establishing shots of the trees around the meadow in which the insects’ activities are taking place, are arboretic in two senses. Firstly, in an obvious sense, these shots feature the overarching “domination by trees” of the meadow (Deleuze and Guattari 2005, 19). But secondly, and more importantly, they are arboretic because they are informed by the “tree logic ... of tracing and reproduction” that underpins the “arborescent culture” (Deleuze and Guattari 2005, 12, 15) of more traditional nature documentaries. That is, those documentaries which seek to “represent” nature as “crystallized into codified complexes”—or organisms—and correlatively neatly “laid out ... and distributed” in what amounts to “a de facto state” of “balance[d] ... intersubjective relations ... articulate[d] and hierarchize[d]” (Deleuze and Guattari 2005, 12) in terms of the arboreal logic of an exclusively human perspective.

But it must be remembered that just as “Deleuze and Guattari consistently refuse to posit a binary opposition between the arborescent and the rhizomatic” (Sprouse 1997, 83), so too a similar stance is apparent in *Microcosmos*. Indeed, in the film the arboretic shots do not break the flora-fauna-human connection established through the rhizomatic macroscopic shots, but rather simply constitute reflections of one pole of the bio-continuum, namely that *of* the human perspective. In this regard, on the one hand, periodic focus on the surrounding trees in different degrees of light serves as a time marker for the viewer by showing the progression of day into night over a twenty-four-hour cycle, and as an indicator of changing weather conditions by focusing on branches blowing in a rising wind or leaves being pelted by driving rain.

8 Similar parallels are also drawn via such montage arrangements between the unfurling proboscis of a butterfly and the unfurling petals of certain flowers, and between the physical intertwining of mating snails and the intertwined tendrils of certain plants.

But on the other hand, while at the very beginning of the film a brief voiceover explains that, for the creatures who will be encountered, time is experienced differently—with hours akin to days, days akin to seasons, and a season the duration of a life—in the ensuing scenes it also becomes clear that for these creatures a breeze can be like a hurricane, and a trickle of rainwater an insurmountable flood. The effect, then, of such vacillation between rhizomatic macroscopic shots of tiny insects and plants, and arboreal establishing shots of trees—which moreover plays out in the absence of any guiding narration after the above-mentioned brief opening voiceover—is a peristaltic montage which precipitates the birth of a people to come, and which accordingly renders *Microcosmos* an example of minor cinema.

That is, firstly, unlike the classical political cinema of Eisenstein which addresses an extant people, in *Microcosmos* “*the people are missing*” (Deleuze 2005b, 208), insofar as they feature neither directly as an object of cinematic focus, nor indirectly as a disembodied narrating voice. Moreover, they are *missing* because they do not yet exist, since it is the above peristaltic rhizomatic-arboreal montage of the film which effectively ushers them into existence as people possessed of a different conception of both their interdependence with, and their indissociability from, nature.

Secondly, unlike in Eisenstein’s films where “a border between the political and the private” is “always maintained” (Deleuze 2005b, 209), in *Microcosmos* the private is politicised through the anthropomorphism of the insects, which problematises strict differentiation of them from humans, and the political is privatised through problematising the continuation of anthropocentric bias at the level of the individual viewer’s attitude. To clarify, as Ronald Bogue explains, when faced with montage “[t]he obvious question posed by the disconnected images” concerns “[h]ow ... they [can] be reconnected” (Bogue 2003, 171), which involves different processes for classical and modern political cinema. In Eisenstein’s classical political cinema, “images are linked through their ... harmonies, polarities, and contrasts” to “embody the sensual thinking of an inner monologue” in which “each image succeed[s] the next according to its given affinities with the preceding” image (Bogue 2003, 171)—such that a scaffolding for thinking differently is systematically built up.⁹ In contrast, in modern political cinema no visual scaffold is erected to systematically develop the viewer’s thought, as it were. Rather, “the thought of the outside” effectively “manifests in the interstice, the gap or interval between images,” where it functions “paradoxically ... as a gap or interval and yet [also] as a generative force, a *constitutive* ‘between two of images’,” in response to which “[l]ogical thought breaks down and experiences its own limits” (Bogue 2003, 170, 173, 176). And this is apparent in *Microcosmos*, which as modern political cinema or minor cinema, “forces thought to think ... the outside, that dispersive, spacing force that passes into the interstice” to rupture thought, both politically “in the external world” of

9 For Eisenstein, “[c]inematography is, first and foremost, montage,” because through such means “[t]he simple combination of two or three details of a material kind yields a perfectly finished representation of another kind—psychological” (Eisenstein 1929, 28, 32).

anthropomorphism, and privately “within” the world of anthropocentric bias (Bogue 2003, 176).

Thirdly, unlike in classical political cinema where there is “conquest of power by a proletariat, or by a united or unified people,” *Microcosmos* as modern political cinema is predicated on “acknowledging the failure of [such] fusions or unifications,” because of how they tend to “re-create a tyrannical unity” that “turn[s] back against the people” (Deleuze 2005b, 211–212)—either those of the city or those of the grass. Instead of pursuing such unity, what the film precipitates is the progressive “fragmentation” (Deleuze 2005b, 212) of anthropomorphic/anthropocentric integrity through the correlative formulation of a collective enunciation by a new human-animal-plant hybrid. That is, Nuridsany and Pérennou, finding themselves before audiences “doubly colonized: colonized by [anthropomorphic] stories ... from elsewhere” and “by their own [anthropocentric] myths become impersonal entities,” do not “invent a fiction which would be one more private story” articulated in the voice of a “master” (Deleuze 2005b, 213) who provides yet more remedial instruction. Rather, they take “real and not fictional characters”—namely their insect actors—and “put ... these very characters in the condition of ‘making up fiction’,” in a process “of ‘story-telling’” underpinned by a “double becoming” (Deleuze 2005b, 214). This is made possible by Nuridsany and Pérennou “tak[ing] a step towards [these] ... characters” while “the characters take a step toward the[m]” (Deleuze 2005b, 214). Through the ensuing carefully-measured visual tension—which as discussed earlier avoids both exclusive fixation on the insects’ utter difference from humans, and anthropomorphic assimilation of the insects—a “collective utterance” is produced, one which “contribute[s] to the invention of [a] ... people” (Deleuze 2005b, 214). In this way, Nuridsany and Pérennou’s film *Microcosmos* “constitute[s] an assemblage which brings real parties together”—namely plants, insects, and human viewers—“in order to make them produce collective utterances as the prefiguration of the people who are missing” (Deleuze 2005b, 215).

Conclusion

In an effort to counter the entrenched self-sabotaging habit of anthropocentric thought which underpins the environmental crisis, it is necessary to “‘bring ... cinema together with the innermost reality of the brain’,” which “is not the Whole, but on the contrary a fissure, a crack” (Deleuze 2005b, 162)—one which Nuridsany and Pérennou effectively exploit through the spiritual automaton that their *Microcosmos* unleashes. For Deleuze, the spiritual automaton refers to both “the involuntary nature of thought’s response to the moving image,” and how in relation to “modern [political] cinema ... thought [is] aroused by the image ... like ... an alien thinker within” (Bogue 2003, 166); a critical thinker that exceeds the parameters of previous thought. In fact, because “thought depends on a shock which gives birth to it ... it can only think one thing, *the fact that we are not yet thinking*, the powerlessness to think the whole and to think oneself,” and at the same time the urgency to think beyond

“thought which is ... fossilized, dislocated, [and] collapsed” (Deleuze 2005b, 162). As Nuridsany explains in his and Pérennou’s 2001 interview, the whole point of *Microcosmos* is precisely to open a window for people to think differently, and as discussed, their film achieves this through the human-insect-plant bio-continuum that it establishes via its peristaltic montage—the result of which is indeed the engendering of “cosmopolitan companionship” (Lorimer 2013, 75) between humans, nonhuman creatures, and plants. However, such cosmopolitan companionship is not something equally engendered through Painlevé’s films, precisely because the Spinozan orientation of the latter precludes such possibility. Yet to the extent that *Microcosmos* departs from Spinoza—and for that matter from Deleuze—by intimating a universal kinship between all beings and the world, and a corresponding ethical obligation on the part of humans to identify with and care for wider nature, the film also draws close to the position of Deep Ecology. As discussed, Kober has rightly pointed out that the ethical “imperatives Naess and other deep ecologists” grounded in “Spinoza’s view of nature” do not constitute “valid Spinozistic conclusions” (Kober 2013, 57). But in the face of the environmental crisis—with which Spinoza was unfamiliar—ethical inspiration deriving from his substance monism may well prove more transformative than refuge in philosophical dogmatism. In this regard, by engendering cosmopolitan companionship that is couched in growing appreciation of shared intensities and recognition of humans’ thorough interdependence with wider nature, *Microcosmos* emerges as inseparable from a new ethic of concern and care on the part of a people yet to come.

References

- Bazin, A. 1947. “Science Film: Accidental Beauty.” In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman. 2000, 144–147. Cambridge: The MIT Press.
- Berg, B. 2000. “Contradictory Forces: Jean Painlevé, 1902–1989.” In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 2–47. Cambridge: The MIT Press.
- Bogue, R. 2003. *Deleuze on Cinema*. New York: Routledge.
- Buchanan, B. 2008. *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. Albany: State University of New York Press.
- Davies, K. 2013. *The Rise of the U.S. Environmental Health Movement*. Lanham: Rowman and Littlefield.
- Deleuze, G. 2001. *Difference and Repetition*, translated by P. Patton. London: Continuum.
- Deleuze, G. 2005a. *Cinema 1: The Movement-Image*, translated by H. Tomlinson and B. Habberjam. London: Continuum.

- Deleuze, G. 2005b. *Cinema 2: The Time-Image*, translated by H. Tomlinson and R. Galeta. London: Continuum.
- Deleuze, G., and F. Guattari. 2000. *Kafka: Toward a Minor Literature*, translated by D. Polan. Minneapolis: University of Minnesota Press.
- Deleuze, G., and F. Guattari. 2005. *A Thousand Plateaus: Capitalism and Schizophrenia*, translated by B. Massumi. Minneapolis: University of Minnesota Press.
- Durgnat, R. 1968. *Franju*. Berkeley: University of California Press.
- Eisenstein, S. 1929. "The Cinematographic Principle and the Ideogram." In Eisenstein, S. 1949. *Film Form: Essays in Film Theory*, translated by J. Leyda, 28–44. London: Dennis Dobson.
- Eisenstein, S. n.d. As quoted in *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman. 2000. Cambridge: The MIT Press.
- Gubern, R., and P. Hammond. 2009. *Luis Buñuel: The Red Years, 1929–1939*. Madison: The University of Wisconsin Press.
- Gundersen, A. G. 1995. *The Environmental Promise of Democratic Deliberation*. Madison: The University of Wisconsin Press.
- Heller, A. 2015. *Renaissance Man*, translated by R. E. Allen. [e-book]. London: Routledge. <https://doi.org/10.4324/9781315682488>.
- Kober, G. 2013. "For They Do Not Agree in Nature: Spinoza and Deep Ecology." *Ethics and the Environment* 18 (1): 43–65. <https://doi.org/10.2979/ethicsenviro.18.1.43>.
- Lorimer, J. 2013. "More-Than-Human Visual Analysis: Witnessing and Evoking Affect in Human-Nonhuman Interactions." In *Deleuze and Research Methodologies*, edited by R. Coleman and J. Ringrose, 61–78. Edinburgh: Edinburgh University Press.
- MacDonald, S. 2009. *Adventures of Perception: Cinema as Exploration—Essays/Interviews*. Berkeley: University of California Press.
- McDougall, M. 2000. "Introduction: Hybrid Roots." In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, xiv–xviii. Cambridge: The MIT Press.
- Microcosmos : Le Peuple de l'Herbe*. 1996. [Film.] C. Nuridsany and M. Pérennou (dirs). France: Galatée Films/France 2 Cinéma/Bac Films. [Blu-ray Special Edition, 2009].

- Naess, A. 1982. "Spinoza and the Deep Ecology Movement." In A. Naess. 2005. *Deep Ecology of Wisdom: Explorations in Unities of Nature and Cultures*, edited by H. Glasser and A. Drengson. Volume X of *The Selected Works of Arne Naess*, edited by H. Glasser and A. Drengson, 395–420. Dordrecht: Springer.
- Naess, A. 1987. "The Basics of Deep Ecology." In A. Naess. 2005. *Deep Ecology of Wisdom: Explorations in Unities of Nature and Cultures*, edited by H. Glasser and A. Drengson. Volume X of *The Selected Works of Arne Naess*, edited by H. Glasser and A. Drengson, 13–20. Dordrecht: Springer.
- Nuridsany, C., M. Pérennou, V. Willis, and C. Petitprez. 2001. "The World of Microcosmos – An Interview with the Directors," Edition Montparnasse. *Microcosmos*. 1996. [Film.] C. Nuridsany and M. Pérennou (dirs). France: Galatée Films/France 2 Cinéma/Bac Films. [Blu-ray Special Edition, 2009].
- Painlevé, J. 1931. "Mysteries and Miracles of Nature." In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 118–123. Cambridge: The MIT Press.
- Painlevé, J. 1935. "Feet in the Water." In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 130–139. Cambridge: The MIT Press.
- Painlevé, J. 1953. "The Castration of the Documentary." In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 148–156. Cambridge: The MIT Press.
- Painlevé, J. 1986. "Jean Painlevé Reveals the Invisible." Interview with H. Hazéra and D. Leglu. In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 170–179. Cambridge: The MIT Press.
- Richardson, M. 2006. *Surrealism and Cinema*. Oxford: Berg.
- Rugoff, R. 2000. "Fluid Mechanics." In *Science is Fiction: The Films of Jean Painlevé*, edited by A. Masaki Bellows, M. McDougall and B. Berg, translated by J. Herman, 48–57. Cambridge: The MIT Press.
- Rust, S. 2014. "Ecocinema and the Wildlife Film." In *The Cambridge Companion to Literature and the Environment*, edited by L. Westling, 226–239. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CCO9781139342728.020>.
- Sponsel, L. 2017. "Lynn White Jr., One Catalyst in the Historical Development of Spiritual Ecology." In *Religion and Ecological Crisis: The "Lynn White Thesis" at Fifty*, edited by T. LeVasseur and A. Peterson, 89–102. New York: Routledge.
- Sprouse, K. A. 1997. "Chaos and Rhizome: Introduction to a Caribbean Poetics." In *Cross-Cultural Studies*, edited by A. J. Arnold. Volume 3 of *A History of Literature in the Caribbean*, 79–86. Amsterdam: John Benjamins. <https://doi.org/10.1075/chlel.xii.07spr>.

Stehr, N., and R. V. Ericson. 1992. Introduction to “Part II: Theoretical Perspectives.” In *The Culture and Power of Knowledge: Inquiries into Contemporary Societies*, edited by N. Stehr and R. V. Ericson, 23–27. Berlin: Walter de Gruyter.
<https://doi.org/10.1515/9783110847765>.

Von Uexküll, J. 2010. *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning*, translated by J. D. O’Neil. Minneapolis: University of Minnesota Press.