Reconfiguring Human, Nonhuman and Posthuman

Striving for More Ethical Cohabitation

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As Donna Haraway (2015, 160) argues, "[i]t matters which stories tell stories, which concepts think concepts. Mathematically, visually, and narratively, it matters which figures figure figures, which systems systemize systems". The time has come for human cultures to seriously think, to diligently conceptualize, and to earnestly fabulate about all the nonhuman critters we share our world with, and to consider how to strive for more ethical cohabitation.

The aim of this book, *Reconfiguring Human, Nonhuman and Posthuman in Literature and Culture,* is to try and tackle this severe matter within the framework of literary and cultural studies. The emphasis of the inquiry is on the various ways actual and fictional nonhumans are reconfigured in contemporary culture – although, as long as the domain of nonhumanity is carved in the negative space of humanity, addressing these issues will inevitably clamor for the reconfiguration of the human as well.

The challenge of mapping the tangled relations between humans and nonhumans has recently been accepted by diverse disciplines, as scholars across academia must come to terms with the social, economic, cultural, environmental, and technological changes that surround, penetrate, and affect their methods and fields of study with unprecedented rapidity. This struggle to adapt has already resulted into a wealth of new approaches, research questions, and conceptualizations, but neither the saturation point nor the demand has quite been met as of yet. On the contrary, the need to find new ways of encountering, discussing, and thinking of entities and environments where human and nonhuman entangle in increasingly intricate patterns has never been more urgent.

So far at least, one of the key tools for approaching these changes has been the concept of the Anthropocene. Humans are now molding even the Earth's strata, which has prompted geologists to propose a new epoch (Crutzen and Stoermer 2000): it is commonly argued that the Anthropocene marks the time in history when the sum of human actions has a larger influence on the geology, hydrosphere, and biosphere

of the Earth than all the naturally occurring cataclysms combined. Indeed, even though the contributors of this volume actively seek new, less anthropocentric perspectives, the humankind's growing influence on the planet cannot be ignored. Climate change, the sixth global mass extinction, deforestation, pollution, nuclear devastations, agricultural developments, intensive animal farming, extensive land-use, ever-increasing consumption of natural resources, and human population growth have had, and continue to have, serious consequences for the entire Earth system and for all the life forms it sustains. This includes human beings, who are hardly equal in relation to these problems either: some are more responsible for the exploitation of the natural resources, and gain short-term benefits from it, while the less privileged ones are situated closer to the receiving, powerless end of the exploitation, along with the myriad nonhumans.

Scholars around the world are now calling for interdisciplinary research that would help us to understand how the Anthropocene came into being, and how it affects humanity and the planet. In natural sciences, for instance, anthropogenic environmental developments, like deforestation, ocean acidification, chemicalization, mass extinctions, and climate change, are no longer observed simply as separate phenomena but as systemic processes affecting the entire Earth. This has given rise to such fresh fields of research as Earth system science and global change research. At the same time, expectations for a greater convergence between natural sciences, social sciences, and the humanities are amounting (Sörlin 2012; Palsson et al. 2013; Holm et al. 2015; Brondizio et al. 2016; Heise 2016).

Bringing profoundly different disciplines to contribute in the same discussion and problem-solving will require substantial and long-standing efforts, however, and critics have already highlighted possible gaps and conflicts. Some have criticized natural sciences' tendency to ignore the ways the historical, economic, national, and social distinctions in human societies have all hastened the end of the Holocene. Various alternative coinages, like "Capitalocene", "Sociocene", "Econocene", "Anglocene", "Chthulucene", and "Neganthropocene" (Davis and Turpin 2015, 6–11; Haraway 2015, 2016; Wark 2016; Stiegler 2017), aspire to seize these ongoing global changes from different angles and call for new ways of understanding humanity itself. Others, meanwhile, have dismissed the very notion of the Anthropocene as altogether "too anthropocentric" (e.g. Haraway 2016; Wark 2016). For example, Claire Colebrook (2017, 10) declares it problematic to view "the Anthropocene as an epoch, as a line or stratum whose significance would not be in dispute. Rather than think of this line as privileged or epochal, we might ask for whom this stratum becomes definitive of *the human*". Following Colebrook and Tom Cohen's (2016, 8) argumentation, humans are not only regarded as the conceptual antithesis of the nonhuman, but, in a

very concrete way, nonhumanity is what humanity denies, excludes, and destroys. In sum, humans are simultaneously world-changing agents and witnesses to processes they cannot wholly understand, predict, or manage. It is thus crucial to consider who the privileged human of the Anthropocene actually is (Colebrook 2017, 10).

Overall, definitions of humanity have grown more and more unstable in natural sciences and in philosophical discussions alike, which has led to a so-called crisis of humanism (see Badmington 2004; Braidotti 2013; Koistinen 2015, 58). Meanwhile, the material parameters of human existence have been reconfigured, for instance, by in-vitro meat, the human genome project, custom-made pharmacology, artificial intelligence, and many other manifestations of scientific and technological progress (Twine 2010; Åsberg 2013; Koistinen 2015, 59) – if progress it can be called. It is usually not that difficult to find an angle from which human innovations do not appear purely advantageous – and more often than not, those angles are more or less nonhuman in nature. A number of scholars have therefore proposed a new concept of the posthuman and accompanying theories of posthumanism, which call into question the anthropocentric biases of humanist thought, the belief in technological progress, and the ethics of current human–nonhuman relations (see e.g. Wolfe 2003a, 2003b, 2010; Badmington 2000; Åsberg 2013; Braidotti 2013; Åsberg and Braidotti 2018).

Because these posthumanist ways of thinking are, all in all, motivated not only by practical and epistemological but also by ethical interests, much of the theoretical work produced under the moniker has, to date, focused on the ethical dimensions of the (post)human. As many researchers have noted, global cultural hegemonies have labeled only a selected few as prototypes of the ideal humanity, while those deviating from this white, masculine, healthy, heterosexual standard – that is, most of the world's population – are branded varying shades of subhuman (e.g. Wolfe 2003a, 6–8; Butler 2004, e.g., 1–4; Koistinen and Karkulehto 2018). Thus, while the chapters of this book mostly scrutinize various ethically loaded relationships between humans and nonhumans, they also resonate with the ethics of encountering the so-called "others of Man" in Euro-American cultures (see also Åsberg 2008, 264–269; Koistinen 2015, 45; Braidotti 2017, 21–31; Koistinen and Karkulehto 2018).

The cultural meanings given to nonhuman animals often reflect and coincide with the attitudes and assumptions held toward repressed or marginalized groups, whereby the treatment of animals and nonhumans is connected to the treatment of the humans who are, in varying contexts, viewed as lesser, weaker, subordinate, or substandard (Herman 2018; Wolfe 2003a, 6–8). This includes, for instance, women (as well as children and elderly people), "other races", people with disabilities, and those who are not readable as members of acceptable genders, as Judith Butler (2004) has noted. Theorists of ecocriticism, critical animal

studies, queer and disability studies, feminist theory, and several other disciplines have time and again challenged the notions that situate (certain kind of) human beings above all the "other" creatures (e.g. Åsberg 2013, 10; Grusin 2017; Koistinen and Karkulehto 2018). Despite the supposed crisis of humanism, these long traditions in exposing and renegotiating social and the humanities structural hierarchies actually make different branches of the humanities quite well-equipped for addressing the hegemonies and dependencies as well as the divides and continuities between humans and nonhumans.

In the intersection of these theoretical traditions and the newly surfaced concerns of the Anthropocene, forms feminist posthumanism, a streak of posthumanist thought that has been influenced by the essayistic writings of Donna Haraway (see Koistinen and Karkulehto 2018). Even though Haraway (2008, 2016) has criticized the concepts of posthumanism and the Anthropocene alike – because they both overemphasize the Anthropos, the human – her work on "significant others" and "companion species" highlights the mechanisms of differentiation and the ethical problems of humanist conceptualizations in ways that are overtly relevant to the discussions about posthumanism and the Anthropocene. Haraway's (2008, 69–82) thoughts on killable and livable species also relate to the ideas of several feminist thinkers; with Butler's (2006, 2010) grievable, ungrievable, and livable lives, and Ahmed's (2004) livable and lovable lives (Koistinen 2015, 58). Both Butler (2004, 12–13) and Haraway (2008) have maintained that the concept of a livable life should be extended to nonhuman life-forms. Furthermore, as Koistinen (2015, 58–59) has argued, both have advocated for openness and curiosity toward the potential new understandings and futures humans and nonhumans could share (Butler 2004, 204–231; Haraway 2008, 289, 300–301). The only way to tackle the ethical and political issues surrounding "killable" animals is "to reimagine, to speculate again, to remain open", and to recognize that "ways of living and dying matter" to other animals as much as they matter to human beings (Haraway 2008, 88, 93). Haraway's non-anthropocentric thinking culminates in the concept of "Chthulucene", "an ongoing temporality that resists figuration and dating and demands myriad names". This challenges the problematic concept of the Anthropocene, which, for Haraway, "is not an idiomatic term for climate, weather, land, care of country, or much else in great swathes of the world" (Haraway 2015).

Meanwhile, the more epistemological concerns of posthumanism – the (im)possibility of cross-species understanding – have been linked to cognitive sciences and methodologies, to the so-called problem of other minds, and the evanescent, private nature of experience itself. These connections were already drawn in 1974 by philosopher Thomas Nagel, whose essay "What Is It Like to Be a Bat?" has inspired many of the contributors of this volume as well. In this brief but influential classic, Nagel

notes that the instruments of natural sciences are unfit for discussing the subjective textures of lived experiences, and their grasp of minds and consciousness, whether human or nonhuman, is therefore rather limited. That is, even if natural sciences' findings of animals' behavioral patterns and their mentalistic motivations are reliably based on (certain types of) empiricism, such hypotheses and experiments only produce abstractions and generalizations valued by (certain types of) anthropocentric institutions. By contrast, they tell us little of how being a bat *feels* through a bat's body, or to what kind of action potentials or horizons of meaning this specific embodiment is bound.

Although these questions of embodiment are now being asked with new-found urgency by enactivist theorists, it is still up to debate whether or not these contextual, holistic, first-person qualities of nonhuman experience can ever be studied scientifically at all; the "objective phenomenology" proposed by Nagel (1974, 449) still remains to be developed. What is clear, however, is that humanistic approaches like philosophy of mind can think about nonhuman experiences in ways that the reductive, objectifying methods of natural sciences do not allow or value. Moreover, if philosophy of mind is understood as an informed kind of speculation (cf. ibid.), literature and other art forms can be situated on the same methodological continuum: they also tend to speculate about the unfamiliar, the unrealized, and the unknown, only on a more concrete, embodied, contextualized, and/or personal level. In other words, literature and art specialize in imagining, examining, and fostering the subjective, embodied aspects of (nonhuman) experience, which the methods of natural sciences have traditionally bypassed. Yet, this experiential dimension is where empathy and other types of personal engagements take place, whereby increasing our understanding of nonhuman creatures, especially on this level, is likely to have notable epistemological and ethical repercussions (cf. Bernaerts et al. 2014).

It also stands to reason that triangulating something so difficult to reach or comprehend through several different disciplines and methodologies – such as natural sciences, philosophy, and arts – will result in more detailed and accurate insights and approximations than the employment of just one approach. Artistic takes on the nonhuman, and academic interpretations of these artworks, are thus an invaluable part of the posthumanist exploration; they cover some of the blind spots of natural sciences and other humanist approaches (cf. Herman 2018).

The Nonhuman in Literature and Culture

So, how is the nonhuman discussed and imagined – or, in Haraway's words, storied and figured – in the literature, art, and culture of the world that has entered a new era, be it the Anthropocene, the Capitalocene, the Sociocene, the Econocene, the Anglocene, the Neganthropocene, or the

Chthulucene? What practices of storytelling, representation, visualization, communication, and meaning-making do we humans employ in our relations to the nonhuman or posthuman – and, more importantly, what practices *could* we employ and what do these practices do?

Not only scholars but also authors and artists have recently taken a keener interest in the nonhuman. However, where posthumanist (animal) studies are mostly rethinking the current ethical and political changes "in light of new knowledge about the life experiences of nonhuman animals", as Cary Wolfe (2010, xxix) maintains, arts and literature have concerned a wide variety of possible and impossible nonhumans, and their various relations to humans, all along. The European tradition of fables, for instance, dates back to Ancient Greece, and the myths of all pre-literary cultures are rife with metamorphoses and chimeric creatures. Experimental and speculative literature and art have since elaborated on these tropes and created many new ways of colliding and merging humanity with the vast domains of life, sentience, and agency that reside outside of it – for what is a story without a conflict and its resolution? So far, scholars interested in the reconfigurations of the nonhuman or posthuman in narratives, arts, and media have turned especially to science fiction, because the various possible worlds and alternative futures imagined within the genre often organize the relations between humans and nonhumans in novel ways (see Haraway 1991, 2008, 217, 2016; Braidotti 2002, 182–184, 203–204; Graham 2002; Badmington 2004, 13–15; Vint 2007, 2014; Koistinen 2015).

Practitioners of ecocritical literary studies (e.g. Soper 1995; Scigaj 1999) have, however, leveled stark criticism toward literary representations of nonhumans since the 1990s: among others, and especially following Gayatri Chakravorty Spivak, David Gilcrest (2002) has deemed any and all attempts at speaking on behalf of nonhumans misguided. Writing is a distinctively human activity, and, to a large extent, very deliberate, intentional, and interpersonal. These assumptions mainly close nonhumans outside of the spheres of literary interest, influence, and action. However, according to posthumanist, new materialist and object-oriented strands of reasoning (Malafouris 2013, 119–139; Morton 2013), lack of interest, influence, or bodily or cognitive abilities does not necessarily negate the possibility of nonhuman agency. On the contrary, many literary scholars now recognize that nonhumans influence, both materially and semiotically, the ways we perceive them, represent them, and write about them (e.g. Herman 2018). Nonhuman beings or environments thus do steer the production of literature, both directly and indirectly, although these processes are often difficult to track and explain.

Serenella Iovino and Serpil Oppermann (2014) have recently fused ecocriticism with Karen Barad's agential realism, creating a new approach they call material ecocriticism. Following Barad's ideas, this framework

reconfigures nonhuman literary agency as intra-action that allows human and nonhuman bodies and meanings to co-emerge and, respectively, establish meanings in and through textual and material bodies – or in what Iovino and Oppermann (2014) call "storied matter". The city of Naples, for instance, is a porous entity, both materially and semiotically, which means it is constantly open to new human and nonhuman histories, which can be produced and read in cultural texts – such as literature, architecture, or sculptures portraying the city – as well as in the landscape itself. According to Iovino (2016, 39), this idea of storied matter holds great ethical and political potential:

> when human creativity "plays" together with the narrative agency of matter, intra-acting with it, it can generate stories and discourses that "diffract" the complexity of our porous collective, producing narrative emergencies that amplify reality, also affecting our cognitive response to this reality.

The stories we spin – and the images we make – about certain places reflect and stem from these intra-actions, meaning that the places themselves make us experience and think about them in the ways we do experience and think about them.

Bruno Latour also discusses nonhuman literary agency briefly in his essay "An Attempt at a 'Compositionist Manifesto'" (2010), which includes a curious footnote about animism. "The redistribution of agencies is the right purview of literature studies", Latour claims (2010, 489), implying that humanists and literary scholars are especially fit to address the liveliness and effectiveness of nonhumans, tuned as they are to fictional characters. He is, of course, right in noting that literary characters are always nonhuman, artificial constructions, no matter how often and easily they are perceived and discussed in human terms. Their agencies are mostly limited to thematic levels – to raising questions about and building scenarios around all kinds of fictional subjectivities, some of which may be posed as human and some of which may be posed as nonhuman. These questions and scenarios constitute the text itself and play into its reception, possibly influencing the reader or the viewer. It is important to note, however, that these agencies of fictional characters mostly mediate, or are at least rather dependent on, the creative and interpretive processes of their human producers and audiences (cf. Bernaerts et al. 2014; Varis 2019). The question of nonhuman poetic agency – of real nonhumans' possibilities of participating in the actual, fleshly act of writing – is a slightly different matter, and one that is also attracting growing interest (e.g. Moe 2014; Lummaa 2017; Tüür 2017).

Examining these two previously overlooked nonhuman forces – the characters participating in the texts and their reception "from the inside", and the co-agencies molding them "from the outside" – calls for

distinct but intertwined methodological strands, which should allow for tracking of the nonhuman currents in language and typography, as well as for describing the ways in which nonhuman agents are gathered or composed in and around the texts under investigation (following Latour 2010, 2011 and Haraway 2016). In other words, narrative studies should develop new methods of taking into account not only the traditional trinity of text, the author, and the reader but all the relevant agents and factors contributing to a given text, whether they are beings, spaces, or historical, natural, textual, cognitive, or social processes. Furthermore, it should be recognized that the meanings and experiences emerging from these processes are never fully human or nonhuman in their origin or ontology (Varis 2019, 94–104).

The hierarchies and tensions between human and nonhuman perspectives have also underlain the interests of – and the debates between – cognitive and unnatural narratologies. At the end of the 20th century, Monika Fludernik's (1996) "natural narratology" redefined narrativization as an activity that both organizes and is deeply permeated by human experientiality – a view that has proved influential in at least two ways. On the one hand, later cognitive narratologies have largely developed along the anthropocentric trajectories demarcated by natural narratology: they tend to anchor both the readers' meaning-making processes and the value of literature on social, probably quite species-specific, cognitive capabilities (e.g. Herman 2013). That is, many cognitive thinkers believe that we place value and interest in fiction and art only insofar as they tell us something about other humans' minds and motivations, and train our folk-psychological skills. On the other hand, other theorists have been inspired to speak against natural narratology and, by association, its anthropocentrism. A notable portion of literary fiction includes elements – nonhuman narrators, impossible space-time, and improbable occurrences – which are blatantly at odds with humans' everyday reality. According to the now-dwindling group of unnatural narratologists, explaining this kind of "strange" fiction in terms of "natural" communication and encyclopedic cognitive structures restricts their interpretation, and possibly even the very definition of fiction. What if the main purpose of literature is not to give us deeper understanding of our immediate social and narcissistic realities but to reach beyond them? Why settle for some fellow human's diary when one might as well engage with a narrator who is "an animal, a mythical entity, an inanimate object, a machine, a corpse, a sperm, an omniscient first-person narrator, or a collection of disparate voices that refuse to coalesce into a single narrating presence"? (Alber, Nielsen, and Richardson 2013, 2).

Of course, as most binaries, this terminologically simple opposition between "natural" and "unnatural" is not as clear-cut as it might first seem. Even though most cognitive narratologists retain realistic skepticism toward our possibilities of escaping beyond human minds' inherent

limits and inclinations, many also share unnatural narratologists' belief that art can challenge, sharpen, and expand our accustomed patterns of perception, thought, and imagination (Bernaerts et al. 2014). In fact, (transmedial) "narrative engagements with nonhuman phenomenology" has been named one of the focal areas for cognitive narratology by David Herman (2013). Furthermore, the "second generation" of cognitive literary studies also participates in "the affective turn" of the humanities (Koivunen 2010) by directing more and more attention toward the material and bodily affects and effects of literature, art, and media. This investigation of bodily responses and embodied thought complicates and complements the centrality of "the mind" established by liberal humanism (see Vermeulen 2014), and is likely to highlight previously ignored continuities between the human, the nonhuman, and the posthuman. All in all, narratives, cultures, and their constituents can be used as "instruments of mind", which can help us humans to construct more nuanced and ethical relationships not only with each other but also with nonhumans – especially if the mind is understood in an embodied, post-Cartesian sense (Herman 2011, 2012, 2018; Varis 2019).

From Storytelling to Co-agency and Unnarratable Matter

Although some critical tools and frameworks for analyzing the complex material, social, and textual ways in which humans and nonhumans entangle in the production and reception of art, media, and technology have begun to emerge, their methodological ramifications and ties to the current global troubles are still quite vague. The chapters in this book create new gripping surfaces between art, theory, and the world by conducting concrete case studies of various contemporary art works and cultural phenomena, and by contextualizing them in the Anthropocene or the Chthulucene, in a way that reconfigures artistic representations into something more than artistic representations. These studies and their target texts reach their tentacles (cf. Haraway 2016) across the growing masses of environmental humanities, multiple and multidisciplinary posthumanist theorizations, material ecocriticism, cognitive narratology, new materialism, and other emerging lines of thought, in order to scrutinize what culture and literature, and multifarious academic approaches to them, bring to the academic and the Anthropocenic or Chthulucenic worlds. Literary and cultural studies can thus realize and elaborate on Haraway's claims about systems, stories, and figures by demonstrating how these semiotic constructions fit in the ever-changing constellations of human and nonhuman entities and environments.

Zooming in to more limited contexts, the theoretical, methodological, conceptual, and analytical work done in this anthology could also be characterized as inter- or transmedial: theories and methods of literary studies are here juxtaposed with and applied to the study of other arts,

media, and technology, and vice versa. "Reading" the multimodality of other media potentially opens up new ways of viewing language and literary texts, while an avid reader or literary scholar might – sometimes helpfully and sometimes not – structure the world through the same logics and sensibilities they structure texts.

In terms of methodology, many of the chapters in this anthology still represent, or at least intersect with, the traditions of literature and literary studies. Literature and its various institutions have contributed heavily to the human-centered cultural legacy, and they have also been central agents in implementing and immortalizing the ideas of humanism. This does not mean, however, that literature and narrative theory have not or could not also be turned around to examine nonhumans – or the often simplified and hegemonic conceptions and portrayals of them – as well. Many of the chapters in this book are driven by the need to inquire what the research of literature can or cannot do, when faced with the profound familiarity and incomprehensibility of human and nonhuman others. This meta-disciplinary streak running through the entire book ponders on the methodological challenges and possibilities literary studies must come to terms with as they enter the interdisciplinary arena, where the burning issues of human–nonhuman entanglements are discussed, and where research materials often defy the traditional definitions of representation and textuality. Could the methods of literary research, and the wider cultural studies, grasp material meanings, or the materiality of meaning – the ways in which physical bodies, languageless organisms, nonverbal materials, and encounters signify – and if so, how? These questions take the texts, writers, and readers of this anthology to the very edges of literary study, and beyond. Many chapters grapple with phenomena that are so vast, fleeting, private, emergent, or otherwise slippery they are difficult, or even impossible, to verbalize or narrativize. Some contributors have thereby opted for discussing multimodal forms of art and media that challenge the linguistic and literary frameworks, prompting the researchers to hybridize different disciplines and approaches.

In short, different media suggest different research questions, research methods, and concepts for studying the nonhuman. In addressing literary, textual, visual, and ludic portrayals of nonhumans, this anthology opens up a wide medial field, where the human and the nonhuman can be reconfigured from as many perspectives, and with as many textual and analytical tools as possible. The first aim of this book, in other words, is to connect posthumanist concerns to the entire range of contemporary culture and, in doing so, test the transmedial (and transspecies) usefulness of the current theories and methods of literary and cultural research. The second aim is to analyze the ways in which literary texts, texts' "literariness", and literary theory could rethink or reopen ethical and political questions about the human, the nonhuman,

and the posthuman in varying communicative and aesthetic contexts. On the one hand, literature, in its classic meaning, always exceeds interpretation both on the semantic and the affective level. On the other hand, literature and art already incorporate, embody, and detangle such unexpected kinships and issues of difference and otherness that the discourses of humanist research, natural sciences, and politics are yet to even recognize.

The question remains: what paths could literature and the increasingly interdisciplinary research of texts and narratives take in the posthuman future? How deep across disciplinary boundaries could posthumanist literary study go, and which of its methods and concepts could – and should – be exported into other fields, even outside verbality and language? The present anthology is meant to ask, rather than to answer, these questions, and it does so by offering sample analyses of a wide range of research materials. These analyses propose novel, more comprehensive, and less anthropocentric ways of reading, interpreting, and experiencing various human and nonhuman minds and worlds through diverse stories, images, texts, and practices. The multiplicity of nonhuman existence and phenomena is, in its various forms, constantly (re)presented, (re)imagined, and even (re)made across the stories and figures of contemporary culture, and humans coming into contact with these stories and figures must themselves become reconfigured through the processes of interpretation and engagement.

The book is divided into five sections, all of which approach the tensions between literature, culture, narration, meaning-making, and the nonhuman slightly differently. The first section focuses on theoretical and methodological questions, and its opening chapter, composed by Carole Guesse, simply asks if literature can truly be posthuman. First, Guesse aims to settle some recurrent confusions around the theories of posthumanism and the concept of posthuman. Then, she turns to discussing the concept of literature and the posthuman(ist) potentialities of each of its components and participants: the author, the reader, the text, the context, language, medium, and their various aspects. Finally, the chapter concludes with a case study on Michel Houellebecq's *The Possibility of an Island* (2005), a novel that could be considered an example of both posthuman and posthumanist literatures, due to its genetically engineered clone-narrators – which may furthermore be addressing clone-narratees. In the light of Roman Jakobson's communication model, these part-human part-nonhuman characters affect the narrative and its meanings in various ways. Overall, the chapter participates in the timely discussion concerning the possible functions posthumanism and the posthuman could serve in literary research: are they efficient or meaningful tools of literary analysis – and conversely, can literary analysis provide new, relevant understanding of posthumanism or the posthuman?

The second chapter, by Karoliina Lummaa, traces the trope of spectrality in posthumanist thinking and suggests a new way of reading contemporary poetry as a summoning of nonhuman powers. The chapter begins with a review of posthumanist readings performed by Stefan Herbrechter, Ivan Callus, Neil Badmington, and Tom Cohen, all of whom have attempted to deconstruct the ambiguous boundaries and differences between human, nonhuman, and inhuman through such fictional figures as cyborgs, mutants, and monsters. Drawing on the works of N. Katherine Hayles, Aaron M. Moe, Lambros Malafouris, and others, Lummaa amends these previous analyses with a new affirmative approach that focuses on nonhuman influence and poetic agencies. For the purposes of demonstration, Lummaa goes on to apply this new posthumanist way of reading to contemporary Finnish digital, visual and sound poetry, including the works of Dan Waber and Marko Niemi (2008), Jouni Tossavainen (2007), and Jukka-Pekka Kervinen (2008).

The theory-oriented section concludes with Kaisa Kortekallio's chapter, "Becoming-instrument: Thinking with Jeff VanderMeer's *Annihilation* and Timothy Morton's *Hyperobjects*", which considers first-person narration and empathic enactment of fictional experience from posthumanist and enactivist perspectives. It introduces a new methodological device called "becoming-instrument", which opens the reader's experience to nonhuman influences. Building on Marco Caracciolo's claims about empathic engagement with first-person narratives and Merja Polvinen's notion of self-aware readerly engagement, Kortekallio argues that engagement with estranging first-person narratives, such as *Annihilation* (2014) and *Hyperobjects* (2013), can work toward dissolving the certainty of the human subject and develop in its stead a model of subjectivity as "multiple and always-in-progress" (Vint 2005). She also maintains that affective experientiality and awareness of fictionality can intertwine in the readerly experience, and that the combination of affectivity and self-referentiality is characteristic of the "dark" or "weird" ecology VanderMeer and Morton advance in their texts.

The second section, "Imagining Aliens and Monsters", presents three analyses on how nonhuman characters and nonhumans' lived experiences have been, and can be, imagined, reimagined, and simulated in multimodal fictions. In his classic essay, Nagel (1974) argues that we are fundamentally unable to imagine what it is like to be a bat, because our senses and cognition are structured in a way that is uniquely human – whereas bats' senses and cognition have a uniquely bat-like configuration. In spite of this, popular genres from children's literature and fantasy to science-fiction have routinely strived to imagine and show what it could be like to be something other than human – and different media have used vastly different means to achieve this effect.

The fourth chapter, "Alien Overtures: Speculating about Nonhuman Experiences with Comic Book Characters", continues the experiential line of inquiry introduced in the previous chapter but recombines it with the multimodal storytelling of comics and the tricky, anthropomorphizing concept of the fictional character. More specifically, the article penned by Essi Varis explores – first theoretically and then through a cognitive analysis of Neil Gaiman and J. H. Williams III's fantastical graphic novel *The Sandman: Overture* (2015) – whether markedly nonhuman comic book characters are able to convey, or at least gesture toward, nonhuman experiences. On the one hand, cognitive narrative theory has repeatedly underlined that the ways in which we think and speak about narratives in general – and characters in particular – are highly subjective and, thus, heavy with human bias. On the other hand, the interactions between reading minds and experimental or imaginative texts can make these limits of our human subjectivity more visible, and even counteract our automatic human-centric assumptions through different techniques of defamiliarization and speculation. The verbal-pictorial hybridity of comics, which enables displaying countless different amalgamations of human and nonhuman traits and viewpoints, is an especially flexible tool for such explorations.

In the fifth chapter, Jonne Arjoranta continues the investigation into different medium-specific imaginations by examining how video games portray the nonhuman, what kind of assumptions they make about being nonhuman, and what kind of tools and techniques they use to convey the (imagined) experience of nonhumanness. The analysis focuses on *Aliens vs. Predator* (2010, Rebellion Developments), which features three different but intertwined campaigns that allow the player to play as a human, an alien, and a predator. The game thereby evokes two playing experiences that are supposedly nonhuman, and enables direct comparison between them and the "normal" experience of playing as human. Like the authors of the previous two chapters, Arjoranta draws theoretical support for this discussion from the notion of embodied cognition.

In the final chapter of the second section, Marleena Mustola and Sanna Karkulehto demonstrate through analyses of Maurice Sendak's *Where the Wild Things Are* (1963), Shaun Tan's "Stick Figures" (in *Tales of Outer Suburbia*, 2009), and Tuutikki Tolonen's *Monster Nanny* (2017) how monsters in children's literature embody contemporary (human) anxieties. In all of these narratives, the fear of difference agitates the human characters to mistreat the characters that represent the disempowered other: monsters – and even the monstrous characteristics lurking inside the humans themselves – are squeezed into tight closets, creatures evoking existential questions are beaten down to silence, and opportunistic quests are undertaken to tame anything wild and unruly. Children and monsters share a similar position in the world

dominated by human adults: they are something to be either tamed, protected, or abused, because they are constructed as different and "other" from the hegemonic standard that is the full-grown, healthy (and typically white) human. Children's literature thus opens a space where the ethical relationships between humans and nonhumans can be radically reconfigured.

The third section, "Becoming With Animals", comprises three chapters that discuss humans' relationships with nonhuman animals – the semantic and material, messy and fleshy becomings, in which we, as fauna, are constantly entangled. The section opens with Mikko Keskinen's chapter, which probes the narrational peculiarities of posthumous tales told by dogs. The primary target of Keskinen's analysis is Charles Siebert's novel *Angus* (2000), a first-person memoir of a dying Jack Russell terrier. The novel presents its canine protagonist Angus as having an outstanding command of the English language, whereby it is no surprise that his lineage turns out to be particularly literary. Yet, there are curious idiosyncrasies in his parlance, which appear to suggest a uniquely cynomorphic language and worldview. Since Angus the dog resides on the border zone between human and nonhuman spheres of communication and knowledge, he is a hybrid creature: domesticated, yet wildly unfamiliar. A similar hybridity marks *Angus* the novel: backward narration may appear a "natural" analogy to canines' ability to trail lingering scents, but it also results in unnatural and counterfactual effects and storylines.

The eighth chapter, by Brad Bolman, traces the ethically complex shared history of humans and pigs, which has encompassed everything from didactic dissections and culinary consumption to artistic co-creation. One of the most prominent early anatomy textbooks, the *Anatomia porci*, has puzzled scholars for a long time: why were pigs selected as the main objects of dissection at the dawn of anatomical study? Moreover, how could the knowledge of early Roman pig dissection have survived the collapse of the Roman Empire, to reappear centuries later in Salerno, Italy? Inter-species anatomical knowledge has traveled with and through the bodies of hogs between the Greco-Roman and Islamicate worlds for centuries. At first, this circulation emphasized the role of edibility, until it turned into more philosophical debates concerning human–animal difference, as in the writings of Gilles Deleuze and Félix Guattari, Donna Haraway, and Charles Foster. After reviewing these lengthy and intersecting lines of scholarly discussion on pigs, Bolman concludes his chapter with an analysis of contemporary artist Miru Kim's work, which explores the fleshy similarities between humans and hogs through extended nude performances.

Next, Hana Porkertová's chapter, "Reconfiguring Human and Nonhuman Animals in a Guiding Assemblage: Toward Posthumanist Conception of Disability", examines how the relationships between human and nonhuman animals can affect the experience and the notion of

disability. The chapter is based on ethnographic observations of and interviews with a visually impaired woman called Eva and her guide dog Nessie, whose experiences are discussed within the framework of the Deleuzo-Guattarian theory of assemblage. In the traditional humanist paradigm, conceptualizations of nonhumanity and disability are built on assumptions of human superiority as well as on negative dialectics of identity, opposition, analogy, and resemblance. These conceptual constructs are challenged by the assemblage formed by Eva and Nessie, since an assemblage is always created through dynamic, mutual processes, which have no beginning and no end, no leaders nor followers. In other words, the "guide team" is effective only when the humanist perspective, and its dichotomic view on the relationships between human and nonhuman animals, is disrupted. Employing the notion of assemblage in conceptual thinking thus entails the subversion of the modern concept of borders as well as of such related concepts as body, autonomy, and independence.

The fourth section, "Technological (Co-)Agencies", seeks to describe different (possible) relations between us humans and our own mechanical creations. Cléo Collomb and Samuel Goyet's "Meeting the Machine Halfway: Toward Non-Anthropocentric Semiotics" highlights the narrow conceptions of machines that we circulate in our daily lives, and proposes a reconfiguration to this relationship. The chapter opens with a semiotic analysis of one page of Google Search results, the purpose of which is to demonstrate how habitually and reductively machines are viewed as simple tools whose functioning is represented in terms that serve humans specifically. The second part of the chapter endeavors to describe the agency of machines in their own terms, as a specific mode of action. This computational agency can be made visible, for example, by analyzing the ways in which we think of writing: machines allow humans to write, but they are also capable of writing themselves – even if their writing is computational, rather than verbal, and thus unreadable to (most) humans. If one wishes to uncover the marks of computers' agency, one should target the semiotic characteristics of "computational writing", such as bugs or glitches, rather than the human-friendly, human-designed interfaces.

Marleena Huuhka's chapter, "Journeys in Intensity: Human and Nonhuman Co-Agency, Neuropower, and Counterplay in *Minecraft*", revisits Chapter 9's idea that the relations between humans and nonhumans could be viewed as a type of Deleuzo-Guattarian assemblage, and explores the human–machine cooperation conducted in the digital environments of *Minecraft* from this perspective. Playing video games is thus described as an activity that combines various agents, materialities, and species into operations that produce pleasure, but which – at the same time – also enable oppressive, colonialist, and violent practices inside as well as outside of the fictional worlds of the games. The chapter's

argumentation draws especially on the concept of counterplay, which refers to the type of gameplay that somehow obstructs the rules or goals of the game being played. The concept has been previously discussed by Thomas Apperley as well as by Hanna Wirman and Rika Nakamura, but here, Huuhka identifies two entirely new practices of counterplay that allow, or even aim at, deconstructing the inherent logics of videogames.

The twelfth chapter, authored by Patricia Flanagan and Raune Frankjær, explores how the evolution of wearable technology blurs the boundaries of the body. The writers propose that emergent wearable technologies, which augment human perception and sensual capacity, may come to expand or alter our understanding of what it truly means to be human, and thus foster new, interconnected ways of understanding our place within the Neganthropocene. Building on the writings of Rosi Braidotti, Karen Barad, Donna Haraway, Bernard Stiegler, Peter-Paul Verbeek, and Bruno Latour, the chapter arrives at a theory of "cyborganic wearables", where the concept of "cyborganic" describes a fictional posthuman entity, a hybrid of human, nature, and machine. Such a figure, through its relation to cyborganic mutation and creativity, calls for a reconfiguration of humanness itself – a new conceptualization that would lay a more sustainable foundation for humanity's self-understanding in the future.

Finally, in the concluding chapter of the volume, Juha Raipola enquires how we – as humans and as literary or cultural scholars – could make sense of the emergent, self-organizing capacities of the nonhuman material world. The chapter returns to the insights of cognitive narratology introduced in Chapters 3–5, and uses them to reassess material ecocriticism's notion of "storied matter". Contrary to the recent claims that nonhuman matter has narrative agency, Raipola asserts that matter consists of countless emergent processes, which can never be reduced to their narrative representations. When the more-than-human world is interpreted through a narrative lens, one must always remain wary of the basic human tendency to reduce complex emergent behavior into simplified anthropocentric storylines. Instead of joining in celebrating the endless "narrative" agency of matter, the chapter thus concludes that it might often prove more fruitful to analyze the numerous ways in which different nonhuman material entities escape and defy our human desire for narrative logics and descriptions.

"If we want to respect the creativity of matter in its own terms, we have to acknowledge that its numerous agencies are not performing stories for the human audience, but exist and act of their own accord", Raipola writes. "No matter how hard we try to fit this world into our cultural landscape of narrative sense-making, a major part of its behavior always remains unreachable". Each reader of this anthology is, of course, free to interpret this (lack of) closure as either resignation or a challenge.

References

Alber, Jan, Henrik Skov Nielsen, and Brian Richardson. 2013. *A Poetics of Unnatural Narrative*. Columbus, OH: Ohio State University Press.

Åsberg, Cecilia. 2008. "A Feminist Companion to Post-humanities." *NORA – Nordic Journal of Feminist and Gender Research* 16 (4): 264–269.

———. 2013. "The Timely Ethics of Posthumanist Gender Studies." *Feministische Studien* 31 (1): 7–12.

———, and Rosi Braidotti. 2018. "Feminist Posthumanities: An Introduction." In *A Feminist Companion to the Posthumanities*, edited by Cecilia Åsberg, and Rosi Braidotti, 1–22. Cham: Springer.

Badmington, Neil. 2000. "Introduction." In *Posthumanism*, edited by Neil Badmington, 1–10. Basingstoke: Palgrave.

———. 2004. *Alien Chic. Posthumanism and the Other Within*. London: Routledge.

Bernaerts, Lars, Marco Caracciolo, Luc Herman, and Bart Vervaeck. 2014. "The Storied Lives of Non-Human Narrators." *Narrative* 22 (1): 68–93.

Braidotti, Rosi. 2002. *Metamorphoses. Towards a Materialist Theory of Becoming*. Cambridge, MA: Polity.

———. 2013. *The Posthuman*. Cambridge, MA: Polity.

———. 2017. "Four Theses on Posthuman Feminism." In *Anthropocene Feminism*, edited by Richard Grusin, 21–48. Minneapolis, MN: University of Minnesota Press.

Brondizio, Eduardo S., Karen O'Brien, Xuemei Bai, Frank Biermann, Will Steffen, Frans Berkhout, Christophe Cudennec, Maria Carmen Lemos, Alexander Wolfe, Jose Palma-Oliveira, and Chen-Tung Arthur Chen. 2016. "Re-conceptualizing the Anthropocene: A Call for Collaboration." *Global Environmental Change* 39(July): 318–327.

Butler, Judith. 2004. *Undoing Gender*. New York: Routledge.

———. 2006. *Precarious Life. The Powers of Mourning and Violence*. London: Verso.

———. 2010. *Frames of War. When Is Life Grievable?* London: Verso.

Colebrook, Claire. 2017. "We Have Always Been Post-Anthropocene: The Anthropocene Counterfactual." In *Anthropocene Feminism*, edited by Richard Grusin. Minneapolis, 1–20. MN: University of Minnesota Press.

———, and Tom Cohen. 2016. "Preface." In *Twilight of the Anthropocene Idols*, edited by Tom Cohen, Claire Colebrook, and J. Hillis Miller, 7–19. London: Open Humanities Press.

Crutzen, Paul J., and Eugene F. Stoermer. 2000. "The Anthropocene." *Global Change NewsLetter* 41: 17–18.

Davis, Heather, and Etienne Turpin. 2015. "Art & Death: Lives Between the Fifth Assessment & the Sixth Extinction." In *Art in the Anthropocene. Encounters Among Aesthetics, Politics, Environments and Epistemologies*, edited by Heather David, and Etienne Turpin, 3–29. London: Open Humanities Press.

Gilcrest, David W. 2002. *Greening the Lyre. Environmental Poetics and Ethics*. Reno and Las Vegas: University of Nevada Press.

Graham, Elaine L. 2002. *Representations of the Post/human. Monsters, Aliens and Others in Popular Culture*. New Brunswick, NJ: Rutgers University Press.

Grusin, Richard, ed. 2017. *Anthropocene Feminism*. Minneapolis, MN: University of Minnesota Press.

Haraway, Donna. 1991. *Simians, Cyborgs, and Women. The Reinvention of Nature*. New York: Routledge.

———. 2008. *When Species Meet*. Minneapolis, MN: University of Minnesota Press.

———. 2015. "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin." *Environmental Humanities* 6: 159–165. http://environmentalhumanities.org/arch/vol6/6.7.pdf.

———. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press.

Heise, Ursula. 2016. *Imagining Extinction. The Cultural Meanings of Endangered Species*. Chicago and London: University of Chicago Press.

Herman, David. 2011. "Storyworld/Umwelt. Nonhuman Experiences in Graphic Narratives." *SubStance* 40 (1): 156–181.

———. 2012. "Toward a Zoonarratology. Storytelling and Species Difference in Animal Comics." In *Narrative, Interrupted. The Plotless, the Disturbing and the Trivial in Literature*, edited by Markku Lehtimäki, Laura Karttunen, and Maria Mäkelä, 93–119. Berlin: Gruyter.

———. 2013. "Cognitive Narratology (Revised Version; Uploaded 22 September 2013)." *The Living Handbook of Narratology*. www.lhn.uni-hamburg.de/article/cognitive-narratology-revised-version-uploaded-22-september-2013.

———, ed. 2018. *Animal Comics. Multispecies Storyworlds in Graphic Narratives*. London: Bloomsbury.

Holm, Poul, Joni Adamson, Hsinya Huang, Lars Kirdan, Sally Kitch, Iain McCalman, James Ogude, Marisa Ronan, Dominic Scott, Kirill Ole Thompson, Charles Travis, and Kirsten Wehner. 2015. "Humanities for the Environment – A Manifesto for Research and Action." *Humanities* 4: 977–992.

Iovino, Serenella. 2016. *Ecocriticism and Italy: Ecology, Resistance, and Liberation*. London: Bloomsbury.

———, and Serpil Oppermann. 2014. "Introduction: Stories Come to Matter." In *Material Ecocriticism*, edited by Serenella Iovino, and Serpil Oppermann, 1–17. Bloomington and Indianapolis: Indiana University Press.

Koistinen, Aino-Kaisa. 2015. *The Human Question in Science Fiction Television. (Re)imagining Humanity in Battlestar Galactica, Bionic Woman and V*. Jyväskylä: Jyväskylä University Press.

———, and Sanna Karkulehto. 2018. "Posthuman(ist) Feminism, Feminist Posthumanities." *Genealogy of the Posthuman*, Critical Posthumanism Network, July 2018. http://criticalposthumanism.net/genealogy/feminism/.

Koivunen, Anu. 2010. "An Affective Turn? Reimagining the Subject of Feminist Theory." In *Working with Affect in Feminist Readings: Disturbing Differences*, edited by Marianne Liljeström, and Susanna Paasonen, 8–28. London: Routledge.

Latour, Bruno. 2010. "An Attempt at a 'Compositionist Manifesto'." *New Literary History* 41: 471–490.

———. 2011. "Waiting for Gaia. Composing the Common World through Arts and Politics." A Lecture at the French Institute, London, November 2011, for the Launching of SPEAP (The Sciences Po Program in Arts and Politics). www.bruno-latour.fr/node/446.

Lummaa, Karoliina. 2017. *Kui trittitii! Finnish Avian Poetics*. Translated by Jaakko Mäntyjärvi, Emily Jeremiah, and Fleur Jeremiah. Annales

Academiae Scientiarum Fennicae. Humaniora 371. Helsinki: Suomalainen Tiedeakatemia.

Malafouris, Lambros. 2013. *How Things Shape the Mind. A Theory of Material Engagement*. Cambridge, MA and London, England: The MIT Press.

Moe, Aaron M. 2014. *Zoopoetics. Animals and the Making of Poetry*. Plymouth, UK: Lexington Books.

Morton, Timothy. 2013. *Realist Magic. Objects, Ontology, Causality*. London: Open Humanities Press.

Nagel, Thomas. 1974. "What Is It Like to Be a Bat?" *The Philosophical Review* 83 (4): 435–450.

Palsson, Gisli, Bronislaw Szerszynski, Sverker Sörlin, John Marks, Bernard Avril, Carole Crumley, Heide Hackmann, Poul Holm, John Ingram, Alan Kirman, Mercedes Pardo Buendía, and Rifka Weehuizen. 2013. "Reconceptualizing the 'Anthropos' in the Anthropocene." *Environmental Science & Policy* 28: 3–13.

Scigaj, Leonard M. 1999. *Sustainable Poetry. Four American Ecopoets*. Lexington, KY: The University Press of Kentucky.

Soper, Kate. 1995. *What Is Nature? Culture, Politics and the Non-Human*. Oxford and Cambridge, MA: Blackwell.

Sörlin, Sverker. 2012. "Environmental Humanities: Why Should Biologists Interested in the Environment Take the Humanities Seriously?" *BioScience* 62(9, September), 788–789.

Stiegler, Bernard. 2017. "Escaping the Anthropocene." In *The Crisis Conundrum. How To Reconcile Economy and Society*, edited by Mauro Magatti, 149–163. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.

Tüür, Kadri. 2017. *Semiotics of Nature Representations: On the Example of Nature Writing*. Dissertationes Semioticae Universitatis Tartuensis 25. Tartu: University of Tartu Press.

Twine, Richard. 2010. "Genomic Natures Read through Posthumanism." *The Sociological Review* 58: 175–179.

Varis, Essi. 2019. *Graphic Human Experiments. Frankensteinian Cognitive Logics of Characters in Vertigo Comics and Beyond*. JYU Dissertations 73. Jyväskylä: University of Jyväskylä. http://urn.fi/URN:ISBN:978-951-39-7725-2.

Vermeulen, Pieter. 2014. "Posthuman Affect." *European Journal of English Studies* 18 (2): 121–134.

Vint, Sherryl. 2005. "Becoming Other: Animals, Kinship, and Butler's *Clay's Ark*." *Science Fiction Studies* 32 (2): 281–300.

———. 2007. *Bodies of Tomorrow. Technology, Subjectivity, Science Fiction*. Toronto, CA: University of Toronto Press.

———. 2014. *Animal Alterity. Science Fiction and the Question of the Animal*. Liverpool: Liverpool University Press.

Wark, McKenzie. 2016. *Molecular Red. Theory for the Anthropocene*. London: Verso.

Wolfe, Cary. 2003a. *Animal Rites. American Culture, the Discourse of Species, and Posthumanist Theory*. Chicago, IL: University of Chicago Press.

———. 2003b. "Introduction." In *Zoontologies. The Question of the Animal*, edited by Cary Wolfe, ix–xxiii. Minneapolis and London: University of Minnesota Press.

———. 2010. *What Is Posthumanism?* Minneapolis, MN: University of Minnesota Press.