

# literatur für leser

# 17

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40. Jahrgang

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PETER LANG

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herausgegeben von: Keith Bullivant, Ingo Cornils, Carsten Jakobi, Bernhard Spies, Sabine Wilke  
Peer Review: literatur für leser ist peer reviewed. Alle bei der Redaktion eingehenden Beiträge werden anonymisiert an alle Herausgeber weitergegeben und von allen begutachtet. Jeder Herausgeber hat ein Vetorecht.

Verlag und Anzeigenverwaltung: Peter Lang GmbH, Internationaler Verlag der Wissenschaften, Schlüterstrasse 42, 10707 Berlin,  
Telefon: +49 (0) 30 232 567 900, Telefax +49 (0) 30 232 567 902

Redaktion der Dr. Sabine Wilke, Professor of German, Dept. of Germanics, Box 353130,  
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Erscheinungsweise: 3mal jährlich  
(März/Juli/November)

Bezugsbedingungen: Jahresabonnement EUR 54,95; Jahresabonnement für Studenten EUR 32,95;  
Einzelheft EUR 26,95. Alle Preise verstehen sich zuzüglich Porto und Verpackung.  
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## Anthropomorphism, Trope, and the Hidden Life of Trees: On Peter Wohlleben's Rhetoric

While the textual representation of plants is yet an emerging concern in academic literary studies, it has squarely arrived in the mainstream of a general reading public: The best-selling German non-fiction book of the past few years, *Das geheime Leben der Bäume* (2015), is a sustained writerly exercise in representing the complexity of vegetal life.<sup>1</sup> Written by the forest ranger Peter Wohlleben, the book portrays trees as exquisitely complex creatures, exploring (among other things) their capacities for communication, memory, and community formation. In terms of genre, the work is perhaps best categorized as creative non-fiction in the tradition of Rachel Carson's *Silent Spring*: Wohlleben synthesizes scientific findings about trees and forest ecosystems in an accessible and captivating form, blending science with personal experience in the service of an environmental mission – in his case, that of raising consciousness for the damaging effects of conventional forestry on ecosystems.<sup>2</sup>

Reacting with some bewilderment to the surprise success of the book, the German feuilleton rather unanimously identified Wohlleben's anthropomorphic style as the main culprit behind the book's immense popular appeal.<sup>3</sup> In Wohlleben's forest, trees "nurse their babies" (when they supply their offspring with sugar solution through roots); they form "friendships" (when two or more trees direct branch growth so as to (not to block) the light for others); and when they exchange information on impending insect attacks through root networks or airborne chemicals, trees "talk"

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- 1 Having sold more than a million copies to date, Peter Wohlleben's *Das geheime Leben der Bäume. Was sie fühlen, wie sie kommunizieren – die Entdeckung einer verborgenen Welt* has remained on the Spiegel bestseller list for an astonishing three years and continues to rank number five as of July 2018, more than three years after its publication in May 2015. Translations are available or optioned in 35 countries; an English translation appeared with Greystone Books under the title *The Hidden Life of Trees. What They Feel, How the Communicate – Discoveries from a Secret World* in 2016 and also became a *New York Times* bestseller. For an overview of information about the book, see the publisher's website at <https://service.randomhouse.de/book/Das-geheime-Leben-der-Baeume/Peter-Wohlleben/e502460.rhd> [last accessed on 24 July 2018].
  - 2 Similar writerly explorations of plant life have received significant attention in the United States in recent years. See the works of biologist David George Haskell, especially the 2013 Pulitzer prize finalist *The Forest Unseen. A Year's Watch in Nature*. New York: Penguin Books 2013; or Robin Wall Kimmerer's writings, which draw on indigenous and other forms of traditional ecological knowledge, such as the 2005 John Burroughs Medal recipient *Gathering Moss. A Natural and Cultural History of Mosses*. Corvallis: Oregon State University Press 2003.
  - 3 See, for instance, the reviews in *FAZ*, *Die Zeit*, and *Die Welt*: Melanie Mühl: "Bestsellerautor Wohlleben. Bäume sind so tolle Lebewesen." In: *Frankfurter Allgemeine Zeitung* (29 November 2015). URL: <http://www.faz.net/aktuell/feuilleton/im-wald-mit-bestsellerautor-peter-wohlleben-13936077.html> [last accessed on 23 August 2018]. Christoph Schröder: "'Das geheime Leben der Bäume.' Die Not am Stamm lindern." In: *Die Zeit* (18 January 2016). URL: <http://www.zeit.de/kultur/literatur/2016-01/wohlleben-das-geheime-leben-der-baeume> [last accessed on 23 August 2018]. Wieland Freund: "Bäume sind die Superhelden der Entschleunigung." In: *Die Welt* (7 July 2015). URL: <http://www.welt.de/kultur/literarischewelt/article143622563/Baeume-sind-die-Superhelden-der-Entschleunigung.html> [last accessed on 23 August 2018].

(see p. 37, 21, 18/34, 15, 11).<sup>4</sup> In this article, I will analyze Peter Wohlleben's rhetoric as a prominent example of anthropomorphic writing about plant life. Close analysis will reveal that Wohlleben's literary maneuvers are often more complex than they initially appear: Exhibiting a degree of rhetorical self-reflexivity unusual in popular science writing, his most intriguing strategies for representing the hidden life of trees recover anthropomorphism as a device whose suspension of the boundary between human and the non-human worlds works, seemingly paradoxically, as an antidote to anthropocentrism.

## Critical Responses

While some reviews applauded the pedagogical usefulness of Wohlleben's strategic use of anthropomorphism,<sup>5</sup> others were more skeptical. The objections took two forms, which exemplify classical critiques of anthropomorphism and as such warrant brief examination. Writing for *Die Zeit*, Christoph Schröder interprets Wohlleben's description of forests in terms of closely-knit communities as catering to a desire for social harmony and security in tumultuous times.<sup>6</sup> According to Schröder, Wohlleben's book (or at least its success) has nothing to do with trees, and everything with a displaced desire for social wholesomeness, projected onto the *deutsche Wald* in a questionable German tradition. A review for *Deutschlandfunk* similarly complains about the projective quality of Wohlleben's anthropomorphism but locates the impropriety of the procedure in its misrepresentation of the life of plants.<sup>7</sup> Comparing Wohlleben's anthropomorphic portrayals of trees to people's tendency to ascribe pseudo-human characteristics to domestic animals, the review complains that Wohlleben's writing style buries the alterity of vegetal life under a heap of anthropomorphizing ascriptions. Such an approach, the author concludes, quoting the developmental psychologist Jean Piaget, is reminiscent of pre-modern animistic thought and detracts from the scientific message of Wohlleben's book. Occasional reservations about anthropomorphism

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4 References to *Das Geheime Leben der Bäume* and the English translation *The Hidden Life of Trees* are provided in parentheses, with page numbers referring to the German edition, followed by references to the English translation after a slash. The bibliographical information for both editions is as follows: Peter Wohlleben: *Das geheime Leben der Bäume. Was sie fühlen, wie sie kommunizieren – die Entdeckung einer verborgenen Welt*. Munich: Ludwig 2015; *The Hidden Life of Trees. What They Feel, How They Communicate. Discoveries from a Secret World*. Transl. by Tim Flannery. Vancouver: Greystone Books 2016.

5 See, for instance, Mühl: "Bestsellerautor Wohlleben."

6 "Kann es in aufgepeitschten und unruhigen Zeiten etwas Tröstlicheres geben als den Entwurf eines funktionierenden gesellschaftlichen Gefüges, das in gegenseitiger Achtung und in Solidarität und Generationengerechtigkeit lebt?" Schröder: "Das geheime Leben der Bäume," n. p. Schröder charges Wohlleben with a harmonistic portrayal of forest ecosystems as unadulterated idylls, although Wohlleben expressly and repeatedly rejects such harmonistic interpretations as misguided and dangerous (see esp. p. 103/113). In Wohlleben's forest, trees not only cooperate but also compete for local resources (pp. 21/14-15), rot from the inside out when devoured by fungi (p. 111/112), and die in scores at the feet of their parent trees (p. 38/35) – at least if one reads past the first few chapters, which tend to emphasize symbiotic relationships within forest ecosystems. The semblance of balance in eco-systems, Wohlleben states rather unsentimentally, stems not from a pre-established harmony but from the fact that species who are too successful in killing off others tend to undermine the basis of their own existence and thus die out (p. 103/113).

7 See "Peter Wohlleben spürt den Wald – Bäume schreien, wenn sie Durst haben." In: *Deutschlandfunk Kultur* (2 June 2015). URL: [http://www.deutschlandfunkkultur.de/peter-wohlleben-spuert-den-wald-baeume-schreien-wenn-sie.1270.de.html?dram:article\\_id=324281](http://www.deutschlandfunkkultur.de/peter-wohlleben-spuert-den-wald-baeume-schreien-wenn-sie.1270.de.html?dram:article_id=324281) [last accessed on 24 July 2018].

voiced in the – largely favorable – reviews of the book’s English translation followed one or the other of these critiques.<sup>8</sup> The charge of anthropomorphism finally also featured prominently in the harsh reaction of the German forestry establishment, a regular target of Wohlleben’s criticism.<sup>9</sup> The critical response culminated in the publication of the book-length polemic *Das wahre Leben der Bäume*, in which biologist Torben Halbe rails against what he portrays as Wohlleben’s unscientific tendency to anthropomorphize trees.<sup>10</sup>

The reviews thus criticize the conflation of human and non-human domains from opposite but complementary angles: The first type of criticism charges Wohlleben’s anthropomorphisms with improperly addressing *human* ailments in the form of a book about non-human nature; the second complains that they do injustice to the *non-human* through a facile ascription of human traits to plants. Both suspicions converge in the charge that Wohlleben’s anthropomorphisms end up mired in human concerns when they pretend to be talking about the life of trees.

## The Trouble with Anthropomorphism

Anthropomorphism is generally considered a bad word. Merely identifying something as an “anthropomorphism” usually implies a moment of critique, an insinuation of impropriety, and a concomitant gesture of critical unmasking or debunking. Such

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- 8 The reviews in *Science* and *Nature* are a case in point: while both praise Wohlleben’s popular-scientific mission, the former again suspects that “perhaps the message of arboreal harmony comforts during a time of societal disharmony;” whereas the latter objects to excessive anthropomorphism by insisting that trees are “interesting enough in their own right without being saddled with a panoply of emotions.” See Gabriel Popkin: “The Socially Savvy Tree.” In: *Science* 353.6305 (2016), p. 1214 and Richard Fortey: “Dendrology. The Community of Trees.” In: *Nature* 537.7620 (2016), p. 306. The press response to the book’s English translation included reviews in most major newspapers across the English-speaking world from the *Washington Post* to the *Irish Times* and the *Sydney Morning Herald*.
- 9 Professional organizations representing the German forest industry such as the *Deutsche Forstunternehmerverband* (DFUV) have been sharply critical of Wohlleben (see, for instance, the entry “Wissenschaft – statt – Wohlleben!” on the DFUV’s website: <http://dfuv.eu/aktuelles/2017/02/auch-im-wald-fakten-statt-maerchen/> [last accessed on 28 August 2018]). The most prominent campaign directed against Wohlleben’s book was a public petition by forest scientists from the University of Göttingen that bemoans Wohlleben’s lack of scientific rigor and his tendency to anthropomorphize trees (see <https://www.openpetition.eu/petition/online/auch-im-wald-fakten-statt-maerchen-wissenschaft-statt-wohlleben>; for an interview with co-author of the petition Christian Ammer, see <http://blogs.faz.net/blogseminar/die-wahrheit-ueber-den-deutschen-wald/> [both last accessed on 28 August 2018]). The arguments of critics are succinctly summarized in a polemical article by professor of forestry Ulrich Schraml titled “Peter und der Wald” and published in *Holz-Zentralblatt*, a leading journal of the forest industry in Germany. Schraml charges Wohlleben with mystifying trees by turning them “from objects into subjects,” thus undermining the science-based management of wood as a resource; see “Peter und der Wald.” In: *Holz-Zentralblatt* 17 (2016) p. 437-438, here p. 437. Interestingly for our context, Schraml charges Wohlleben of being seduced by his anthropomorphic metaphors and taking them all too literally – while botanist and professor of forestry and ecology Pierre Ibisch defends Wohlleben precisely on the account that his use of anthropomorphic language is effective in probing new approaches to understanding trees, while remaining transparently figurative to a general readership (see “Ausblenden von Fakten statt ‘Märchen’? Zum wissenschaftlichen Umgang mit waldbezogenen Büchern, Petitionen und Gutachten in Deutschland.” URL: <http://www.centreforeconics.org/news-and-events/press-release-downloads/zum-wissenschaftlichen-umgang-mit-waldbezogenen-b%C3%BCchern-petitionen-und-gutachten-in-deutschland/> [last accessed on 28 August 2018]).
- 10 Torben Halbe: *Das wahre Leben der Bäume. Ein Buch gegen eingebildeten Umweltschutz*. Schmallenberg: WOLL-Verlag 2017. More on Halbe’s critique in the section on “Self-Reflexive Anthropomorphism.”

anti-anthropomorphic reflexes are deeply ingrained in a tradition of Enlightenment critique forged in the struggle against modes of thought that interpreted the natural or supernatural world in terms of human characteristics. Like two late echoes, the objections voiced in the critical reviews of Wohlleben's book recall the two main arenas of this struggle.

In a first, theological context, Enlightenment critics from Spinoza to Feuerbach escalated existing religious taboos against attributing human qualities to the divine – the original domain of the term<sup>11</sup> – into the charge that religion as a whole amounted to a massive anthropomorphic misrecognition: a projection of human nature into the heavens, from where it then confronts humans in the form of a seemingly independent being.<sup>12</sup> Because such anthropomorphism removes or (in Feuerbach's influential formulation) "alienates"<sup>13</sup> human matters from the context in which they can be properly addressed, it leads into a paradoxical form of self-enslavement by one's own creations, as paralyzing to human self-determination as Narcissus' infatuation with his own mirror image. Here, the critical remedy of choice is a consistent *reductio ad hominem* – a repatriation of anthropomorphic projections, religious or otherwise, to their human, all too human origins; and an acknowledgement that agency had rested exclusively with humans all along.

Another, equally momentous critique of anthropomorphism emerged alongside the rise of modern science from the seventeenth century onwards. Figureheads of the new scientific method like Bacon and Descartes identified the tendency to describe the natural world in terms reminiscent of human experience as the cardinal sin of previous natural philosophy and the main obstacle to its progress.<sup>14</sup> In this instance, the remedy against anthropomorphism amounts to a *reductio homini* – a methodical elimination of human-like qualities in favor of observable quantities in scientific descriptions of the natural world. Coupled with nineteenth-century historical schemata that relegated "animistic" conceptions of the world to a "primitive" state of civilization that has been triumphantly overcome by science, the rejection of anthropomorphic thought provided a powerful foundation myth of modern rationality that continues to

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11 The word is first attested in Augustine as the designation of a heresy that imagines the divine in overly sensuous human terms. For a succinct overview of the conceptual history, see G. Lankowski/R. Fabian/H. W. Schütter: "Anthropomorphismus." In: *Historisches Wörterbuch der Philosophie*. Ed. by Joachim Ritter. Basel: Schwabe 2007, columns 1361-1367.

12 This is the basic thrust of Feuerbach's summative critique of religion as developed in *Das Wesen des Christentums*. Berlin: Akademie-Verlag 1973, esp. pp. 53-54. Feuerbach's understanding of religion as an alienated projection of human nature represents the culmination of two centuries of Enlightenment critiques of religious anthropomorphism and can thus serve as a representative of that discursive tradition.

13 Feuerbach famously appropriated the concept from Hegel to describe how religion removes or estranges humanity's own essence and then misattributes it to the divine (e.g. "wie unser eigenes Wesen die Religion uns entfremdet und entwendet" in *Das Wesen des Christentums*, p. 364). Through the mediation of Marx, who adopted the word for his critique of alienated labor, the concept has become a key term in critical theory.

14 Francis Bacon's *New Organon* programmatically denounces anthropomorphic tendencies under the rubric of "idols of the tribe": "human understanding is like a false mirror, which [...] distorts and discolors the nature of things by mingling its own nature with it, which thus discolors and corrupts it." Francis Bacon: *The New Organon*. Ed. by Lisa Jardine a. Michael Silberthorne. Cambridge, New York: Cambridge University Press 2000, p. 41, aphorism XLI. Bacon also attests to the intimate connection between theological and scientific critiques of anthropomorphism when he compares the religious heresy of imagining the divine in human shape to the misguided projection of human similitude on nature in science. See *The Advancement of Learning*. Oxford: Clarendon Press 2000, p. 116.

expose any anthropomorphism to the twin charges of being at once pre-modern and anti-scientific.

In effect, the double reduction *to* and *of* the human draws and enforces a single dividing line: between human society, history, and culture on one side, and nature on the other, as the exclusive domain of the quantitative sciences (or else only a projection screen or smoke screen for sociopolitical concerns). As two sides of the same coin, the classical critiques of anthropomorphism thus police what they consider illegitimate boundary-crossings between the sphere of human subjects and non-human objects in one or the other direction.

If my analysis of Wohlleben's anthropomorphisms will sidestep these classical critiques, then not least because the limits of the conception of the human that informed them have become increasingly obvious. The escalating climate crisis is only the most pressing sign that insisting on a categorical separation of human and non-human realms cannot be the final word of critical thought. As ecological thinkers have pointed out for a while, a systematic blindness to the enmeshment of human and non-human worlds stands both at the origin of global ecological crises and in the way of developing collective responses to them. As a result, we find ourselves in a situation where deeply entrenched critical reflexes are beginning to fail us and a critical habitus founded on exposing anthropomorphism in all its guises has become fundamentally questionable.

Take, for instance, the (post-Feuerbachian) critical commonplace rehearsed in the *Zeit* review – the principle that evocations of non-human nature in a language other than that of sober scientific fact should by default be treated as alienated projections of social concerns. Echoing Hans Magnus Enzensberger's inversion of Brecht's elegiac pronouncement that a conversation about trees almost amounts to a crime in politically troubled times, we might counter by asking whether in the age of climate change, it is not rather the disavowal of the political significance of non-human nature that runs the risk of mystification: "Heute ist es umgekehrt: Fast ein Verbrechen, nicht über Bäume zu sprechen."<sup>15</sup> Conversely, the charge of "animism" voiced in *Deutschlandfunk* rings hollow in the face of an increasing awareness that the reduction of living ecosystems to an inanimate resource itself commits a fateful (and deeply anthropocentric) mystification. Here, one might similarly reverse the charge to ask whether a dose of well-placed anthropomorphism might not serve as a reminder that trees are *in fact* living beings.

The desire to dislodge the dogmatic separation between human and non-human worlds has indeed provided the impetus for a renewed scholarly interest in anthropomorphism in recent years.<sup>16</sup> These discussions have, however, focused almost exclusively on the

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15 See Mathias Schreiber's interview with Enzensberger: "Falltüren in den Schrecken." In: *Der Spiegel* (17 March 2003). URL: <http://www.spiegel.de/spiegel/print/d-26609858.html> [last accessed on 30 August 2018]. This is not to abandon a healthy skepticism about the risk of using nature as a projection screen. What is called for is rather a questioning of whether the critical response is truly exhausted by the traditional demystifying gestures. In general, the answer to the shortcomings of classical critiques of anthropomorphism cannot be a regression to a supposedly purer premodern way of relating to non-human nature but a sober assessment of the limits of these critiques, together with a revision or refinement of the critical toolset.

16 See representative anthologies edited by Lorraine Daston a. Gregg Mitman: *Thinking with Animals. New Perspectives on Anthropomorphism*. New York: Columbia University Press, 2006 and Robert W. Mitchell, Lyn Miles: *Anthropomorphism, Anecdotes, and Animals*. Albany: SUNY Press 1997. On the contested status of

stakes of anthropomorphizing *animals* – and often even more narrowly, for instance, on whether it is permissible to ascribe human-like cognitive states to primates, as our closest evolutionary cousins.<sup>17</sup> One notable exception to this narrow focus has been Jane Bennet's suggestion to harness anthropomorphism as a tool for doing justice to the vital agency of non-human forces more generally. By quickly subsuming plants under a general category of the "non-human," however, Bennet, too, has little to say about the specific stakes of anthropomorphizing plants.<sup>18</sup> In either case, these scholarly discussions of anthropomorphism have tended to exclude or marginalize the question of what happens when plants become the subject of anthropomorphic language.<sup>19</sup> "Plants are beautiful," the editors of a recent anthology on anthropomorphism note in their introduction, but lack "self-locomotion" and thus do not attract the same kind of interest as animals. As a result, the editors claim symptomatically, one "rarely tries to think with them."<sup>20</sup> Plants, in other words, tend to be excluded from reflections on anthropomorphism for the same stereotypical reasons they have traditionally been neglected in theoretical discourse altogether: They are supposedly too static and passive to excite the human fancy or challenge the human intellect.

In conjunction with a growing body of scholarship – including the present volume – that challenges the long-standing marginalization of plants,<sup>21</sup> my analysis of Wohlleben's

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anthropomorphism in an eco-critical context, see the helpful discussion of anthropomorphism in Timothy Clark: *The Cambridge Introduction to Literature and the Environment*. Cambridge: Cambridge University Press 2011, pp. 192-201. In cognitive ethology (and beyond), Gordon Burghardt's "critical anthropomorphism" has been widely discussed as a heuristic tool for generating hypothesis about animal behavior. See "Animal Awareness. Current Perceptions and Historical Perspective." In: *American Psychologist* 40.8 (1985), pp. 905-919 and more recently "Critical Anthropomorphism, Uncritical Anthropocentrism, and Naïve Nominalism." In: *Comparative Cognition & Behavior Reviews* 2 (2007), pp. 136-138.

- 17** For a lucid overview of the theoretical and ethical challenges of these debates, see Sandra D. Mitchell: "Anthropomorphism and Cross-Species Modeling." In: *Thinking with Animals. New Perspectives on Anthropomorphism*. Ed. by Lorraine Daston a. Gregg Mitman. Cambridge: Columbia University Press 2005, pp. 100-117.
- 18** See *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press 2009, esp. pp. 98-100. Most references to plants in the book come in the form of lists like "animal, plant, and thing" (p. 120) that spell out the general kinds of entities Bennet includes in her concept of non-human forces. Bennet's specific examples of anthropomorphism, however, remain focused on animals (p. 98-100), while other sections of the book pass over plants to explore the agentic force of inorganic material organizations.
- 19** While scholarly discussions that focus explicitly on the uses and abuses of anthropomorphism have tended to default to animals, questions concerning anthropomorphism and adjacent problems have played a role in plant science as well as in critical plant studies, especially in discussions of plant intelligence. For a popular summary of the controversial discussions surrounding the notion of plant intelligence, see Michael Pollan: "The Intelligent Plant." In: *The New Yorker* (23 December 2013). URL: <https://www.newyorker.com/magazine/2013/12/23/the-intelligent-plant> [last accessed on 26 August 2018]. Pollan stages an exchange between proponents and opponents of the idea of plant intelligence that exemplifies the role of anthropomorphism as a contested term in these debates: While opponents tend to accuse proponents of falling victim to an unscientific anthropomorphism, proponents can respond by pointing out that reserving intelligence for creatures with brains rests on an implicit anthropocentrism (or zoocentrism) – a bias that cautious anthropomorphism might rather help to correct. Anthropologist Natasha Myers has systematically explored such a defense of anthropomorphism as an antidote to anthropocentrism in "Conversations on Plant Sensing." In: *Nature Culture* 3 (2015), pp. 35-66.
- 20** See Daston and Mitman's introduction to *Thinking with Animals*, pp. 12-13. The gendered overtones of this classical devaluation of plants are unmistakable and echo the stereotypical association of plants and women (as "beautiful but passive and lacking in thought"). As Claudette Sartillot has pointed out, this association has been part of the standard repertoire of the philosophical discourse on plants and flowers since at least Hegel; see *Herbarium, Verbarium. The Discourse of Flowers*. Lincoln: University of Nebraska Press 1993, pp. 13-15.
- 21** A continuously updated list of scholarship in this emerging field can be found on the website of the *Literary and Cultural Plant Studies Network*, URL: <https://plants.sites.arizona.edu/content/6> [last accessed on 31 August 2018].



rhetoric on the following pages seeks to question and remedy this lacuna by shifting the spotlight to exploring the stakes of anthropomorphizing plants. Doing so requires suspending the knee-jerk censure of anthropomorphism that has long been a mainstay of the critical repertoire. My goal is to instead provide a “critique” of anthropomorphism in a sense that is reminiscent of the Kantian meaning of the term: a meta-reflection on the purview and the limits of anthropomorphic approaches to plant life as modeled by Wohlleben’s book.

## Didactic Anthropomorphism: Familiarizing the Unfamiliar

Anthropomorphism is not reducible to a single classical figure or trope but functions as a rhetorical meta-category.<sup>22</sup> For our analytical purposes, it can be described as a specific mode of organizing the tropological transfer between what classical rhetoric called the “proper” term and its “improper” figurative substitution – one in which a concept that “properly” belongs to the non-human domain is substituted by one taken from the sphere of human experience. In anthropomorphic metaphor, the device most commonly employed by Wohlleben, this substitution is based on similarity (or the *tertium comparationis*, as classical rhetoric called the features shared between the terms implicitly compared in the trope). The metaphorical substitution *produces* as much as it *presupposes* this similarity: If no similarity were detectable, the trope would be unintelligible; if the terms compared were too similar or identical, it would be pointless. Anthropomorphic metaphors thus function by positing unexpected similarities across human and non-human domains in order to shed new light on the (non-human) target domain of the metaphorical transfer.<sup>23</sup> The classic epistemic function of anthropomorphism in this context is that of familiarizing of the unfamiliar. By understanding aspects of the non-human world in terms that ring closer to home (i.e., by analogy with human experience), affairs that are strange or difficult to grasp attain at least the semblance of greater familiarity.

Anthropomorphisms of this familiarizing kind form a part of Wohlleben’s repertoire and are typically used for didactic purposes – for instance, in the service of dramatizing complex interdependencies within forest ecosystems, or for rendering aspects of plant life that are foreign to human and animal life more accessible to readers. In illustrating the fact that, like other plants, trees are not dependent on external food sources for their energy but produce their own nourishment through photosynthesis, which requires water, Wohlleben resorts to the image of a baker baking bread: “Wie ein Bäcker [...] können [Bäume] durch Fotosynthese jedes Magenknurren sofort

**22** The trope of *personificatio* or *prosopoeia* – the “attribution of personhood to” or “giving face to” abstract or non-human entities – covers some of what is commonly described as anthropomorphism but does not exhaust the term’s wider significance. There are forms of anthropomorphic figurative language that do not fit the definition of the classical trope, such as metaphors that mix human and non-human domains, but fall short of attributing personhood, anthropomorphic similes, or extended conceptual metaphors with an anthropomorphic underpinning.

**23** In an anthropomorphism like the portrayal of trees who avoid blocking each other’s light as “friends,” for instance, the *tertium comparationis* might be characterized as “two individuals cooperating.” This shared feature is first foregrounded among all the possible meaning aspects of human friendship at the expense of others that do not fit the image (humans, for instance, rarely cooperate by staying out of each other’s light), and then used to characterize tree behavior in terms of “friend-like” agentive cooperation where one might have expected to find blind and mechanical growth.

beenden. Doch der beste Bäcker der Welt kann ohne Wasser nichts backen, und auch für Bäume ist ohne Feuchtigkeit mit der Nahrungsmittelproduktion Schluss” (p. 45/43). This is an extended anthropomorphic simile in which a state of affairs foreign to non-photosynthesizing beings like humans is illustrated by means of a familiar idea with which it shares certain features (in this case, that of being able to produce one’s own food, but only when water is present as an ingredient). The risk of this type of familiarizing anthropomorphism is less that of anthropomorphic misrecognition – readers will hardly be tempted to confuse a tree for a baker – than that of platitude: The didactic advantage of presenting a complex botanical mechanism in a vivid and accessible image is as apparent as the risk of simplifying processes beyond recognition. Among the things the analogy ignores is the fact that trees also need sunlight to photosynthesize and are therefore hardly capable of producing their own sustenance simply by deciding to switch on an “internal oven,” as the image of bread baking suggests.

### **Self-Reflexive Anthropomorphism**

Familiarizing anthropomorphism is, however, not the primary strategy in Wohlleben’s playbook and certainly not the most interesting one. The most distinctive feature of Wohlleben’s style is a remarkable degree of rhetorical self-reflexivity. Rather unusually for a popular science text, his writing not only relies on but frequently also draws attention to the operations of figurative language.

The text accomplishes this in a first instance by reactivating dormant metaphors from the expert languages of scientists and professional foresters. The fact that tree seedlings growing up under the canopy of parent trees are compelled by the dearth of light to grow dense and stable cells that ensure long tree life is, for instance, characterized by Wohlleben in terms of “Erziehung”: “Erziehung? Ja, es handelt sich tatsächlich um eine pädagogische Maßnahme, die nur dem Wohl der Kleinen dient. Der Begriff ist übrigens nicht aus der Luft gegriffen, sondern wird von Förstern schon seit Generationen auf diesen Sachverhalt angewendet” (p. 36/32). The daring anthropomorphic conceit thus turns out to be an idiomatic expression commonly used by experts. The same applies to the designation of subterranean fungal networks through which trees exchange nutrients and information as “Internet des Waldes” – an expression that, Wohlleben points out, is plucked directly from scientific biology, where such networks are discussed under the heading of the “wood wide web” (p. 52/51).<sup>24</sup> Figurative maneuvers of this type put into abeyance the clear-cut distinction between scientific literalism and the popular presentation of knowledge in an improperly anthropomorphic imagery.

In more salient cases of rhetorical self-reflexivity, Wohlleben directly invites readers to reflect on the figurative status of anthropomorphic expressions. Summarizing recent findings, according to which the roots of grain seedlings emit clicking sounds at a frequency to which other seedlings respond by leaning toward them, he notes: “Immer dann, wenn sie einem Knacken von 220 Hertz ausgesetzt waren, orientierten sich

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<sup>24</sup> Suzanne Simard at the University of British Columbia, one of the forest scientists responsible for coining the term, wrote the afterword to the book’s English translation.

die Spitzen in diese Richtung. Das bedeutet, dass Gras diese Frequenz wahrnehmen, sagen wir ruhig: 'hören' kann" (p. 20/13). After stating the "plain fact" of cause and response, the text offers an interpretation that proceeds from the still rather neutral "wahrnehmen" to the more anthropomorphic "hören," whose figurative status is signaled by quotation marks and the qualifying "sagen wir ruhig." The rhetoricity of the anthropomorphic ascription is thus twice emphasized – but its "mere" figurative impropriety is, at the same time, called into question: what, after all, is "hearing," if not the perception of sound as information?

The subtlety of such rhetorical maneuvers has escaped (or been consciously ignored by) one of Wohlleben's most ardent critics. Torben Halbe's book-length polemic *Das wahre Leben der Bäume* spends a large part of its first chapter refuting the strawman claim that trees are unable to hear in the same way humans do (because they lack a human-like outer ear and a brain to tune in or out of specific frequencies, etc.) – as if that had been the assertion.<sup>25</sup> The misreading is, however, instructive in demonstrating that Wohlleben's rhetorical devices are not merely ornamental but critical to the substance of his message: They make all the difference between a simple ascription of human qualities to plants and an encouragement to imagine sound-responsive behaviors of plants as a kind of "hearing," thus challenging readers to consider what is at stake in using (or refusing to use) such a term.

In numerous instances, Wohlleben examines the underlying motivation of anthropomorphic tropes by explicitly addressing the *tertium comparationis* that grounds the rhetorical maneuver. The following passage, which discusses how forest ecosystems regulate temperature by means of evaporation, is one example: "Verdunstung erzeugt Kälte, die wiederum bewirkt, dass nicht so viel verdunstet. Man könnte auch sagen: ein intakter Wald kann im Sommer schwitzen und erzielt damit denselben Effekt wie der Schweiß bei uns Menschen" (pp. 93/100-101). The anthropomorphic statement that "trees sweat" differs in several ways from the run-of-the-mill anthropomorphism employed in the "baker" simile discussed above. Neither a naïve nor a merely didactic ascription of human qualities to plant life, the passage begins once again by drawing attention to its own figurative nature ("man könnte auch sagen") before proceeding to address the basis of the tropological transfer: Trees resemble humans in employing the cooling effect of evaporation. Here, the anthropomorphism is not based on a perceived analogy between categorically different (human/non-human) domains but on the unexpected commonality of a physiological process that applies *across* these domains. As an effect, the tropological transfer is free to proceed in both directions:

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**25** This is only one example of Halbe's bad-faith interpretations of Wohlleben's claims. For the most part, Halbe's objections are not factually wrong (it is certainly true, for instance, that trees lack auricles and brains) but they consistently (and perhaps deliberately) miss the point of Wohlleben's writing. Where Wohlleben takes new findings about plants as a point of departure to probe new ways of understanding and relating to trees by means of an avowedly metaphorical language, Halbe reads Wohlleben's descriptions as a series of literal statements of scientific fact, only to then police them as transgressions against a narrowly conceived scientific literalism to which Wohlleben never aspires. The deeper motivation behind Halbe's polemic may reveal itself in one of his more bizarre misrepresentations: the idea that Wohlleben rejects all forms of silviculture except the wholesale re-introduction of virgin forests (Halbe: *Das wahre Leben der Bäume*, p. 14) because he allegedly sees felling trees as morally evil and as a form of murder (ibid., p. 16); for the remarks on "hearing," see ibid., pp. 26-31. This is demonstrably wrong. Wohlleben propagates a form of silviculture called "Plentnerwirtschaft," which he likens to organic farming (p. 216/243) – a kind of forestry that is sensitive to the complexity and climatic importance of forest ecosystems.

Not only are trees like humans; humans, it turns out, are in some respects like trees. The self-reflexive “category mistake” ultimately challenges the categories it deliberately confuses, raising the question whether insisting on the merely anthropomorphic nature of such descriptions may not itself disguise an implicit anthropocentrism.

## Defamiliarizing Anthropomorphism

The tendency of Wohlleben’s tropes to critically examine the similarity that motivates them culminates in a rhetorical strategy perhaps best described as “defamiliarizing” anthropomorphism. In an extensive description of tree bark (a part of which is reproduced below), Wohlleben consistently portrays bark in terms reminiscent of human skin. What may initially seem like a classic case of (pseudo)familiarization through anthropomorphism is, in fact, a rather different rhetorical maneuver:

Bevor ich auf das Alter zu sprechen komme, möchte ich einen Schlenker zum Thema “Haut” machen. Bäume und Haut? Nähern wir uns dem Phänomen zunächst von der menschlichen Seite. Die Haut ist eine Barriere, die unser Innerstes vor der Außenwelt schützt, die Flüssigkeiten zurückhält, die Inneren am Herausfallen hindert und nebenbei Gas und Feuchtigkeit abgibt und aufnimmt. Zudem blockiert sie Krankheitserreger, die sich nur zu gerne in unserer Blutbahn ausbreiten würden. Daneben reagiert sie empfindlich auf Berührungen, die entweder angenehm sind und das Verlangen nach mehr wecken oder aber Schmerz und damit eine Abwehrreaktion hervorrufen. [...] Und wie ist das bei Bäumen? Ihnen geht es nicht anders. Der wesentliche Unterschied ist reine Wortklauberei: Die Haut von Buchen, Eichen, Fichten, und Co. nennt sich Rinde. Sie erfüllt aber exakt dieselbe Funktion und schützt die empfindlichen inneren Organe vor der aggressiven Außenwelt. (pp. 59-60/60-61)

As in earlier instances, the anthropomorphism is prefaced by an examination of the *tertium comparationis* that grounds the substitution of skin for bark. More clearly than in those examples, however, the passage emphasizes the irreducibility of the ground of comparison to conventional understandings of either one of the two compared terms. Rather than assuming that we already know what skin is, the text first ventures into an exploration of skin as a porous boundary organ that separates and mediates between an organism and its environment. Only this “strange” and, to average readers, “defamiliarizing” notion of skin *qua* boundary organ then becomes the operative term in an extended anthropomorphic metaphor, according to which trees desquamate in order to renew this organ, develop wrinkles with age, form scars in response to injuries, and so on (pp. 59-65/60-67). By focusing on the human organism rather than human cognitive abilities as a source of the anthropomorphic transfer, the trope inverts the familiarization-through-personification achieved by classical anthropomorphism. One might say that the anthropomorphism instead effects a *de*-familiarization through the *de*-personification of the human term of the comparison – a defamiliarization that then, however, reveals overlooked points of contact between human and tree life. Defamiliarizing anthropomorphisms thus perform a two-step rhetorical maneuver in which an initial defamiliarization of the human element discloses an unexpected familiarity between human and plant life. If trees are like humans for Wohlleben, then only because humans are more like trees than we may be prone to think. To become more familiar with trees, the text suggests, we may first have to become unfamiliar with ourselves; or we must at least unlearn thinking of ourselves as beings categorically different from the forms of life that surround us. As an organ of demarcation, contact, and interchange, skin encapsulates the effect of such defamiliarizing anthropomorphisms

in a rather overdetermined way: By revealing our uncanny familiarity with the boundary-organ of trees, the text prompts us to re-examine ways of drawing and crossing the boundaries between human animals and plants.

At their most compelling, Wohlleben's anthropomorphisms thus challenge traditional definitions of the *anthropos* rather than naively making humans the measure of all things. The nature of this challenge is specific to the kinds of boundary-crossings invited by anthropomorphizing accounts of plants. Debates about anthropomorphism in animal ethology and animal studies at large tend to focus on whether it is legitimate or misleading to ascribe "higher" cognitive functions (such as self-consciousness, abstract thinking, or rational inference) to non-human life forms. Summarizing and seeking to provide a theoretical foundation for discussions of anthropomorphism in ethology and animal rights debates, philosopher Sandra D. Mitchell, for instance, proposes that "claims of similarity between humans and non-humans" are scientifically viable if (and only if) they are "substantiated by evidence that there are similar causal mechanisms responsible for generating apparently similar behaviors that are observed."<sup>26</sup> Anthropomorphizing animals, in other words, is legitimate where the inference from human-like behavior to human-like cognition can be empirically substantiated. Where this is not the case and such behavior may be governed by "mindless" processes, this line of reasoning implies, anthropomorphism is inappropriate.

This model is of limited use when it comes to understanding plant anthropomorphisms of the kind Wohlleben employs – or anthropomorphizing accounts of any species more distant to humans on the phylogenetic tree than the mammals commonly invoked by Mitchell and the debates she reviews. Plants have no brains; whatever "causal mechanisms" govern their behavior will be patently different from those at work in humans and other animals with centralized nervous systems.<sup>27</sup> Mitchell's criterion would thus seem to rule out the viability of plant anthropomorphisms *a priori*. Focusing on salient similarities in behavior is equally impractical when it comes to plants. After all, the problem when it comes to anthropomorphizing plants seems quite different from the one Mitchell takes for granted: Rather than probing whether salient similarities in behavior can be trusted, the challenge of plant anthropomorphisms would seem to be in demonstrating that meaningful similarities can be detected *despite and across* salient dissimilarities in the behaviors of humans and plants.

Wohlleben's defamiliarizing anthropomorphisms provide innovative examples of how to meet this challenge. As we have seen, his experimental anthropomorphisms often shift the focus of exploring trans-species resemblances from "higher" cognitive functions to non-cognitive or para-cognitive functions – if we understand "para-" with the ambiguity of the Greek prefix as meaning both "alongside" and "beyond, other than" human cognition.<sup>28</sup> In many of the self-reflexive anthropomorphisms that have been

<sup>26</sup> Mitchell: "Anthropomorphism and Cross-Species Modeling," p. 114.

<sup>27</sup> How to (and whether it is possible to) understand the concept of "intelligence" without invoking a brain or central nervous systems is a key point of contention in the plant intelligence debate. See, for instance, the section on "Cognition without a Brain" in Fatima Cvrčková/Helena Lipavská/Viktor Žárský: "Plant Intelligence." In: *Plant Signaling & Behavior* 4.5 (May 2009), pp. 394-399.

<sup>28</sup> Compare the meanings of "parallel" ("alongside one another") and "paradoxical" ("contrary to received opinion"). The word "para-cognitive" occasionally appears in (analytic) philosophy to discuss the quasi-rationality of human affects and emotions; see, for instance, Ingmar Persson: "The Rationality of Para-Cognitive Attitudes." In: *Ibid. The Retreat of Reason. A Dilemma in the Philosophy of Life*. Oxford: Clarendon Press, 2005, pp. 158-167.

the focus of my reading, the juxtaposition of humans and non-humans is not based on advanced cognitive faculties but on functions of the autonomic nervous systems such as sweating (p. 93/100), sleeping (p. 129/241), and digesting (p. 129/241) – precisely the kinds of processes long declared “vegetative” and, in the same stroke, inessential to the kind of rationality that traditionally defined the human as the “rational animal.” Even where Wohlleben’s anthropomorphisms explore plant intelligence, they do so less by ascribing human-like cognition to plants than by way of prompting readers to reconsider what may count as intelligence in humans. His discussion of various forms of tree communication under the heading “Die Sprache der Bäume,” for instance, initially seems to hinge on attributing to trees a distinctly and exclusively human faculty. On closer inspection, however, the anthropomorphic transfer rests on a reevaluation of the range of human behaviors that may count as language-like. Humans, Wohlleben notes, have been shown to be (usually unconsciously) responsive to scents of conspecifics as well, and can thus be said to possess a “geheime Duftsprache” (pp. 14/6-7) of their own – not unlike that of trees. With this qualification, the anthropomorphic transfer again changes direction: A mode of communication exemplified by trees becomes the model relative to which a range of human behaviors appears in a “strange” new light.

This strategy characterizes Wohlleben’s approach to questions of plant intelligence more generally. The autonomic nervous systems so often invoked by his anthropomorphisms operate without a single command center but nevertheless respond to environmental changes in “intelligently” adaptive, more-than-mechanical ways. Our experience with them may thus both provide a glimpse into how intelligent behaviors may function in plants without projecting conceived notions of human cognitive exceptionalism on other forms of life. Even in humans, Wohlleben’s defamiliarizing anthropomorphism invite us to think, there are forms and layers of intelligence that do not conform to “cerebrocentric”<sup>29</sup> models of what constitutes cognition.

The commentary most attuned to this aspect of Wohlleben’s writing appeared in an unlikely place – the *Journal for Palliative Medicine*. Wohlleben’s exploration of parallels between humans and trees, the reviewer suggests, will help palliative caregivers avoid dehumanizing patients who have sometimes lost the kind of “higher” cognitive functions traditionally deemed essential for personhood.<sup>30</sup> Perhaps the rise of autonomic dysfunctions such as sleep and digestive disorders is a sign that in a dematerializing world, developing sensibilities for aspects of human life that remain below the threshold of cognitive subjectivity is a task for more than specialists in palliative medicine.<sup>31</sup> If *Das geheime Leben der Bäume* indeed caters to the zeitgeist, one might speculate that it does so less by satisfying a desire for social harmony than by promising a way of reconnecting with layers of life that resist a conception of humans as disembodied cognitive machines. Wohlleben’s improper

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**29** The formulation was coined by the philosopher Dann Denett, quoted in Pollan’s *New Yorker* article cited above; see Pollan: “The Intelligent Plant,” n.p.

**30** See Sarah C. Rossmassler: “The Hidden Life of Trees.” In: *Journal of Palliative Medicine* 20.12 (2017), p. 1420.

**31** For a discussion of how sleep (as an example of an autonomic bodily function) collides with global capitalism’s demand for continuous functioning, see Jonathan Crary: *24/7. Late Capitalism and the End of Sleep*. New York: Zone Books 2014, esp. pp. 11-14.

anthropomorphisms thus not only excavate the hidden life of trees but also challenge readers to reconsider aspects of life excluded from traditional definitions of the “properly” human. Belying the premature dismissal of such a project by the commentators cited above, *Das geheime Leben der Bäume* is thus a testament to the fecundity and timeliness of “thinking with plants.”

