

THE ANDROID IN THE ANTHROPOCENE: A MATERIAL  
ECOCRITICAL READING OF PHILIP K. DICK'S  
*DO ANDROIDS DREAM OF ELECTRIC SHEEP?*

by

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DEDICATION

For RG, MV, CR, DR, MC, LA, MC, MR, AP & the many other friends, family, and advisors that have supported me in this project. All of you are those who *matter*.

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## ABSTRACT

Paul Crutzen and Eugene Stoermer's concept of the Anthropocene recognizes the human role in climate change and situates the species within a geological timescale. While the idea of the Anthropocene has been adopted by a wide group of academics, scholars working with what they call "new materialism" describe this naming of our geological time as an overestimation of human agency. They emphasize a furious search for meaning in an environmental context that asserts human superiority to and separation from nature. Instead, new materialists rethink outmoded trends in environmental, historical, and literary theory by recognizing the agency of nonhuman nature. Interestingly, Philip K. Dick's 1968 novel, *Do Androids Dream of Electric Sheep?*, anticipates the anxiety that emerges when humans confront the limits of their agency. He offers robotic animals, organic androids, and a post-apocalyptic space within which humans and nonhumans co-construct meaning and navigate the limits of agency in the late Anthropocene.

New attention to materialism allows critics to recognize "narrative agency," which endows the nonhuman with meaning assembled *with* the human rather than *through* them. Through this material ecocritical framework, human/nonhuman and natural/cultural dualisms may be disrupted, allowing new ways to theorize the human. This paper traces the ways that Philip K. Dick lays the groundwork for an ecocritical posthumanism, demonstrating how nonhuman nature interacts with the human in ways that extend boundaries of agency. In his vision of the near future, the author engages readers in a critical conversation exposing problematic perspectives of nature and the human's place therein.

## SECTION I. INTRODUCTION

In December 1968, the Apollo 8 mission successfully sent the first manned mission to orbit the moon, producing one of the most important images in space exploration. As astronaut William Anders and his crew circled the lunar body, Anders captured the photo *Earthrise*, the first ever image of Earth and all but four human lives in one field of view. The photo sparked global environmental movements, green politics, and the philosophical ideas bound within “deep ecology.” Coined in 1973 by Norwegian philosopher Arne Næss, Deep Ecology, in part, was an effort to extend mainstream environmentalism into a wider philosophical project concerned with viewing the “*total-field image*” of the planet’s ecology, questioning anthropocentric models of human/nonhuman relations with “biospherical egalitarianism” (Næss, “The Shallow” 95).

In the same year *Earthrise* made headlines, Philip K. Dick published *Do Androids Dream of Electric Sheep?*, a novel that ambitiously confronts the philosophical notion of deep ecology—though its positions were unavailable to him—with a narrative that confounds anthropocentric visions of Earth and its nonhuman inhabitants. Indeed, in all of the philosophically and spatially obscure questions posed by Dick’s fiction, perhaps the most unexamined is: what does it mean to be *nonhuman*? The novel follows both detective Rick Deckard and John (JR) Isidore as they each experience a post-apocalyptic, yet surprisingly living nonhuman world. While this novel is deeply philosophical in its themes, it is also patently environmental in its portrayal of San Francisco’s climate ruined, radioactive environment, wherein various nonhuman entities exhibit strange agencies and surprisingly living qualities alongside Earth’s few remaining human actors.

Many forms of matter, in fact, find new venue for asserting agency within an ecologically devastated, post-war Earth. From radioactive dust and kipple to electric animals and androids, these nonhuman entities are storied into the backdrop of deep ecology, technological innovation, and the radioactive throes of post-World War II America. Coupled with widespread cultural shifts brought about by green politics and environmental movements, *Do Androids Dream* builds a “narrative of matter,” which projects the stories of lively nonhuman actors into contemporary navigations of agency and environmental concerns confronted in reality.

Bound together within a crumbling radioactive world, Dick’s human and nonhuman actors are deeply storied into the complex phenomena of climate change and other anthropogenic factors now influencing ongoing considerations that Earth has—some time ago—entered the “Anthropocene epoch.” The term recognizes that humans have so radically affected the natural, ecological, and geological forces of the Earth that their namesake, “Anthropo,” should be inextricably tied to these large processes. However, this recognition perhaps unintentionally forgoes the consideration of the material, nonhuman world. While this term does not call for—or resists—either hastily asserting the human’s dominion over Earth or the relinquishing of the powers of the nonhuman world, its ambiguity between these enables reconsiderations of nature/culture, human/nonhuman, language/reality divisions. Although, the titular presumptions underscoring “Anthropocene” puts the wrong foot forward in the re-evaluation of these dualisms, which Timothy Clark suggests are “the ultimate source of humanity’s destructive relation to the natural world” (“Post Nature” 77). The long-overdue

examination of the lives and stories of the material world find new voice in the scholarship of “new materialism,” that broadly proposes “ways to analyze language and reality, human and nonhuman life, mind and matter, without falling into dichotomous patterns of thinking” (Iovino and Oppermann, “Introduction” 2). The paradigm of new materialism takes conceptions of agency as the primer for reconsidering problematic dualisms that cast nature, the nonhuman, and matter as “unable to convey any independent expression of meaning” apart from human intention (2). Instead, new materialists view matter as quite alive, with built-in “trajectories, propensities, and tendencies of their own,” as opposed to “the image of dead or thoroughly instrumentalized matter” (Bennett viii-ix). Thus, the notion that matter has real efficacy in the world aside from their interactions with the human opens avenues for recognizing vast networks of agency within which humans and nonhumans co-exist, act with, and create meaning through one another.

Working from the perspective that both humans and nonhumans form this network together, *Do Androids Dream* casts nonhuman actors that decidedly part from normative boundaries of agency, subjectivity, and embodiment as human characters come to increasingly co-exist with and draw meaning from technologically advanced, nonhuman entities. Specifically, Dick’s android characters exhibit powerful but “rarely embraced” roles as the “amalgamation of human and nature” that uniquely embody the notion that nonhuman, material nature acts *with*, and even helps constitute the human (Alaimo 7). These highly evolved, intelligent machines submit dynamic narratives alongside other “hybrid compounds of the Earth,” weaving a dense fabric of agencies that

together overturn visions of nonhuman nature as passive or inert (Oppermann, “Posthumanism” 30). Indeed, Dick’s novel is insistent to represent a manifold presence of agency, within which the android characters sustain considerable narrative weight. Against the backdrop of ecological collapse, the android and human characters become ontologically close, thematically pressing boundaries of embodiment, agency, and the human/nonhuman divide. As the human and android characters explore these boundaries, *Do Androids Dream* positions readers as actively interpreting the android figure’s “narrative agency,” reading the figure as making meaningful deposits into a real, material *and* human world, extending its agency beyond cultural representation into ongoing developments of new technologies, increasingly changing natures, and unfolding posthuman realities.

Viewed together, *Do Androids Dream* is a complex and porous narrative about shifting environmental paradigms, questioning how a devastated nonhuman nature is viewed, interacted with, and theorized about; and ultimately, anticipates the issues facing an environmentally threatened and ironically posthuman Anthropocene. From this perspective, Dick’s novel provides perplexing accounts of nonhuman forms and agencies within a climate changed, radioactive world. While initially, garden-variety ecocriticism seems an apt tool for interpreting Dick’s work, the theoretical space opened through new material studies has built upon so-called “first wave ecocriticism,” to become more perceptually aware of matter’s dynamic agency and narrative powers (Iovino, “Matter, Text” 56).

As the oft-cited philosophical and theoretical foundation for ecocriticism, deep ecology helped set the terms for equating nature's "intrinsic value" with the human's in an attempt to retract conceptions of nature as an expendable or disposable resource for human aesthetic consumption. However, the concept of deep ecology and its eco-centric value system has been accused of being "misanthropic," and in response, headstrong practitioners of deep ecology "often reaffirm the conventional priorities they criticize in environmentalists" (Garrard 25). Paradoxically, deep ecology separates nature as simply the "other" to culture, framing humans as always "condemned to denaturalize and destroy its exoticized natural 'other'" (Goodbody 64). Though progressive and even radical, deep ecology proves an ineffectual—or at best shaky—theoretical and philosophical landscape for ecocritics who now recognize the world as "'a dense network of agencies' [...] in constant 'relation' with each other" (Oppermann, "Ecological Postmodernism" 22). Readers quickly locate this vision of the world unfolding in Dick's novel, which showcases a plexus of human and nonhuman forms of agency framed within a post-war, posthuman Earth undergoing radioactive decay.

This becomes immediately apparent in the opening sentence of the novel: "A merry little surge of electricity piped by automatic alarm from the mood organ beside his bed awakened Rick Deckard" (3). The subject of the sentence, electricity, situates Deckard as the receiver of this oddly characterized electric current, and more importantly, establishes a narrative trajectory that highlights the living qualities of the nonhuman as decisive agents directly influencing the human. In fact, the narrative focalizes human dependence on the nonhuman for inspiring emotions, determining actions, and defining

human values. Guided intuitively by devices known as “Penfield mood organs,” humans “dial” very specific, yet artificially inspired emotions that prompt engagement with their environments. For instance, dialing an “888” inspires “the desire to watch TV, no matter what’s on it” (6). The novel’s constant interrogation of what distinguishes human from nonhuman—through various displays of agency, expressions of emotion, and demonstrations of value—plays an integral role in Dick’s narrative, where these qualities find new expression through various nonhuman forms, or more appropriately, through an extreme scarcity of those forms.

Dick’s novel situates characters and events unfolding soon after “World War Terminus,” whose effects are vastly overshadowed by wide-spread environmental collapse resulting from both “radioactive fallout,” and elusive mentions of “dust which had contaminated most of the planet’s surface,” but eerily “had originated in no country, and no one, not even the wartime enemy, had planned on it” (15-16). As a result, all forms of life on Earth have been altered irreversibly, and, as “the sun had ceased to shine on Earth,” the majority of humans deemed both psychologically and biologically fit left to colonize Mars (16). While Earth’s human population reduces to the thousands, animal life becomes so scarce that ownership of any *real* animal is not only a much sought-after status symbol, but provides the owner an outlet for remaining emotionally in-touch with the natural world. The qualifier “real” is necessary, for humans so desperately seek sources for connecting with the nonhuman that animals are built and sold at a bargained cost to those who cannot afford the real thing. These “ersatz animals,” however, “had a way of gradually demoralizing one” in their fakery, but caring for one is nonetheless a

social requirement in a world where all things “living” are extremely scarce to the point of commodification (12). Owning and caring after animals—whether real or not—is, in fact, considered the moral thing to do insofar as having empathy for living things demonstrates a human commitment to both the preservation of the last remaining forms of life on Earth and maintaining the capacity for empathy.

Alongside these artificial animals stands the “organic android,” whose perceived lack of empathy toward any living thing (even other androids) however, poses a threat to the scant human and nonhuman life still remaining on Earth, and are thus banned from the planet under penalty of “retirement.” The newest model of androids, the “Nexus 6,” are the most advanced, rivaling human intelligence and nearly physically and biologically identical to humans. The only method for revealing them as nonhuman is through the “Voigt-Kampff empathy test,” which measures minute shifts in facial features and pupil dilation as its test subjects respond to various social situations, all of which feature pre-war, pre-fallout scenarios “mostly having to do with animals” (119). Both the electronic animal and android, in their very being, serve as extensions of bodily and biological authenticities, and importantly, act as markers for determining human qualities such as their moral values and empathic capacities. While the animal—whether authentic or false—maintains the humans’ link to the natural world and their emotional connections to it, the androids, in their ability to seamlessly blend in with and act similarly to humans, question the boundaries of what is deemed as natural or human. Ultimately, humans have remarkably few markers for determining the authenticity of their own values, biological qualities, and even natural surroundings with relation to the nonhuman. Throughout the

novel, these two seemingly non-natural beings complicate normative conceptions of nature and human agency and subjectivity.

As the human characters and even their android kin weave in and out of existential crises, humans sense immense isolation in their harsh, post-war environment. For John Isidore, the sole occupant of one of San Francisco's abandoned apartment buildings, seclusion was his solution for having "ceased, in effect, to be part of mankind" (16). Classified a "special," Isidore, subject to his radioactive environment, was sterile and deemed a threat "to the pristine heredity of the [human] species" (16). At once biologically human but classifiably nonhuman, Isidore interacts with what is predominantly left of "intact nature" on earth: silence. Living alone in a "deteriorating, blind building of a thousand uninhabited apartments," Isidore observes his empty apartment:

It flashed from the woodwork and the walls; it smote him with an awful, total power [...] It managed in fact, to emerge from every object within his range of vision, as if it—the silence—meant to supplant all things tangible. Hence it assailed not only his ears but his eyes; as he stood by the inert TV set he experienced the silence as visible and, in its own way, alive. Alive! [...] The silence of the world could not rein back its greed. Not any longer. Not when it virtually had won. (20)

Isidore's observation here displaces the once thriving building, which previously "chattered like a bird tree with life and opinions and complaints," and furthermore, casts Isidore as uniquely perceptive of his lively surroundings taken over by "entropic ruin" (15, 20). This potent description of his imaginably empty surroundings as still vibrant and "tangible" speaks to his character's observational powers and exceptional connection with his silent yet living surroundings. Perhaps related to this quality, Isidore's

categorical lapse of the human/nonhuman distinction first establishes his character as quite in-tune with the nonhuman world; and second, lays the groundwork for the novel's thematic volleying between these categories as they slowly dissolve.

Already, Dick's narrative depicts a lively nonhuman world flirting with boundaries of humanness, agency, and categorical lapses of human/nonhuman distinctions. The novel pays equal attention to the toxic effects of a radioactive post-war Earth and how humans and nonhumans encounter this environment. Operating within one of the largest transformations in human and environmental history, *Do Androids Dream* also responds to the effects of the "Great Acceleration," J.R. McNeill and Peter Engelke's proposed timeline for the "beginning of the Anthropocene" (4). Specifically, their proposal of this geological timeline of Earth focuses on how the expansion of human population, energy consumption, and industrial production post World War II all play essential roles in the phenomena of climate change and wide-scale ecological devastation that underpins the Anthropocene discourse. While nuclear technologies and energies in the 1950's showed seemingly "bright and endless possibilities," their potential benefits came only on the heels of their capacity for mass-destruction. In fact, as McNeill and Engelke explain,

one of the world's first international environmental agreements arose from nuclear testing. As evidence mounted that atmospheric testing sprinkled all ecosystems and earthlings with extra doses of fallout, as explosions grew bigger and bigger, and as expertise in radiation medicine accumulated, politicians and scientists by the late 1950's developed some doubts about the prudence of continued testing. (27, 166)

Writing against the backdrop of these effects, Dick's novel expands a narrative well into the Anthropocene discourse, as characters experience their "morning air, spilling over

with radioactive moles,” and don their “Mountibank Lead Codpiece[s]” as they navigate a toxically radiated Earth (7-8). While Dick’s novel attends to the interactions between dwindling human and nonhuman agents, critical attention to the notion of the Anthropocene benefits equally from a materialist perspective, and likewise, how this perspective impacts literary depictions of climate change, scientific and cultural epistemology, and the “narrative agency” of the nonhuman world. Indeed, the proposal that Earth is presently located within the significant natural-historical moment now discussed widely as “the Anthropocene,” must temper its anthropocentrism through the consideration of material nature and the livelihood and agency of the nonhuman world.

The term and its current usage are credited to atmospheric chemist Paul Crutzen and biologist Eugene Stoermer, who in May 2000 declared that “the expansion of mankind, both in numbers and per capita exploitation of Earth’s resources [...] emphasize the central role of mankind in geology and ecology” (Crutzen and Stoermer 17). The concept of the Anthropocene is gaining widespread attention beyond geology from scholars of history, environmental science, anthropology, ecology, and literature. Yet, while the human role in global climate change through processes of deforestation, population growth, and energy expenditure is arguably undeniable, the term “Anthropocene,” or literally, the “New Human Age,” is at the center of a wide, cross-disciplinary debate.

The chief concern of scholars still skeptical at accepting the term argue it assumes too much about the human role in both Earth’s history and its natural forces. Namely, historian Timothy LeCain takes issue with the term’s “unapologetically anthropocentric”

meaning, which grants humans a seemingly endless amount of agency extending deeply into Earth's geologic history and future. Similarly, in his essay "The Climate of History: Four Theses," Dipesh Chakrabarty argues that the term and the historical processes leading to its arrival have collapsed the "age-old humanist distinction between natural history and human history" (201). This thesis proves transformative for the nonhuman world, insofar as Chakrabarty argues here that—as anthropogenic climate change suggests—humans and their relatively short history are now intricately tied within nonhuman, natural history, initiating what LeCain calls "the Great Ontological Collapse" (LeCain, "Heralding" 16). Thus, in response to Chakrabarty's essay, LeCain suggests scholars might actually be more productive by taking on "the even broader modernist distinction between culture and nature" (17). Specifically, because the Anthropocene joins the nature with the culture, and now "humans must be understood both as unnatural self-created creatures and a natural force" (16). The Anthropocene idea, then, decidedly collapses the long-dominant "Western Enlightenment thought" that humans existed "far above" their nonhuman counterparts (16).

The concept of the Anthropocene, then, carries with it the assumption that human culture exists in conjunction with natural history rather than as its product—or perhaps its commensurate agent—asserting a world view in which humans largely stand outside of nature, haphazardly using its materials at the whim of modern capital and industry. As LeCain points out, however, arguing in this direction discredits the role of natural materials in the Anthropocene, supports a disjuncture between nature and culture, and problematically suggests that culture always precedes nature. In an effort to reevaluate

this separation, LeCain suggests a “neo-materialist” perspective that exposes ways in which “the planet has made humans rather than the other way around,” and importantly, questions the possible overestimation of human agency in the broader scheme of global environmental changes (4). Specifically, LeCain works to overturn the “modernist idea [...] that material things are essentially passive ‘natural resources’ that humans bend, with more or less success, to their own will” (LeCain “Against” 22). In this departure, social constructivism becomes an unreliable model for which to understand how our ideas of “nature” have been created, studied, observed, and consumed. Thus, the primary mission for new materialists is developing an ontological and epistemological view of all nonhuman matter. While LeCain here is approaching work in the new materialisms from an environmental historian’s perspective, as a field of inquiry new materialism encompasses vast cross-disciplinary conversations that overlap into political, scientific, and humanist spheres of thought.

For instance, political ecology, or the study of nature within scientific, economic, and social institutions, is the primary concern of Bruno Latour’s *Politics of Nature* (2004) in which he argues that politicizing nature sets up problematic boundaries between nature and how it is theorized and defined. For Latour, the notion that the sciences—and its practice of studying observable, “objective” reality—and the social—and its gathering of knowledge from human interaction—are separate spheres for theorizing ontology and epistemology that tend to privilege definitions of what is true or observable to scientific methods. However, Latour does not argue for the separation of scientific or social ways of knowing or being, but rather argues for “redistributing powers” between each sphere

(Latour 14). Thus, Latour's theory implicates both scientific and social ways for defining and theorizing nature. Particularly helpful for serving Latour's interests, Jane Bennett's widely-cited *Vibrant Matter* (2010) argues for a "vital materiality," (vii) which asks, "How would political responses to public problems change were we to take seriously the vitality of (nonhuman) bodies?" (viii) and, to that end, argues that "naming where subjectivity begins and ends is too often bound up with fantasies of a human uniqueness in the eyes of God, of escape from materiality, or of mastery of nature" (ix). Bennett's primary concern, then, is to employ Latour's notion of what she calls "*distributive agency*" and apply it to ways of thinking about nature that extend into questions of nonhuman agency and subjectivity.

Bennett and Latour therefore provide some basis for re-thinking a dichotomous, social constructivist epistemology, evincing the need for developing a more nuanced vocabulary and theoretical framework for understanding and analyzing nonhuman nature—one which provides more inclusive definitions of agency and considers how the nonhuman, or more broadly matter, weaves its own histories and narratives. This is the central aim of new material theorists, where questions concerned with ontology, epistemology, and agency begin taking account of matter's position therein. Thus, scholarly work in new material theories provide a wide analytical scope for studying environmental, ecological, philosophical, and literary issues. Given the theoretical framework provided by new materialism, ecocriticism—which finds its foothold in the analysis of narrative portrayals of nature—has gained a necessary focus in *material ecocriticism*, that Serenella Iovino argues "provides a literacy for an evolved political

ecology based on an extended understanding of our being, knowing, and acting” (Iovino, “Matter, Text” 65). In laying the groundwork for material ecocriticism, various theorists hope to strengthen ecocriticism as a form of textual analysis and move beyond its tendency to inadvertently reinforce nature/culture and human/nonhuman dualisms.

## SECTION II. THEORETICAL FRAMEWORK &amp; THE TEXT

Ecological Postmodernism, Material Ecocriticism, & Storied Matter

While the environmental issues raised in Dick's novel—which clearly illustrates several ecological effects characteristic of the Anthropocene—initially appear to benefit from the utility of ecocriticism, Greg Garrard argues its methods of analysis ironically separates nature from its own dimensions; that, in its effort to restore or reenchant the “value” of nature while reflecting on humankind's relationship with it, nature had become an object of scientific, political, and literary study and therefore subject to human regulations and social and cultural constructions. In his critical survey of the field, Garrard explains “the challenge for ecocritics is to keep one eye on the ways in which ‘nature’ is always in some ways culturally constructed, and the other on the fact that nature really exists, both the object and, albeit distantly, the origin of our discourse” (11). Therefore, visions of nature as culturally constructed require subtracting any sense of “nature” as existing beyond the dimensions of discourse. This “hermeneutical closure,” then, must ultimately come to terms with a more interpretive method for approaching textual natures—both nature in texts and nature as texts—that a material ecocriticism aims to perform (Oppermann, “Theorizing Ecocriticism” 103). Particularly, a material ecocriticism seeks to reveal textual depictions of the nonhuman, bolster their expressive powers, and locate their being and agency within the same plane of reality and meaning as the human.

As readers come to recognize in *Do Androids Dream*, knowledge and reality are, for characters, initially only determined by social and cultural constructs, as mass human decolonization of Earth departed with both “the Pentagon and its smug scientific vassal, the Rand Corporation” (15). Thus, in order to make sense of their radioactive environment, humans, rather than turning to scientific explanation, rely on the Voigt-Kampff empathy test as a form of “biological insurance” that determines who, and even what, are feasible contributors to Earth’s ecological survival (16, 31). Functioning to distinguish the human from the nonhuman world, however, the test firmly grounds reality within a “cultural construction,” that sets apart the natural from the cultural and the human from the nonhuman (Galvan 415). However, as the novel develops several nonhuman entities, Dick’s human characters steadily cede to the meanings provided by their material surroundings apart from those only socially or culturally constructed. Ultimately, *Do Androids Dream* gradually unveils an image of Earth in which all bodies—human and nonhuman—interact with one another to build a cohesive web of differing forms and enactments of agency. In doing so, Dick’s novel slowly breaks these constructions down; and, in a world removed from scientific models for shaping reality, human characters depend on their interconnectedness with and the lives of the nonhuman to build their reality.

Thrusting upon its reader an environment within which “the absence of life [is] everywhere,” *Do Androids Dream* imagines what new connections to the nonhuman are possible, and how to make sense of a reality which finds them threatened (5). For instance, human characters rely on the “empathy box;” a device which, when connected

to its “power supply,” submerses the user in a collective experience of empathy—under the assumption that empathy “only existed within the human community” (21, 30). This nonhuman entity thus permits and sustains human collectivity, enabling the human’s knowledge of the self while mediating their experience of reality. Importantly, in world which finds the use of the empathy box a social and cultural imperative, the device functions as an “extension of [the human] body,” and therefore “interlocked with human social practices, [...] compounded of each other, like ‘infoldings of the flesh’” (Dick 66; Oppermann, “Ecological” 28). Indeed, as Jill Galvan explains, Dick’s nonhuman entities occupy an “ineradicable element of human day-to-day existence,” and, against the backdrop of radioactive fallout wherein “displaced populations moved as the dust moved,” the nonhuman formulates a narrative spilling into Dick’s experience of the effects of this Anthropocene epoch (Galvan 418; Dick 17).

Dick’s narrative therefore designs an elaborate network of both biotic and abiotic beings in a world with meager forms of life, which allows them to work together to find new meanings and establish new lines of connection. Serenella Iovino and Serpil Oppermann posit this as ecological postmodernism, that they define as “a worldview in which nature is, at a fundamental level, reanimated” (“Materiality, Agency 83). From here, material ecocriticism finds in these connections a method for bridging the textual to the reality through the recognition that the material world lives through narratives as “storied matter” (83). Within this entanglement, previously distinct categories of human and nonhuman, nature and culture, and language and reality become enmeshed and their meanings are mutually assembled. Importantly, this perspective grants a view of agency

as plural, opening a worldview in which all matter expresses “narrative agency,” wherein matter forms complex interrelations “of agencies which can be ‘read’ and interpreted as forming narratives” (Iovino and Oppermann, “Introduction” 1). As Dick’s novel indicates, exploring these relationships is essential in an Anthropocene age, wherein dualism threatens to diminish essential ways for thinking through growing environmental and ecological issues.

Part of Dick’s ability to create and develop these interrelations—or more appropriately categorical confusions and bodily ambiguities—originates in his thematic tendency to confront and overturn closely held modernist assumptions that the real is separate from the artificial or the representation. Indeed, his canon is characterized by a “deep *ontological* doubt [and] profound questioning of every reality claim,” and therefore his fiction decidedly parts with normative constructions of the human, the sciences, and nature (Broderick 62, emphasis in original). To these ends, Dick’s fiction writ large has been regarded as a “critique of modernity: of postwar America,” and with that, a critique of the American industrial complex and its attendant sociopolitical and environmental effects (Palmer 7). As an author working within this Anthropocene epoch, his fiction reflects the human and nonhuman conditions of the mid-twentieth century, hyperbolizing an advancing techno-sphere at the cost of a denigrating biosphere. More importantly, Dick’s canon—and particularly *Do Androids Dream*—responds to a sense of human hubris, identity fragmentation, and dissolution from the self and bodily boundaries as his characters undergo “the form-destroying process of entropy,” a theme permeating both human and nonhuman worlds throughout the narrative (98). Along with this, Dick’s

novel is positioned within several global effects relative to the Anthropocene, as his post-nuclear war/disaster, radioactively-smothered, and “sun-beclouded” imagery suggests (8).

Therefore, reading *Do Androids Dream* against the backdrop of the Anthropocene benefits from the ambitious theoretical work of material ecocriticism, and importantly, is not immune to the large natural and cultural shift in thinking consequent the re-naming of our current geological epoch. Gathering from Dick’s novel important insights into the effects of the Anthropocene requires adopting new methods for reading and interpreting fiction that recognizes how authors shape and reflect their realities while avoiding sticky dualisms. Meaning, before a material ecocriticism can be deployed, the problem that fiction in the Anthropocene has with ecocriticism must be first addressed. For instance, Timothy Clark argues that ecocriticism must cast off normative criticism of nature as existing in contrast or external to the human, primarily because the Anthropocene, having represented “the advent of a kind of new, totalizing reflexivity as a species,” will no longer profit intellectually from nature/culture and human/nonhuman dualisms (86). Tied within the aims of material ecocriticism, then, is the need for re-examining literary representations of the human, nature, and how the human forms agency *with* nature—which, in the Anthropocene, gives ecocriticism new theoretical insight and analytical methods for navigating problematic binaries.

#### Literary Representation & Science Fiction in the Anthropocene

Anthropogenic climate change, ecosystem collapse, and irreversible geological footprints undoubtedly draw wide implications for literary critics, who are beginning to

analyze texts within the “enormous cultural transformations,” instigated by the concept of the Anthropocene epoch (Trexler 5). Although, focusing on a body of fiction that depicts such wide-scale environmental concerns is daunting, considering that “[t]he ‘environment’, after all, is, ultimately, ‘everything’” (Clark, *Cambridge* 203). Thus, ecocritics faces a range of literature that complicates its effectiveness as a theoretical tool in the face of mounting environmental and ecological devastation. As Adam Trexler explains in his book, *Anthropocene Fictions* (2015), “climate change and all its *things* have changed the capacities of recent literature” (13, emphasis in original). Specifically, literary analytical focus in the Anthropocene emphasizes how works of fiction represent and negotiate scientific truths, relying on differing models of social and cultural constructivism through which characters make sense of their climate changed worlds. For authors, literary theorists, and ecocritics, the state of climate change fiction at this moment might be best defined as polarized between representations of scientific realism and social constructivism, each considered disparate modes for analyzing textual representations of the human, culture, and nature; in that neither seems to be an accurate tool for exploring the phenomenon through fictive measures. On one hand, authors might deploy scientific realism, privileging literary illustrations of science as a method for both representing and measuring nature, thereby exposing the “truth” of environmental degradation. On the other hand, the postmodern social constructivist recognizes the role of social and culture structures that determine the reality. Both interpretations however seem to paradoxically miss the point, distracted by an impasse of defining and reflecting the reality, but altogether these methods ignore the accounts of the nonhuman.

While fiction in the Anthropocene oscillates between these two epistemological spheres in its aim to reflect real environmental issues and mount social, cultural, and scientific impetuses, ecocriticism—argued as rooted “firmly in realist epistemology”—founders to provide a focused and meaningful theoretical framework that views scientific objectivity and human social and cultural knowledge as intricately woven methods for making meaning out of ecological devastation (Oppermann, “Theorizing Ecocriticism” 107). Indeed, ecocriticism often disregards literary theory for its “humanistic emphasis [...] particularly structuralist and poststructuralist approaches, because these read the world as primarily textual, constructed and therefore never ‘natural’” (Johns-Putra 745). From this perspective, ecocriticism effectively closes access to any socially or culturally constructed accounts or theories of nature that circulate in literary criticism.

In response to this closure, Adeline Johns-Putra argues for an “ecocritical [...] application of genre theory,” which recognizes ways in which authors form generic conventions in response to specific cultural and environmental moments (748). Johns-Putra calls upon Anis Bawarshi’s rhetorical, ecological perspective of the generic habits of authors and readers, who offers that genres “are the sites in which communicants rhetorically reproduce the very environments to which they in turn respond—the habits and habitats for acting in language” (Bawarshi 71). In responding rhetorically to these “habitats,” authors mediate nature *through* specific (or generic) cultural and environmental contexts—in other words, they “reciprocally shape, structure, and determine [...] the environment at large” (Johns-Putra 748). Provided this “generically-aware” ecocriticism, reading fiction with a critical eye turned toward literary genre (and

how that genre's particular style seeks to mediate knowledge) becomes helpful for moving reading beyond an attentiveness to nature/culture dualisms into making meaning from fiction in an Anthropocene age. Furthermore, through this framework, both Bawarhsi and Johns-Putra advocate for a "naturalcultural" reading of the environment in literature; meaning, one which acknowledges and enables meaning-making as emerging from both human cultural constructs and textual depictions of nature. This becomes especially important in the Anthropocene, and specifically for responding to Dick's novel given current ecological crises.

Interestingly, the environmental issues that underline the Anthropocene situate ecological devastation as at once culturally grounded—by the human's interactions with and imprint upon natural history—and grounded naturally, as indicative of the unpredictable natural forces beyond human control. Accordingly, Timothy Clark argues, "the nature/culture dichotomy seems too crude a tool" for grappling with the issues raised by the Anthropocene, and furthermore, that ecocriticism in the Anthropocene must move past the argument that "some forms of writing are more natural than others," and cede to the critical potential for analyzing other forms and genres of fiction (80-81). Ultimately, an awareness of particular authorial styles and tendencies plays an important role in reading fiction in the Anthropocene, specifically for opening ways of examining hybridized literary accounts of both scientific (and other elements of) realism and models of social constructivism.

*Do Androids Dream*, and indeed most of Philip K. Dick's canon, is aligned with the cornerstones of science fiction, and on several levels helps define the genre. Within

its predisposition for situating readers as actively “creating meaning where none is provided,” science fiction allows a wide berth for knowledge and meaning making (Mendlesohn 6). As Adam Trexler somewhat broadly states, the “Anthropocene challenges science fiction’s technological optimism, general antipathy toward life sciences, and patriotic individualism” (14). Although, readers find no solace in heroism or technological utopianism in Dick’s science fiction, and, in the case of *Do Androids Dream*, gathering and determining what “authentic life” remains becomes quite pertinent when confused with endless forms of simulacra. In fact, science fiction has been noted as a stable literary form for viewing the Anthropocene in its “bizarre kinds of action-at-a-distance, its imponderable scale, the collapse of [...] nature and culture, and the proliferation of forces that cannot be directly perceived” (Clark 81). Thus, the literary representation of anthropogenic climate change, massive species extinction, and ecological disaster finds science fiction and its penchant for world-building as a viable source for illustrating the effects of the Anthropocene.

Over the course of its long development as a literary form, science fiction proves resistant to singular, generic definition. In his account of the genre, critic Carl Freedman begins with Darko Suvin’s notion of “cognitive estrangement” as the categorical impetus of science fiction, though arguing further that the genre is better understood as “the *dialectic* between cognition and estrangement” (19). Specifically, as Freedman argues, science fiction remove reality as-is (estranges), thereby opening the interpretation of its own rational or irrational boundaries with relation to what is causing the estrangement (cognition). Important here is the way science fiction questions and offers alternatives to

a realist mindset; explores and overturns common assumptions about how society, technology, and nature function and interact; and importantly, asks readers how the imagined or the representative questions the nature of reality.

This has always been the crux of Dick's canon, to draw readers in with elements of realism, only to be immediately set in contrast with a claim to its working illusions. For instance, as Rick Deckard "turned up the TV sound," he listened to the cadence of a weather report announcing "that fallout will be especially pronounced toward noon and will then taper off" (7). Here, readers find a modern American cultural icon set in immediate contrast with the mention of apparent nuclear fallout. While this is certainly an estrangement at work, the steady collapse of distinctions between text and reality and human and nonhuman are stretched to a point where both the reality of *Do Androids Dream* and the one we are likely to eventually experience are no longer resolvable. More importantly, what at first appears as something distinctly natural or cultural, or human or nonhuman, become increasingly indistinguishable as well. Through his own brand of science fiction, Dick toggles realism with estrangement to construct his narrative of the Anthropocene—wherein the human occupies a space increasingly overrun by prevailing nonhuman beings and materials whom decisively act with, and sometimes despite, the human. Viewed from a material ecocritical perspective, *Do Androids Dream* reads as a "narrative of matter:" a "poetical and philosophical text about nature, [and] the material dynamics of reality" (Iovino, "Matter, Text" 57). To that end, as a novel working to amplify the material replacement and representation of "authentic" nature and beings (both human and nonhuman), this narrative provides the foundation for investigating the

agency of the nonhuman, offering a contemporary readership a perspective of the humans' navigation through dissolving boundaries between human and nonhuman agency and embodiment in the Anthropocene.

*Do Androids Dream & Naturecultures*

Until World War Terminus, humans experienced an Earth reflective of ours, whose descriptions are found in “pre-colonial fiction” that depicts “cities and huge industrial enterprises, and really successful colonization” (151). As these texts—which feature speculative “[s]tories written before space travel but about space travel”—circulate in the novel, they provide readers with a unique meta-perspective of Dick’s actual novel (150). Representations of Earth provided through pre-colonial fiction thus illustrate a modernized human culture and a thoroughly “colonized” nature—here described ironically as an instance of “successful colonization”—through a metanarrative heuristic that backdrops the novel’s historical and environmental context. These works of fiction provide a narrative fraught with human’s destructive relationship with Earth, who leave the planet behind after thoroughly “colonizing” and “industrializing” its habitats and resources. Interpreting Dick’s world, then, requires readers to adopt a critical and skeptical stance toward their present naturalcultural moment. Distancing both readers and the novel’s characters from a hitherto “intact” nature and replacing it with an artificial, representative, colonized, industrialized, or otherwise ecologically ruined one, *Do Androids Dream* draws speculation into the reality of the reader’s experience world. Indeed, Christopher Palmer views Dick’s literary tradition as an “anticipation of [...]

postmodernity,” and therefore his representations of nature emphasize its slow recession, degradation, and eventually as an aesthetic forgery (7). Sprouting in the place of both the “natural” and the human, then, are their artificial representations. However, the novel determines to illustrate a once-intact image of Earth. In the case of pre-colonial fiction, Dick situates his readers as the interpreters of what his fictive world emphasizes: human disregard—or lack of empathy—for the nonhuman and nature at present. Indications of Dick’s present can also be found in the Voigt-Kampff empathy test—which aims to reveal when its test subjects fail to express empathy for living things. For example, as Deckard deploys the test, he describes a mountain cabin setting “still verdant,” with “trees and bushes growing,” and “above the fireplace a deer’s head has been mounted” (104). Through the test’s depictions of reverent, natural settings, Dick illustrates his present, but also uses the test as a method for revealing the pitfalls of humanity’s existing lack of empathy for the nonhuman.

The Voigt-Kampff test, therefore, functions on several levels; for one, it acts as the primary determiner of the humans’ difference from the android; on another level, the test’s illustrations and instances reveal that a shift has occurred from the human’s past injustices toward nonhuman nature; and finally, it calls attention to the function of nonhuman agency. Specifically, the androids, in providing a response to the questions posed them via the test, might defend themselves against an accusation of their lack of empathy; and further, that animals hold such cherished positions in this ecologically devastated society that they become lynchpins for maintaining the humans’ own sense of engagement with the nonhuman world. The human, therefore, increasingly recognizes a

shared agency after over-asserting their own—inciting nuclear war, ecosystem collapse, and the massive extinction of species.

To that end, World War “Terminus” suggests an interesting boundary-breaking paradigm that Timothy Clark proposes better describes the Anthropocene: as a “slow but massive shift in in the tectonic plates of human self-conceptions” (Clark, “Post Nature” 80). More specifically, World War Terminus and the nuclear fallout that ensues situates humans and nonhumans at equal threat of total collapse (at least on Earth), and therefore, as entities equally bound to receding corners of both nature and culture. Situating characters within the context of the Anthropocene—at such a point when anthropogenic factors have made irreversible marks upon the Earth<sup>5</sup>—results with the realization that, “deformed as it was, Earth remained familiar, to be clung to” (17). From such a vantage point, lines of thought that seek to part nature from culture are decidedly abolished. As Timothy Clark explains, in the Anthropocene “the nature/culture distinction becomes the incalculable interaction of imponderable contaminated, hybrid elements with unpredictable emergent effects” (80). In critiquing ecocriticism’s history of interpreting literary representations of nature as the “outside” of human culture, Clark here emphasizes the loss of “externality” in favor of the “hybrid” (82). In other words, nature must no longer be regarded as an illusory non-space without affect or substance, and likewise, human culture must no longer see itself in contrast with it; rather, each inhabits Earth as a space of “plurality, multiple agency, and unpredictability,” but more importantly, of “entrapment” (81). *Do Androids Dream* deftly illustrates this space,

wherein nature is no longer the “outside” to human culture’s “inside,” but instead, these are increasingly spatially and conceptually intertwined.

Along these lines, nature—while seemingly positioned at arms-length—has merely taken new forms through which to assert its agency alongside the human. For instance, *Do Androids Dream* situates human characters navigating through pervasive kipple, or “useless objects, like junk mail or match folders after you use the last match” (65). In fact, “garbage collecting and trash disposal had, since the war, become one of Earth’s important industries” as the entire planet “had begun to disintegrate into junk” (87). In perhaps one of the most pointed criticisms of the human’s destructive relationship with Earth, an android TV personality, Buster Friendly, broadcasts that “Earth would die under a layer—not of radioactive dust—but of kipple” (87). In the example of kipple, the narrative illustrates what were once human cultural objects taking on living qualities found in natural processes. Specifically, as John Isidore describes it, “kipple reproduces itself,” and, in adherence to the law of entropy, the universe constantly moves “toward a final state of total, absolute kippleization” (66). These “naturalized enemies” of the human overpower, or perhaps supplant, their distinctive agency (Vinci 97). More importantly, kipple provides an instance of that which was hitherto “external” to or an extension of human culture, returning to become a “naturalized” agent. The narrative goes so far as to situate humans as “living kipple,” who inevitably die and move “toward the ash heap,” which enters humans into commiserate affect with kipple (73). As Jane Bennett explains this, kipple possesses “*Thing-Power*,” which she uses to describe the “curious ability of inanimate things to

animate, to act, to produce effects dramatic and subtle” (6). Kipple holds a remarkable reminder of a once—but now diminished—modernized American, hyper-consumptive culture that Bennett argues only ever “conceals the vitality of matter” (5). Matter, therefore, narrates a wasteful, industrial culture while also projecting a dramatic, perhaps ironically reenchanting, reversal of once over-produced cultural commodities returning in a lively (if not alarmingly living) fashion.

Human industries thus transform after decolonization, where now only remnants of economic structures linger on Earth and most of humanity’s characteristic hypermodern industries have transplanted to “New America, the chief U.S. settlement on Mars” (18). More importantly, what remains of a distinctly human industrial culture has decidedly parted with American capitalist endeavors in favor of establishing networks that seek to restore humankind’s connection with the nonhuman. As such, any semblance of the Western concept of cultural, industrial, or political progress has been supplanted by humanity’s dire attempt to restore forms of nature. Along with the example of kipple, animal life and its naturalcultural capital permeates the narrative. More specifically, as humans desperately pursue any potential outlet for maintaining their empathy and connection with the nonhuman, industrial enterprise seeks to supply the human with remaining forms of nature. For example, the only apparent mass distributor of “products” is “Sidney’s Animal & Fowl Catalogue” that lists Earth’s remaining animals for sale, while other businesses, such as the “Happy Dog Pet Shop” that operates on “animal row” and the “false animal repair firm, [...] the Van Ness Pet Hospital,” all either provide services for or trade in real and artificial animals (10, 32, 19). The transformation of these

systems of industry are nonetheless necessary, for any human not actively caring for or seeking ownership of an animal (whether real or false) are considered “immoral and anti-empathic” (13). Thus, human industry establishes, and perhaps enforces, an economic endeavor that provides humans sources for expressing empathy.

This commiserate cycle of animal/human emotive and economic reciprocity and the characterization of kipple situates Earth as a necessarily hybridized, naturalcultural space. Moreover, as the primary force for maintaining human empathy, animals also act as indicators of social status and, to an extent, stimulate Earth’s economy, thereby effectively acting *with* the human—reciprocally shaping their experiences, cultural practices, and their sense of humanness. Humans, then, no longer recognize animals as separate or lesser forms of life, but rather, as lynchpins to human emotional awareness and industry. Thus, Dick’s image of the Anthropocene narrates an intricately woven naturalcultural world in which “human agents co-exist and co-act with biological organisms,” thriving within their mutual dependencies; wherein humans come to rely on, exercise agency with, and draw values from the nonhuman (Iovino and Oppermann, “Materiality, Agency” 84). Moreover, nature becomes embodied in the form of both kipple and animal life as they operate with agencies that extend beyond either natural or cultural origin. *Do Androids Dream*, through depicting lively, reproductive, and embodied forms of nature, effectively breathes life into both material and nonhuman nature which goes “beyond the domain of the ‘biological,’” and “relocates the human species in broader natural-cultural environments of inorganic material forces such as electricity, electro-magnetic fields, metals, stones, plastic, and garbage” (84). Provided

this brief material ecocritical sketch of Dick's novel—which traces his critical outlook on a modernized, wasteful, and anti-empathic American culture—it becomes clear he is concerned with illustrating the vitality and various bodily forms of the nonhuman in an effort to re-evaluate the human connection to the nonhuman.

In weaving this reality, Dick emphasizes a perspective which recognizes and ties together “interchanges and interconnections between various bodily natures;” this, Stacy Alaimo describes, is an instance of “trans-corporeality,” illustrative of a continuity of beings, agencies, and bodily experiences that bridge the “more-than-human world” with human culture (2). From this perspective, the human body is not exclusively “human” nor the instantiation of a bounded subject. Rather, the human *body* acts as the site for the continual streaming of material interconnections and agencies and at once biological, political, material, and cultural. To that end, trans-corporeality is way of recognizing “the co-extensiveness of multiple ecologies (nature, society, politics, culture),” in an attempt to map the connections between the material reality and its discursive counterpart (Iovino “Matter, Text” 60).

If, as Alaimo discusses, trans-corporeality imagines the human body as intricately woven within material reality, constructed from of an amalgamation of “flows of substances and the agencies of environments,” then the human necessarily forgoes “the sovereign, central position” to become “part of an active, often unpredictable, material world” (Alaimo “Oceanic” 187; *Bodily* 16). The lines of thought drawn by Alaimo and the theoretical framework of material ecocriticism, then, crosses paths with posthumanism, which broadly question the boundaries of human agency, subjectivity,

and embodiment. And similarly, just as material ecocriticism works to enliven the narrative positions of the nonhuman and develop hybridized notions of nature, culture, and agency, a *posthuman* ecocriticism further recognizes the human and their biological, technological, and environmental entanglements. Pramod K. Nayar, for example, argues for a “critical posthumanism” that recognizes the human as “evolving in conjunction with other life forms, technology, and ecosystems” within a “network of connections, exchanges, linkages, and crossings with all forms of life” (5). Thus, the questions posed by critical posthumanism are inquisitively entangled with material ecocriticism; for each highlight a conceptual view of human hybridization with various forms of the nonhuman, viewing these as “confluent, co-emergent, and defining each other in mutual relations” (Iovino and Oppermann, “Materiality, Agency” 86). Against the backdrop of the Anthropocene, posthuman ecocriticism provides essential ways for viewing the human and the nonhuman in critical relationships woven into a much larger ecological picture.

Drawing from these lines of thought, then, allows for a *posthuman* ecocritical reading of Dick’s novel, and, through prominently featuring his heavy-hitting, ontologically compelling figure, the “organic android,” the novel further confuses previously distinctive boundaries between the human and the more-than-human world. Provided the theoretical landscape of material and posthuman ecocriticism—through which human, nonhuman, and posthuman bodies enact narratives, express entangled agencies, and mutually make meanings in a lively, storied environmental context—I aim to sketch an approach to the discourse of the Anthropocene through the analysis of a prominent figure dense with story-telling power: the android.

### Posthuman Ecocriticism and the Android

The android is a complex, material-discursive entity that performs dense and elaborate cultural work in literature, film, and broader discourses of biology, science studies, philosophy, and ecocriticism. As an extensively storied, defined, and characterized figure in literature and film, the android is thick with history and meaning. Often signifying technological innovation, the android is also read variously as a problematic literary trope through which humans project existential anxieties and explore technological, biological, and bodily tensions. The android, or the “artificial person,” is densely encoded in our culture; they serve as useful cultural reflections of the human desire to surpass the limits of the body and its firm grounding in the real, the biological, and the political. Despina Kakoudaki traces their heritage back to early mythological and religious traditions, originating broadly within the “fantasy of animation, in which inanimate objects come to life” (Kakoudaki 4). Therefore, as the artificial human is developed in the cultural imagination, these varying figures help us to “explore the difference between animate and inanimate matter,” where, in posthumanist and new materialist veins, both the android and the human are treated as *between* these categories, as simultaneously biotic and abiotic (7). So, just as the android exhibits a “hybridity and a kind of betweenness in terms of ontological and political status,” posthumanists see the human as “an instantiation of networks of information [...] and material exchanges between systems and environments” (Kakoudaki 9; Nayar 10). Thus, the android inhabits a liminal space within which the human recognizes their co-evolution and coexistence with the nonhuman.

To these ends, the figure circulates widely in theoretical, philosophical, and pop culture discourses, and increasingly as fully realized beings. Within theoretical and philosophical spheres, the “artificial person” and its various forms find some theoretical foothold in Donna Haraway’s essay “A Cyborg Manifesto,” which recognizes the “cyborg” as an entity contributing to scientific, political, and critical discourses of feminism in the interests of imagining a “post-gender world,” and importantly, offers the image of the cyborg as representative of “a way out of a maze of dualisms in which we have explained our bodies and our tools to ourselves” (292, 316). Whereas N. Katherine Hayles uses the concept of the cyborg to investigate human and machine embodiment, suggesting in a posthuman world “there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism” (Hayles 3). What these theorists reveal is the strong cultural and theoretical power represented by the “artificial person,” who challenges inherited ideas of human subjectivity, agency, and the human’s material relations and entanglements.

In their fictional portrayal, these mechanized, humanoid “things” are often charted as complex metaphors for myriad ethical, philosophical, and recently, environmental issues. Additionally, and “despite their unreality,” Despina Kakoudaki, in her book *Anatomy of a Robot* (2014) argues the android composes a “dense web of interactions between fiction and reality in contemporary culture,” contributing to “a political and existential negotiation of what it means to be human” (3). While androids provide humans models through which to question the boundaries of subjectivity, their meanings further implicate ongoing navigations of human culture, history, and politics. Viewing the

android, then, as it reflects, simulates, and eclipses the human initiates ways for analyzing their connections to and disconnections from the human. Despite largely remaining a fictional character, the android exits its fictional narratives to take on its own in a material-discursive way. Although scientific and technological progress has not reified the android to the bodily and intellectual specifications it is often portrayed to have (though I would argue we have surpassed the need to), the figure is constantly explored in fiction wondering: What if? In this way, the android projects myriad visions that vary from the utopian—the perfect, ageless, infinitely renewable human; to the dystopian—elaborately staged human mimics or heavily-armed war machines bent on destruction.

While they are broadly defined and their qualities vary with each fictional portrayal, Kakoudaki defines the android as an “artificial person, [...] an imaginary being who is partly or fully anthropomorphic, mechanical, or constructed from a variety of technological or natural materials and considered autonomous, animated, or capable of being animated” (Kakoudaki 3). Honing in on her phrase in this definition, “constructed from natural materials,” she draws an interesting image of artificial people. Rather than defining them by their mechanical, material “thingness,” androids, here, are rightly given a definition that considers their inherent nature(s), especially considering the ubiquity of “nature” and its “materials” that collectively compose the android. As well, the android as defined here is composed of various physical parts with lively, animate qualities, taking on new meanings provided the theoretical horizon of new materialism. Defined here, the android extends boundaries of nature, exposing a form of nature as embodied and enlivened, and through its cultural narratives becomes a porous and lively actor ripe

for a material ecocritical analysis. In an effort to delineate how this hitherto fictional character submits narrative meaning beyond its cultural being, Serpil Oppermann recently explains,

Matter today is storying itself not only through biological and material forms, but also through [...] techno-scientifically engineered entities, such as robots that are story-filled as biological agencies, revealing a ‘posthuman performativity in its narrative disclosures.’ (Oppermann, “From Posthumanism” 30)

Therefore, in the context of the Anthropocene, scholars must emphasize the essential connections between humans and nonhumans to restore liveliness to the nonhuman and elucidate a mutual reliance in “becoming” with technology in times of environmental crisis. For Donna Haraway, this means humans “make kin” with their “companion species,” that is, with their other and othered nonhumans. Her recent book, *Staying with the Trouble: Making Kin in the Chthulucene* (2016) stresses the vital importance of not only making connections with the nonhuman, but enlivening their positions beyond simple anthropomorphism to make meaning *with* them rather than *out of* them. This requires humans make what Haraway calls “oddkin; that is, we require each other in unexpected collaborations and combinations” (4). Important to her approach to the Anthropocene is SF, or “science fiction, speculative fabulation, string figures, speculative feminism, [and] science fact,” insofar as these offer ways for thinking through, or “thinking-with,” connections within the “patterning of possible worlds and possible times, material-semiotic worlds, gone, here, and yet to come,” because, “it matters what thoughts think thoughts; it matters what stories tell stories” (2, 31, 39). If the Anthropocene discourse seeks to tell a story of the Earth, it features humans most

prominently, and that nonhumans merely bear our legacies. However, Haraway finds that stories are quite relevant in times of environmental crisis; that our nonhuman “companion species” must be given a narrative space—or perhaps that humans more carefully read the stories they have told long before ours. In establishing such a narrative space, Dick decidedly casts human essentialism aside to make room for a narrative of the nonhuman, wherein the nonhuman makes the meaning, rather than human making meaning for them.

To that end, a posthuman ecocritical approach to Dick’s android views how they interact with the human, opening pathways for exploring its narrative, agentic, and naturalcultural capacities; and further, the android assists in defining how material nature is embodied, enlivened, and made an imperative marker for posthuman hybridization with the nonhuman, material world in growing environmental crises. Specifically, as the android speculatively reflects both the human and the nonhuman at once, the figure signifies tense negotiations of agency and subjectivity and overturns nature/culture distinctions that reveals critical insights into the Anthropocene discourse. Tied together by questions of material agency, human and nonhuman interconnectivity, and posthumanist ontology, the android and the Anthropocene together weave a complex narrative concerned with environmental and ecological futures. From here, it is my goal to further situate the android within the discourse of the Anthropocene through demonstrating its narrative, historical, and cultural power. Onerous as this task appears initially, focusing this discussion through Dick’s novel—as he elaborately draws out the android in the human, and the human from the android; and likewise, nature from the android, and the android from nature—evinces the growing need for thinking reflectively

about the human's material entanglements with the more-than-human world, and how humans become "posthuman" in the Anthropocene.

While some scholars recognize Dick's brand of science fiction as diametrically opposed to the "natural world"—by exposing a false or questionable sense of place or reality and isolating his characters from any connection to the authentic or natural—he simply finds alternative ways to depict naturalcultural phenomenon in a posthuman, ecologically devastated world. For instance, in his book-length study of Dick's canon, Christopher Palmer recognizes his fiction as unfolding "in a technosphere rather than a biosphere, [...] as if materiality has been drained out of the natural, concentrated in the artificial" (18). However, provided the rubrics of material and posthuman ecocriticism, contemporary readers will more readily view the android (and to a lesser extent, the authentic/false animals) as instances of naturalcultural, posthuman actors. Moreover, all of Dick's built world can be read as charting the progress of the human gradually becoming *posthuman*; and through this transition, as providing humans conceptual tools with which to view their role in the Anthropocene.

Within the radioactive, dust-laden San Francisco, Dick depicts the Anthropocene as having reached somewhat of an apex. The nuclear fallout resultant World War Terminus—a title indicative of anthropogenic catastrophe, near exhaustion of resource, and finality—situates humans clinging to the nonhuman, as each stands equally on the edge of total collapse, while the androids hover inconspicuously between these categories. As the novel opens, its tone is doggedly anthropocentric, depicting a domestic feud over misinterpreted feelings, leading to a jealous squabble between Deckard and his

neighbor over which is more or less moral: owning more than one *real* animal. Deckard, at this point, believes empathy is a uniquely human emotion, and yet he and his wife rely on a steady supply of “merry electricity” to open their “unmerry eyes” (3). Moreover, Deckard looks to animals for sources of expressing empathy which provides him with a self/other meaning in a world which has nearly expelled all other sources for this reflexivity.

Although, Deckard’s occupation as an android bounty hunter and his adherence to the prevailing social expectations find him initially at an impasse with his artificial surroundings. Indeed, Deckard desires to latch onto any *living* thing that might reinforce his purpose and meaning as a human—to remain aware of his only distinctly human characteristic, empathy—by setting himself in contrast to (even harboring disdain for) artificial representations:

He thought, too, about his need for a real animal; within him an actual hatred once more manifested itself toward his electric sheep, which he had to tend, had to care about, as if it lived. The tyranny of an object, he thought. It doesn’t know I exist. Like the androids, it had no ability to appreciate the existence of another. (42)

As Deckard desires to maintain a link to his own humanity, his frustration mounts at the unnatural form his sheep takes, which revokes the exchange of values and purpose he seeks. While the android—that Deckard reflects are merely a “highly developed, evolved version of the ersatz animal”—serves a similar purpose in that they are only distinct from humans in their lack of empathy (42). However, as the androids perform their agency in taking on human roles, identities, and occupations, it becomes increasingly difficult to delineate human/nonhuman boundaries on the bases of either empathy or agency. For

instance, the Nexus 6 androids that Deckard is tasked with ‘retiring’, are imbued with false memories that skew the results of the Voigt-Kampff empathy test, providing the android with a false sense of self whereby it “could hardly tell the truth; about itself, anyhow;” and thus, there is no reliable measure for discerning if androids actually *lack* either empathy or agency at all (99).

In fact, several androids are shown to express various emotions and even identify with human culture in unique ways. For instance, as Deckard is first introduced to the android Luba Luft, his goal is subjecting her to the Voigt-Kampff test. An unfortunate series of sexually-charged-sounding questions, however, leads to her accusing Deckard of being a “sexual deviant” who simply poses as a detective (105). Defensively, she calls the police, leaving Deckard wondering “why didn’t she simply kill him,” ultimately realizing that “[s]he must think she’s human” (106). Later, as Resch and Deckard are tracking down Luft they find her at a museum exhibit “absorbed in the picture before her” (131). Desiring a copy of the painting (Munch’s *Puberty*), she requests for Deckard to purchase her a copy. Deckard agrees, while the sociopath Resch responds that he would “never in a million years” extend this gesture to an android. In response, Luba glances at Resch with a look of “manifold hostility and aversion” (133). As well, the android Rachel Rosen explains she and Luba Luft had once “been very close friends;” and later, expresses empathy for an android that had been reproduced in her identical likeness, Pris Stratton, as she explains to Deckard, ““You know what I have? Toward this Pris android?” – ‘Empathy,’ he said. – ‘Something like that. Identification’” (199, 189). Finally, in perhaps the most interesting instance in which androids decisively distort the

human/nonhuman separation, android Roy Baty convinces several androids to escape Mars in pursuit of new “life” on Earth. Baty’s police profile states he wove “a pretentious fiction as to the sacredness of so-called android ‘life’” and more importantly, “stole, and experimented with, various mind-fusing drugs [...] to promote in androids a group experience similar to that of Mercerism” (185). His desire to simulate Mercerism—as human society’s prevailing religious/philosophical doctrine—exemplifies how androids seek both collectivity and commensurability with the human.

Similarly, Luba Luft, as an opera singer that had illegally migrated to Earth with a group of other androids led by Baty, provides Deckard the first thought that androids might not be entirely distinct from humans. As Deckard requests her assistance in locating an escaped android, she replies,

“If I were an android, would I be glad to help you?”

“An android,” he said, “doesn’t care what happens to another android. That’s one of the indications we look for.”

“Then,” Miss Luft said, “you must be an android.”

That stopped him; he stared at her.

“Because,” she continued, “your job is to kill them, isn’t it?” (101)

The question of a distinctly human empathy, then, is stirred in Deckard as he gradually reconsiders his attitude toward the android’s separation from humans. Readers, too, suspect this categorical separation gradually becoming unstable. Moreover, some humans express alarming lacks of empathy—and altogether, the notion that empathy unites all humanity becomes doubtful (evidenced further by their need for mood organs). For instance, Deckard questions the humanness of the particularly sociopathic detective Phil Resch, who aids Deckard in his search for Luft and ends up erratically killing her:

He had never thought of it before, had never felt any empathy on his own part toward the androids he killed. Always he had assumed that throughout his psyche he experienced the android as a clever machine—as in his conscious view. And yet, in contrast to Phil Resch, a difference manifested itself. And he felt instinctively that he was right. Empathy toward an artificial construct? he asked himself. Something that only pretends to be alive? But Luba Luft had seemed genuinely alive; it had not worn the aspect of a simulation. (141)

At this pivotal moment in the novel, in which human empathy for *androids* is tested, the grounds on which humans and the androids are distinctly, ontologically separate grows unstable. In his recognition that androids now seem “genuinely alive,” Deckard begins questioning his, and the android’s, positions within the human/nonhuman spectrum.

While Deckard is tasked with locating this “truth,” his character foil is presented in John Isidore, who, like the androids, wavers between the human/nonhuman distinction.

As stated earlier, Isidore stands outside normative human and nonhuman divisions as a “special,” and therefore shows empathy for and can identify with both humans and the nonhuman world. His job at the Van Ness Pet Hospital—a repair shop for electric animals—situates him in close proximity with fake animals, though his coworkers remark that he cannot “tell the difference,” and “[t]o him they’re all alive, false animals included” (77). Similarly, Isadore harbors androids that ironically dehumanize him, referring to him derogatorily as a “chickenhead,” and even torturing a spider as he pleaded with them not to “mutilate it” (157, 206). Although, when he realizes their android nature, “he didn’t care; it made no difference to him” (163). Isidore even imagines Deckard as “something merciless [...] that moved machine-like through the flat, [...] without emotion, or even a face; a thing that if killed got replaced immediately by another resembling it” (158). Isidore’s concept of the android bounty hunter juxtaposes

the humans' image of the android, who find androids "possessed no ability to feel empathic joy for another life form's success or grief at its defeat" (32). Thus, Isidore exemplifies the emergence of the posthuman, "co-evolving with other forms of life, enmeshed with the environment and technology" (Nayar 4). Interestingly, his namesake, "Isidore," uniquely draws attention to his submersion within technology and networks of knowledge. It should be read as no coincidence that Saint Isidore of Seville is often remarked as the patron saint of computers and the internet after composing *Etymologies*, a "20 book opus [...] for a thousand years considered the encyclopedia of all human knowledge" (Govan, *Telegraph.co*).

These categorical lapses and ontological implosions suggest the human is not discernable from its material and technological entanglements; that together, the android coexists *with* the human. However, in the fluctuations between human and nonhuman, the empathic and non-empathic distinction slowly dissolves as well. What the collapse of these distinctions suggests—beyond illustrating that androids are construed as the human living through the Anthropocene: careless and complacent about their intimate relations and shared agency with the nonhuman—is how the human comes to recognize and embrace their own materiality. Dick thus provides a thinly veiled criticism of the human's destructive and hubristic relationship with the nonhuman; and through this analogy, illuminates a desperate need for humans to reflect their anthropocentric tendencies—promoting an acceptance of their material, biological, and technological entanglements.

While Isidore acts as the novel's posthuman center—living in his “kipple-ized” apartment building, commiserating and cohabitating with androids, referring to his empathy box as “an extension of [his] body,” and holding all human and nonhuman lifeforms as sacred—Deckard provides an image of the human still grasping onto traditional, anthropocentric humanism; evidenced by his occupation, and his selfish desire to own a real animal, referring to them as forms of “compensation” (65-66, 177). As the novel concludes, however, Deckard is exposed to his environment, becomes absorbed within it, and resolutely enters “the posthuman collective” (Galvan 428). At the outset, he is tasked with retiring a list of escaped androids in order to afford a living animal for he and his wife. This task nearly complete, Deckard buys a living goat with the wages made from retiring three androids; desperate to pay the interest on the animal, however, he goes against his newly formed ability to “empathize with androids” and retires the remaining three harbored by Isidore (174). Feeling the weight of this decision, he reflects, “I’m a scourge, like a famine or plague,” which interestingly parallels the initial causes of Earth’s decimated biosphere, characterized by “plague” that had “descended from above,” in the form of various birds (226, 16).

Upon returning home, he finds his goat murdered by the android Rachel Rosen, perhaps out of retribution for murdering her companion androids. Ultimately, Deckard resolves to drive “toward the uninhabited desolation north,” where he interacts with a desolate but lively nature, or rather, it interacts with him (227). Climbing a barren hill, a rock (out of nowhere) strikes him in his “inguinal region,” although, resuming the climb, he feels “goaded on [...] Rolling upward, he thought, like the stones; [...] doing what

stones do” (231). Eventually, he finds what appears a living toad which were previously thought extinct, but conjecturing it “had, perhaps, evolved, meeting the new climate as it had met all climates before” (237). Bringing the toad home to his wife, Deckard discovers the toad is merely false. Though discouraged, Deckard expresses, “The electric things have lives too. Paltry as those lives are” (241). Thus, at the conclusion, Deckard reflects on his climate-ruined world, with the hope he, too, might “evolve to meet his new climate.” More importantly, this refers not only to the new climate of the earth, but the new climate of the posthuman condition.

Through Deckard’s interaction with the android and his gradual acknowledgement of nonhuman agency, his character exemplifies how the human negotiates shared agency in the posthuman Anthropocene. While these two concepts viewed together appear rather contradictory, it befits the ideas Dick communicates through this work. If we are to view the human as “an assemblage, co-evolving with other forms of life, enmeshed with the environment and technology,” while the concept of the Anthropocene views the human’s long-developed relations and material entanglements with the geologic record and the naturalcultural phenomenon of climate change, then it seems these concepts are mutually exclusive (Nayar 4). As N. Katherine Hayles remarks, citing Bruno Latour’s *We Have Never Been Modern*, “the seriated history of cybernetics—emerging from networks at once materially real, socially regulated, and discursively constructed—suggests [...] that we have always been posthuman” (291). And further, the Anthropocene has been argued to reach “as far back as the human control over fire [...] about 1.8 million years ago” (McNeill 4). Thus, *Do*

*Androids Dream* sets these two concepts closely together to acknowledge their mutual development, and in that, exemplify how humans navigate through “the intricacies of environmental anomalies caused by climate change, anaerobic environments, [...] hybrid natures, intelligent machines, and a motley of other strange agencies” (Oppermann, “From Posthumanism” 33). Moreover, in providing humans with this narrative, Dick also shows the gradual human co-existence with, increasing reliance on, and the slow-growing agency within pervasive technologies.

Indeed, while Dick’s narrative finds the android arising in response to the war effort as “the Synthetic Freedom Fighter,” his references to their development provide an inner-narrative that speculates how these figures advance through several decades (16). As is often the case with the fictional deployment of robots, they have been read as tracing cultural histories of slavery. As Despina Kakoudaki observes, the robot, derived “from the Czech word *robot*, [...] refers to serf labor, but also generally to drudgery and hard work,” where in Dick’s narrative, the androids are more explicitly advertised as “duplicates of the halcyon days of the pre-Civil War Southern states [...] as tireless field hands” (Kakoudaki 116; Dick 17). Other references to their progression discuss the android as surpassing their “primordial, crude varieties of the 1970’s,” and had ultimately “evolved beyond a major—but inferior—segment of mankind” (30). Now, the arrival of the Nexus 6 is tied to run-away innovation catalyzed by consumer-driven production, birthed because their manufacturer “produced what the colonists wanted, [...] followed the time-honored principle underlying every commercial venture” (54). Through this mode of production, the android is reformatted and employed by the U.N. to promote

emigration from Earth to Mars, “the android servant as carrot, the radioactive fallout as stick” (16). Thus, through its progression, production, or perhaps evolution, the android ultimately becomes an incentive for leaving behind an ecologically ruined Earth—the techno-sphere’s response to bio-spherical collapse. Importantly, in tying together the android’s utility for coping with Earth’s nuclear fallout and climate-ruined state, Dick’s narrative indicates how humans might respond to the issues raised by the concept of the Anthropocene, and within that, the advancement of the techno-sphere.

Developing a posthuman, ecocritical perspective of Dick’s novel draws together his narrative of the android as form of “*storied matter*” that explores the figure as both a narrative agent as well an agent informing reality in material-discursive ways (Oppermann, “From Posthumanism” 29). Meaning, the android, while performing its agency within Dick’s narrative, extends this capacity to advise both the bio- and techno-sphere, wherein increasingly intelligent technologies and their social ubiquity are woven within a dense fabric of agencies, ecologies, and economies. Specifically, as human societies quickly realize newer, more powerful, and more intelligent technologies, so too have they come to increasingly rely on technology for problem solving, communicating, transportation, and industrial production. Thus, thinking through these developments, posthuman ecocriticism views the cultural development of these technologies as creating “intriguing maps of co-evolution of organisms, inorganic matter, perception and imagination in interesting hybrid life-worlds” (33). *Do Androids Dream*, as one such cultural text, becomes “inseparable from the material networks, forming a naturalcultural space as an intermingling spillway of science and literature” (32). Indeed, as I have

shown, Dick intends to delineate the human's co-evolution with technology, offering an image much akin to the one humans are viewing now.

Specifically, in response to the various and impending environmental issues that the discourse of the Anthropocene brings to the forefront, advocates for a "Good Anthropocene" have appeared in turn. What these so-called "eco-pragmatists" suggest is that through massive technological and geoengineering projects, humans will be able to repair their immense damages to the environment. However, these only serve to reinforce the separation of the human from the nonhuman world—and again, asserting the human controls environmental processes and can somehow "fix" the problems they have caused. As Donna Haraway recently remarks, the idea of a Good Anthropocene is more indicative of "a comic faith in technofixes," or the argument that "technology will somehow come to the rescue of its naughty but very clever children" (*Staying With It* 3). Playing into this idea more broadly, then, is the technosphere, insofar as human technologies play a rather large role in the discourse of the Anthropocene. However, if Dick's narrative is any indication, a reliance on technological innovation might prove counterproductive—to the extent that Dick's androids actually threaten, rather than help re-create, the biosphere. Nonetheless, it is hard to ignore just how tightly technology and the Anthropocene are interwoven.

Christian Schwägerl, for instance, explains that with the advent of this New Human Age, "it's not human beings that are new," but rather our technologies (127). Indeed, the ubiquity of technology and increasingly intelligent machines weaves an important narrative into the discourse of the Anthropocene. For instance, advancements

in the techno-sphere might learn from the bio-sphere's ability to self-sustain, and broadly take on new forms that mimic its organic, ecological systems—as is certainly the case with Dick's "organic androids." Perhaps most importantly, Schwägerl argues that geologists are more likely to find a fossil record substantially more consistent of human technologies than humans themselves. Thus, bringing the technosphere into conversation with the biosphere is productive for realizing the density of material and technological networks within which the human and the environment are entangled. Insofar as the posthuman and materialist paradigms suggest, "becoming with" the agencies of our technologies within biotic/abiotic material networks is paramount to thinking through our environmental crisis; as Serpil Oppermann offers, the critical aim of posthumanist ecocriticism is not to highlight a technological displacement of the human, but is rather concerned with "admitting the human as an interdependent part of the material configurations of the world" (Oppermann, "From Posthumanism" 25). In fact, just as the concept of the Anthropocene has garnered equal attention from both eco-pragmatists as well as very, and understandably, concerned skeptics, scholars and researchers of the techno-sphere have established opposing spheres of techno-optimism and techno-skepticism.

Currently, several texts in circulation are contributing to the narrative agency of the android, cyborg, and other forms of intelligent machinery drawing attention to the humans' increasingly material-technological entanglements. For instance, Wendell Wallach's *A Dangerous Master* (2015) draws a heavy skepticism toward increasingly intelligent, powerful, and ubiquitous technologies pervading everyday society. Similarly,

John Markoff's *Machines of Loving Grace* (2015) brings the minds of roboticists, computer scientists, and neuroscientists in an effort to understand burgeoning developments in artificial intelligence within the robotics industry and its implications for humans. Thus, several—no doubt many—problems that have not been delineated here will understandably draw more from the environmental and technological implications running through *Do Androids Dream*—most notably, posthuman, ecocritical, and machine ethics no doubt have wide implications in posthumanist, new materialist, and ecocritical theories when framed within the greater concept of the Anthropocene.

## SECTION III. CONCLUSION

Through reflecting on the ways in which *Do Androids Dream* paints an image of the lively nonhuman back-dropped by massive species extinction and environmental degradation, a larger theme of impermanence runs through the narrative; perhaps the impermanence of the idea of this new Anthropocene age, or the impermanence of the idea of the human. However, matter—insofar as we can articulate its ubiquitous, prehistorical, and even pre-universal energies—is decidedly permanent, always mobile, and always living. Thus, as Dick deftly illustrates, it is the human recognition of their material entanglements with the agencies of the nonhuman world that allow sustainable perceptions of the environmental future. As I believe Dick's narrative communicates, accepting our material, technological selves and reading deeply into the narratives of the nonhuman world in search of the plethora of connections to be made therein, lays the groundwork for furthering the lives and stories of the posthuman in a posthuman world.

Even as Dick projects a reality far from his own experiences, I have witnessed how remarkably relevant his narrative remains to both contemporary scholarship and the ongoing but imperiled human and nonhuman lives of the present. An observation of mine might serve to illustrate this point. At the outset of this project, I gathered books and articles, listened to podcasts, and made hasty note of my ideas on my iPhone's note-taking app. After typing *Anthropocene* into my notes, the word had been underlined as misspelled or perhaps unrecognized. This made me think: the idea is so utterly new that it is not yet registered in all of Apple's iPhone dictionary databases draws an interesting image of technology that has yet to (and perhaps never will) recognize the idea of an

“Anthropocene age.” It dawned on me that perhaps the concept of the Anthropocene need not be asserted so haphazardly, especially when humans have yet to include this idea in the popular imagination, or while humanity is only just beginning to realize its interconnectedness with both the nonhuman world, and particularly, with their own technologies. These issues—raised both by the idea of the Anthropocene and the human preoccupation with technology—are multi-faceted, and their solutions (if any) are dizzying. To these ends, a quick glance at the homepage of the news source *Futurism* brilliantly illustrates this. Across their front page read three eerily relevant articles to this project and the implications of Dick’s novel: the first, “US Government Issues NASA Demand, ‘Get Humans to Mars by 2033;” the next, “A New World Leader is Emerging in the Battle Against Climate Change;” and finally, “Amazon Argues AI Alexa Has Rights.” If these articles are any indication, the reality projected in Dick’s novel has reached the surface; and, if this reality comes to fruition (as these headlines suggest it might be), humans will not die buried under a layer of “radioactive dust,” but rather under the weight of their own hubris. The fossil record of Earth millennia from now will reveal a strata of metals, plastics, and nuclear radiation, and the human’s fossilized remains will be deeply below this much more pronounced, obscurely nonhuman layer.

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