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Posthuman ethics with Cary Wolfe and Karen Barad: Animal compassion as trans-species entanglement

While critiques of humanist tenets are not new, the growing currency of posthumanist discourse is indicative of pressing concerns about humanity’s responsibility for and within the ecological order. Since the late 20th century, some of the most prominent works interrogating anthropocentric worldviews have placed the ethics and politics of human-nonhuman relations under much scrutiny. Fundamentally, the critical leverage in the use of the prefix ‘post’ rests on the belief that the discrimination between the human and the nonhuman is more given than interrogated. In other words, posthumanism calls into question the apparently obvious coherence of ‘human nature’, and aims to destabilise the basic premises of human exceptionalism, i.e., the position that human beings are the most important species on the planet. According to this line of critique, human ways of knowing and being in the world do not have privilege or priority over the myriad variety of ways that nonhuman entities—e.g. computers, animals, plants, microorganisms, minerals, and fossils—encounter and apprehend the world. Significantly, the corollary of pursuing this perspective is to show that the identity of the human species is not unified or self-present, but thoroughly implicated in the phenomenology and ontology of other nonhuman entities.

Nevertheless, the complexity of maintaining such a position is demonstrated by the diversity of perspectives denoting where the exact locus of intervention lies: posthumanism, for some, is about troubling the distinction between humans and nonhuman animals (Wolfe 2010; Pettman 2011; Haraway 2008); for others, posthumanism is about seeing the technological as an extension of human subjectivity
(Hayles 1999, 2006; Thacker 2003, Miah 2008); for still others, posthumanism is about interrogating humanity’s role in environmental ethics (Morton 2010; Pickering 2005). More recently, the ‘nonhuman turn’ epitomised by the intellectual movements of object-oriented ontology (Harman 2002) and speculative realism (Meillassoux 2008) rejects anthropocentrism by arguing that objects can exist independently of human thought and perception. This shift in emphasis is also accompanied by a growing body of literature on anthropomorphic interpretations of animal sentience (Daston and Mitman 2006; Buller forthcoming) and ‘more-than-human’ environments (Whatmore 2013; Jensen and Blok 2013). As Nikolas Rose puts it, ‘[m]any things have led to this reframing of the human. Some have to do with the cycles of theoretical fashion in the human sciences. Some stem from a new sense of our precariousness as a species in the face of ecological threats and climate change’ (2013: 4). Notwithstanding the diversity of possible reasons, the stakes in managing and accounting for these conceptual configurations are significant, for how the fault line of discrimination between the human and the nonhuman/animal/environment is drawn also motivates the reasoning behind claims for which life forms deserve more equitable kinds of moral treatment.

Yet, interestingly, although posthumanism as an intellectual movement is marked by rather diverse lineages, the competing moralities and seemingly opposed positions that shape its history share more in common than they may realise or like to admit. In Scandalous Knowledge: Science, Truth and the Human (2006), Barbara Herrnstein Smith deftly captures the challenge posed by these varying intellectual commitments. She points out, for instance, that the myriad factors motivating someone to appeal for responsibility toward one group and not another is as much a question about socialisation, political leanings and individual temperament as it is
about being persuaded by an ethical cause. Why we are drawn to a particular moral conviction, or how we name and direct specific justifications for empathy or accountability, raises emotionally demanding questions. Smith offers a compelling meditation on this issue:

The problem of our kinship to other animals mirrors that of our relation to other problematic beings: for example, the unborn, the mentally disabled, the drunk, or the terminally comatose—beings, that is, who are recognizably our own kind but not yet, not quite, not just now, or no longer what we readily think of as what we ourselves are (2006: 153, emphasis in original).

Smith’s poignant description here sums up the conflicting moralities that inform many a debate on what constitutes ethical culpability, especially human responsibility toward the welfare of nonhuman others. As Smith furthers, matters become all the more contentious when the notion of responsibility is circumscribed by rather slippery identity markers that are used to stake a claim on which entity or group one is obligated to have regard for. ‘Should we’, she queries, ‘have care for dogs, cats, cows, and horses but not birds, snakes, or butterflies? For leopards and walruses but not lobsters or oysters? For all these, but not wasps, ticks, or lice? Or for these, too, but not microbes or viruses?’ (2006: 154). In short, Smith’s searching questions illuminate the difficulty of determining what a ‘proper’ affinity between humans and nonhumans may look like, or how the appropriate ‘recipient’ of ethical consideration may be located. Crucially, the ambivalent meanings attributed to the status of the ‘nonhuman’ often return us to a pervasive assumption, namely, that the originating source of responsibility is a human duty of care that is (or ought to be) extended toward other entities who will receive, rather than enable it. It is the underpinnings of this assumption that will concern us here.
As a prominent figure in posthumanist theory and the emergent field of ‘interdisciplinary animal studies’, Cary Wolfe’s work serves as an exemplary version of arguments that are persuaded by the prospect of a posthumanist ethics, one which will cut across species barriers and, in that respect, mobilise a fundamental shift in our understanding of discriminatory practices and moral responsibility. This paper interrogates Wolfe’s posthumanist framework as he approaches the questions of activism and agency vis-à-vis animal ethics and disability politics. As will become clear, although I share Wolfe’s aim in reworking traditional humanist tenets, our arguments differ on the problem of (re)defining moral culpability as something that is peculiarly human. By drawing attention to the contradictions in his own commitments to rethinking human exceptionalism, this paper examines how Wolfe’s reading of ability and agency in animal rights and autism advocate, Temple Grandin, ironically reinstalls an understanding of moral agency that is grounded in the deficiency of another whose lack the human must supplement.

Nevertheless, even though a critical tone will be apparent in my reading of Wolfe’s posthumanist approach, specifically of his conception of ethical responsibility, the convictions that drive the following analysis bear considerable affinity with his work. In short, the value of Wolfe’s theoretical rigour in rethinking humanist conceptions of ethics and subjectivity is not repudiated. Indeed, in an eventual discussion of feminist and physicist Karen Barad’s work, I suggest that the implications of Wolfe’s thesis of ‘trans-species affinity’ can be extended still further.

Wolfe’s brand of posthumanism is both ambitious and unusual as it brings together very disparate areas of thought. Throughout his writings, Wolfe makes sustained attempts to open up the question of subjectivity beyond species identities, highlighting in many places that by identifying the presence of language, conscious
awareness and complex social behaviour in animals, studies in areas as diverse as neuroscience, cognitive ethology and field ecology have troubled any neat distinctions separating the human from the nonhuman animal (e.g. 2003a, 2003b, 2010). In *What is Posthumanism?* (2010), a text now considered to be an important forerunner of the interdisciplinary field, ‘posthumanities’, Wolfe argues that one of his fundamental aims is to rework the ‘ontologically closed domain’ of attributes thought to be uniquely human (2010: xxv). He champions the cause for a ‘trans-species empathy’ that will recognise the human as a human *animal* whose defining characteristics are not so much exceptional as they are of a ‘generalized animal sensorium’ (Wolfe 2010: 134). The notion of a trans-species affinity is essential to the outcomes Wolfe wishes to pursue. However, Wolfe reasons that this form of affinity is at odds with the current debates around speciesism—attributing rights and values to beings based on their species membership. Wolfe makes his stance expressly clear when he stresses that speciesism merits the same attention paid to the more familiar kinds of identity politics discourse against racism and sexism because the very rationale behind liberation and rights theories has in the past been used to determine and discriminate ‘normal’ from less desirable kinds of human subjectivity. The violence of humanism, as Wolfe has reiterated forcefully, ‘is species-specific in its logic (which rigorously separates human from nonhuman) but not in its effects (it has historically been used to oppress both human and nonhuman others)’ (1998: 43).

Within the contemporary context of animal ethics debates, Wolfe points out that attempts to rethink the ethical status of animal subjectivity, under the aegis of a more inclusive framework, often rehearse an insidious form of humanism because they operate within the vernacular of rights and ability based discourse, ‘locked in a model of justice in which a being does or does not have rights on the basis of its
possession (or lack) of morally significant characteristics that can be empirically derived’ (Wolfe 2008: 13). On this topic, Wolfe looks to renowned postcolonial scholar, Gayatri Spivak’s deliberations on the anthropocentrism implicit in the history of liberationist political projects. Many of these projects, Spivak reasons, circumscribe identity and ethics in terms of whether a being has made the qualifying cut for possessing properties that are deemed human enough:

[T]he great doctrines of identity of the ethical universal, in terms of which liberalism thought out its ethical programmes, played history false, because the identity was disengaged in terms of who was and who was not human. That’s why all these projects, the justification of slavery, as well as the justification of Christianization, seemed to be alright; because, after all, these people had not graduated into humanhood, as it were. (Spivak in Wolfe 1998: 43-4)

For Wolfe, the gravity of Spivak’s point has profound implications not just for thinking about humanity’s moral obligations to nonhuman entities; it is also a reminder of the atrocities that have occurred and continue to be exchanged within the human social community in the name of liberation and rights. Explicitly drawing on this point in Animal Rites, Wolfe asserts that ‘the humanist concept of subjectivity is inseparable from the discourse and institution of speciesism … not only of animals, but other humans as well by marking them as animal’ (2003a: 43, emphasis in original). Fundamentally, Wolfe is guided by the conviction that what we have come to call ‘ethics’ has from the outset been based on prejudicial practices. That is, received notions of ethics foreclose more inclusive frameworks because they are grounded in views that privilege the human as a species more deserving of moral
attention. For Wolfe, a posthumanist ethics means broadening out the identificatory processes that define ethicality and subjectivity beyond species differences.

Given this, what is curious about Wolfe’s more recent pursuit of a new conceptual configuration of subjectivity—one that will unsettle the foundation of human identity—is his concomitant resolve to hold forth on the particularities of the human. In the opening pages of *What is Posthumanism?*, Wolfe writes:

>[T]he perspective I attempt to formulate here—far from surpassing or rejecting the human—actually enables us to describe the human and its characteristic modes of communication, interaction, meaning, social significations, and affective investments with greater specificity once we have removed meaning from the ontologically closed domain of consciousness, reason, reflection, and so on. It forces us to rethink our taken-for-granted modes of human experience, including the normal perceptual modes and affective states of *Homo sapiens* itself, by recontextualizing them in terms of the entire sensorium of other living beings and their own autopoietic ways of “bringing forth a world”—ways that are, since we ourselves are human *animals*, part of the evolutionary history and behavioral and psychological repertoire of the human itself. (2010: xxv, emphasis in original)

This promise to deliver a greater specificity in defining the human is one of the most exciting, yet also challenging, aspects of Wolfe’s posthumanist appraisal: how to secure the distinctiveness of the qualities that have defined a specific humanism (meaning, consciousness, reason, reflection), yet simultaneously situate them beyond their conventional human identifications?

To pursue this paradox, Wolfe brings into conversation the theoretical trajectories of animal ethics and disability studies. He finds common ground in these
areas insofar as both challenge ‘a model of subjectivity and experience drawn from the liberal justice tradition and its central concept of rights, in which ethical standing and civic inclusion are predicated on rationality, autonomy, and agency’ (2010: 127). The opportune example of this union, Wolfe locates in the story of animal rights activist and autism advocate, Temple Grandin. As this move to amalgamate the aims of animal ethics and disability politics forms a significant aspect of Wolfe’s posthumanist thesis of trans-species empathy, it is worth unpacking this line of reasoning, paying particular attention to how Wolfe consolidates the notions of contingency and partial perspective in his critique of the humanist trope of ‘visuality-as-mastery’ (2010: 131).

**Temple Grandin: visuality, trans-species affinity, and suffering as compassion**

Temple Grandin is a famous spokesperson for animal welfare, particularly in the area of humane slaughter in the livestock industry of the United States. As someone who has lived with autism from a young age, she is also widely recognised for her autism advocacy. In her autobiographical accounts, Grandin (2006) believes that her visual acuity and sensory hypersensitivity as an autistic have enabled her to build a special bond with the livestock she works with, and as a result, have also led her to design more effective and humane livestock handling facilities. Inspired by these self-reports, and by the enabling insights of Grandin’s autism, Wolfe surmises that Grandin’s story opens up ‘new lines of empathy, affinity, and respect between different forms of life, both human and nonhuman’ (2010: 127).

In *What is Posthumanism?* Wolfe draws our attention to Grandin’s belief that the visual acuity she developed as an autistic individual has enabled her to communicate *without* language or words: “ ‘During my thinking process I have no
words in my head at all’’, Grandin says; ‘‘When I lecture, the language is mostly
‘downloaded’ out of memory from files that are like tape recordings … I look at
visual images on the ‘computer monitor’ of my imagination, then the language part of
me describes those images’’ (Grandin in Wolfe 2010: 130, emphasis in original).
Curiously and importantly, Wolfe interprets this explanation as evidence that Grandin
is able to express herself through a visual rather than a verbal register (2010: 129).

As we have seen, Wolfe’s entry point for critique is his stance against the
humanist assumption that animals and beings deemed less ‘normal’ or different to the
autonomous human subject are perceived to be lacking in some element of
subjectivity or the capacity to respond and speak for themselves. In his succinct
expression, ‘[i]t would be overly simple, but not wrong to say that the basic formula
here has been: no language, no subjectivity’ (Wolfe 2003b: xv-xvi). Thus, using
Grandin’s story, Wolfe seeks to overturn this longstanding assumption that only
through language is one constituted as a subject who has the capacity for experience,
reflection, or intellectual acuity.

To further substantiate his claim of a trans-species connectivity vis-à-vis
Grandin, Wolfe suggests that Grandin is ‘implicated in what are, for humanism, two
ontologically opposed registers, both of them radically inhuman or at least ahuman’
(2010: 130, emphasis added). Wolfe problematises the notion of visuality as it is
‘stereotypically expressive of the humanist ability to survey, organize, and master
space’ (2010: 130, emphasis in original). He claims that Grandin’s visual acuity, as an
autistic, subverts this assumption and argues that Grandin’s ‘visual prowess’, which
typically would be considered as an indicator of ability, is ‘instead offered here as an
index of disability’ (2010: 130, emphasis in original). At the same time, Wolfe
interprets this enabled disability as a condition that has allowed Grandin to think like
a web browser, like a ‘recording, storage, and playback device’ (2010: 131). He reasons that these notions of the technical and the mechanical, often deemed ‘inhuman’ or ‘ahuman’, are recovered, indeed intensified, in Grandin’s hyper-acute perceptual apparatus. Taken together, Wolfe claims that ‘disability becomes the positive, indeed enabling, condition for a powerful experience by Grandin that crosses the lines not only of species difference but also of the organic and inorganic, the biological and mechanical’ (2010: 136, emphasis in original).

This point needs to be fleshed out as it shapes the way that Wolfe develops his reading of ethical responsibility as trans-species affinity. Consider the following example. Wolfe believes that Grandin’s hypersensitive perceptual apparatus by virtue of her experience as an autistic has helped her design career in the livestock industry. This follows from Grandin’s reasoning that the visual experience of a prey species like cattle is different from that of a predator species like humans because cattle’s eyes are evolutionarily designed to be on the side, instead of in front of their heads, as we would find in humans. For Grandin (as it is for Wolfe), this insight into cattle’s ‘wide-angle vision’ has inspired her to make some significant design changes in existing feedlots so that the cattle could more easily and willingly move through the chute. In her recollection of these design projects, Grandin insists that ‘[u]ntil I made this observation, nobody in the feedlot industry had been able to explain why one veterinary facility worked better than the other’ (2006: 22). Tellingly, Wolfe goes along with this account, and surmises that Grandin’s ability to relate her experience as an autistic with hypersensitive sensory faculties enables an ‘acute awareness of how different a cow’s visual experience is from our own’ (2010: 129, emphasis added). This observation is then used to lend credence to the claim that ‘visuality may be
animal, it may be technical, but it is *anything* but “human”’ (Wolfe 2010: 131, emphasis in original).

There are significant contradictions in this line of reasoning that merit attention. In Wolfe’s analysis, Grandin’s visual proficiency affords her a better understanding of the visual experience of cattle, because this perceptual acuity is enabled by her disability. Here, the causal connections that Wolfe makes are glib and much too swift. It is one thing to argue for the enabling possibility of disability, that we certainly don’t have to read disability as lacking and opposite in meaning to ability, but quite another to claim that one’s disability identifies a unique ability that ‘ordinarily abled’ individuals are *unable* to achieve. In doing so, Wolfe reproduces the identity politics he wants to contest, for he has merely tipped the fulcrum over such that Grandin’s disability is now cast as a special sense of sight, an insight that ‘normal’ or non-autistic individuals cannot access.

Wolfe’s objective in using Grandin’s story is to highlight the confounding of the visible and the invisible, to complicate the received tradition of thinking that vision is the mark of discrimination between the all-seeing knower and the one deprived of sight or insight. Yet, in this analysis, the humanist assumptions that reinstate the notions of autonomy and mastery underpinning Grandin’s anecdotes are not called into question. This is not to diminish both Grandin’s design achievements in the livestock industry and her contributions to autism therapy. However, positing Grandin as someone with special, hyper-acute sensory capabilities in order to displace the humanist trope of vision paradoxically shortchanges what is most profound about the empirical and phenomenological structures of visuality *for all of us*. What does it mean to extrapolate, as Wolfe does in his engagement with Grandin, that visuality is ‘anything but human’? By arriving at such a conclusion, that Grandin’s visual
proficiency is somehow ‘other’ or alien to us, Wolfe’s reasoning recovers a rather standard and conservative view of ability that rests on the discrimination between those who have it and those who don’t have it. More disturbingly, Wolfe’s claim seems to diagnose a moralism that runs counter to his overall commitments: vision (abled) equates with the bad, non-vision (disabled) equates with the good.

It is worth highlighting that Wolfe’s inspiration for a posthumanist conception of ethics comes from German sociologist and systems theorist, Niklas Luhmann. In Luhmann’s systems theory, communication and observation are cast as ‘second-order’ phenomena, in that they rest on the impossibility of seeing one’s own ‘blind spot’ (e.g. 1995a, 1995b). Thus, for Luhmann, as for Wolfe, sociality is enabled by a certain perspectivalism in which seeing can only proceed by way of the partial or restricted nature of one’s worldview. To this end, Wolfe suggests that one of the most valuable insights in Luhmann’s emphasis on ‘self-referential’ blind spots is that it offers a way to reconfigure the tension between claims for the contingency of observation/knowledge and a corresponding criticism of the inability of such claims to found their argument on convincing grounds. Although he highlights this tension in a number of different contexts, there is one particular description Wolfe offers that captures the conundrum at stake:

On the one hand, the critiques of the traditional philosophical paradigms of positivism, empiricism, and the like, which stress instead the contingency and social construction of knowledge (pragmatism, poststructuralism, materialist feminism), would seem politically promising because they hold out hope that a world contingently constructed might also be differently (i.e., more justly) constructed. But on the other hand, that very constructivist account has left intellectuals seeking grounds for their own political practice without a
foundation from which to assert the privilege of their own positions. (1998: xii, emphasis in original)

Here, the challenge that Luhmann’s systems theory poses is that assuming any (moral, political, or social) position inevitably rests on an ‘interdiction of self-exemption’ (Luhmann in Moeller 2006: 112). Stated differently, a position cannot be posited outside the very problem it deems unethical. Importantly, for Wolfe, what constitutes an ethical position, understood in terms of Luhmann’s systems theory, acknowledges that that position can only point self-reflexively to its guiding principles because its perspective is partial to itself. It cannot step outside itself to gain a moral high ground over other positions.

We may recall that one of the most compelling insights that Wolfe offers in his posthumanist theory is his critical acknowledgement that reworking humanist ethics and politics cannot simply mean ‘extending’ the boundary conditions of acceptable or ‘normal’ entry points to include the previously underrepresented or persecuted. Indeed, Wolfe is emphatic about this when he clarifies that his aim in using the story of Grandin ‘is not to play the oldest and most predictable trump card in the identity politics deck—“my constituents are more marginalized than yours”’ (2010: 140). However, Wolfe’s critical acuity here appears to be at odds with his ethics of compassion.

Ultimately, Wolfe appeals to the possibility of a posthumanist ethics in which subjectivity, in his rendering, is ‘neither “disabled” nor “normal,”’ but something else altogether, a shared trans-species being-in-the-world constituted by complex relations of trust, respect, dependence, and communication’ (2010: 141). Accordingly, for Wolfe, this leads to a reconceptualisation of how ethically bound the human is to other forms of life, bound ‘in our shared vulnerability, to other living beings who
think and feel, live and die, have needs and desires, and require care just as we do’ (2010: 140). This undertaking ‘points us toward the necessity of an ethics based not on ability, activity, agency, and empowerment but on a compassion that is rooted in our vulnerability and passivity’ (Wolfe 2010: 141, emphasis in original).

To this end, Grandin provides the context for Wolfe to marry the central problematic of ethics, or what constitutes moral standing, with that of an identity politics, that asks who is the ‘subject’ of ethical consideration? In this amalgamation of concerns, Wolfe insists that it is only by recognising a trans-species affinity that the question of posthumanist ethics can be brought into a sharper focus. However, his overriding emphasis on the exceptional aspects of Grandin’s disability amounts to the claim that as a result of Grandin’s autism, her visual acuity, as a mark of her disability, surpasses that of an ordinarily sighted individual. In other words, for Wolfe’s thesis to cohere, his argument has to be staked on a logic of reasoning that is similar to the identity politics claims in question: Grandin, as disabled and because this disability provides her with an affinity with the cattle she works with, is an identificatory process that singles out an ethical intervention. But in doing so, Wolfe glosses over the irony that by concurring with Grandin that her experience with autism has given her special visual abilities that otherwise ‘normal’ individuals lack, the very contention that Wolfe sets out to refute is unquestioningly reinstalled: the humanist assumption of visuality as mastery, as well as the sorts of ability-based discourse that are grounded in debates over who has or does not have certain properties to qualify for moral consideration.

For Wolfe, compassion, with its literal meaning ‘to suffer together’, is a way to connect with the nonhuman animal by recognising the shared fact of suffering that underpins existence itself. In other words, acknowledging an affinity that is anchored
in the poignant reminder of mortality and finitude, regardless of species difference, captures the most basic sense of compassion. Importantly, this reminder that we suffer together challenges the ontological containment of the human as a superior species, and interestingly returns us to the earlier problematic that began this discussion, namely, Wolfe’s intention to displace and sustain the specificity of the human.

This tension between repudiating humanism and maintaining the unique capacities of the human, results from Wolfe’s interpretation of what is involved in an ethical relation. The quandary is that Wolfe’s rigorous insistence on the ontological status of the human as always already a human animal, is at odds with his investment in the question of ethical culpability as a responsibility that originates in the human and is extended toward the nonhuman animal. In this delineation of what grounds an ethical relation, prejudice is peculiarly human. The difference between human and nonhuman, one that is more assumed than problematised, remains intact. Consequently, Wolfe’s approach to the notion of trans-species connectivity remains wedded to a rather linear and derivative sense of human compassion toward nonhuman others who would receive, rather than give or indeed enable it.

It is to this extent that I think Wolfe undercuts what could be a much more illuminating argument, namely, that to conceive the specificity of human identity is to open up the very identity of life as something of a general sensorium, in his own description, a ‘trans-species being-in-the-world’ (2010: 141). However, if one subscribes to this reading, what needs to be confronted, honestly and openly, is that the trans-species empathy that Wolfe encourages through the concept of compassion may not be self-evidently benign, kind, or ‘good’. The crucial point here is that if we are always already connected, indeed, if connectivity is what affords the ontological experience of our individual viability, ethics can’t simply oppose the good to the bad
(one to the other), or take the good with the bad (one and the other). What is needed is a different understanding of the production of binarity itself. Of course, we are at this point faced with a profoundly unsettling suggestion, for the radical sense of trans-species connectivity that Wolfe feels so strongly committed to must also imply that the questions of cruelty, violence, abuse or indifference do not disappear. They endure, because ethical responsibility, this trans-species experience as a social fact of suffering, compassion, will compromise any ‘pure’ sense of an opposition between good or evil, benign or cruel—indeed, not just between human and nonhuman animal, but between humans beings within the one socius.

**Intra-active entanglement: Karen Barad’s posthumanist performativity**

To venture another reading of ethical inquiry, I want to turn our attention to the work of feminist and particle physicist, Karen Barad. As one who not only practises science but also writes in the tradition of feminist science studies, Barad occupies a unique position in which to reconcile the perceived incompatibility between notions of subjectivity and scientific objectivity, epistemology and ethics, discourse and matter. In *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007), she offers a refreshing and certainly counterintuitive take on ethical responsibility and human agency. Using the insights of quantum mechanics, Barad proposes a ‘posthumanist performative’ approach to reexamine the representationalism and humanism that underpin conventional understandings of scientific knowledge and what grounds an ethical relation. Against representationalist accounts that assume knowledge about nature or reality is mediated by human observation and language, Barad’s thesis questions this longstanding partitioning of matter and meaning, nature and culture. At the forefront of her argument is a
profound sense of systemic entanglement that confounds the metaphysics of individualism in Western thought, that is, ‘the belief that the world is populated with individual things with their own independent sets of determinate properties’ (Barad 2007: 19). Where traditional representationalism casts the inquiring subject as incontrovertibly human and distinctly individual, Barad’s posthumanist performative approach radically opens up the question of how the ‘human’ emerges in and even as the world’s self-encounter. As we will see, the implications of this dilated frame of inquiry for thinking about ethics are far-reaching.

According to Barad, the physical phenomenon of diffraction is integral to the key insight in quantum mechanics that the observer and the observed are fundamentally entangled, or indeed, ontologically inseparable (2007: 73). When two stones are dropped in a body of still water, for example, the resulting ripple effect caused by disturbances in the water produces an interference, or diffraction, pattern. In classical physics, diffraction is generally understood as the process by which waves bend around objects to produce alternating patterns of areas of wave intensities (Barad 2007: 77). Importantly, in classical physics, as Barad points out, diffraction patterns can only be produced by waves and not particles, since as separate portions of matter, particles cannot occupy the same position at the same time (2007: 81). However, and this is what makes diffraction crucial to quantum physics, under certain experimental circumstances, diffraction effects have been found for electrons, atoms, and neutrons—forms of matter routinely considered to be made up of particles, i.e. discrete ‘bits’ of matter. This is the famous puzzle of the ‘wave-particle duality’ typically associated with English scientist Thomas Young’s ‘two-slit’ experiment. As the two-slit experiment is central to Barad’s overall argument that epistemology,
ontology and ethics are inextricably intertwined, it is worth mulling over some of its key provocations.

Originally devised to understand whether light is composed of particles or waves, the two-slit experiment works by emitting a light source through two parallel openings on a plate, and observing what happens on the screen behind when the light source passes through. When a beam of light is emitted through the apparatus, a diffraction pattern, i.e. a wave, emerges. However, when the light source is reduced such that only one photon is released at a time, what is observed on the screen is not two scattered patches of light corresponding to where the photons are expected to land. Instead, what the screen registers is a wave, a diffraction pattern. This is a curious finding as it raises the question of what constitutes the nature of matter. If only one photon is sent through the apparatus at a time, what interfered with the photon particle to produce a diffraction pattern? Puzzling over this, Barad asks: ‘Does an individual electron “interfere” with itself? Does a single electron somehow go through both slits at once? How can this be? Doesn’t each electron go through one slit or the other?’ (2007: 102, emphasis in original)

The broader implication of the findings from the two-slit experiment is highly significant. If, as classical physics instructs, photons and electrons—‘bits’ of matter—are discrete particles with determinate properties, then how can they also manifest wave behaviour, since waves, by definition, cannot be localised to a single point? How, to put it another way, is the nature of matter and light local yet general in their materialisation? Here, we might recall a similar theoretical conundrum that Wolfe faced in his posthumanist project that insists on preserving the specificity of the human species and simultaneously reconfiguring the human animal as something of a general sensorium. While Wolfe does not frame his commitments in terms of the
quantum rendering of part-whole entanglement, his acknowledgement that any
posthumanist account is necessarily of a paradoxical nature because ‘it comes both
before and after humanism’ (2010: xv) approximates the quantum insight that the
emergence of one entity is somehow also (an expression of) its entire frame of
reference. Indeed, one could argue that a convincing and cogent posthumanist
position is paradoxical because the production of its difference from humanism is not
one of separation but of differential becoming. This point will become clearer in a
moment.

To get some purchase on the perplexing questions raised by the two-slit
experiment, Barad turns her attention to the work of celebrated physicist Niels Bohr.
Bohr’s interpretation of the wave-particle duality paradox challenges the
representationalism and metaphysical individualism inherent in classical approaches
to value and measurement. According to Bohr, there is no sense in asking where the
electron or photon is prior to the measuring process. This is the basis of his
indeterminacy principle which states that we cannot concomitantly know both the
position and momentum of a particle because particles do not have fixed values of
position and momentum (Barad 2007: 19). In other words, the wave-particle duality
paradox, for Bohr, is not an epistemological problem about knowledge and
uncertainty, whether we can or cannot know reality. Bohr argues that the wave-
particle duality paradox evokes a fundamental question about the ontology of life and
the nature of reality itself. For Bohr, there is no absolute distinction between matter
and representation because the capacity of the apparatus that presumably measures
and give meaning to the value of an object does not exist independently of the
measuring process. In the case of the two-slit experiment, the value of a particle, that
is, whether matter manifests wave-like or particle-like properties, emerges only in and as measurement itself.

In a series of *gedanken*, or thought, experiments—many of which with the benefit of technological advances have actually been performed and confirmed in experimental labs (Barad 2007: 105)—Bohr demonstrates that matter will exhibit wave or particle-like behaviour contingent on the specific material setup of the apparatus used to measure the experimental outcome. For instance, by modifying the two-slit apparatus so that the upper slit is a movable diaphragm suspended from springs, one would be able, Bohr says, to detect which slit each particles goes through by observing the amount of displacement created by the movable diaphragm (Barad 2007: 266). Now, crucially, the ability to determine which slit each particle passes through is not a result of a ‘mixture of particles’ (Barad 2007: 268), some of which enter the top slit while others enter the bottom slit, but ‘an experimental arrangement that makes it possible’ (Barad 2007: 268). Bohr’s critical insight into the wave-particle duality paradox is that value and measurement are co-constitutive; ‘the nature of the observed phenomenon changes with corresponding changes in the apparatus’ (Barad 2007: 106, emphasis in original). If a particular experimental arrangement is designed to respond to the particle-like character of the object of inquiry, then that is what is observed. One finds particle-like behaviour and not a diffraction pattern. Correspondingly, if the experimental setup is introduced to investigate the interference pattern of light or matter, the material specificity of that arrangement confirms it.

At first glance, this finding seems to suggest that the process and outcome of the experiment are arbitrary. However, when read carefully, the gravity of the point being made is that value or evaluation does not *preexist* the apparatus; it is
materialised in and as the specific process of measurement that is carried out, including the particular exclusions that are enacted. This is an important point that bears reiterating. For Bohr, as Barad tells us, the boundary between ‘the object of observation’ and the ‘agencies of observation’ is never fixed as such (2007: 114). Instead, the very possibility of making this subject/object ‘cut’ presents itself as the moment of measurement arises and where certain choices are made to the exclusion of others. Here, significantly, any exclusion is constitutive of the apparatus since it enables and provides the condition for establishing boundaries and measurement interactions. As Barad emphatically insists, ‘we are not entitled to ascribe the value that we obtained for the position to some abstract notion of a measurement-independent object’ (2007: 113). Rather, what Bohr’s analysis shows is that there is no unambiguous or inherent distinction between the (human) subject with the agency to observe and to measure and the object that is presumably nonhuman and outside the field of agency.

In this confounding scene of agential entanglement, even the question of what constitutes the boundaries of an apparatus is radically reconfigured. An apparatus, for Barad, is not a stand-alone instrument waiting to be applied to a particular experimental set up. She says:

The particular configuration that an apparatus takes is not an arbitrary construction of our choosing; nor is it the result of causally deterministic power structures. Humans do not simply assemble different apparatuses for satisfying particular knowledge projects but are themselves specific parts of the world’s ongoing reconfiguring. To the degree that laboratory manipulations, observational interventions, concepts, and other human practices have a role to play, it is as part of the material configuration of the
world in its intra-active becoming. Humans are part of the world-body space in its dynamic structuration. (2007: 184-5)

This originary ‘intra-active becoming’ does not imply that there are no differences between objects or events, but that the production of any difference has no preexisting or independent reality outside the specific physical arrangement of the system or apparatus—the world’s self-encounter and self-making. ‘The point’, as Barad states cogently, ‘is not simply to put the observer or knower back in the world (as if the world were a container and we needed merely to acknowledge our situatedness in it)’ (2007: 91, emphasis in original). Rather, she argues, ‘[w]e do not obtain knowledge by standing outside of the world; we know because ‘we’ are of the world (2007: 185, emphasis in original). Against conventional understandings of causality, time, and space, and the metaphysical individualism that assumes the world is composed of discrete and autonomous entities, Barad’s notion of intra-activity makes a persuasive and timely argument against human exceptionalism. Indeed, as a radically different kind of posthumanist intervention, Barad’s argument reminds us that to destabilise the self-certainty of humanism is to acknowledge that the human is an expression of the apparatus of life and world constantly taking measurement of itself.

**An ethics of humanism reworked**

If we return to Wolfe’s posthumanist ethical framework through Barad’s notion of intra-action, it becomes clear that advocating for compassion as a form of trans-species affinity is fraught with complication. The rub is this: a general sensorium, as Wolfe proposes, cannot exclude the disabled, the animal, or those who discriminate against them. At stake, then, is not just an impugning of the privileged human subject, for what is at issue pertains to the privileging of any identificatory
process that promises to single out one point of difference as the locus of discrimination deserving of greater moral attention and/or indictment. Put simply, what constitutes compassion as a corrective for cruelty or injustice is not at all straightforward. For if the question of ethics is truly opened up in a general sensorium, that is, an ethics that implicates all of life as a trans-species entanglement, then the ‘rightness’ or ‘wrongness’ of an ethical conundrum are not separate or opposing determinations. Put plainly, Wolfe’s notion of trans-species affinity does not preclude compassion or violence.

The recognition that responsibility is not secured ‘in’ one individual, event, or location will recast the very meaning of culpability, and how we continue to approach questions of blame, accountability, and ethical relations. To be sure, this is not a suggestion that we relinquish our sense of personal agency because, after all, our intentions and interventions are determined by the ongoing structuration of the world. Rather, it is precisely because we are the world we seek to understand that our participation matters (Barad 2007: 396). In this ethics of mattering, however, what constitutes culpability presents itself with all its inconsistencies and competing justifications as the quandary that changes and morphs into different possibilities, different contingencies. Consequently, what determines ‘compassion’ as an ethical response is invigorated as an involvement of these previous possibilities and not as a moral compass that orients us from a position outside the object of violation.

While both Wolfe and Barad make the argument that there is no privileged locus of observation outside or above the object of inquiry, there is a decisive difference in the way that the same claim is made in their works. Barad’s appreciation of the ‘constitutive effect of exclusions’ (2007: 59) means that no perspective is simply lacking or partial. Recall that for Wolfe, via Luhmann, it is the partial or
restricted nature of one’s worldview, the impossibility of seeing one’s blind spot, that allows other ‘second-order’ observations to enter as remedial observations. This is an important point for Wolfe given his commitment to the partiality and social contingency of the very concept of ethics. Yet, if we read Wolfe’s thesis of a general sensorium with Barad’s notion of intra-active becoming, one is faced with a view of ethicality that has far-reaching implications even as it also raises discomforting questions about the nature of being. Stated differently, if the basic logic of self-referentiality in systems theory is to suggest a more counterintuitive and implicated sense of what it means to assume an ethical position or perspective, as Wolfe wishes to pursue, this must also mean that the ethics and politics of discrimination are not outside ontology, but are indeed what motivates and animates the system of life.

This sense of general systematicity can be found in Barad’s notion of the apparatus where every perceived separation or discrimination is not prescribed by, or prior to, its material configuration. If we heed this reading, how we conceptualise the specificity of an entity or event will embrace a rather different sense of what enables it in the first place. In other words, taking Barad’s argument for the entanglement of knowledge and life seriously—we know because ‘we’ are of the world—involves an understanding of ethical agency and accountability whose limits may not necessarily be configured by the human. Indeed, what constitutes the (limits of the) human in this confounding origin of intra-activity should be the question posed at the forefront of any intervention into human-nonhuman relations.

The point is not to deny or collapse the distinctions that are drawn between human and nonhuman animal. Rather, the more provocative suggestion here is that the perceived errors of humanism are also already facets of Life’s determination to organise itself, understand itself, to be present to itself—even in its missteps. How we
make sense of our relations in the world, in fact, how we are the world making sense of itself, are enduring questions about the nature of sociality, that is, the ontological inseparability of nature and humanity. As Peta Hinton in her sustained engagement with Barad contends, this ontological inseparability implies that ‘everything is accountable in the world’s differential becoming, and the terrain of ethical inquiry shifts from ‘how can I produce an ethical relation?’ to the broader consideration of ‘how am I produced, ethically?’ (2013: 183, emphasis in original). In this astute reconfiguration of human exceptionalism, Hinton reminds us that what is most instructive about Barad’s argument lies in its insistence that ‘we participate in bringing forth the world in its specificity, including ourselves’ (Barad in Hinton 2013: 183).

By implication, then, the very possibility of a posthumanist ethics cannot be located beyond humanism as a corrective for what appears to be lacking in humanist ethics and politics—at least not without being involved, self-referentially or diffractively, in this general ecology of movement that is life. Indeed, if what determines an ethical call cannot be defined outside of, or prior to, the instance of a moral quandary, if the ethical does not pre-exist the scene of violation or error but is constitutive of it, then ethical inquiry is an expression of the myriad ways by which Life bears itself. It is in this sense that we may challenge and redefine our views of culpability and moral responsibility as exclusively human.
References


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