CPH3.2.9

Art Without Humans?

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> Humanity is the species betrayed by art, in both senses of that word: the species at once revealed and undone through the agency of art.[1]

Introduction

Throughout the history of art and aesthetics there has been a tacit assumption that art is fundamentally and more or less exclusively a human practice, based on human thought, perception, agency and symbolic transformation, or at the very least involving human presence in the form of an implied (human) spectator and admirer. Even spectacles of "divine beauty" or "the natural sublime" cannot really do or would not really make sense if there was no human subject to witness them.[2] Since art has almost exclusively been looked at as a cultural technology, social practice or institution that depends on the idea of human presence it can be said to be fundamentally 'humanist', in the sense of being human-centred, or anthropocentric. Human presence can be articulated in the form of a direct depiction of human subjects, or, indirectly, through the representation of the effects of humans and their cultures, spaces, technologies on their environments, or their "world" in general.

This does not mean that the nonhuman has been absent from art. On the contrary, nonhuman animals are among the first objects of art and representation. They may even have been what "prompted" the "birth of art" in prehistoric times in the first place.[3] Landscapes and still life also are and remain major art genres. Sculpture and architecture as well play a fundamental role in connecting human and nonhuman spheres. And the "material" aspects of art practice, from the "raw materials" used and transformed to the material interconnectedness and embodied nature of artistic practices also necessarily involve a myriad forms of "entanglement" between human6 and nonhuman "actors". All of these are obvious connection points for a critical posthumanist rewriting of a human-centred idea of aesthetics.

What has become a growing concern for modern and contemporary art and the thinking about art's past and future, is not only their anthropocentrism, but at the same time, their ingrained Eurocentrism and their Greco-Roman and Renaissance humanist tradition, as well as their global commodification and problematic relationship to "late capitalism". The critique of humanism that gathers pace in the second half of the 20th century is thus connected to the historical process of decolonisation. It reacts against the universalism and cultural imperialism that European aesthetics has coevolved with at the expense of "indigenous" cultures and art practices by either appropriating and commodifying or simply repressing them. While such a "postcolonial" critique still leaves the possibility of a *neo*humanist view of a universal aesthetic in the form of an equal valorisation of *all* human aesthetic practice intact, the second target of a more recent, posthumanist, critique is more radical in that it is directed at the underlying anthropocentrism of art practice more generally. In this context, the late 20th and early

[1] Daniel Cottom, *Unhuman Culture* (Philadelphia: University of Pennsylvania Press, 2006), p. 150.

[2] Cf. the comments on "correlationism" and its critique from "speculative realists" below, however,

[3] See my discussion in "Lascaux, Geophilia and the 'Cradle of Humanity'", *Before Humanity: Posthumanism and Ancestrality* (Leiden Brill, 2022), pp. 162-183.

21st centuries are characterised by what Richard Grusin has called the "nonhuman turn".[4] Thinkers like Donna Haraway, N. Katherine Hayles, Karen Barad, Cary Wolfe and many more have changed their focus of attention on postanthropocentric political and aesthetic practices, in which humans and nonhumans co-exist in, co-experience and co-produce distributed cognitive environments, assemblages and networks.

This notion of entangled materialities – natural, cultural, technological – leads to art practices that are increasingly aware and critical of art's anthropocentric bias and which stress or foreground and address the political and ecological issues that new forms of living-together outside a clear distinction between nature, culture and technology raise. In doing so, the traditional idea of the autonomy of art and the special experience, affects or subjectivities it affords, together with the institutions these are embedded in, which they support and which in turn legitimise them, all become problematised in posthumanist art or art engaging with and produced under posthuman conditions. Posthumanism, as a by now well-established theoretical paradigm that embraces both the technological and ecological challenges of its time, attacks both the humanist and anthropocentric preconceptions of art. It does so in two ways: it is an aesthetic practice that continues and radicalises the critique of humanism; and it privileges work that takes the idea of postanthropocentrism and nonhuman art seriously, sometimes even literally. This chapter discusses examples of both (posthumanist-postanthropocentric) techniques or strategies and shows their differences but also their complementarity. While the ongoing critique of humanism is ultimately still directed at and produced for a human subject, even though a radically changed and de-centred one, nonhuman art does no longer require a human as either its producer or observer – ultimately, it is art "without" humans, literally.

Posthumanist Aesthetics

The *OED* features two entries on "post-humanism". The first noun is defined as a "system of thought formulated in reaction to the basic tenets of humanism" and (esp. in postmodernist and feminist discourse): "writing or thought characterized by rejection of the notion of the rational, autonomous individual, instead conceiving of the nature of the self as fragmentary and socially and historically conditioned". This definition is a reflection of what happened in and to critical and cultural theory (including feminism, postmodernism but also poststructuralism, deconstruction, postcolonialism, psychoanalysis) over the past fifty years, namely a "decentring" of the (human) subject, or a critique of the idea of the so-called "liberal humanist individual" and its purported universality, timelessness, freedom and autonomy. It is the continuation and radicalisation of this critique which turns posthumanism into what one might call the "ongoing deconstruc6tion of humanism".

The second entry for "post-humanism" in the *OED* is defined as the "idea that humanity can be transformed, transcended, or eliminated either by technological advances or evolutionary process" – a definition that is marked as originating in "science fiction". It also includes "artistic, scientific, or philosophical practice which reflects this belief". By implication this definition understands posthumanism as an aesthetic term that is concerned with the "post-human", a separate entry in the *OED*, designating (again marked science fictional) "Of or relating to a hypothetical species that might evolve from human beings, as by means of genetic or bionic augmentation". The posthuman thus understood is 'our' technological evolutionary "successor". Relating to art the posthuman implies a scenario "in which humanity or human concerns are regarded as peripheral or absent". This second

[4] Richard Grusin, ed., *The Nonhuman Turn* (Minneapolis: University of Minnesota Press, 2015).

(aesthetic) definition clearly reconnects with the discussion about "dehumanisation" and the "end of art" throughout the 20th century (see below).

Another key aspect that can be gleaned from both definitions is the central role technology plays in the process of "posthumanisation", i.e. humans becoming somehow "posthuman". As a general rule, one might add that those who embrace this process with enthusiasm, by and large trust the idea of technological progress and see the increasing "cyborgisation" of humans and their coevolution with and maybe supersession by artificial intelligence as a positive and necessary "next step", usually self-identify as "transhumanists". They welcome human "enhancement" through present and future technologies. For *trans*humanists, humans are merely a "transitional" species preparing the way for technological superintelligence; their imaginary is fundamentally "science factional", in the sense that the boundary between science fiction and science fact, as Donna Haraway already wrote in the 1980s, has become largely illusional.[5] *Post*humanists, or as I would prefer to call them, "critical posthumanists",[6] are aware of the implications of the technological transformations afforded by the combination of biotechnology and digitalisation, but they are much more focused on material and political changes that these technologies impose on life (both human and nonhuman) more generally. They are commenting critically on "biopolitics" and "biopower" (which also explains the important role "bioart" plays in posthumanist aesthetics, see below), by which they understand, following Michel Foucault, Giorgio Agamben and Roberto Esposito, the specifically modern form of "governmentality" focusing on the "administration of individual and collective life". Biopower is thus exercised by regulating, controlling but also commodifying "life".[7]

Even though posthumanists also concern themselves with questions of technology and science, science fiction and futurity, they tend to deploy a longer term view of "how we became human" and to what extent we might or should understand ourselves as "posthuman" today. As opposed to transhumanists they stress our biological and microbiological entanglement with nonhumans – something that biotechnology has both made "visible" and "available" for human intervention. And, again as opposed to transhumanism, posthumanists promote an ecological and geopolitical (deep historical) understanding of the place and meaning of the human within the history of the planet, life and evolution, which explains their radical critique of human exceptionalism and speciesism in the face of anthropogenic climate change (cf. Anthropocene) and the challenges and extinction threats this poses to human and nonhuman life alike.

What one might call a posthumanist aesthetic is therefore thinking about art "outside" traditional (humanist) human exceptionalism. How to think and display a world in which the human is no longer at the "centre" of representation even while the effects of human "extraction" of planetary resources have never been more painfully felt. Posthumanism holds the human (or to be more precise, some humans) responsible, while searching for alternative, more ecological, more just and also more accurate models of cohabitation in a world of finite resources and multispecies entanglement, under technological conditions that are, to say the least, ambivalent, maybe even uncontrollable. Its eco-political stance explains why posthumanism in art often takes the form of (political, sometimes polemic) "performances" that highlight and problematise questions of "embodiment", while its techno-critical aspect (not to be confused with science fictional technophobia or techno-scepticism)

[5] Donna Haraway, "A Cyborg Manifesto" [1985], in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149-181.

[6] Cf. Stefan Herbrechter, Posthumanism: A Critical Analysis (London: Bloomsbury, 2013).

[7] Cf. Nikolas Rose, *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century* (Princeton: Princeton University Press, 2007).

often takes place in the creative "lab" (see below). In doing so, it is engaged in challenging humanist "norms" through transgressive forms of "monstrosity".[8]

Dehumanisation and the End of Art

It was Ortega y Gasset who, in 1925, spoke of the "dehumanization of art",[9] by which he meant the failure of modern art to involve people "sentimentally" and to show a concern for the "human element" and "human destiny". The "unpopularity" of modern art is attributed by Ortega to the "progressive elimination of the human or too human elements characteristic of romantic and naturalistic works of art",[10] which leads to its abstract aestheticism or anti-realism, located in a "triumph over the human"[11] and the "ridding of all pathos"[12] – provoking in sum an "emptying of meaning".[13] This "decline" or questioning of the human in modern art – and the stressing of the "inhuman" object and perspective as a result – which characterises the modernist avant-garde in particular was designed to produce a "liberation of the image from man", as a valorisation of the aesthetic object and a depersonalisation of the artist, according to Oretga y Gasset. However, this also led to a "heightened subjectivism" in producing the illusion of "pure perception".[14] In the era of the posthuman, one might argue, what in modernism produces a subjective aesthetic experience of impersonality and "self-willing self-annihilation" in the face of the aesthetic object, becomes a general ecological and ontological concern, a generalised aesthetics, of concrete "extinction" and "inhuman worlds".[15]

However, "when the notion of the human becomes strained, so too does the concept of art".[16] The "end of man" and the "end of art" seem coterminous. The end as finality, thought in a Hegelian sense, as completion or fulfilment, rather than mere ceasing, is what provides meaning to both the human and "his" art: "Art is rooted in the same human need that gives rise to religion and philosophy: to find and disclose an abiding meaning in the seemingly senseless accidentality and contradictoriness of finite existence, in the externality and alienness of the world of life; to make the world ultimately man's own home".[17] In this Hegelian, radically anthropocentric sense, art is purely about human self-discovery.

Modernist art at the end of the 19th and beginning of the 20th century finds itself confronted with the question, formulated by Arthur Danto, what function and significance art might have "after the end of art", in the state of its heightened "autonomy", once it is no longer subservient to the ideal of human self-discovery. This also implies that art is in need of a new source of legitimation once it purely

[8] Cf. Lucian Gomoll, "Posthuman Performance (2010)", in Giovanni Aloi and Susan McHugh, eds., *Posthumanism in Art and Science: A Reader* (New York: Columbia University Press), 2021), pp. 192-201.
[9] José Ortega y Gasset, "The Dehumanization of Art (1925)", *The Dehumanization of Art and Other Essays on Art, Culture, and Literature* (Princeton: Princeton University Press, 1968), pp. 65-83.
[10] *Ibid*., p. 69.
[11] *Ibid*., p. 71.
[12] *Ibid*., p. 80.
[13] *Ibid*., p. 82.
[14] Claire Colebrook, *Death of the PostHuman: Essays on Extinction*, Vol. 1 (Minneapolis: Open Humanities Press, 2014), p. 27.
[15] *Ibid*., pp. 27-28.
[16] Jacob Wamberg, "Dehumanizing Danto and Fukuyama: Towards a Post-Hegelian Role for Art in Evolution", in Kasper Lippert-Rasmussen, Mads Rosendahl Thomsen and Jacob Wamberg, eds., *The Posthuman Condition: Ethics, Aesthetics and Politics of Biotechnological Challenges* (Aarhus: Aarhus University Press, 2012), pp. 141-154 [141].
[17] Gyorgy Markus, "Hegel and the End of Art", *Literature and Aesthetics* 6 (1996): 7-26 [10].

becomes an "aesthetic experience for a subject". It also means that art *itself* begins to ask what it is (for); it becomes increasingly self-referential, faced with the question why something may be considered art (or not) – cf. Warhol's famous "neo-expressionist" "Brillo Box (1964)". In becoming "philosophical", art turns "conceptual" and as a result – this is Danto's famous claim – comes to an end.[18] To end, however, does not mean to cease to exist, as already insinuated:

> In its great philosophical phase, from about 1905 to about 1964, modern art undertook a massive investigation into its own nature and essence… It realized that it had identified its essence with something it could exist without, namely the production of optical equivalences, and it is no accident that abstraction should be among the first brilliant stages in its marvellous ascent to self-comprehension.[19]

The end of art is thus not its disappearance, and the contemporary artist is concerned with the challenge of "what are artists to do when art is over with and where mechanisms of the market require that something happen that looks like the continuation of the history of art?"[20] In the face of market nihilism, art turning into a "social institution and practice" as well as into an object of consumption and capitalist speculation, ironically, for Danto, also means that art can be seen to be returning to the "serving of largely human ends", and to the "enhancement of human life".[21] This, arguably, is precisely what posthumanist art is contesting on a number of levels. It is a repoliticisation of art not at a personal, but a "species" level. It is a rehistoricisation, not at a human, but a "geological" level of "deep history". It is a reaesthicisation of the real, however, not as a simple return to a mimetic (realist) representation of "reality", but in finding novel forms of expression that challenge the limitations of human perception.

Rematerialisation

As Katherine Hayles, one of the founding figures of posthumanism,[22] explains: "Throughout the long and varied tradition of aesthetics, one premise has always, implicitly or explicitly, remained unquestioned: that aesthetics has at its centre human perception.[23] In many ways, a posthumanist aesthetic or an aesthetic of the posthuman is necessarily 'speculative' in that it aims to escape and undo a human perspective[24] and asks: "What would it mean … to imagine an aesthetics in which the human is decentred and inanimate objects, incapable of sense perceptions as we understand them, are included in aesthetic experience?"[25] Hayles here engages with what has come to be known as "object-oriented-ontology (OOO)" (associated with philosophers like Graham Harman, Levi Bryant, Ray Brassier, Timothy Morton, or Ian Bogost) or "speculative realism" (associated mainly with Quentin Meillassoux), which perform critiques of what they call Kantian "correlationism".[26] Kant and "Western metaphysics" ever since, have been arguing that the "thing-as-such", and by implication the "world-

[18] Arthur C. Danto, *The State of the Art* (New York: Prentice Hall, 1987), p. 209.
[19] *Ibid*., p. 217; cf. also Danto, *After the End of Art: Contemporary Art and the Pale of History* (Princeton: Princeton University Press, 1997) and *What Art Is* (New Haven: Yale University Press, 2013).
[20] Danto, *The State of the Art*, p. 209.
[21] *Ibid*., pp. 217-218.
[22] See N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).
[23] N. Katherine Hayles, "Speculative Aesthetics and Object-Oriented Inquiry (OOI)", in Ridvan Askin et al., eds., *Aesthetics in the 21st Century: Speculations V* (New York: Punctum, 2014), p. 158-179 [158].
[24] Cf. Askin et al., eds., *Aesthetics in the 21st Century: Speculations V* (New York: Punctum, 2014).
[25] Hayles, "Speculative Aesthetics and Object-Oriented Inquiry (OOI)", in Askin et al., eds., *Aesthetics in the 21st Century*, p. 159.
[26] Cf. Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, London: Bloomsbury, 2009).

as-such", are not really experienceable "outside" (human) subjectivity. Consequently, OOO and speculative realism set out to rediscover and re-evaluate an object world prior to and independent from the (human) subject or perceiver. Meillassoux refers to post-Kantian speculative realism as the recovery of "the great outdoors".[27]

The general aim of this shift, one might argue, is moving towards a new, radicalised form of alienation and re-materialisation of aesthetics. Roberto Simanowski, referring to Ian Bogost's work in particular, speaks of "the alien aesthetic"[28] according to which art pursues the question "what is it like to be a thing?" In "The New Aesthetic Needs to Get Weirder", Bogost writes that a "*really* new aesthetics" would arise "if we asked how computers and bonobos and toasters and Boeing 787 Dreamliners develop their *own* aesthetics …".[29] While the aesthetics of other beings might remain inaccessible to (human) knowledge, it might however be open to speculation and to art, Bogost concludes. This has obvious implications not only for art but also for design more generally and the disappearing boundary between the two. This "weird aesthetic" wishing to discover "the secret life of things" forms an inhuman perspective that may be particularly suited to do justice to a complex situation in which, on the one hand, technologies and technological objects are starting to gain "smartness" and autonomy (i.e. may be developing their own "aesthetics" outside human perception), while, on the other hand, a new understanding of human and nonhuman entanglement at an organic, biological level is forming around urgent ecological questions and challenges. In this sense, what Nicolas Bourriaud names "relational aesthetics" allows for new forms of "intersubjective" or communal experience based on the coexistence of human and nonhuman actors.[30] It also responds to a situation in which "matter" in all forms seems to be proliferating, a revolutionary situation that characterises the predominant form of (posthumanist) practice as "postproductive", as Bourriaud calls it. This reflects, since the 1990s, "the proliferating global chaos of global culture in the information age, which is characterized by an increase in the supply of works, and the art world's annexation of forms ignored or disdained until now".[31] For artists this means that they "insert their own work into that of others" which contributes to the "eradication of the traditional distinction between production and consumption, creation and copy, readymade and original work [and that] the material they manipulate is no longer primary".[32] Key to both – the new forms of relationality and the new forms of object formation – is the new informational sphere created by the internet. The constant flow and reprogramming this new arch-medium affords leads to a "profound transformation of the status of the work of art" in which the "artwork is no longer an end point but a simple moment in an infinite chain of contributions", and thus itself becomes an agent or develops a life of its own.[33]

It is important to stress, however, that this proliferation of aesthetic informational practice is not a *de*materialisation or a "disembodiment" of art but rather a *re*materialisation (in the sense of Jay David Bolter and Richard Grusin's notion of "remediation"[34]) – the co-existence of many forms of materiality,

[27] *Ibid*., p. 7 and *passim*.
[28] Roberto Simanowski, "The Alien Aesthetic of Speculative Realism, or, How Interpretation Lost the Battle to Materiality and How Comfortable this Is to Humans", in Ridvan Askin et al, eds., *Aesthetics in the 21st Century: Speculations V* (New York: Punctum, 2014), pp. 359-381.
[29] Ian, Bogost, "The New Aesthetic Needs to get Weirder" (2012), n.p.; available online at: https://www.theatlantic.com/technology/archive/2012/04/the-new-aesthetic-needs-to-get-weirder/255838/ (accessed 23 June 2025).
[30] Nicolas Bourriaud, *Relational Aesthetics* (Paris: Les presses du réel, 2002).
[31] Nicolas Bourriaud, *Postproduction – Culture as Screenplay: How Art Reprograms the World* (New York: Lukas & Sternberg, 2010), p. 13.
[32] *Ibid*., p. 13.
[33] *Ibid*., p. 20.
[34] Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge: MIT Press, 2000).

or "distributed materialities" as one might call them, in analogy with Katherine Hayles's use of "distributed cognition" for the way in which humans and computers interact.[35] This return to questions of "matter-reality" is usually associated with feminist new materialism. While matter is traditionally seen as "dead", new materialisms inspired by feminist thinkers like Donna Haraway, Jane Bennett, Karen Barad, Vicki Kirby, Elizabeth Grosz or Stacy Alaimo and others start from the assumption that the boundaries between life and death, organic and inorganic, machines, humans and animals and, most importantly, nature and culture have always been porous and, under the conditions of accelerated technological change in the late 20th and early 21st centuries, have become an "optical illusion", as Haraway explained in her hugely influential "Cyborg Manifesto", first published in 1985.[36] Matter under these conditions is becoming increasingly "lively" or "vibrant", as Jane Bennett writes,[37] as well as heavily contested.[38] In many ways, this is based on a critical re-engagement with, on the one hand, indigenous cultural techniques and ideas related to animism and its extension towards a technological sphere, and, on the other hand, critical science studies and actor-network-theory, which extend the realm of the social to include nonhuman actors that are co-implicated in "material-semiotic" networks. This view opens up the perspective of what Karen Barad refers to as "agential realism", or "the ontological inseparability of intra-acting agencies".[39] Inspired by this, artists like Patricia Piccinini (see case studies below) have been engaging with new forms of more-than-human networks, materialities and agencies in their works of "post-1990 new media art that draws attention to our encounters with new sciences, technologies, and other forms of matter, often in forceful and unexpected ways".[40]

Posthumanism Exhibited

While posthumanist thinkers like Haraway, Hayles, Rosi Braidotti or Cary Wolfe have been stressing the role of art as a source of inspiration and as a practice of "imagineering" posthuman futures,[41] posthumanism as a label for a significant current within contemporary art practice remain quite rare. Paul Greenhalgh describes posthumanism as an "attempt to move beyond the nihilism of absolute [postmodern] relativism" by "critical realists", who, instead, are attempting to root relativism in "rooted empirical veracity" and the "technological sphere".[42] Posthumanism's main concern is the "ability of science literally to transform, and even replace, the human body and mind".[43] Steve Dixon anchors posthumanism to the rise of new media art and performance that arises out of and radicalises postmodern media society. While postmodernism, for Dixon, "is the explanation of how society has become consumed by mass media; how we are *becoming* the media", posthumanism further extends

[35] N. Katherine Hayles, *Unthought: The Power of the Cognitive Unconscious* (Chicago: University of Chicago Press, 2017).
[36] Donna Haraway, "A Cyborg Manifesto" [1985], in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149-181.
[37] Cf. Jane Bennett, *Vibrant Matter* (Durham: Duke University Press, 2010).
[38] Cf. Petra Lange-Berndt, ed., *Materiality* (Cambridge: MIT Press, 2015).
[39] Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter", *Signs* 28.3 (2003): 801-831 [815].
[40] Kate Mondloch, *A Capsule Aesthetic: Feminist Materialisms in New Media Art* (Minneapolis: University of Minnesota Press, 2018), p. 1.
[41] Manuela Rossini, "Science/Fiction: Imagineering Posthuman Bodies" (2003); available online: https://www.academia.edu/4209673/Science_Fiction_Imagineering_Posthuman_Bodies_2003_; (accessed 23 June 2025).
[42] Paul Greenhalgh, *The Modern Ideal: The Rise and Collapse of Idealism in the Visual Arts from the Enlightenment to Postmodernism* (London: V & A Publications, 2005), p. 97.
[43] *Ibid*., p. 98.

this trend "until we are media itself".[44] Dixon's focus, obviously, is on digital performance art, virtual bodies and "split subjectivities", when he writes that: "Posthuman theories, extending McLuhan's concept of mediatized consciousness and Baudrillard's ideas of simulacra and simulation, suggest that there is no reason why we should recognize breathing living bodies to have grater solidity and authenticity than electronic humans similarly engaged in performative actions".[45]

Volume 4 of Valerio Terraroli's monumental study *The Art of the 20th Century* tracks the development "From Postmodern to Posthuman" through new media and environmental sculpture and installation art by Matthew Barney, Mariko Mori and Cindy Sherman.[46] And in Andy Miah's *Human Futures: Art in the Age of Uncertainty*, Sandra Kemp uses the "Self Portraits" by multimedia artist Daniel Lee, fusing human and primate faces, Orlan's extreme cosmetic surgery, and Patricia Piccinini's hyperrealist waxworks of human and mutant figures, as well as Eduardo Kac's transgenic bioart (see case studies below),[47] to illustrate how the new [posthuman] aesthetic is (re)shaping the human and the human self-image. In doing so, it is attempting to keep pace with "ever-accelerating technological advances, from airbrushing and digital manipulation to cosmetic surgery and whole face transplants". Kemp asks: "As digital faces are becoming as 'real' as live ones and transplants, how will our identity be affected and what is the effect of new technologies?"[48]

Another way to track the rise of posthumanist themes and concerns in the art world is to look at some milestone exhibitions as well as changes to museum practices affected by posthumanist thinking. The first is probably the exhibition "PostHuman", curated by Jeffrey Deitch at the FAE Musée d'Art Contemporain in Lausanne, in 1992,[49] which focused on the fusion of art with science, computerisation and biotechnology to "create further 'improvements' on the human form", as Deitch claims in his catalog essay: "in the future, artists may no longer be involved in just redefining art. In the posthuman future artists may also be involved in redefining life". Posthumanist exhibitions, however, only really started accumulating in the second decade of the 21st Century. I can only give a selection of the most prominent events here. 2011 saw an exhibition exploring art in dialogue with speculative realism, entitled *And Another Thing: Nonanthropocentrism and Art*.[50] In the same year, curated by Zhang Ga, "Translife" took place at the National Art Museum of China in Beijing, a media art event whose subject statement reads: "Amidst the global challenges of climate and ecological crises that threaten the very existence of humanity, the exhibition TransLife reflects on the whereabouts of humankind in relationship to nature through a unique perspective and philosophical speculation, calling for citizen participation in facing these imminent challenges with artistic imagination to advocate a new world view of nature and a retooled humanist proposition".[51]

Susanne Pfeffer, curator at the Fridericianum in Kassel, organised a sequence of posthumanism-related exhibitions that reflected the variety of conceptual issues at stake in postanthropocentric thinking and

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[44] Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation* (Cambridge: MIT Press. 2007), p. 153.
[45] *Ibid*., p. 154.
[46] Valerio Terraroli, ed., *The Art of the 20th Century*, *Volume 4: 1969-1999: Neo-Avantgardes, Postmodern and Global Art* (Milano: SKIRA, 2009).
[47] Sandra Kemp, "Shaping the Human: The New Aesthetic", in Andy Miah, ed., *Human Futures: Art in an Age of Uncertainty* (Liverpool: Liverpool University Press, 2008), pp. 82-99.
[48] *Ibid*., p. 84.
[49] Cf. Jeffrey Deitch, *PostHuman* (New York: Distributed Art Publishers, 1992).
[50] Curated by Katherine Behar and Emmy Mikelson at The James Gallery in New York (cf. Katherine Behar and Emmy Mikelson, eds., *And Another Thing: Nonanthropocentrism and Art* (New York: Punctum, 2016) for a catalogue.
[51] "Translife – Media Art China 2011"; available online at: https://v2.nl/events/translife-media-art-china-2011 (accessed 23 June 2025).

art ("Speculations on Annymous Materias" [2013], "Nature after Nature" [2014], and "Inhuman" [2015]). In an interview with Thom Bettridge she speaks of the representatives of "post-Internet" art as dealing "with the interconnection of technology, economics, and ecology, and their awareness of being part of this system" while facing a situation in which "the human and human culture are no longer at the center".[52] In the same vein, "Dump! Multispecies Making and Unmaking", curated by Elaine Gan, Steven Lam and Sarah Lookofsky at the Kunsthal in Aarhus, in 2015, gathered artists, scientists and organisms "to explore multispecies collaboration that reshapes the ruins of modernity and resists industrial progress", while looking at "waste, obsolescence, and decomposition". This initiative was inspired by Donna Haraway's shift in her latest work towards ecological notions of "multispecies justice" and "compostism", in which she contests that "we are not posthuman but compost".[53]

The Istanbul Design Biennial, curated by Beatriz Colomina and Mark Wigley, in 2016, asked "Are We Human?",[54] while, in the same year, Anna Davis curated "New Romance – Art and the Posthuman", at the Museum of Contemporary Art in Melbourne (in collaboration with the National Museum of Modern and Contemporary Art in Seoul), to show how contemporary artists in Australia and Korea, inspired by science fiction, robotics, biotechnology, consumer products and social media offer "experiences that raise questions around the idea of the posthuman; a concept that signals new understandings of humanity and a breakdown of boundaries between what we think of as natural and artificial".[55] In 2018 an exhibition on "Artists & Robots" at the Grand Palais in Paris, was shown, curated by Jerôme Neutres and Laurence Bertrand Dorléac, which was designed for visitors to "experience works of art produced with the help of increasingly sophisticated robots … offer[ing] a gateway to an immersive and interactive digital world – an augmented body sensory experience that subverts our notions of space and time".[56] 2018 also saw "Post-/Human", curated by Oliver Gingrich at The Library in St. Martin's, London, sponsored by Art in Flux – a retrospective of posthumanist art since Deitch's 1992 exhibition, "[r]esonating concepts of Haraway's Cyborg manifesto, artists continue to question effects of technological impact on society, on concepts of gender, intimacy, communication".[57]

The great variety of approaches taken in this small selection of events – from the impact of artificial intelligence, biotechnology, climate change, digitalisation and genetics – shows posthumanism and the posthuman as a common concern of what a postanthropocentric world would mean for artistic practice and aesthetics more generally. Exhibitions, as well as museums, as "custodians of cultural memory and as trusted information sources … in a more-than-human world", as Fiona Cameron writes, "are ideally placed to concretely re-work human subject positions and frame and promote posthuman theories and practices of life through curatorial practice".[58] One excellent example is the initiative

[52] Susanne Pfeffer, "How Art's Post-Human Turn Began in Kassel" (2016); available online: https://032c.com/magazine/how-arts-post-human-turn-began-in-kassel; (accessed 23 June 2025).

[53] Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2019), pp. 101-102.

[54] Beatriz Colomina, and Mark Wigley, eds., *Are We human?* (Istanbul Design Biennial; Istanbul: Istanbul Foundation for Culture and Arts (IKSV), 2016).

[55] *New Romance* – Art and the Posthuman (2016) MCA (Museum of Contemporary Art Australia); available online at: https://www.mca.com.au/artists-works/exhibitions/new-romance-art-and-the-posthuman/ (accessed 23 June 2025).

[56] Jerôme Neutres and Laurence Bertrand Dorléac, "Artists and Robots, Grand Palais, Galeries nationales – 5 April 2018 - 9 July 2018"; available online at: https://www.grandpalais.fr/en/event/artists-robots (accessed 23 June 2025).

[57] Art in Flux, "Post-/Human, curated by Oliver Gingrich"; available online at: https://www.artinfluxlondon.com/post-human.html (accessed 23 June 2025).

[58] Fiona R. Cameron, "Posthuman Museum Practices", in Rosi Braidotti and Maria Hlavajova, eds. *Posthuman Glossary* (London: Bloomsbury, 2018), pp. 349-352 [349].

"Museum of Nonhumanity" which opened in Helsinki 2016, calling for "the deconstruction of the categories of animality and humanity in order to enter a new, more inclusive era".[59]

Posthumanist Case Studies

In the second part of this chapter I want to briefly present a number of case studies designed to show examples of how artists and theorists of posthumanism have been collaborating to address and transform what Rosi Braidotti calls "our posthuman condition".[60] In selecting I have gone for more widely known and well-established examples and names, especially the ones where direct links between posthumanist theory and art practice already exist. There are many other artists working in a posthumanist vein, in fact, posthumanism has arguably become a major concern, impetus and inspiration for contemporary art given that posthumanism's "issues" and political interventions are the "big issues" of "our" time: climate change and migration, technological futures, embodiment, new ecologies and materialisms, the loss of biodiversity and new (artifical) life forms, biotechnology and biopower to name but the most obvious.

Case Study 1: Body and Performance Art

The Australian artist Stelarc (born 1946) and the French artist Orlan (born 1947) are usually seen as pioneers of posthumanist body performance. Their careers stretch back fifty years, and the developments their works and practices have undergone throughout this time is a good reflection of the emergence of the aesthetic engagement with and transformation of posthumanist motifs and concepts, as Chris Hables Gray notes:

> There has been a clear progression in the work of both Orlan and Stelarc from performance art, to body art, to carnal art, to what can variously be described as cyborg art or post-human art.[61]

As most body artists Stelarc and Orlan see their bodies as design objects, i.e. not as a given but subject to changing conditions of embodiment, capable of aesthetic and technological transformation. Both are thus interested in redesigning the body and in challenging traditional (humanist, religious or "naturalized") norms and taboos concerning bodies, bodily boundaries and the dualistic separation of the body from the mind. Instead, for them and for posthumanism more generally, bodies are neither natural nor artificial but the living proof of the inseparability of both; they are embodiments of "naturecultures" in Haraway's and Bruno Latour's term. Both Stelarc and Orlan provocatively articulate the assumption that the body is "obsolete" (in its traditional sense), but they do so in very different ways and by different means, which can be mapped back to a certain extent onto gender differences. Orlan's best-known works are critical and extreme engagements with plastic surgery and female identity and thus address feminist political issues of sexuality, agency and beauty ideals.[62] Stelarc is embracing technological means of connectivity to problematise the notion of bodily extension through prosthetics, networks and technological enhancement. Both, however, can be said to be practising

[59] Laura Gustafsson and Terike Haapoja, eds., *Museum of Nonhumanity* (New York: Punctum, 2019), p. 5.
[60] Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity, 2019), pp. 6-39; cf. also Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013).
[61] Chris Hables Gray, "In Defence of Prefigurative Art: The Aesthetics and Ethics of Stelarc and Orlan", in Joanna Zylinska, ed., *The Cyborg Experiments: The Extensions of the Body in the Media Age* (London: Continuum, 2002), pp. 181-192 [189].
[62] Jane Goodall, "An Order of Pure Decision: Un-Natural Selection in the Work of Stelarc and Orlan", *Body and Society* 5.2-3 (1999): 149-170.

what one might call "posthumanist pervormativity" and forms of "rematerialisation" (cf. above). Their experimenting on their bodies calls into question a traditional understanding of what it means to be human. Both scandalise – Orlan mostly at a religious-moral and individual, Stelarc at a technological-ethical and social level – through what one might call the "cyborgisation" and hybridising of their bodies. In doing so, their interventions are "prefigurative"[63] in that they indicate possible futures of human-nonhuman embodiment where body modification is not predominantly related to remedial prosthetics but becomes a question of choice, new aesthetics and ontologies. In fact, they might prefigure new forms of life and maybe even a new (human or posthuman) species. The process of rematerialisation and posthumanisation Stelarc and Orlan stand for corresponds to a shift towards a "performative understanding of identity" in which bodies and matter lose their traditional connotation as passive and stable, as Cary Wolfe explains.[64] Wolfe here refers to Judith Butler's classic interventions in the 1990s on the social construction of bodies and genders[65] and also builds on Karen Barad's "relationalist ontology" that emphasises the "co-constitutiveness of materiality and meaning".[66]

Orlan's work provides a critique of Western notions of the body shaped by Christian, especially Catholic, tradition. It uses Christianity's most sacred images and concepts – the virgin Mary, mother of God – according to which the body is something that is both exalted as well as something that needs to be disciplined or even denied. There is thus a heretical element Orlan shares with Haraway who in her "Cyborg Manifesto" proclaims that she'd rather be a cyborg than a goddess.[67] Orlan's bodily "blasphemy" or "heresy" is performed in a series of extreme surgical operations that go beyond the socially acceptable medical use of plastic surgery to "enhance" beauty and rather aim for much more radical forms of transformation or "morphing".[68] These operations are also turned into mises-en-scène or happenings, accompanied by readings, recorded or transmitted live to a public. Throughout her career, Orlan has thus "explored models of body knowledge that eschew the limitations imposed by a culture which divides body from mind, man from woman, the beautiful from the grotesque, the real from the virtual, and the virgin from the whore".[69] Her performances are displays of artistic narcissism *and* political statements against patriarchy and its humanist ideals. They are "carnivalesque", even "humorous"[70] and, as in the case of "The Reincarnation of Saint Orlan", ironically "literal" in their "enfleshment". The art she performs is "carnal", which she defines as: "self-portraiture in the classical sense, but realized through the possibility of technology. It swings between defiguration and refiguration. Its inscription in the flesh is a function of our age. The body has become a 'modified ready-made', no longer as the ideal it once represented".[71] As Linda Kauffman writes, Orlan "stands between past and future, human and posthuman" in performing a "juxtaposition of posthuman technology and ancient religion":

[63] Cf. Hables Gray, "In Defence of Prefigurative Art".
[64] Cf. Cary Wolfe, "Posthumanist Performativity", in Braidotti and Hlavajova, eds. *Posthuman Glossary* (London: Bloomsbury, 2018), pp. 359-361 [359].
[65] Cf. Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1990) and *Bodies That Matter: On the Discursive Limits of "Sex"* (New York: Routledge, 1993).
[66] Wolfe, "Posthumanist Performativity", p. 360.
[67] Haraway "A Cyborg Manifesto", p. 181.
[68] Cf. Victoria Duckett, "Beyond the Body: Orlan and the Material Morph", in Vivian Sobchack, ed., *Meta-Morphing: Visual Transformation and the Culture of Quick-Change* (Minneapolis: University of Minnesota Press, 2000), pp. 209-223.
[69] Eleanor Heartney, "Orlan: Magnificent 'And'", in Collective, ed., *Orlan* (Paris: Flammarion, 2004), pp. 223-232 [232].
[70] C. Jill O'Bryan, *Carnal Art: Orlan's Refacing* (Minneapolis: University of Minnesota Press, 2005), p. 9.
[71] Cf. Orlan's "Manifesto of Carnal Art", ctd. in O'Bryan, *Carnal Art*, p. 22.

> She is Janus: one side faces the past, which memorializes the obsolete body, carefully preserving its viscera as reliquaries. The other side faces the cyborg future, when the inorganic far outweighs the organic elements of the body.[72]

As the digitalisation of technology and society progressed, intensified and became more invasive, Orlan's forms of "self-hybridisation" (and body performance art more generally) became more and more entangled with the "informational" and the "virtual" levels of expression that computerisation affords.[73] This is a development that can also be tracked in Stelarc's work, which moves from the "mechanical" prosthesisation in his early works of "body suspension" (flesh hooks inserted into his skin) to electronic "exoskeletal" structures (cf. his "Third Hand" series) and networked bodies, to organic transplants (cf. "Third Ear"). Stelarc's aim in showing the "obsolescence" of the human body is somewhat different to Orlan's in that it is closer to a *trans*humanist notion of a postbiological overcoming of the body and its seamless fusion with technology in order to "burst from [the body's] biological, cultural and planetary containment in the post-evolutionary age".[74] What characterises Stelarc's projects and performances is a concern with the prosthetic in which the prosthesis is not the sign of lack but rather a "symptom of excess" or "augmentation".[75] As the technologically prosthesised human body becomes augmented, in the informational age it also becomes a "nexus or a node" in a network of "collaborating agents that are not simply separated or excluded because of the boundary of our skin, or having to be in proximity".[76] This corresponds to an externalisation of our nervous system as new possibilities of "connectivity" arise and "extended operational systems" are created. As Stelarc explains:

> The biological body is not well organ-ized [*sic*]. The body needs to be Internet-enabled in more intimate ways. The *Extra Ear: Ear on Arm* project suggests an alternate anatomical architecture – the engineering of a new organ for the body: an available, accessible and mobile organ for other bodies in other places to locate and listen in to another body elsewhere.[77]

Both Orlan's and Stelarc's work has been highly controversial because of its radical transformational approach regarding the human body and its remodeling. Stelarc has been seen as a representative of an optimistic or even technoeuphoric posthuman future, as well as being "indicative of the apocalyptic dangers of naïve… [and masculinist] approaches to incorporating militaristic technologies of control into the body",[78] or indeed of a wider trend of "information freeing itself from its material, biological, bodily constraints". To be posthuman, Stelarc claims, "means to take up a strategy where one needs to shed one's skin and consider other more deep and more complex interfaces and interconnections with technologies that we've generated".[79]

Even though Stelarc or Orlan may today no longer be at the forefront of the posthumanist avant-garde they stand as representatives of an "early digital-culture posthumanism" whose ideas have become

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[72] Linda S. Kauffman, *Bad Girls and Sick Boys: Fantasies in Contemporary Art and Culture* (Berkeley: University of California Press, 1998), p. 64.
[73] Cf. Kate Ince, *Orlan: Millennial Female*, Oxford: Berg, 2000).
[74] Cynthia Carr, *On Edge: Performance at the End of the Twentieth Century* (Hanover: University Press of New England, 1993), p. 10.
[75] Stelarc, "Excess and Indifference: Alternate Body Architectures", in Hazel Gardiner and Charlie Gere, eds., *Art Practice in a Digital Culture* (Farnham: Ashgate, 2010), pp. 93-116 [104].
[76] *Ibid*., p. 111.
[77] *Ibid*., p. 112.
[78] Ross Farnell, "In Dialogue with 'Posthuman' Bodies: Interview with Stelarc", *Body and Society* 5.2-3 (1999): 129-147 [130].
[79] Stelarc, in Farnell, "In Dialogue with 'Posthuman' Bodies: Interview with Stelarc", p. 131.

generalised in new media materialism.[80] They coincide and are in dialogue with the beginning of a wider theoretical engagement with the figure of the posthuman in the academy at a time when, as Arthur and Marilouise Kroker claim that "we are all Stelarcs now".[81] One could say that, while Orlan's work might be more closely aligned with Haraway's early organic cyberfeminism, Stelarc's posthuman embodiment mirrors Katherine Hayles's argument in *How We became Posthuman*, which begins with the assumption that cybernetics has transformed the human body into "a material-informational entity" by "splic[ing] will, desire, and perception into a distributed cognitive system in which represented bodies are joined with enacted bodies through mutating and flexible machine interfaces".[82] Hayles tracks this rematerialising development of "posthumanisation" through the post -WWII history of cybernetics and proposes that the shift towards a posthuman view occurs once we start thinking of the body as "the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born".[83] The decisive ideological change that this involves, as Hayles writes, is that a "posthuman view configures human being so that it can be seamlessly articulated with intelligent machines" so that there is no longer any "absolute demarcation between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot technology and human goals".[84] This posthuman moment, indicatively and aesthetically "performed" by artists like Orlan and Stelarc, thus shows the "essential transformation … from biomorphism to technomorphism" characteristic of our time,[85] in which the human and its world is "subject to computing".[86] It is also the time when *all* art becomes "digital art", either in directly exploring digital code as a new material sphere of exploration or simply as a (post-media) "platform" from which to delve into a fundamentally transformed, informational-semiotic, world in which virtual and actual reality become thoroughly entangled in a convergence of new, social and mobile media based on ubiquitous computing, data bases and algorithms, networks and artificial intelligence.[87]

Case Study 2: Science Art / Lab-Art

This digitalisation process coincides with the rise of modern "technoscience" more generally. All posthumanist art is therefore "technological" in the sense that it is produced under the technoscientific and technocultural conditions of the late 20th and early 21st centuries. However, it is precisely this conne6ction between art and technology that 6is also foregrounded and problematised in posthumanist aesthetics. Art, in fact, has always been "technological" in the sense that it is itself a central cultural technology. In other words, art and technology are etymologically closely linked – the Latin "*ars*" is in many ways the translation of the Greek "*techne*"; both originally mean "craft" or "skill"

[80] Eyal Amiran, "Proprioception of the Hand: Stelarc's Object-Oriented Relations", *TDR: The Drama Review* 63.2 (2019): 102-116 [105].
[81] Marquard Smith, ed., *Stelarc – The Monograph* (Cambridge: MIT Press, 2005), pp. 63-86.
[82] Hayles, *How We Became Posthuman*, p. xiv.
[83] *Ibid*., p. 3.
[84] *Ibid*.
[85] N. Katherine Hayles, "The Seductions of Cyberspace", in David Trend, ed., *Reading Digital Culture* (Oxford: Blackwell, 2001), pp. 305-321 [305].
[86] Cf. N. Katherine Hayles, *My Mother was a Computer; Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005).
[87] Cf. e.g. Oliver Grau, *Virtual Art: From Illusion to Immersion* (Cambridge: MIT Press, 2003); David M. Berry and Michael Dieter, eds., *Postdigital Aesthetics: Art, Computation and Design* (Houndmills: Palgrave Macmillan, 2015); Melissa Gronlund, *Contemporary Art and Digital Culture* (London: Routledge, 2017); Paul Crowther, *Digital Art, Aesthetic Creation: The Birth of a Medium* (London: Routledge, 2019); Joanna Zylinska, *AI Art: Machine Visions and Warped Dreams* (London: Open Humanities Press, 2020).

(in a practical and rhetorical, as well as a "creative" sense). When Martin Heidegger claimed that the essence of technics or technology is nothing "technological" but rather is "poietic", in the sense of "creative" or "transformative",[88] he meant that humans and technology are co-constitutional, i.e. that our relationship with technology is "originary", which is also Bernard Stiegler's stance,[89] which, in turn, has been very influential in posthumanist thinking. This means that a merely "utilitarian" notion of technology, which understands technology as basically a (human) "tool" or a "prosthesis", is underplaying the ontological condition our entanglement with technology creates and which, under modern conditions, has also become our main "challenge". Technology rather than being a human creation challenges the human and acts as a kind of "framing" (in Heidegger's term is *Gestell*). Or, in other words, the human and "its" compulsion to design are inseparable.[90]

This insight is certainly not posthumanism's own discovery. Modern art since the rise of industrialisation can be said to be an engagement with the "machinic", its aesthetic and the anxieties and desires that surround it. Futurism was particularly "technoeuphoric" in its idolatry of the machine and its ideal of man-machine fusion. What characterises the specifically "posthuman(ist)" condition of our own time, to which a lot of contemporary art practice responds, is, on the one hand, an intensification and acceleration of technological development, and, on the other hand, a reaction to the specialisation of scientific knowledge this produces and which is driven by economic development. What is going on in the science labs of the world has become of central political, economic and military importance while, for the general public, it has become less and less graspable. This raises ethical questions, for example whether genetically modified food and the genetic manipulation of "life" is the right way forward. How to inform the public and convince the "consumer" to accept future scenarios produced by science as desirable in the absence of transparency and verifiability? This becomes of crucial importance at a time when the survival of not only the human species but life in general, on this planet, is at stake, whether this is because of persisting nuclear or new ecological threats produced by anthropogenic climate change. Posthumanist art – whether it openly embraces the label or only shares a similar take on the set of issues this specific technocultural condition produces – is concerned with this public role of science, its institutions, its practices and understands itself as a political-aesthetic and techno-social intervention. Art and science – both reliant on and reproducing technology – form "the twin engines of creativity in any dynamic culture".[91] In this sense a lot of posthumanist art can be described as "science art",[92] or "lab art".[93] It is "experimental" in the literal and scientific sense and asks whether art can not only provide a critical commentary on scientific practice and use its latest technologies but also make a genuine contribution to scientific exploration and technological (re)design. To this effect, the science-art-lab scenarios necessarily engage in inter- or even transdisciplinary knowledge co-operation and production, as Sigrid Weigel explains, which include "meetings between bioscientists and performance artists, video artists and ethnologists, champions of land art and climate scientists, urban planners and writers, museum historians and architects,

[88] Martin Heidegger, "The Question Concerning Technology [1954]", *Basic Writings* (New York: Harper & Row, 1977), pp. 283-317.
[89] Cf. Bernard Stiegler, *Technics and Time*, Volume 1: *The Fault of Epimetheus* (Stanford: Stanford University Press, 1998).
[90] Cf. Beatriz Colomina and Mark Wigley, *Are we Human? Notes on an Archaeology of Design* (Zurich: Lars Müller, 2021).
[91] Stephen Wilson, *Art Science Now* (London: Thames & Hudson, 2010), p. 6.
[92] Cf. Gerfried Stocker and Christine Schöpf, eds., *LifeScience* (Ars Electronica 99) (New York: Springer, 1999); Siân Ede, ed., *Strange and Charmed: Science and Contemporary Visual Art* (London: Calouste Gulbenkian Foundation, 2000); David Edwards, *Artscience: Creativity in the Post-Google Generation* (Cambridge: Harvard University Press, 2008), and Stephen Jay Gould and Rosamond Wolff Purcell, *Crossing Over: Where Art and Science Meet* (New York: Three River Press, 2000).
[93] Ingeborg Reichle, *Kunst aus dem Labor* (New York: Springer, 2005.

filmmakers and neuroscientists".[94] Needless to say that this also requires an engagement with and an intervention within the production and practice of scientific research.

As Stelarc, representative of most posthumanist artists in this respect, explains that artistic practice has to "develop strategies in order to interface with the scientific community and academic institutions".[95] This also means, however, that art research or "research-creation"[96] increasingly has to fulfil academic requirements and standards before ethics committees and funding bodies while complying with scientific criteria. Very often, artists like Stelarc and the bioartists discussed below are on academic contracts or university positions at either publicly or privately funded "art and science labs". They may be in the process of acquiring academic qualifications through their artistic research, and are therefore also bound by contracts that require them to publish their work in peer-reviewed academic or scientific journals. Since art's social role, however, is not to sanction or to simply illustrate or "explain" scientific knowledge but needs to be seen to be "disturbing", "risqué" or "disruptive", this alliance between science, art and the public is not without dangers and tensions. Therefore, while most posthumanist art is conceptually driven it also involves a variety of technical, media and research skills that are impossible to master by a single person and which instead call for collaboration and inter- and transdisciplinary approaches.[97]

Outside an institutional framework, the kind of artistic practice engaging with science but also very critical of science practice is often "activist" in its campaigns, projects, performances, happenings and installations. A prime example of this approach can be found in the work of the Critical Art Ensemble (CAE) – a collective of "tactical media" artists or practitioners with expertise in video, computer and web design who stage (often participatory) political protest events mainly engaging with biotechnology and bioscience and their role in what the CAE call "global eugenics" and the "flesh machine".[98] They describe themselves as a group "dedicated to the exploration of the intersections between art, technology, critical theory, and political activism",[99] who "expose the performativity of science through tactics that include the presentation of scientific techniques",[100] and thus "reveal" complicities between science, politics, the military and capitalist economy. The *tactical* media events they create are understood as a form of "cultural intervention"[101] like in the example of "Radiation Burn (2010)" which involved setting off a mock "dirty bomb" in a public park as part of the Werkleitz Festival 2010 in Halle, Germany. The aim of this "installation" was, on the one hand, to look into the scientific feasibility of dispersing radioactive material through conventional explosives, and, on the other hand, to expose the "myth" of an imminent threat of a terrorist dirty-bomb attack as an

[94] Sigrid Weigel, "WissensKünste: Vorwort – Foreword", in Sabine Flach and Sigrid Weigel, eds., *WissensKünste* (Weimar: Verlag und Datenbank der Geisteswissenschaften, 2011), pp. 9-13 [10].
[95] Stelarc, "Excess and Indifference: Alternate Body Architectures", p. 114.
[96] Natalie Loveless, *How to Make Art at the End of The World: A Manifesto for Research-Creation* (Durham: Duke University Press, 2019), pp. 4ff.
[97] Cf. Gere, Charlie, "Research as Art", in Gardiner and Gere, eds., *Art Practice in a Digital Culture* (Farnham: Ashgate, 2010), pp. 1-7; and Loveless, *How to Make Art at the End of the World*.
[98] Critical Art Ensemble, "The Coming of Age of the Flesh Machine [1998]", in David Trend, ed., *Reading Digital Culture* (Oxford: Blackwell, 2001), pp. 172-182 [174ff].
[99] Critical Art Ensemble, "Body Invasion and Resistant Cultural Practice", *Art Journal* 59.3 (2000): 48-50 [50].
[100] Nicola Triscott, "Performative Science in an Age of Specialization: The Case of Critical Art Ensemble", in Rachel Zerihan, Janis Jefferies and Maria Chatzichristodoulou, eds., *Interfaces of Performance* (London: Routledge, 2009), pp. 153-166 [153].
[101] Critical Art Ensemble, "Tactical Media and Democracy", in Xtine Burrough, ed., *NetWorks: Case Studies in Web and Art Design* (London: Routledge, 2014), pp. 145-147 [146].

instrument for state propaganda. Practically, by setting off a "mock" dirty bomb the intention was to "recreate the hype around this instrument while at the same time deflating the spectacle".[102]

Case Study 3: Bioart / Transgenic Art

This co-involvement of art, science and research is also very evident in bioart, transgenic art or *l'art biotech*.[103] While biological processes and structures have obviously intrigued and inspired artists for a long time it is only really with the advent and spread of gene-sequencing, gene-splicing and gene-editing biotechnology or bioengineering that artists have started creating works, often in collaboration with bioscientists, working in "wet labs" and at medical institutions,[104] by using human and animal tissues, micro- and other living organisms. "Life" (*bios*) is here used as "raw material waiting to be engineered".[105] Bio-artistic practice ranges from "critical interventions into contemporary biotech practices to proposals for techno-utopian solutions".[106] The posthumanist dimension that artists working with and on "life" as material – sometimes creating new life forms, or A-Life (artificial life, in analogy with AI, artificial intelligence) – implicitly or explicitly involves a provocation to or critique of humanist ethics based on the "sancitity" of (human) life, breaking religious taboos of "playing God". As opposed to "pure" science, however, bioart and art transforming at a molecular or genetic level (transgenic art),[107] are about questioning and showing how (scientific) knowledge is produced and the cultural effects this might have. This includes a radical reopening of the question of what it means to be human, animal, and alive.[108] It also complicates the status of bio-technology as a practice of producing "artificial" life forms that are thoroughly "technical". By highlighting the production processes involved and turning them into aesthetic and political performances or curatorial and media events, bioart enters the controversial and contested territory of genetic manipulation and the contemporary "bioimaginary".[109] Through their hybridising forms, often creating provocatively "monstrous" chimera, artists are triggering and targeting affective and ethical responses from the public, like disgust, fear, wonder, recognition, rejection or inclusion.[110] In this sense, bioart performances usually involve multimedia events in which life, technology and their "mediation" are foregrounded, so that one might also speak of "biomedia"[111] and its spectators' "embodied sense" of "the transformative power of life".[112]

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[102] Critical Art Ensemble, "Radiation Burn" (2010); available online at: http://critical-art.net/radiation-burn-2010/ (accessed 22 June 2015).

[103] Cf. Jens Hauser, ed., *L'art biotech* (Nantes: Trézélan, 2003).

[104] Cf. Petra Kuppers, *The Scar of Visibility: Medical Performances and Contemporary Art* (Minneapolis: University of Minnesota Press, 2007).

[105] Oron Catts, "Biological Arts/Living Arts", in Braidotti & Hlavajova, eds., *Posthuman Glossary* (London: Bloomsbury, 2018), pp. 66-68 [66].

[106] Cf.Erich Berger, et al., eds., *Art As We Don't Know It* (Espoo: Aalto Arts Books, 2020).

[107] Cf. Peter Weibel and Ljiljana Fruk, eds., *Molecular Aesthetics* (Cambridge: MIT Press, 2013) and Suzanne Anker and Dorothy Nelkin, *The Molecular Gaze: Art in the Genetic Age* (Cold Spring Harbor: Cold Spring Harbor Laboratory Press, 2004).

[108] Cf. Grau, *Virtual Art: From Illusion to Immersion*, pp. 296-336.

[109] Cf.Deborah Lynn Steinberg, *Genes and the Bioimaginary: Science, Spectacle, Culture* (London: Routledge, 2015).

[110] Tora Holmberg and Malin Ideland, "Imagination Laboratory: Making Sense of Bio-Objects in Contemporary Genetic Art", *Sociological Review* 64 (2016): 447-467.

[111] Eugene Thacker, *Biomedia* (Minneapolis: University of Minnesota Press, 2004) and *The Global Genome: Biotechnology, Politics, and Culture* (Cambridge: MIT Press, 2005).

[112] Robert Mitchell, *Bioart and The Vitality of Media* (Seattle: University of Washington Press 2010), p. 11.

In the context of what one might call a growing postanthropocentric awareness of human and nonhuman biological entanglement at a microbiological level – studies of the "microbiome" or organisms show that the notion of biological "species" is not as clear-cut as it might seem and that "symbiosis" between organisms is the norm and in fact constitutes one of the main drivers of evolution[113] – bioart consequently arises out of and "tactically" intervenes in (micro)biopolitics[114] and challenges traditional notions of "bioethics".[115] As Jennifer Johung points out, the notion of "life" operating in contemporary biotechnology and bioscience as "living matter that can be reworked" goes far beyond earlier ideas of "organic life". It is this difference also that constitutes "an opening where art and architecture may intervene – to visualize, situate, perform, publicize, and contest the ways we now manipulate and recontextualize the particulate mattering of biological life".[116] The main political aim of bioart might be to illustrate not only our posthuman but also our "post-natural" condition, in the sense that contemporary biotechnology, biopolitics and bioart are breaking down the boundaries between (biological) nature, science and art, as well as between humans and animals, as well as between animals and plants, and thus intensify the attack on the (humanist) notion of an "autonomous" (human) subject. Instead they show (human) agency to be distributed or dispersed, entangled within a multispecies context. As such bioart is located within but also negotiates the more general context of modern biopolitics and biopower which, following thinkers like Michel Foucault, Giorgio Agamben, Nicholas Rose and Roberto Esposito, constitute a mode of the political "whose distinctive characteristic is that *life itself* in its barest form becomes the direct object of political power".[117]

Rosi Braidotti, one of the foremost thinkers of posthumanism and the posthuman, distinguishes, within the contemporary "proliferation of discourses that take life as subject and not as object of social and discursive practices", that is between *bios* and *zoe*.[118] Life, she writes "is half animal, or *zoe* (zoology, zoophilic, zoo), and half discursive, or *bios* (biology)", with *zoe* being "the poor half of a couple that foregrounds bios, defined as intelligent life".[119] Braidotti's argument, however, is that, even within the human body, *zoe* and *bios* cannot really be separated. For her, the posthuman is therefore about "becoming animal, becoming other, becoming insect" and thus reconnecting with the vitalist and materialist notion of life. It is about constructing a more just, radical politics based on an affirmation of shared, embodied living and "nonanthropocentric vitalism".[120] It is also in this sense, that bioart is engaged in exploring and intervening in the shifting boundaries between life and death and in showing how living matter is becoming the subject and not just the object of enquiry. In doing so, it develops a technologically mediated life of its own so to speak.

A leading proponent of bioart is Oron Catts, an artist, researcher and curator, who, in collaboration with Ionat Zurr, pioneered the ongoing "Tissue Culture and Art Project" (TC&A), established in 1996 – one of the most prominent projects in biological art project. This project is run through an art-science

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[113] See my "Microbes", in Lynn Turner, Undine Sellbach and Ron Broglio, eds., *The Edinburgh Companion to Animal Studies* (Edinburgh: EUP, 2018), pp. 354-366.

[114] Cf. Beatriz da Costa and Kavita Philip, eds., *Tactical Biopolitcs: Art, Activism, and Technoscience* (Cambridge: MIT Press, 2008).

[115] Cf. Joanna Zylinska, *Bioethics in the Age of New Media* (Cambridge: MIT Press, 2009).

[116] Jennifer Johung, *Vital Forms: Biological Art, Architecture, and the Dependencies of Life* (Minneapolis: University of Minnesota Press, 2019), p. 2.

[117] Cary Wolfe, "Ecologizing Biopolitics, Or, What is the 'bio-' of Bioart?", in Erich Hörl, ed., *General Ecology: The New Ecological Paradigm* (London: Bloomsbury, 2017), pp. 217-234 [217].

[118] Rosi Braidotti, "The Politics of Life as Bios/Zoe", in Anneke Smelik and Nina Lykke, eds., *Bits of Life: Feminism at the Intersections of Media, Biology, and Technology* (Seattle: University of Washington Press, 2008), pp. 177-192 [177].

[119] *Ibid*.

[120] *Ibid*., p. 184.

lab called SymbioticA, directed by Catts, at the School of Anatomy, Physiology and Human Biology, of the University of Western Australia. TC&A highlights the "vulnerability" of biotechnological creations, especially in the form of "semi-living" sculptures like, for example, in "Victimless Leather: A Prototype of a Stitch-less Jacket Grown in a 'Technoscientific Body" (2008)".[121] The "Victimless Leather" installation uses bioengineered mammal tissues grown over biopolymer scaffoldings.[122] These require sterile growing conditions in a "bioreactor" to survive and usually have to be "killed off" at the end of an exhibition, in a "killing ritual" which is used as an integral part of the performance to involve the public in ethical questions about life, its technological mediation, consumption and termination. The kind of tissue-engineering which is involved here also plays an increasing part in regenerative medicine more generally,[123] as well as in the race for alternative food technologies to replace animal slaughter (cf. in-vitro meat and TC&A's "Disembodied Cuisine" project, which claimed to have produced the first artificially grown "steak").[124] TC&A's aim is to expose "gaps between our cultural perceptions of life and scientific knowledge and its implementation", and to make the viewer aware "of our lack of cultural understanding in dealing with new knowledge and control over nature".[125] It highlights "the ethics of experiential engagement with the manipulation of life"[126] and thus raises posthumanist questions of human responsibility and "interspecies care".[127]

As one of the most discussed transgenic artists, Eduardo Kac's work focuses on "telepresence and bio art" and combines "telerobotics and living organisms".[128] Through a combination of robotics, biology and networking Kac explores the fluidity of subject positions in the post-digital world. He is also well-integrated into the academic scene and engages with posthumanist theory and its discussion of bioart. Like all of the artists presented in this chapter he regularly not only features but intervenes in these theoretical and philosophical discussions, commenting on his own and others' work and its political or ethical implications[129] – a rather typical cooperative approach between posthumanist art practice and posthumanist theory. Kac is probably best known for his controversial "GFP Bunny (2000)" project – a transgenic lab-art-*cum*-media-performance work commenting on the creation of life and evolution. The bunny in question, ironically called "Alba" (i.e. white) was "bioluminescent" – a rabbit with an implanted Green Fluorescent Protein (GFP) from a specific type of jellyfish that would glow green under blue light. Kac himself describes Alba less as a visual artwork, however, but as "a complex social

[121] Cf. Adele Senior, "In the Face of the Victim: Confronting the Other in the Tissue Culture and Art Project", in Jens Hauser, ed., *Sk-interfaces: Exploding Borders – Creating Membranes in Art, Technology and Society* (Liverpool: Liverpool University Press, 2008), pp. 76-82 [76].
[122] Cf. Marietta Radomska, "Non/living Matter, Bioscientific Imaginaries and Feminist Technoecologies of Bioart", *Australian Feminist Studies* 32.94 (2017): 377-394; Chris Salter, *Alien Agency: Experimental Encounters with Art in the Making* (Cambridge: MIT Press, 2015); and Johung, *Vital Forms: Biological Art, Architecture, and the Dependencies of Life*, pp. 49-78.
[123] Cf. Thacker, *The Global Genome: Biotechnology, Politics, and Culture*, pp. 251-ff.
[124] Oron Catts and Ionat Zurr, "Disembodied Livestock: The Promise of Semi-Living Utopia", *Parallax* 19.1 (2013): 101-113. See also my commentary in "Zoontotechnics – Cultured Meat, Margaret Atwood's *Oryx and Crake* and Life after Animals", *Solidarities with the Non/Human, or, Posthumanism and Literature* (Leiden: Brill, 2025), pp. 209-234.
[125] Oron Catts and Ionat Zurr, "Growing Semi-Living Sculptures: The Tissue Culture & Art Project", *Leonardo* 35.4 (2002): 365-370.
[126] Oron Catts and Ionat Zurr, "The Ethics of Experiential Engagement with the Manipulation of Life", in da Costa and Philip, eds., *Tactical Biopolitcs: Art, Activism, and Technoscience*, pp. 125-142.
[127] Cf. Rachel Adams, "The Art of Interspecies Care", *New Literary History* 51.4 (2020): 695-716.
[128] Eduardo Kac, "Bio Art", in A. Aneesh et al., eds., *Beyond Globalization: Making New Worlds in Media, Art, and Social Practices* (New Brunswick: Rutgers University Press, 2011), pp. 189-228.
[129] Eduardo Kac, *Telepresence and Bio Art: Networking, Humans, Rabbits, and Robots* (Ann Arbor: University of Michigan Press, 2005); see also Kac, ed., *Signs of Life: Bio Art and Beyond* (Cambridge: MIT Press, 2006).

event that starts with the creation of the chimerical animal that does not exist in nature".[130] An essential part of this project was the public dialogue generated by it and "the social integration of the rabbit" which led Kac to develop a series of works in a variety of media, including drawing, photography, print, painting, sculpture, animation, and digital media. It is thus a piece of transgenic lab art, as well as a media and marketing campaign designed to provoke ethical thinking about gene-manipulation and the creation of "monstrous" artificial life forms. It constitutes a critical intervention in contemporary bio-techno-politics[131] inspired by what Kac calls the "artist's responsibility to conceptualize and experience other, more dignified relationships with our transgenic other" than corporate genetic engineering practices.[132] The specific point of conversion between Kac's transgenic art and posthumanist thinking lies in dealing with the implications of new microbiological insights that "we are all transgenic creatures" in a sense, since humans "have absorbed genetic material that comes from nonhumans, in our genome".[133] This realisation obviously challenges anthropocentrism, humanism and speciesism and instead produces "vivid new ecologies" that don't necessarily function according to traditional humanist or human visuality, as Cary Wolfe argues, and thus "subvert the centrality of the human and anthropocentric modes of knowing and experiencing the world".[134]

Case Study 4: Animal Art

Bioart often involves animals – both human and nonhuman – and their unstable boundaries and hybridisations, chimeras that are culturally marked as "monstrous". However, as Jeffrey Jerome Cohen put it: "the monster polices the borders of the possible"[135], a negotiation process that Elaine Graham referred to as "ontological hygiene".[136]

"Animal art" usually evokes these taboos, plays with and transgresses them. In bio-techno-media-political times there is no clear demarcation between animal art, bioart and digital media art. Posthumanism in fact begins by challenging the boundaries tween both "our" traditional significant others: machines and animals. Instead it "de-anthropocenters" the human by foregrounding entanglements, assemblages and hybridisations between humans, animals and machines insisting that contemporary technologies are merely the latest phase in a long history of human-animal-technology co-evolution. Animal art, as one visual or symbolic expression of posthumanism can of course use biotechnology "literally" (as in the case of Kac, for example) or figuratively. Examples of such a figurative use are Patricia Piccinini's art works, especially her sculptures of "imagineered" (cf. above) transgenic animals or chimeras. As opposed to Kac's works or the TC&A, Piccinini does not directly use "biomatter". Her sculptures and installations are not produced in a wet science lab although they do of course make extensive use of digital media technology in their design and manufacture.

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[130] Eduardo Kac, in Stephens, "Making Monsters: Bio-Engineering and Visual Arts Practice", p. 59.

[131] Eduardo Kac, "Bio Art: Proteins, Transgenics, and Biobots", in Gerfried Stocker and Chrsitine Schöpf, eds. *Ars Electronica 2001* (Vienna: Springer, 2001), pp. 118-124 [120ff.]; Jane Blocker, *Seeing Witness: Visuality and the Ethics of Testimony* (Minneapolis: University of Minnesota Press, 2009), pp. 98-102.

[132] Catherine Chalmers and Eduardo Kac, "Vivid New Ecologies", in Steve Baker, ed., *Artist/Animal* (Minneapolis: University of Minnesota Press, 2013), pp. 66-89 [71].

[133] *Ibid*., p. 78.

[134] Cary Wolfe, "From *Dead Meat* to Glow-in-the-Dark Bunnies: Seeing 'the Animal Question' in Contemporary Art", in Sidney I Dobrin & Sean Morey, eds., *Ecosee: Image, Rhetoric, Nature* (New York: SUNY Press, 2009), pp. 129-151 [145].

[135] Jeffrey Jerome Cohen, ed., *Monster Theory: Reading Culture* (Minneapolis: University of Minnesota Press ,1996), p. 12.

[136] Elaine L. Graham, *Representations of the Post/Human: Monsters, Aliens and Others in Popular Culture* (Manchester: Manchester University Press, 2002), pp. 33-37.

Piccinini's best known and most discussed work is probably a sculpture called "The Young Family (2002)", made of a combination of silicone, acrylic, plywood, human hair, leather and timber. Kate Mondloch describes a typical first "encounter" with Piccinini's fantastic, but nevertheless hyperealistic, "monstrous" figures as a "face-to-face with otherworldly biotech-generated creatures".[137] These "charmingly grotesque" beings are engaged in "everyday activities", in this case, "a nursing family of mutant porcine-bovine-hominoid crossbreeds".[138] Encountering them in their exposedness and vulnerability and the hyperrealism does not fail to provoke sympathy alongside disgust, as Piccinini's installation "allows you to experience yourself shamelessly anthropomorphizing these nonhuman entities", which in turn, "might challenge your notion of what it means to be human in the first place".[139] As Piccinini herself explains, her intention lies in "out-weirding the world":

> Obviously the things that I create don't actually exist but perhaps they could. In fact, perhaps I create them because they should … The possibilities for my creations are already amongst us, and before too long the things themselves could turn up unannounced, without our ever having had the opportunity to wonder how much we want them…There is no question as to whether there will be undesired outcomes; my interest is in whether we will be able to love them. This leads me to an additional implication… the empathy that might arise when we imagine ourselves in another's life, in their shoes.[140]

Provoking further reflection and discussion by evoking our ambivalent emotions and exploring our ability to empathise (an "ability" often wrongly believed to be unique to humans),[141] "The Young Family" is part of a number of installations that display "humanimal encounters" designed to facilitate a possibility for ethical engagement with the nonhuman animal "other".[142] In a time "when flesh is becoming plastic", Piccinini also asks "what we will do with flesh when we can control it", and states that "there is a nice conceptual irony in my use of silicone – basically a kind of plastic – to create flesh in works that talk about the plasticity of flesh".[143] It is a figuration of reengaging with our animality, or our "becoming animal", precisely at the time when some humans may be all too keen to finally "overcome" (or rather repress) our (biological) animality and instead fantasise about a fusion with some techno-utopian form of "artificial intelligence" (cf. transhumanism). Animal art, on the other hand, is "acknowledging that our place in the world of life is less supreme than we would like to think".[144]

Donna Haraway, although critical of the label "posthumanism", is usually seen as one of its founding figures, especially due to her seminal "Manifesto for Cyborgs".[145] The figure of the "cybernetic organism" as a combination of human/animal and machine is the most iconic sign of posthumanism's

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[137] Kate Mondloch, *A Capsule Aesthetic: Feminist Materialisms in New Media Art* (Minneapolis: University of Minnesota Press, 2018), p. 3.
[138] *Ibid*.
[139] *Ibid*.; for an extensive reading see Mondloch, *A Capsule Aesthetic,* pp. 65-85.
[140] Patricia Piccinini, "In Another Life" (2006); available online at: https://patriciapiccinini.net/a-essay.php?id=28 (accessed 23 June 2025).
[141] See my "Unsociable Robots – Empathy in *Robot & Frank*", *Before Humanity: Posthumanism and Ancestrality* (Leiden: Brill, 2022), pp. 184-207.
[142] Sara E.S. Orning, "Staging Humanimality: Patricia Piccinini and a Genalogy of Species Intermingling", in Michael Lundblad, ed., *Animalities: Literary and Cultural Studies Beyond the Human* (Edinburgh: Edinburgh University Press, 2017), pp. 80-103 [80ff].
[143] Patricia Piccinini, "Interview with Patricia Piccinini", in Nato Thompson, ed., *Becoming Animal: Contemporary Art in the Animal Kingdom* (Cambridge: MIT Press, 2005), pp. 104-105 [104].
[144] *Ibid*., 105.
[145] Cf. Donna Haraway, "A Cyborg Manifesto" [1985], in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149-181.

early "cybernetic" phase, followed by an even more general "nonhuman turn",[146] with an increased focus on biopolitics and biotechnology, animal studies and anthropogenic climate change – all reflected in Haraway's more recent work, as well as in the posthumanist art work discussed in this chapter. Haraway herself provides extensive commentary of Piccinini's "posthuman offspring", which illuminates both Piccinini's art and Haraway's own thought, as well as their posthumanist context more generally.[147] As Haraway writes: "When I first saw Patricia Piccinini's work … I recognized a sister in technoculture, a co-worker committed to taking 'naturecultures' seriously without the soporific seductions of a return to Eden or the palpitating frisson of a jeremiad warning of the coming technological Apocalypse".[148] About "The Young Family" more specifically Haraway says: "Piccinini's work is full of youngsters … ambiguously foetal-like transgenics", who act as part of a "queer family whose members require us to rethink what taking care of this country [i.e. Piccinini's Australia], taking care of these generations, might mean".[149] Piccinini's "critters" th6us also have a strong element of "ecological care" built into them: "Stem cell research, genetic engineering, cloning, bioelectronics and technologically-mediated ecological restoration and kin formation loom large … and provoke the onto-ethical question of care for the intra- and inter-acting generations".[150] In doing so, Piccinini performs a kind of "anti-Frankensteinian" ethics, rectifying the scientists' lack of "care" for their "monstrous" progeny, as well as attempting to right colonial wrongs Western science has helped to commit (e.g. towards the Australian aboriginal population). Haraway thus sees in Piccinini's work an ally in what she and ecological or critical posthumanism more generally see as an opportunity for redress "when species meet",[151] namely a "move toward multi-species reconciliation".[152]

The ethical drive in contemporary posthumanist animal art, as Cary Wolfe puts it, is thus to find solutions that do not speak *for* nonhuman animals, but speaking *to* our relations with them and how to take those relations seriously, which "unavoidably raises the question of who 'we' are".[153] Conceptually, however, "the animal" does not occupy just any place in the history of representational art, as Steve Baker writes: "the very idea of the animal is in some way aligned with creativity, or in alliance with creativity".[154] It is not a coincidence that prehistoric art should explore what it means to be human through representations of animals.[155] What characterises contemporary and posthumanist animal art is that animals are not simply "objects" of art and of (human) creative desire; they are

[146] Richard Grusin, ed., *The Nonhuman Turn*, Minneapolis: University of Minnesota Press, 2015).

[147] Cf. Maria Sofia Pimentel Biscaia, "Loving Monsters: the Curious Case of Patricia Piccinini's Posthuman Offspring", *NordLit* 42 (2019): 27-46; available online at: https://septentrio.uit.no/index.php/nordlit/article/view/5003 (accessed 23 June 2025).

[148] Donna Haraway, "Speculative Fabulations for Technoculture's Generations: Taking Care of Unexpected Country", *Australian Humanities Review* 50 (2011): 1-16; available online at: http://australianhumanitiesreview.org/2011/05/01/speculative-fabulations-for-technocultures-generations-taking-care-of-unexpected-country/ (accessed 23 June 2025).

[149] *Ibid*., p. 2.

[150] *Ibid*., p. 4.

[151] Cf. Donna Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008.

[152] Haraway, "Speculative Fabulations for Technoculture's Generations"; p.7.

[153] Wolfe, "From *Dead Meat* to Glow-in-the-Dark Bunnies: Seeing 'the Animal Question' in Contemporary Art", p. 130; cf. also Elizabeth Grosz, "Art and the Animal", *Becoming Undone: Darwinian Reflections on Life, Politics and Art* (Durham: Duke University Press, 2011), pp. 169-186; and Elizabeth Sutton, *Art, Animals, and Experience: Relationships to Canines and the Natural World* (New York: Routledge, 2017).

[154] Steve Baker, "Sloughing the Human", in Cary Wolfe, ed., *Zoontologies: The Question of the Animal* (Minneapolis: University of Minnesota Press, 2003), pp. 147-164 [147].

[155] Cf. Georges Bataille, *Prehistoric Painting: Lascaux or the Birth of Art* (London: Macmillan, 1980); Stuart Kendall, ed., *The Cradle of Humanity: Prehistoric Art and Culture* (New York: Zone Books, 2009).

treated as "creatures who actively share the more-than-human world with humans, rather than as mere symbols or metaphors for aspects of the so-called human condition".[156]

In fact, one way of reading the phrase "animal art" is to take it even more literally than bioart tends to do, namely by attributing *both* subjectivity *and* agency to animals and to treat animal aesthetics as a practice that is actually performed by (nonhuman) animals – a similar case can of course be made for plants, machines, "objects" or "environments" (see below). The ethologist Dominique Lestel, for example, speaks of "non-human artistic practices" like birdsong, ape-paintings and many other animal "cultural practices" and the (evolutionary) basis they might actually form for (human) art[157] – an argument that is made even more forcefully by the posthumanist philosopher Roberto Marchesini, who speaks of the "zoomimetic" origin of art.[158] By zoomimesis Marchesini means the fact that human imitation of animals has deeply influenced human behaviour and culture and continues to do so to illustrate "our" strong co-dependence. A case in point in this context, also used by Marchesini and Karin Andersen in their co-authored volume *Animal Appeal*,[159] is Daniel Lee's work, especially his series of "Self-Portaits" showing him as a human-primate morph, or as a "manimal" (the title of an earlier series of images by Lee, in 1993). Lee's digitally transformed portraits are a literal interpretation of contemporary posthumanist art's "becoming animal".[160] As Karin Andersen comments: "The particularity of Lee's beings is based on a teriomorphism without any connotation of value in anthropomorphic terms: they are no evil monsters or freaks (in the sense of aberrations or caprices of nature), but neither are they angels, their teriomorphia is simply a given, a phenotype like any other".[161]

Becoming animal, or in fact re-becoming animal, in the sense of recognising and responding to our bio-ecological co-implication with nonhuman animals and their environments, is closely connected with a general ecological turn, not only in posthumanist thinking. However, critical posthumanism's contribution to the debate about climate change and the "Anthropocene" lies mainly in reminding techno-enthusiasts of humans' biologically entangled embodiment and humans' responsibilities towards nonhuman others.

Case Study 5: Environmental Art, Anthropocene Art, Art and Climate Change

If posthumanism went through a "cybernetic" wave in the 1990s and a "digital" one in the 2000s, it could be argued that from 2010 the main conceptual shift is towards engaging with anthropogenic climate change and the "Anthropocene" as a new geological period characterised by the fact that humans (at least those human societies that have been driving industrialisation, oil extraction, colonialism and globalisation) have become the single most significant geological agent in changes to the planetary atmosphere, the biosphere, the reduction of biodiversity (cf. the sixth mass extinction) and the ongoing processes of terraforming and increasing toxification. Rosi Braidotti describes our

[156] Steve Baker, ed., *Artist/Animal* (Minneapolis: University of Minnesota Press, 2013), p. 4; cf. also Ron Broglio, *Surface Encounters: Thinking with Animals an Art* (Minneapolis: University of Minnesota Press, 2011).
[157] Cf. Dominique Lestel, "Non-human artistic practices: A challenge to the social sciences of the future", *Social Science Information* 50.3-4 (2011): 505-512.
[158] Cf. e.g Roberto Marchesini, "Zoomimesis", *Angelaki* 21.1 (2016): 175-197.
[159] Marchesini and Karin Andersen in their co-authored volume *Animal Appeal: Uno Studio sul Teriomorfismo* (Bologna: Hybris, 2003)
[160] Cf. Nato Thompson, ed., *Becoming Animal: Contemporary Art in the Animal Kingdom* (Cambridge: MIT Press, 2005).
[161] Karin Andersen, "Il teriomorfo della cultura", in Marchesini and Andersen, *Animal Appeal: Uno Studio sul Teriomorfismo*, pp. 227-428 [394] my translation.

"posthuman condition" as being "positioned between the Fourth Industrial Revolution and the Sixth Extinction".[162] The Anthropocene – even though its name might be controversial since it contains "Anthropos", the universal humanist concept of "man" that postanthropocentric posthumanism has actually set out to "decentre" – both has a "mobilising" ecological force and produces new aesthetic perspectives. It "marks a period of defamiliarization and derangement of sense perception",[163] or "aesthesis" (the Greek work for "sense perception" and etymon of the notion of the "aesthetic"). Climate change, according to Heather Davis, entails a "complete rearrangement of our sensory and perceptive experience of being in the world, where the threat itself becomes hard to identify based on the sensory limitations of our bodies".[164] The scale of something like climate change, which in its vastness and complexity goes beyond human perception in both "space" and "time", and surpasses notions of "nature", "culture" and "technology", "human" and "nonhuman", has led Timothy Morton to speak of "hyperobjects" as "things that are massively distributed in time and space relative to humans".[165]

Art in the Anthropocene[166] thus deals with the scalar challenges to representation of climate, ecology, cosmology and geology (both deep space and deep time, so to speak) and becomes a "polyarchic site of experimentation for living in a damaged world, offering a range of discursive, visual and sensual strategies that are not confined by the regimes of scientific objectivity, political moralism or psychological depression".[167] Through its "modelling" and "Imagineering" ability art may thus provide a space for "dealing with the affective and emotional trauma of climate change"; it can "hold together contradictions" and provide "modes of expression for the collective suffering through and venues to express the emotional toll of living in a diminished world".[168] It is testimony to what one might call the new "geological imaginary" and the contemporary "geological reformation of the human [and nonhuman] species",[169] or, indeed, "the geologic now".[170] It also shows that the "aesthetic" has truly become a "more-than-human" affair.[171] In doing so, and by taking on not only a *bio*logical but also a *geo*logical perspective, it offers "an inspiring means for understanding and communicating the complexity of the biological and mineral entanglements linking species through metabolic pathways and networks".[172]

In fact, one might argue that what "Anthropocene art" shares with posthumanism is the6 question of how to deal with the "end of the world" in a post-, or rather, non-apocalyptic way and how to imagine new forms of co-habitation under these circumstances. It is therefore no surprise that many of the

[162] Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity, 2019), p. 2.
[163] Heather Davies, "Art in the Anthropocene", in Braidotti and Hlavajova, eds., *Posthuman Glossary*, pp. 63-65 [63].
[164] *Ibid*., p. 64.
[165] Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), p. 1.
[166] Cf. Heather Davies and Etienne Turpin, eds., *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies* (London: Open Humanities Press, 2015).
[167] Davies, "Art in the Anthropocene", p. 64.
[168] *Ibid*., p. 65.
[169] Davies and Turpin, eds., *Art in the Anthropocene*, p. 3.
[170] Cf. Elizabeth Ellsworth and Jamie Kruse, eds., *Making the Geologic Now: Responses to Material Conditions of Contemporary Life* (New York: Punctum, 2013).
[171] Cf. Deborah Dixon, Harriet Hawkins and Elizabeth Straughan, "Of human birds and living rocks: Remaking aesthetics for post-human worlds", *Dialogues in Human Geography* 2.3 (2012): 249-270; and Kathryn Yusoff, "Biopolitical Economies and the Political Aesthetics of Climate Change", *Theory, Culture & Society* 27.2-3 (2010): 73-99.
[172] Monika Bakke, "Art and Metabolic Force in Deep Time Environments", *Environmental Philosophy* 14.1 (2017): 41-59 [41].

installations, projects, events that engage with posthumanism, postanthropocentrism and the Anthropocene contain features of "earth" or "land art" – "artistic gestures that are transforming sculpture from the production of distinct three-dimensional objects on pedestals to something less clearly definable, something that hovers ambivalently between architecture and not-architecture, landscape and not-landscape, and that properly belong to neither".[173] Some of the most compelling artists today, therefore, "are forging new representational and performative practices to reveal the social significance of hidden, or normalized, features inscribed in the land".[174] Following ground-breaking land art projects like Robert Smithson's "Non-Site (1968)" and "Spiral Jetty (1979)", more recent works, for example by Olafur Eliasson, tackle the even more urgent contemporary ecological issues in their installations using architectural, geological-geographic and climatic elements. Eliasson's "Ice Pavillion" in Reykjavik (1998), "The Glacierhouse Effect Versus the Greenhouse Effect" (2005) or "The Weather Project (2003)" are cases in point.[175] In one of his more recent works, "Dark Ecology (2016)", Eliasson combines water colour techniques with using "chunks of ancient glacial ice that were fished from the sea off the coast of Greenland":

> A piece of ice was placed on a circle defined by a thin wash of black ink; as the ice gradually melted, the water displaced the pigment, creating organic swells and fades within the established tone. The subtly fading blue of the background results from the repeated application of thin, transparent layers of pigment. Employing chance and natural processes, these watercolours are experiments that attempt to harness the spontaneous behaviour of natural phenomena as active co-producers of the artwork.[176]

Conclusion

I wish to conclude with one artist who actively engages with posthumanist theory and also embraces the label for her art practice: Eija-Liisa Ahtila. Her multi-media installations often relate to "human drama" but are also fundamentally about new forms of empathy and perception with a strong ecological element in their postanthropocentric message. Often they also involve an important aspect of animal art in that they challenge human perception through plant and nonhuman animal perspectives. Her "Studies in the Ecology of Drama (2014)"[177] uses sculpture and video installation to create narrative positions and ways of filmic focalisation that challenge the centrality of the human viewer by foregrounding the perspective of a swift. Technologies are here shown to enable humans to

[173] Krauss, ctd. in Natalie Loveless, *How to Make Art at the End of The World: A Manifesto for Research-Creation* (Durham: Duke University Press, 2019), p. 1.
[174] Cf. Emily Eliza Scott and Kirsten Swenson, "Introduction: Contemporary Art and the Politics of Land Use", in Scott, & Swenson, eds., *Critical Landscapes: Art, Space, Politics* (Berkeley: University of California Press, 2015), pp. 1-15 [1].
[175] Cavazzini, ed., *The Art of the 20th Century, vol. 5: 2000 and Beyond: Contemporary Tendencies*, pp. 238-241; Nathalie Blanc and Julie Ramos, *Écoplasties: Art et environnement* (Paris: Manuella. & Ramos 2010), pp. 148-155; and Guillaume Logé, *Renaissance sauvage: L'art de l'Anthropocène* (Paris: PUF, 2019).
[176] Olafur Eliasson, "Dark Ecology" (2016); available online at: https://olafureliasson.net/archive/artwork/WEK110441/dark-ecology (accessed 23 June 2025.
[177] Cf. Cathleen Chaffee, ed. *Eija-Liisa Ahtila – Ecologies of Drama: Collected Writings, Interviews, and Scripts* (Buffalo, NY: Albright Knox Art Gallery, 2015).

overcome their physiological "limitations" to see the world differently and to develop new, hopefully more "ecologically sustainable" sensibilities towards the planet and nonhuman animals.[178]

Cary Wolfe sees Ahtila's work as paradigmatic of an artistic engagement with biopolitics in which concerns like "domestic space, immigration and colonialism, sexuality, gender, and animality … relations between the realms of the human, the animal, and the divine (or transcendent)" all combine to show that there is no human "immunity" to environmental entanglement.[179] In her interview with Wolfe, Ahtila admits that reading Jakob von Üexküll on the notion of "*Umwelt*", Giorgio Agamben on "bare life" and J.M. Coetzee on "the animal" as well as Wolfe's own texts about posthumanism and biopolitics has been transformational, especially for her more recent work.[180] Ahtila, in many ways, could thus be seen as the epitome of a contemporary (critical) posthumanist artist. She combines a critique of technology, human-centred vision and narrative, humanist anthropocentrism, exceptionalism and speciesism with an aesthetic informed by new feminist materialism, ecocriticism, animal studies and object-centred or nonhuman ontologies.

Images (all accessed 23 June 2025):

1: Orlan, The Reincarnation of Saint Orlan, 1990-1993: https://i1.wp.com/www.orlan.eu/wp-content/gallery/operation-reussie-1990/Successful_Operation.jpg

2: Stelarc, Extra Ear: Ear on Arm, 2006: http://stelarc.org/_activity-20242.php

3: Critical Art Ensemble, Radiation Burn, 2010: http://critical-art.net/radiation-burn-2010/

4: SymbioticA, Victimless Leather, 2008: https://tcaproject.net/portfolio/victimless-leather/

5: Kac, GFP Bunny, 2000: http://www.medienkunstnetz.de/works/gfp-bunny/

6: Piccinini, The Young Family, 2002: https://patriciapiccinini.net/writing/51

7: Lee, Self Portrait, 1997: http://www.daniellee.com/projects/self-portrait

8: Smithson, Spiral Jetty, 1970: https://holtsmithsonfoundation.org/spiral-jetty

9: Eliasson, Dark Ecology, 2016: https://olafureliasson.net/archive/artwork/WEK110441/dark-ecology

10: Ahtila, Ecologies of Drama, 2014: https://crystaleye.fi/eija-liisa_ahtila/installations/studies-on-the-ecology-of-drama-1

Artists' Websites (all accessed 23 June 2025):

Ahtila, Eija-Liisa: https://crystaleye.fi/eija-liisa_ahtila

[178] Cf. Söke Dinkla, ed., *Eija-Liisa Ahtila: Skulptur in Zeiten des Posthumanismus* (Duisburg: Lehmbruck Museum, 2019); Emma Cavazzini, ed., *The Art of the 20th Century, vol. 5: 2000 and Beyond: Contemporary Tendencies* (Milano: Skira, 2010), pp. 44-45; and K21, ed., *Eija-Liisa Ahtila* (Düsseldorf: Hatje Cantz, 2008).
[179] (Wolfe 2015: 82)
[180] Eija-Liisa Ahtila, "Interview with Cary Wolfe", in Cathleen Chaffee, ed. *Eija-Liisa Ahtila – Ecologies of Drama: Collected Writings, Interviews, and Scripts* (Buffalo, NY: Albright Knox Art Gallery, 2015), pp. 116-123 [119].

Critical Art Ensemble: http://critical-art.net

Eliasson, Olafur: https://www.olafureliasson.net/

Kac, Eduardo: http://www.ekac.org/

Lee, Daniel: http://www.daniellee.com/

Orlan: https://www.orlan.eu/

Piccinini, Patricia: https://patriciapiccinini.net

Stelarc: http://stelarc.org/projects.php

SymbioticA: https://www.symbiotica.uwa.edu.au/