Virulence of Posthumanism in Art and Design and the Posthuman Turn

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Abstract
One of the most prominent challenges in the digital transformation is the design of virtual environments in a wide variety of contexts and innovation scenarios. Digital transformation and the virtual environments raise questions regarding the need to technically supplement the physical prerequisites of mankind and the societal pressure to technically enhance humans. Although the 'deficient ontology' of man cannot be overcome, a contemporary design must be aware of possible extensions of environments and bodies.

Under what conditions and common agreements may humans design themselves and their environments beyond natural conditions? This design-theoretical question unites technical, media-theoretical, and ethical aspects. Probably the most extreme utopia of a virtual reproduction is offered by the discourses on transhumanism on the one hand and posthumanism on the other. Transhuman positions seek to confirm the Enlightenment understanding that mankind is permanently progressing towards the perfect human. In Gehlen, that is through technical improvements of body and aims at immortality. In contrary, (technological) posthumanists take an ethical position and tie the path to perfection to the abolition of the human as a biological entity. They understand perfection as a perfect simulation or already conceive of man as a cyborg of machine and organism.

The historical view of the concept of design opens an ever-expanding space of meaning. In addition, new questions are currently being raised about the expansion of the concept of design beyond the anthropocentric view (user, target groups) to a posthuman dimension.

Keywords: *Posthumanism, Transhumanism, Posthuman Design, Body Art, Immateriality*

Introduction
Media create virtual spaces. In those spaces the question of reality is permanently posed anew and thus also the question of the ideal of human existence in general. The French philosopher Jean-François Lyotard refers to electronic media and their increasing proliferation in postmodernity as the beginning of the immaterial space in which people are bound to experiences and decisions. Bodies no longer perceive themselves as their own bodies but outsource sensation to virtual bodies. The dominance of the image reinforces the success of virtual worlds, which would be much harder to achieve in text cultures. The most extreme concept of (virtual) reproduction is offered by posthumanism, which transcends death through abolishing the concept of a biological human being. In the sense of critical posthumanism, mankind is not permanently progressing towards the perfect human being. Instead, man is to be overcome.

With our paper we bring contemporary concepts of art and design into contact with those of an ethical and technological posthumanism against the background of the technical, media-theoretical, and ethical challenges of a digital world. For this purpose, we make use of two tools: First, Rosa Braidotti's division of the posthumanist project into the four core areas of self, species, death, and theory (Tool 1) and second, Klaus Krippendorff's concept of a 'trajectory of the artificiality' (Tool 2). Based on these two tools, we search for answers to our two core questions in six short steps of argumentation: First: How can the posthumanist demands for life after the self, the human species, death, and theory be translated into posthumanist design? Secondly: What consequences can this have for praxis and what spaces of possibility do they create?

Definition: What is Posthumanism?

Transhumanists transfer the idea of enlightenment to understand the history of mankind as a progress to the human body. Condorcet's idea 'that nature has set no term to the perfection of human faculties; that the perfectibility of man is truly indefinite' (1) is transferred to the human being: The perfectibility of the individual is incalculable. At the same time, transhumanists assume that mankind needs perfectibility as it is a deficient being. This idea first originated with Johann Gottfried Herder. In his Treatise on the Origin of Language he writes: 'That man is far inferior to animals in strength and certainty of instinct [...] is certain' (2). Animals are thus physically and instinctively far better equipped. Nevertheless, man is evolutionarily far more successful at present. For this reason Herder writes: 'Instead of the instincts other hidden forces must sleep in him!' Namely the freedom of the intellect: 'One calls this whole disposition of his forces, as one wants, understanding, reason, reflection, etc.' (3) Intellect instead of instinct, then.

Arnold Gehlen picks up on this when he describes man as a 'deficient being' and pursues the necessity of man to procure 'prostheses' for himself with the intellect. This ability more than compensates for its evolutionary disadvantages compared to animals. With his concept of man as 'deficient' he had wanted to point out man's inability to live without technology. Gehlen even goes so far as to conceptualize technology as the true human being: Like mankind, technology is also nature reworked. (4) This 'lack of ontology' (5) of man is a necessary condition of the transhumanist attempt to perfect man prosthetically: Only if there is a lack, I can add something that makes up for this lack and, for example, improves the physical abilities of the human being or delays death.

Technological and ethical posthumanism is quite different. It is true that here, too, the human body is understood as a technological, cybernetic system. However, the body is no longer integrated into a modern paradigm of progress, but on the contrary detached from it. Instead of a progress-oriented position, an ethnically based position is taken that abandons the concept of man as a biological entity. In *The Posthuman*, Rosa Braidotti distinguishes four fundamental posthumanist positions: 'Self,' 'Species,' 'Death' and 'Theory'. We want to make use of those four fundamental concepts in the following to discuss possibilities of how design can consider posthumanist positions by means of some examples. In doing so, we are by no means concerned with a transhumanist, progress-ideological perfection of humans beyond themselves. We thus orient ourselves to Braidotti's mainly ethical posthumanism.

Tool 1: Posthuman Understanding of 'Self,' 'Species,' 'Death,' and 'Theory'

Posthumanists do not aim at the ethical handling of the categories of 'self,' 'species,' 'death,' and 'theory' in society and consequently also in art and design. Rather, these categories are to be overcome. What does it mean to overcome these categories and how can this overcoming be imagined?

a) Self Humanistic perspectives start from a self-image of man, as Braidotti shows when she

writes about the 'Vitruvian ideal of Man as the standard of both perfection and perfectibility' (6). This ideal of a theoretical perfection and practical perfectibility of man is shaken with feminism since the 1970s. At the latest with the emergence of gender theory this program collapses: Where no binary oppositions of men and women exist anymore, but only a 'queer space' of difference, no absolute identification can take place and no perfection can exist. This ends the concept of a perfect and perfectible 'self'. The focus is no longer on self-determination, but on a new subjectivity: 'The posthuman subjectivity I advocate is rather materialist and vitalist, embodied and embedded, firmly located somewhere.' (7)

b) Species Other concepts are taking its place. It has been proposed to conceive of man only as an animal. This would solve the problem of the anthropocentric 'self', but it would transfer it to a speciesism, which would only apparently solve the problem of speciesism: The species would no longer be 'human' but 'animal'. Another consideration has proved more promising. The dissolution of the binary human/machine opposition in poststructuralism: 'The posthuman predicament is such as to force a displacement of the lines of demarcation between structural differences, or ontological categories, for instance between the organic and the inorganic, the born and the manufactured, flesh and metal, electronic circuits and organic nervous systems.' (8) Donna Haraway develops the concept of the cyborg in this context. A cyborg has no identity as a human being or a technical entity that is freed from organic boundaries. In *A Cyborg Manifesto*, she defines the posthuman and supra-gender cyborg as 'a creature in a post-gender world; it has no truck with bisexuality, pre-Oedipal symbiosis, unalienated labor, or other seductions to organic wholeness through a final appropriation of all the powers of the parts into a higher unity.' (9)

c) Death With the disappearance of the individual 'self' as well as the difference between man and machine, death is no longer an absolute boundary at which man would define himself. What Heidegger understood as the core of human being, the 'being-towards-death', no longer exists: it loses its significance. If fear of death forms the basic motivation of human action, in posthumanism it is the 'productive aspect of the life-death continuum' (10). Instead of the *end*, the focus is on the *now*. At the same time, a technological eternity comes into play: the infinite perfectibility of man (Condorcet) is replaced by a posthuman not-anymore temporality. Oliver Krüger has stated in this regard that the technological overcoming of mortality would 'surpass biological being in all its qualities.' He therefore connects the 'immortality question in conjunction with the vision of immeasurable intelligence and power' and declares both to be the 'two central analytical axes [...] of technological posthumanism.' (11)

d) Theory The entity-formerly-known-as-man becomes a simulating quantity: an entity within a network that runs between actors, where actors are all entities involved in an event or a process. In this process, these entities no longer are to be understood as instantiations of binary oppositional structures (man/woman, life/death, etc.). Instead, they build singular figurations. Thus, they no longer are representations of theoretical concepts and ideas but singular entities:

'For example, figurations such as the feminist/the womanist/the queer/the cyborg […] are no mere metaphors, but signposts for specific geopolitical and historical locations. As such, they express complex singularities, not universal claims. A figuration is the expression of alternative representations of the subject as a dynamic non-unitary entity; it is the dramatization of processes of becoming. These processes assume that subject formation takes place in-between nature/technology; male/female; black/white; local/global; present/past – in the spaces that flow and connect the binaries. These in-between states defy the established modes of theoretical representation because they are zigzagging, not linear and process-oriented, not concept-driven.' (12)

Tool 2: Krippendorff's trajectory of the artificiality

Design can be described with the universalistic principle 'Everything is Designed'. This view not

only addresses the individual perspective of a person, but also finds a common ground in the need that design must always exist to support human being. Derived from this, products, services, and communication should and must always be understandable, convincing, and appropriate. People act partly passionately, partly rationally and thus set the framework for the creative demands of user-centered design. To fulfil these demands, design cannot be reduced to pictorial and artistic design. Rather, aspects of society and economy as well as technical challenges must be considered. It is fair to say that the HfG Ulm is in this regard the core of a new way of thinking about design. Many of the teachers who worked there, such as Klaus Krippendorff, Thomas Maldonado, Horst Rittel, Bruce Archer or Gui Bonsiepe, still stand to this day for authoritative theories around an expanded concept of design.

In his publication *The Semantic Turn: A New Foundation for Design* (13), Klaus Krippendorff describes the development of the meaning of design. He identifies the design of products and objects at the lowest level of his concept of an ascending line of design as the most original form. Via the design of services and identities, he finally arrives at the design of discourses. In terms of the challenge of posthumanism, the question arises as to whether and, if so, to what extent the trajectory should be extended. Krippendorff's idea to apply the concept of design to discourses and to use self-reflexibility currently forms the end point of the trajectory. The trajectory demonstrates design is seen not only as an aesthetic task, but also as a process-driven methodology within complex problems. This understanding of design paved the way to conceive design as a scholarly discipline and thus also as an object of research as well as a method for research. But what happens when the virulence of non-human actors increasingly comes to the fore? Who conceives, designs, and produces artifacts, services, interactions, society, and courses in the context of artificial intelligence and increasing posthuman technologies? And how can this development be linked to Krippendorff's trajectory?

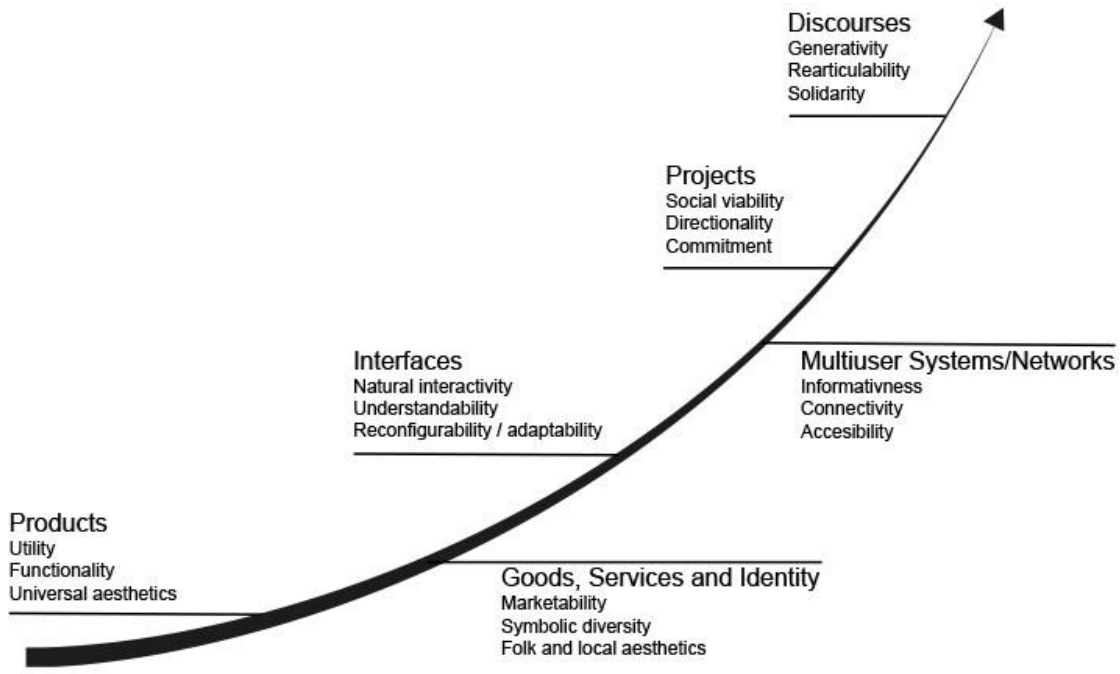

Figure 1: Own graphic after *The Trajectory of the Artificiality*, in: Klaus Krippendorff, *The Semantic Turn. A new Foundation for Design*, p.6

Braidotti's four posthuman categories 'self', 'species', 'death' and 'theory' can be assigned to Krippendorff's model in a classical understanding. In particular, the extension of design beyond the design of objects (level 1) makes the path of artificiality an illuminating starting point for a debate on post- and transhuman aesthetics. First, level 6, that of discourse, offers an open platform for all debates that go beyond the physical requirements of design level 1. Beyond this, however, the following will differentiate more precisely the extent to which levels 2 to 5 allow sufficient connections.

The current societal debate on gender identities opens a fluid space of possibilities for the self that reach beyond traditional and rigid binary understanding of sex and gender. In stage 2 of the trajectory, the task of design is extended to the charging and recognition of objects and subjects as identities. The principle of personal identity is characterized by the power and obviousness of a difference to everything else. This distinction makes it possible to characterize a situation as unmistakable and recognizable, for example in terms of effective marketing. In this way, new and innovative 'selves' beyond the understanding of identity as unequivocal can be created. These can overcome old social roles and create alternate identities that work both in terms of marketing and help build an open and diverse society. Take brands and services that go beyond their physical and service-orientated roles. The dimension of the human species in the context of non-human beings and machines described by Braidotti is reflected in several stages of the trajectory. Level 4 with its networks offers the obvious possibility of interaction with non-human network partners. The dissolution of the human being through death only appears to be the final frontier. Alternate forms of existence are confronting with new tasks in design, e.g. the 'survivability' of digital content, which continues to exist after the death of the subjects responsible for it. This raises not only legal and ethical questions, but also pragmatic questions relating to technology and design. The trajectory does not yet provide any approaches in this respect. Especially this is true for a posthumanist approach to overcome theory and direct the focus of design interest onto singularities, non-unitary units and processes. Hence, we suggest implementing a new level in Krippendorff's trajectory: A level that opens an expanded field for non-human qualities beyond discourses that are reduced to human actors. A level that reaches beyond a human-centered world and focuses on an environment- centered dimension.

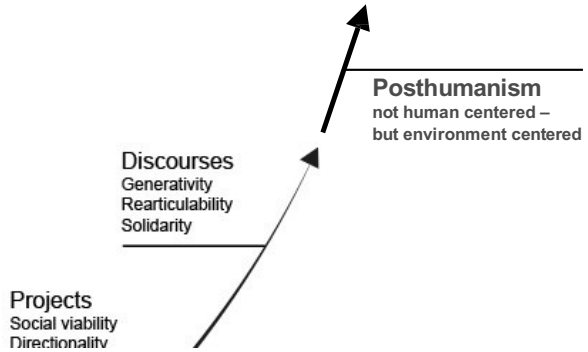

Figure 2: Extended graphic after *The Trajectory of the Artificiality*, in: Klaus Krippendorff, *The Semantic Turn. A new Foundation for Design,* p.6

Concretizations: posthumanism in art and design

Modernism and postmodernism have been exploring basic concepts of post- and transhumanism through extreme artistic positions for over a hundred years. The Futurists' glorification of technology and simultaneous neglect of nature and the organism in the first decade of the 20th century already

signified a conscious rejection of traditional representations of the human being in favor of distorted and flowing formal inventions. The famous Futurist sculpture, by Umberto Boccioni, *Unique Forms of Continuity with Space* (1913), which melds human forms with mechanical ones.

Figure 3: *Unique Forms of Continuity with Space* (1913), Museum of Modern Art, New York https://www.widewalls.ch/magazine/posthumanism-contemporary-art (viewed, Sept., 11th, 2023)

Artists such as Stelarc and Orlan have been working on improving and enhancing the body and its individual appearance since the 1960s. Stelarc is an Australian performance artist who believes the human body is obsolete. Although transhumanism is a relatively new concept in modern culture, visionaries like Stelarc have been exploring the idea of merging human flesh and machine for years. The French artist Orlan works with various artistic means and defined the terms 'Body Art' and 'Carnal Art' in 1989. She makes her body available as a field of experimentation for medical interventions and modifications of various kinds. This at first hand transhumanist project touches on various posthumanist aspects as it renders the question of Orlan's identity obsolete, as her appearance disappears through the permanence of change.

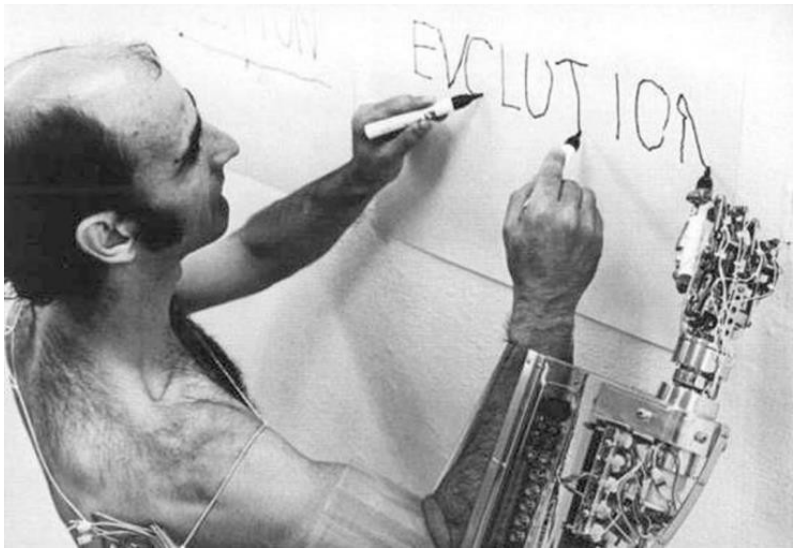

Figure 4: Stelarc and his mechanical arm https://fahrenheitmagazine.com/de/Kunst/Visuals/Nutzen-Sie-die-Kapazit%C3%A4t-des-K%C3%B6rpers-den-bioartistischen-Vorschlag-von-Stelarc (viewed Sept. 11th, 2023)

What began with Orlan became much more prominent in art and design throughout the last decades. The task of connecting people with machines lies in the broad-based endeavors of interaction and experience design. This is followed by: 'Machine learning, artificial intelligence, algorithms, big data, automation technology, and robotics are currently being applied in a wide range of fields, and designers are just beginning to understand the implications of these developments for design practice. (14)' Another approach is the concept of speculative design, which goes beyond practical design production and deals with the areas of the possible and the fictional. The aim is to criticize existing conditions of living and use design practice to show how attitudes and attention can be directed towards relevant discourses. Speculative design does not want to be user-friendly but enters the field of user-unfriendliness as thematized by Anthony Dunne. User friendliness refers to anticipating the needs of users. User unfriendliness challenge the user by asking for a new attitude and opinion for improvements and changes. (15)

Conclusions: Posthuman Design – a new level on the trajectory?

We added a further level of Krippendorff's trajectory model to discuss the two questions set out at the beginning, 'how can the posthumanist demands for life after the self, the human species, death, and theory be translated into posthumanist design?' and 'what consequences can this have for praxis and what spaces of possibility do they create?'. The theoretical complexity that design has to face increases with each stage of the trajectory. The posthumanist discourse is adding a new dimension to the focus of design, which was before centered solely on humans. Currently this is not yet conceivable as a part of the trajectory model, not even at the sixth level, as it represents a paradigmatic innovation not only for the requirements and challenges in design. With a new seventh level of the trajectory we implement those tasks into Krippendorff's model and hope to open new possibilities to describe design and art phenomena from Orlan to Dunne. Even if the six levels currently allow technoid and post-humanistic aspects of 'self,' 'species', 'death' and 'theory' in a variety of contexts, a seventh level would finally open up new dimensions of artificiality exclusively in the context of non-human actors.

Notes

1. Marquis de Condorcet, *Progress of the Human Mind*, (London: Weidenfeld and Nicholson 1955), 4.

2. Johann Georg Herder, *Abhandlung über den Ursprung der Sprache, welche den von der Königl. Academie der Wissenschaften für das Jahr 1770 gesetzen Preis erhalten hat*, (Berlin: Voß 1772), 31 ("Daß der Mensch den Thieren an Stärke und Sicherheit des Instinkts weit nachstehe, […] ist gesichert.").

3. Johann Georg Herder, *Abhandlung über den Ursprung der Sprache, welche den von der Königl. Academie der Wissenschaften für das Jahr 1770 gesetzen Preis erhalten hat* (Berlin: Voß 1772), 38, 42 ("Es müsse statt der Instinkte andre verborgne Kräfte in ihm schlafen! […] Man nenne diese ganze Disposition seiner Kräfte, wie man wolle, Verstand, Vernunft, Besinnung u.s.w.").

4. Cf. Arnold Gehlen, *Man in the age of technology*, transl. Patricia Lipscomb, foreword by Peter L. Berger (New York: Columbia Univ. Press. 1989).

5. Erich Hörl, Die künstliche Intelligenz des Sinns. Sinngeschichte. und Technologie im Anschluss an Jean-Luc Nancy, in: *Zeitschrift für Medien- und Kulturforschung* (ZMK), 1 (2010), No. 2, S. 129–147, 137, https://doi.org/10.25969/mediarep/18456.

6. Rosi Braidotti, *The Posthuman* (Cambridge: Polity 2013), 23.

7. Rosi Braidotti, *The Posthuman* (Cambridge: Polity 2013), 51.

8. Rosi Braidotti, *The Posthuman* (Cambridge: Polity 2013), 89.

9. Donna Haraway, *A Cyborg Manifesto. Science, Technology, and Socialist-Feminism in the Late Twentieth Century*, in: *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge 1991), 149-181, 150.

10. Rosi Braidotti, *The Posthuman* (Cambridge: Polity 2013), 132.

11. Oliver Krüger, *Virtualität und Unsterblichkeit. Gott, Evolution und die Singularität im Post- und Transhumanismus* (Freiburg i.Br.: Rombach 2019), 70f. („Der künftige Mensch soll jedoch nicht nur die Sterblichkeit überwinden, sondern auch das biologische Dasein in all seinen Qualitäten übertreffen. [...] Die Unsterblichkeitsfrage in Verbindung mit der Vision unermesslicher Intelligenz und Macht bilden die zwei zentralen analytischen Achsen der nachfolgenden Ideengeschichte des technologischen Posthumanismus."). Krüger is primarily referring to technological post-humanism. However, his position can also be applied to the theoretical perspectives of Haraway and Braidotti.

12. Rosi Braidotti, *The Posthuman* (Cambridge: Polity 2013), 164.

13. Cf. Klaus Krippendorff, *The Semantic Turn. A new Foundation for Design* (Boca Raton: Taylor & Francis 2006).

14. L. Forlano, *Posthumanism and Design*. She Ji: *The Journal of Design, Economics, and Innovation*, 3 (2017), No. 1, 16–29, https://doi.org/10.1016/j.sheji.2017.08.001.

15. Anthony Dunne, *Hertzian Tales: Electronic Products, Aesthetic Experience, and Critical Design* (Boston: MIT Press 2008), 35.

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