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Post-anthropocentric Design: The problem of optimizing the relationship between humans and nature

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The history of design shows countless examples in which design has caused harm on an individual, social, political, or ecological level – even things that are identified as nature, depending on the cultural and geographical context, have already been interfered with by design. All these actions are, of course, anthropocentric – because design is always an anthropocentric activity and practically no processes exist that seriously exclude humans as stakeholders (this problem is intensified by the fact that design is also dominated by a WEIRD – western, educated, industrialized, rich and democratic – view that lacks the methods and vocabulary to understand needs and requirements in a global context). Established design processes can thus quickly cease to function since they cannot reflect all interests (between different people; and the "interest" of nature and its plant and animal representatives – whatever that may mean). So we need a post-eurocentric and then a post-anthropocentric understanding of design – and one that functions pluralistically and above all also future-oriented. Instead of using established processes to deal with interdependence, this tension between humans and nature formulates the need for new design processes and a serious design ethic.

Social Design; Post-anthropocentric design; Transformation Design; Design Ethic

1. Introduction: The Relationship between Humans and Nature

In a discussion on the relationship between humans and nature, there are various reasons and developments that could be listed as arguments. However, the context of the impending climate catastrophe—and the global injustices that go along with it—should make one thing very clear: this relationship should be negotiated in design discourse, as there is a need for an understanding of design

that includes potential interests of non-human entities and takes into account dependencies and interconnectedness. As a result, it also shows global injustices.

Such an idea embeds itself in current discussions on social or transformational design. However, it is my belief that we need to fundamentally change our understanding of design: Rather than continuing to view design as a problem-solving activity, we should view it as a problem-causing action. This would provoke a shift in our anthropocentric understanding of design as we delve into the potential problems.

This way of thinking contradicts the optimism that can often be attributed to the discussion of social design and similar concepts. In this basic understanding, design is seen as a way to solve social and political problems. It is not my intention to contradict the idea that design can solve problems—however, a shift in this way of thinking can create a new understanding of our actions and our dependencies. After all, optimism in design can also be viewed critically after looking at the history of design: As such, the history of design is also a history of attempted problem solving. Design has often been used to try to solve social problems and optimize circumstances on different scales, meaning the history of design is also a history of optimization. But even design with a positive will to optimize can fail—it can even cause problems of catastrophic proportions.

2. Design as an Optimization Process

The history of design has brought forth numerous movements and actors who have not only understood the design process as a form-giving action, but have also used design as a means of improvement. This can mean small interventions in individual situations as well as a greater urge to improve social situations with and through design.

Of course, this argumentation is only comprehensible if design is explained and defined. Design is a rather fuzzy term that is constantly argued about in academic discourse. As such, everything is seen as design—thus, the history of humankind is automatically also a history of design. While I do not intend to contradict this, I wish to use a somewhat restricted concept of design. According to this somewhat narrower concept, design is a relatively young term. In the European area, it appeared in the 19th century. It appeared in the Oxford English Dictionary in 1885 (Mareis, 2011, p. 24), accompanying the advancing industrialization. In the course of this industrialization, design became increasingly separated from the production of the artifact. In this development, the social and political context is also significant. The aforementioned industrialization was accompanied by major social changes, which is why the first major design movements in the European region were already discussing social, political, and philosophical issues. Their understanding of design was not reduced to the design of an artifact. Rather, it was also about improving circumstances with and through design. The working conditions of the working class served as a clear example of this. *Arts and Crafts* can be seen as an early design movement in which protagonists—such as John Ruskin and William Morris—formulated new visions. On the formal level, they addressed a return to pre-industrial forms, but this was embedded in a general critique of advancing industrialization; in the case of William Morris, this culminated in a call for a return to crafts and simple living (Erlhoff, 2008, p. 21). The design thus corresponded with a political vision. The following *Art Nouveau* also deviated from solely focus on developing a new formal language. The idea of optimizing social conditions was equally important. With the onset of design modernism, such visions manifested themselves in the design discourse. Particularly in Europe, the 1920s were characterized by the fact that design artifacts were closely linked to social utility; the *Bauhaus*, created in a period marked by life-reform movements, evolves from an esoteric initial period with a comprehensive design claim (Mareis, 2011, p. 90-91) to a politically influenced educational institution. The "people's needs instead of luxury needs" motto was proclaimed under Hannes Meyer (Eisele, 2008, p. 45). At a similar

time, the *New Frankfurt* also attempted to improve people's living conditions with design artifacts. In an era characterized by a general idea of optimization (e.g., the home economics movement), exciting typification projects were born. One of such projects was the so-called Frankfurt Kitchen, which sought to optimize the domestic workplace by creating the basis of the modern fitted kitchen. Among other aspects, the aim here was to transfer the familiar principles of performance enhancement from industrialization to domestic work; this could be seen to start from the standardizing of body measurements (Moisi, 2019, p. 181).

Without further judgement, it can be assumed that many designs of this time had a kind of programmatic vision and a will to change. In particular, functionalism—which sprang from the thoughts of design modernism—and its will to optimize can be linked to the major problems of our time. Mara Recklies argues that the ecological, ethical, and economically induced catastrophes of the present illustrate the problematic nature of the idea of functionality in design; by linking the ideas and visions of functionalism to artifacts like the to-go plastic cup, the PET bottle, or the plastic bag, she draws a connection between design and the recent garbage issue (Recklies, 2021, p. 104–105).

The car-centered city can also be seen as terrible ecologically consequence of a modernity design vision (Quadflieg, 2018)—such a list could be continued far and wide. In order avoid going beyond the scope of this contribution, it should be stated concisely: some of the problems of the present can be quickly linked to the optimization ideas of design history. This can be seen as a confirmation of Victor Papenk (1971), who impressively postulated that design could cause a great deal of worldly damage.

It is worth noting that this discussion is truncated. Undoubtedly, equally positive aspects can be derived from past ideas and visions. At the very least, however, the retrospective view should teach us something more important than basic skepticism: even design with good intentions should be accompanied by critical discourse. The idea that design interventions or ideas will result in societal improvements should not be criticized. Rather, it should be accompanied by a critical eye. History shows that the long-term consequences of well-intentioned visions can be problematic: Design processes of the past often failed to assess the extent of the possible consequences of their actions—it seems that the idea of improvement masks the potential of problems. As such, the discussion of optimization idea consequences should be given more space in design.

3. Optimization of Nature

Indeed, the human urge to optimize means that large areas of our environment have somehow been designed. What does this term mean here? Even large areas of nature are designed on a functional level (i.e., the bred alpaca that gives more wool than the original vicuña) or a form-giving level (i.e., the banana as a designed form). Food in particular is optimized on diverse levels: fewer seeds, more pulp, straighter shapes for more efficient packaging, brighter colors, and so on. Johanna Kleinert (2020) examined fruits and vegetables from a design science perspective; this indicated that the relationship between nature and design is more complex than a superficial understanding of nature might suggest. This is another reason why terms like biofacts (Karafyllis, 2006) are used in the discourse to discuss the complex connection between culture, technology, and nature.

4. Design as Problem Solving

Design was often accompanied by a thought of optimization—this began to clearly manifest around the 1960s. At that time, design was beginning to be considered as a fundamental problem-solving

competence in the US and Europe. The writings of Herbert Simon and Horst Rittel had a particularly great influence in the period (Mareis, 2011, p. 130–131). It was often argued that the competence of designers would not only lie in the aesthetic design of artifacts—rather, it would also lie in the fact that they could identify and solve problems with their approach. This way of thinking has manifested itself in the famous methods of contemporary design. Approaches such as Design Thinking or the Double Diamond process are based on the idea that designers acquire a fundamental understanding of the problem domain first, and they subsequently work out solutions in iterative steps while testing them in the process. There are two problems that can be attributed to this approach: First, the process ends with the idea or artifact, but not with the possible consequences. Solutions emerge with possible consequences that are not discussed in the process. Thus, this approach entails short-term and isolated thinking. If the cross-reference is drawn to global dependencies or even the impending climate catastrophe, then design approaches that end with the artifact fall short. This merges smoothly into the second problem: the lack of consideration of diverging interests. User research is point of high interest in the design context, and the interests of potential users are evaluated and taken into account. However, what comes of user interests that are not congruent with non-user interests? Essentially, no existing design process manages to seriously and systematically take different interests into consideration. This is exactly where established design processes fail. They simply do not—or cannot—take a sufficient number of viewpoints into account.

The alleged "interest" of humans is an exciting point in the discussion about design, as it takes up so much space in the current design discourse. After all, the idea of human-centered design is currently very dominant in the discourse. Thus, the interest of humans seems to be somehow in the center. Before addressing that matter, I wish to present the aforementioned example and briefly explain the conflict: an object that is as convenient as a PET bottle or a to-go cup can of course be in the interest of its users, but this interest can come into conflict with other interests (i.e., interests of the people or non-human actors who suffer from a possible waste problem, interests of those who feel and will feel the consequences of the climate catastrophe fueled by the use of fossil resources, etc.). Additionally, an interest can change over a period of time. Interests can also diverge, so it is important to also consider the (long-term) consequences of an artifact.

It should be noted that "human" is indeed a difficult term—particularly, it is a term that is simply not used precisely. For example, Laura Forlano argues that "design, architecture, and related fields have incorporated an understanding of the human based on the notion of a universal subject—usually white, male, privileged, well-off, and young—that does not exist in reality" (Forlano, 2017, p. 27). Thus, the WEIRD. acronym often surfaces in association with what it means to be human: Western, educated, industrialized, rich, and democratic. Global action is just as conditional as global interests, and they can often contradict each other. As such, the human-centered term should generate skepticism; by no means are all humans considered here. Furthermore, considering the interests of some can lead to the suffering of others. The interest of people should thus be considered in the context of global interdependencies: "The world of the South has in large part been an ontological designing consequence of the Eurocentric world of the North" (Fry, 2017, p. 26).

As such, established design methodologies may be failing precisely at the point where design fails to manifest or reinforce global injustices. More importantly, it fails at the point where design can no longer avoid discussion regarding the ecological consequences of artifacts.

5. A Pluriverse Design

If we negotiate the relationship between humans and nature, then other concepts should be discussed. This is especially relevant because we as humanity are naturally dependent on climate and nature. Ailton Krenak formulates this impressively:

> *What's happening is terrible, but society needs to understand that we are not the salt of the earth. For a long time, we were fed the story that we, humanity, stand apart from the great big organism of Earth, and we began to think of ourselves as one thing, and Earth, another: Humankind* versus *Earth. We have to abandon our anthropocentrism. There's a lot more to Earth than us, and biodiversity doesn't seem to be missing us at all. Quite the contrary. (Krenak, 2020, p.5–6)*

The idea of abandoning an anthropocentric way of thinking can also be found in design. Arturo Escobar (2018), in particular, impressively articulates that design should serve a pluriverse with a diverse set of human and non-human actors. The Concepts of *Ecospheric Design* by Gabriel García-Acosta and Carles Riba Romeva (2010) or the *Non-anthropocentric Framework* by Li Jönsson (2014) could also be discussed in this context.

Thus, it is necessary to establish an understanding of design that has a non-anthropocentric core. This could be justified ethically. However, in the context of the looming climate catastrophe, it can be much shorter. Ironically, a post-anthropocentric understanding of design could then map the interests of humanity again; the perspective of the interest of non-human entities reveals our dependencies on them (and averting a climate catastrophe should be in the human interest, after all).

6. Design as a Problem Creator

German design theorist Friedrich von Borries (2020) explored the concept of no consequences; he argued that we should think about how to leave as few traces as possible rather than being concerned with simply acting sustainably. What would a life that is as inconsequential as possible look like? Could a regulative ideal that is perhaps unattainable but worth striving for—like freedom, justice, and equality—be derived from this argument (von Borries, 2020)?

The idea of no consequences is indeed an idea that can be easily formulated in a situation characterized by wealth and abundance. The exclusion of a possible improvement, which can also be a consequence in and of itself, can certainly be discussed differently in other regions of the world. However, this is perhaps the strength of the concept: it is a way of thinking that should be discussed in the Global North, as it is precisely the inconsequence of potential actions here that could bring a global injustice into focus. From this, a new understanding of design can be derived.

Instead of understanding design as a problem-solving activity, it could also be understood as a problem-causing activity. From this, a new understanding of design can emerge. In the Global North, a new approach could focus on fundamentally reversing the relevant thought processes. We could attempt to avoid new problems first instead of looking for solutions to problems with and through design, particularly solutions that create various new problems (i.e., ecological issues). Focusing on the idea that design can cause harm automatically leads to a long-term way of thinking that no longer ends with the artifact.

No empathy arises from this, but it can be argued that focusing on potential problems caused by human actions very quickly and clearly reveals our dependence on nature and our responsibility to other people. Over a long period of time, this can influence the way we think. A problem-avoiding design—or

a design without consequences, according to von Borries—is a simplification that cannot do justice to the complexity of the reality of design. However, it is a simplification that can manage to create a thought-provoking effect by shifting the focus from solutions to consequences (it also creates a shift from "user" and "target groups" to other humans and ecology).

7. Ethical Questions

The aforementioned simplification reveals that complex ethical questions are underrepresented in the design discourse. How do we deal with different needs and desires? How do we value divergent interests?

Indeed, the question of possible consequences of design also reveals the lack of competence of established design methods to map non-human interest. Design is an anthropocentric activity, but what about non-human interest (this could include: the interest of those not yet born)? What about non-human entities? The inclusion of non-human interest can bring interrelationships and interdependencies into focus. An understanding of design that is post-anthropocentric can also be directly understood as climate-centric (i.e., climate-neutral).

8. The Optimization of the Human/Nature Relationship

How would our tools change if we understood our planet as an interconnected living system? Arguably, optimizing the relationship between humans and nature is not feasible with the established optimism in design. This is a result of a lack of concrete approaches that could succeed in establishing post-anthropocentric ways of thinking. However, instead of simply searching for such concepts, I would like to argue that an understanding of the planet as an interconnected living system can emerge via an understanding of the interdependencies of humans and nature—this especially applies in the Global North. This system can emerge via the idea of avoiding new problems. As such, I therefore argue for an understanding of design that does not end with the artifact. I argue for a design methodology that does not overemphasize its problem-solving competence; rather, it integrates an awareness of its problem causation and shifts the focus to include new perspectives of interest. A problem-avoiding mindset can lead to a post-anthropocentric mindset, and a post-anthropocentric mindset can optimize our relationship with the rest of the world.

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