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POST-ANTHROPOCENTRIC DISCOURSES IN DESIGN EDUCATION: A WOOL-CENTRIC WORKSHOP

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ABSTRACT

This paper reflects on alternative approaches in design education and how it can shift to include current discourses of post-Anthropocentrism, through a review and reflections in current design education. Furthermore, it introduces a speculative design workshop conducted to introduce an alternative concept to students. While design is still considered a human-centred field and practice, many theories challenge human-centred approaches, such as non-Anthropocentric and post-Anthropocentric discourses that place nonhumans in a non-hierarchical order with humans. Apart from a small number of courses and workshops, post-Anthropocentric approaches are not included in the design curriculum. Therefore, there is still a need to address how design education can deal with the Anthropocene itself, and how post-Anthropocentric approaches can be introduced to students. Accordingly, to challenge traditional human-centred methods in design, the paper reflects on how design can shift to other directions with current discourses, reflecting on post and non-Anthropocentric discourses and design education. It gives examples from a workshop conducted to trigger speculative interactions with wool material, extending to how post-Anthropocentric approaches could be introduced in design education, and to educate designerly thinkers.

Keywords: Design pedagogy, post-Anthropocene, non-Anthropocentric design, design thinking

1 INTRODUCTION

The age of the Anthropocene, the geological age marked by the human impact of human exploitation on nature [1], leads to the question of how to deal with the consequences of it and shift our thinking to acknowledge its consequences on the environment. In design, scholars have started to reflect and work on how design can shift to non or post-anthropocentric approaches. However, in design pedagogy, there are not many examples that consider how to involve post-anthropocentric approaches in teaching. This study is an attempt to propose how design pedagogy can reflect on the post-Anthropocentric thought.

While there are recent studies in design that consider posthuman and more-than-human elements, the main paradigm in design is human-centred design since 1980s [2]: Human-centred design was seen as a shift from technology-centred design that focuses on user experiences; however, recently, human-centrism was questioned and challenged as it is not inclusive of nonhumans. Roudavski claims that since the consequences of the Anthropocene are undesirable and humans and nonhumans will have to live with them, a reasonable response would be to change current "human practices" [3: 148]. He points to the significance of design and the "need for a transformation of design practices", suggesting interspecies design [3: 147].

Although industrial design was commonly associated with industry at the end of the nineteenth century, the profession of the industrial designer was still not defined at that time, and artists, architects, craftsmen, inventors were labelled as what an "industrial designer" does [5]. Only at the beginning of the 20th century, the legitimacy of the industrial designer surfaced as a person who integrates all these activities, combining the dimensions of technology, user, aesthetics and business. [6] Heskett defines industrial design as "a process of creation, invention and definition separated from the means of production, involving an eventual synthesis of contributory and often conflicting factors into a concept of three-dimensional form, and its material reality, capable of multiple reproduction by mechanical means" [4: 10]. Industrial design profession links to the development in industrialization and

mechanization, which began with the *Industrial Revolution*. As the start of the Anthropocene traces back to the Industrial Revolution, the field of industrial design is directly linked and should rethink how to solve issues caused by the Anthropocene.

2 NEW APPROACHES AND CRITICISM IN CURRENT DESIGN DISCOURSES

While the foundations of industrial design education relates to craftsman traditions, for the last 50 years, it has been shifting to several directions, as a result of changing issues, themes and discourses. With the new age, design field has become more transdisciplinary, and design's relationship with craft, art, natural sciences, social sciences are becoming blurrier. Many scholars agree that design should go beyond the industry limitations and reflect on future practices and challenges. As Atkinson [7], states, we are in a post profession era, and the definitions of design, designer and professions became more fluid. "It has to be acknowledged that we are already in an new age of open source systems, shared product development and free distribution. The old rules no longer apply." [7:153]. Similarly, many agree that design education should go beyond the current practices and industries. For instance, although sustainability as an issue has been put forward, in design education, it is often not introduced to students sufficiently. Walker [8] states, except for some examples, relatively few schools have sustainable design as a core in their curriculum. He criticizes that design research and teaching are still ignoring many issues we face today, by asking where today's design schools and researchers are: "In my experience, *most design teaching is feeding the machine – sticking to the outdated playbook of modernism, training* students in skills for industry now rather than preparing them to contribute thoughtfully to a less materialistic future."[8: 4] Additionally, he criticizes that sustainability is taken as an "afterthought", added to some pre-existing courses which "serve to maintain the status quo" [8].

Buchanan discusses a misunderstanding that design education should follow the design practice, and states that "when properly understood and studied, design provides a powerful connective link with many bodies of knowledge. Design integrates knowledge from many other disciplines and makes that knowledge effective in practical life" [9: 66]. This statement connects well with the designerly thinker, explained by Dutton and Tovey [10, 11]. Dutton writes by exploration, the student is not guaranteed to be a "better designer", but "he/she has definitely begun to be a designerly thinker. It is these kinds of evaluations based upon the observation of the growth of knowledge and understanding which should become among the measures of design learning" [10: 119]. Oxman states; "if we are design educators, we must find means to supplement traditional pedagogy by educating the designerly thinker as well as the maker of designs" [12: 120].

3 NON-ANTHROPOCENTRIC APPROACHES IN DESIGN EDUCATION

This study draws from the idea that design education is not only for raising professionals for the industry, but it also teaches a way of thinking. What design schools teach does not have to be limited to designing objects or systems. As an extension, the study claims that emerging discourses should be introduced to design students when they are being educated on current design issues, as a knowledge base. As design itself is not in a post-Anthropocentric era, there are some discussions among scholars how designing from non or post-Anthropocentric views is possible, and if it might be helpful for them. However, it is argued that thinking and reflecting on these frameworks could offer designers to understand ethics based on non-hierarchical and non-binary definitions of nature-culture, and worldviews on how to approach natural entities in equal ways. These frameworks can provide alternative views on how to design for new eras, for all designers and design students.

According to Walker [14], the current consequences of economic growth, such as mass manufacturing and consumption promotion are leading to destructive courses, such as environmental destruction and pollution. To overcome this exploitation, he defines two current "exits" as alternatives. First, he brings up eco-modernism as the first exit, which offers "science-based technological solutions" to our existing dilemmas. As a second exit, he brings up the term sustainable development, which involves technological improvements and results with socioeconomical benefits. However, he finds some problematic outcomes of this and states that it is limited by its conventional thinking and vision. As an alternative to these 2 approaches, he proposes a third exit, which brings up a change of priorities and values. This involves recognizing consumerism relates to the idea of development rooted on material benefits, which also destroys the world. He suggests this third exit as turning to "inner development" and questioning ideas of innovation [14], bringing up values such as making and maintaining things, sufficiency and localization. While this exit is not primarily related to post-anthropocentric discourses,

the author brings up the idea that post-anthropocentric and more-than-human worldviews in design can also shift our understandings of the world and change our behavior and how we design things. Therefore, the study proposes that design education can acknowledge these alternative approaches and educate future "design thinkers" to be informed about different ways to tackle with current world issues, and this involves the introduction of post and non-anthropocentric frameworks.

Some examples from modern design education focus on issues related to sustainability and the re-use of resources, for example, many courses encourage the use of alternative or waste materials, to introduce more environmentally responsible and eco-sensible design practices. These inspire fruitful discussions on how design impacts the environment and natural resources and emphasize practices such as circular and sustainable design and use of renewable resources. Still, these approaches often consider sustainability and design as a part of consumerism, with aims of development and economic growth. On the other side, post/non-anthropocentric worldviews do not focus on human development, but rather, take on non-hierarchical and ethical frameworks that recognize the relationships between nonhuman entities, environment and humans. Furthermore, they challenge the traditional design approaches, which are dominantly under anthropocentric assumptions.

As an emerging discourse, post-anthropocentric thought is not commonly brought up in design curricula. From a literature review, examples were found from different locations, that consider nonhumans as relevant actors in design: In 2022, the conference Counterparts: Exploring Design Beyond the Human addressed ways to challenge a "one world reality", aiming to explore "what happens when we shift away from human-centred and universalist views of design and begin contemplating future ways of co-existing and co-emerging with others on this planet" [15]. In "A material-centric approach in nonanthropocentric design", the results of a workshop for design students is discussed, which proposed a "speculative, material-centric design approach to engage discussions towards post-Anthropocene scenarios by rethinking the entanglement of human and non-human actors" [16]. However, as postanthropocentric discourses in design are still emerging, examples from design education are still limited. For instance, in Turkish context, industrial and product design departments usually aim to provide skills that satisfy the requirements of the industry and the user needs. "Being aware of the social and environmental problems caused by the dominant mass production and mass consumption cycles throughout the 20th century and also the 21st century" [13], many departments started to involve sustainability in their curricula. Nonetheless, this inclusion is still driven from eco-modernism, sustainable development, or economic growth purposes.

4 A WOOL-CENTRIC WORKSHOP OF SPECULATIVE SCENARIOS

This study discusses the results of Making Felt Castles workshop, conducted by the author for a nonanthropocentric framework, where the students worked with wool material to engage with speculative and non-anthropocentric approaches. The workshop took place in Istanbul Bilgi University, Turkey, and was a part of summer internship courses in 2019, organized by the research assistants of the faculty. On total, 8 workshops with various themes were opened by different instructors, and students made their top 3 choices based on their interests. This workshop was proposed from the department of industrial design, still, students from the whole faculty were welcome to join. Initially, 27 students applied as their first choice, and a total of 20 students were selected to attend the course. The students were primarily in their first year, from departments of industrial design, architecture, and interior architecture. Most of the class were from Turkey, except for two foreign students not familiar with Turkish language. Accordingly, English became the main language for presentations and juries during the workshop. The workshop consisted of many complementary exercises to get to know felting and materials in design. However, in this study, the main exercise and some of its results will be shared. Design brief for this exercise as a group project was as follows,

"In this workshop, you are expected to design a planet for a wool-based life form, a creature evolved to suit the life on this planet, the living area of this creature and the daily life objects it uses. In the end of the workshop, you are expected to present the daily life of this creature, and how this planet has its life cycle. We (human beings) are carbon-based creatures. But our support structure is also based on calcium and many other inorganic materials. Takes this example into consideration."

The main aim of the 2-week workshop was to change the narrative of our current world scenarios to focus on wool material as the main substance, and the main topic was worldbuilding for wool-based life forms [17]. It also intended to introduce students to felting method and wool material. For the method, the wool-based life form was inspired by speculative design approaches through a traditional and

contemporary craft method, named felting. Felting was chosen as it allows for a direct hands-on approach with wool material, it requires minimal tools. For felting, unlike some other textile making methods, wool material is applied without being spun, therefore students have a chance to experience the qualities and tactile feelings of the wool fibres. Also, the instructor had previous experience with the method as she experimented with it in previous years for her design practice, which allowed her to pass her own experiences to students. By doing the workshop, three outcomes were anticipated. Firstly, it aspired for students to interact with wool material in a non-conventional way. Secondly, it aimed to find out how to use wool and felting in out-of-ordinary situations, and if it could lead to different engagements with the material itself. When felting is made in this non-conventional way, it was foreseen that it could change our perceptions of felting practice itself, and how we perceive the material. Thirdly, it intended that using material and production techniques with speculative methods could trigger students' wish to continue experimenting with the dying craft of felt making.

Students were asked to think of a scenario for a wool-based life form and design a planet, in which this wool-based life form can exist in. Furthermore, as the wool-based life forms progressed, some groups were encouraged to think of a creature that evolved to suit the life on this planet, the living area of this creature and the daily life objects it uses. The planet could be designed for a parallel universe, an imaginary universe, a universe from a specific source. To design the planet, some instructions were suggested, but students were free to follow other steps as long as they could prove its consistency and relation to wool. They were also free to focus on any of the elements, such as only the planet, instead to reflect on the story, characteristics, layers and its relation to wool. Some inspiration sources from cartoons and fiction movies were included in the workshop briefs. For the presentation, it was left openended on purpose, to allow the students to come up with their stories first. The results of the workshop consisted of dystopic and utopic scenarios, with many different approaches to wool material. Some example results are shown below,



Figure 1. Student works and presentation for a wool-based life form, Versheet

"After 3000 years, the world has been ruined because of climate change and there is no atmosphere. Because of lack of atmosphere, temperature difference is huge and there cannot be any creature existing, except jellyfish. Jellyfish has succeeded to survive and evolve. Their feet are able to climb everywhere, and they no longer live in the water. Also, they have kind of hands that allow them to cut the plants and live their daily life. Jellyfish can only eat the plant that they grow in the cave and when they eat the wool stays in Jellyfish's body. As a result, jellyfish die slowly because of wool." (Sidar, Sedef, Kibar, Vedat)



Figure 2. Student works for a wool-based life form, Planut

"After a huge explosion of wool, a new planet came and it was Called Planut. The Planet is donutshaped planet made of wool. Half of the Planut is day and the other half is night. One year in our planet is 24hr in Planut. The creatures are called Bawools. Every sunrise a mountain of tiny Bawools are born. They grow by rolling around their Planut. Bawools are making their houses by themselves by turning around themselves. Bawools feed themselves in the rivers also to get health from rivers. To have some fun Bawools love to roll from higher places like the mountains. If Bawools get crashed into the trees, they need to go to the river to get well soon. At night when a Bawool become really big, it explodes every morning to give birth to many tiny Bawools." (Seda, Samirah, Tolga).



Figure 3. Student works for a wool-based life form, Wooland

"The land what had been separated by earthquake and had been exposed to mutation become a completely wool-based spiral island. The formation of the island is not fully completed, the creatures that exist on the island are moving and continue to grow. That's why, spiral island also constantly grows. As this spiral structure continues to grow, it will be a danger to the world. It will harm the plants and animals in the world and will completely disrupt the balance of the world. Because the world and living things in the world do not have any advanced features for living in a wool-based environment" (Asya, Berivan, Irem Nur)

As a result of the workshop, a final jury and exhibition was set in the faculty in August 2019; and afterwards, students were asked to evaluate the course in an anonymous form. As this was a part of the internship course, the grading system was as a pass or fail and contributed to gaining 2 ECTS credits. As the workshop was not graded and the evaluation took place after the students learned that all attendees who participated had successfully passed the workshop, the instructor believes that the answers reflect student's opinions and criticisms. In some ways, the workshop functioned similar to a traditional design course, asking students to expand their ideas and develop their designs along the way. A student commented "*The workshop was more enjoyable than I had expected. We had the opportunity to turn what we wanted / imagined into reality. Every day we presented the things we do regularly, so that our ideas change and expand with what we listen and tell."*

Some students stated they would continue experimenting with wool material and felt making method and that it allowed them to discover their creative identity, while some of them reflected on the difficulties of working with wool; "Wool was not an open material to manipulate it and create. But by using other materials with it helps us to do what we couldn't do with only wool." Also, some students had difficulties with the speculative aspects of the workshop especially at the beginning. One student wrote "I had difficulty at first because there was always a right because of my previous training, we had the opportunity to be completely free with our imagination in this workshop, which is something we are not used to. In design, I became aware of the effect of material on the design field, on existing living inanimate beings. Besides, I worked with a different material and I'm quite satisfied, I do some experiments at home."

Another aspect of the workshop was to challenge the relational outcomes and the designerly thinking process, by asking students how their final designs relate to their wool-based life forms. For instance, the character and its daily life objects they designed had to be consistent with the planet they created. A student reflected on the issue as follows: *"Unlike the planet we live in, our planet consisted entirely of wool. So, at some point, I had difficulty. For example, as the trees on the planet will be made of wool, anything that will be made of wood must be made of wool. In order for the living creature to survive, it must have certain characteristics that are related to the creature's body or internal system. And also, creature's daily life object had to be made of wool." This feedback was coherent with the workshop aims, as it intended to challenge student's way of thinking about materials and also about the world. In general, the workshop achieved the expected outcome, to introduce students to speculative thinking and reflecting on a material from different ways. While wool was a familiar material from everyday life.*

none of the students had previous experience on felting as a method, or working with it in design projects, and starting with this workshop led them to find creative and mind-opening ways to engage with the wool material.

5 CONCLUSIONS

As current design discourse assumes a separation between humans and nature, design education is primarily focused on human-centred and Eurocentric methods. To challenge this in design, intruders that bring in posthuman theories such as more-than-human, nonhuman or decentralizing approaches are needed [18]. Design from post-Anthropocentric discourses is being discussed more thoroughly in recent years, for instance through material-thinking, making-with or decolonial approaches [16, 18, 19]. The expanded definitions of design, which bring up nonhuman entities (such as materials and the environment) and challenges the anthropocentric assumptions could potentially involve more ethical practices, which foster symbiotic relationships between humans and nature. Accordingly, it is argued that further steps may be necessary to involve post-anthropocentric approaches in design education and study programs. As design operates within the broader systems, such as the ecological and social ones, design education should be considering how to approach these systems and contribute to the changing worldviews on how to coexist with nature and nonhuman entities. By acknowledging these, design educators could put forward values that go beyond consumerism and economic development ideas. The workshop presented in this study aims to expand the material agency part. These examples could be furthered by thinking of other materials, other nonhuman entities or other perspectives that involve post-Anthropocentric discourses in design and education.

REFERENCES

- [1] Crutzen P. J. and Eugene F. Stoermer. The 'Anthropocene', 2021. (Springer International Publishing).
- [2] Forlano L. Posthumanism and design. She Ji: *The Journal of Design, Economics, and Innovation*. 2017 Mar 1;3(1),16-29.
- [3] Roudavski S. Interspecies Design. *Cambridge Companion to Literature and the Anthropocene*. 2021:147-62.
- [4] Heskett J. Industrial design. New York: Oxford University Press; 1980.
- [5] Megens C. J. P. G., Peeters M. M. R., Funk M., Hummels C. C. M. and Brombacher A. C., 2013. New craftsmanship in industrial design towards a transformation economy. In Proceedings of the 10th EAD Conference-Crafting the Future. Gothenburg.
- [6] Sparke P. Introduction to Design and Culture. 1987. (Westview Press)
- [7] Atkinson P. Boundaries? What Boundaries? The Crisis of Design in a Post-Professional Era, *The Design Journal*, 2010, 13(2), 137-155.
- [8] Walker S. Design is ... Lost, *The Design Journal*, 2023, 26(1), 4-6.
- [9] Buchanan R. Education and professional practice in design. *Design Issues*, 1998, 14(2), 63–66.
- [10] Dutton T. Design and Studio Pedagogy. Journal of Architectural Education, 1987, 41(1), 16-25.
- [11] Tovey M. Designerly thinking and creativity. In M. Tovey (Ed.), *Design pedagogy: Developments in art and design education*, 2015, pp.1-14. (Surrey: Gower Publishing Limited).
- [12] Oxman R. Educating the designerly thinker. *Design Studies*, 1999, 20, 105-122.
- [13] https://www.bilgi.edu.tr/en/academic/faculty-of-architecture/industrial-design/ [Accessed on 2023, 4 May].
- [14] https://www.archinet.me/articles-page/the-third-exit-designing-a-better-future
- [15] https://counterparts.ch/about [Accessed on 2023, 6 March] (October 2022).
- [16] Zhou Z., Brück V. and Holzbach M. A material-centric approach in non-anthropocentric design, In Lockton, D., Lenzi, S., Hekkert, P., Oak, A., Sádaba, J., Lloyd, P. (eds.), *DRS2022: Bilbao*, 25 June - 3 July 2022, Bilbao, Spain.
- [17] https://www.tumblr.com/makingfeltcastles-blog [Accessed on 2023, 4 May].
- [18] Tarcan B., Pettersen I. N. and Edwards F. Repositioning Craft and Design in the Anthropocene: Applying a More-Than-Human approach to textiles. *Exchanges: The Interdisciplinary Research Journal*, 2023, 10(2), 26-49. Available at: https://doi.org/10.31273/eirj.v10i2.973.
- [19] Laurien T., Jönsson L., Lilja P., Lindström K., Sandelin E. and Ståhl Å. 2022. An emerging posthumanist design landscape.