SUCKING OUT CONSUMERISM FROM DESIGN EDUCATION
a practice based assesment of consumerism in status quo design education

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POSITION STATEMENT

Being a white male raised in a privileged Western-European context I oftentimes view topics such as "care", "repair" or "living with nature in mind" as rather novel or radical, leaving me to present them similarly. I invite the reader to be aware of this bias, acknowledging the immense body of knowledge that exists on this topic within feminist and indigenous communities worldwide.

My participation in activist organizations such as Extinction Rebellion (an international movement for climate and justice) and my interest in capitalism have made me steer to this topic. I acknowledge that this background makes me present the topics of this paper in a certain light, which I invite the reader to be attentive to. I realize that being critical or "not neutral" as a scientist is something still largely controversial, especially when your income or status depends on it. I want to speak out my support to those who work hard to show that science is and should never be neutral.

ABSTRACT

This research makes use of a situated practiced-based approach to answer the question; are designers of the future being educated to prevent consumerist tendencies in their work? Rooted in theory on critical design, reflective design, and care ethics, this pictorial presents the outcomes of a reflective workshop combined with speculative responses relating to design and education. With its critical assessment of design education at TU/e, this work aims to spark conversation in global education and design research communities.

KEYWORDS

Consumerism; Design Education; Critical Design;

1.5 cubical meters of vacuum cleaners collected in less than a week in Eindhoven, a medium size city in the Netherlands (220.000 inhabitants)

INTRODUCTION

During my job at one of the two "mileustraten" (recycling centers) in Eindhoven I get confronted with a pile of post-consumer electronic waste every shift. Being a student at one of the Dutch design universities (TU/e) I wondered: What is the role of designers in this and are we "designers of the future" being educated to prevent this from happening?

The answer to the first question has been made increasingly clear by various bodies of work. Within the current system, design labor has been said to be "subordinated to capitalist interests and is increasingly enlisted in the service of late-capitalist global brands" [3]. Not only do designers create products that support capitalism, but more importantly the products they designed played an important role in establishing hegemonic capitalist norms in which consumerism thrives, an example being the design of the shipping container which established the norm to outsource labor [16]

Being aware of the relationship between design and consumerism, several designers and researchers have started to rethink design and educational practices. Examples include Postcapitalist design, which is inspired by the Italian anti-design movement, the DESIS network, and other historical streams of design [37]. Also, Post-Growth education is introduced, which focuses among other principles on the development of ecological literacy and introducing a plurality of futures [35]. However, existing research lacks a critical assessment of the status quo of design education within the scope of consumerism.

I try to broaden the understanding of the status quo in design education, questioning; Are me and my fellow "designers of the future" being educated to prevent consumerist tendencies in design? I explore the topic through a practice-based approach, by making use of a random electronic object that I notice oftentimes as e-waste; the vacuum cleaner.

I present two types of findings in a combined manner: (1) reflective quotes and drawings from a critical-making workshop with 10 fellow Industrial Design master students (2) alternative visions of vacuums and design education as speculative responses to my educational findings. Both the workshop and speculative accounts are rooted in the existing literature on care ethics, critical design, and reflective design.

The situated results of this research are not intended to be generalized but rather aim to be explorative in nature. The generated knowledge is aimed to be inspiring for both educators and design researchers, helping them to spark more constructive conversations on freeing design education from its capitalist and consumerist tendencies.

VACUUM CLEANER HISTORY

To understand the critical design practice within this research it is relevant to understand the historical relation between the vacuum cleaners and consumerism: the societal obsession with acquiring consumer goods for individual happiness. From a household average of 0.5 vacuum cleaners in the 50s to 2 in 2009 [11], what's the history of this ever-expanding market?

The first vacuum cleaners appeared around the 1900's when most families relied on cleaning with dustpan and broom. Only the well-to-do could afford the domestic labor of underpaid young black women [21]. However, with the WOI taking away a large part of the same workers [25], rich families faced a "problem" to be solved by the vacuum cleaner. The original intent of the technology was thus never to improve the dreadful work of many, but to cater to the wishes of a few individuals.

In the post-war era, the consumption of vacuum cleaners rose sharply, as incomes grew, middle-class homes electrified [28], and consumer electronics became more afford-able. However, this increase in consumption occurred at the expense of communities. The designs of vacuum cleaner advertisements relied on heavily gendered marketing. The feminist Wages for Housework movement also made clear that for cheap production by male workers factories relied heavily on women's unpaid work within the household [5]. More recent examples show that vacuum cleaners are designed to rely on outsourced technology, which hides child labor in com-munities worldwide [1]

Innovations like cordless tools and robotic vacuums have made vacuum cleaners more con-venient. The popularization of plastic in the 1940s and the use of shipping contain-ers for outsourcing drastically reduced prices, making these appliances accessi-ble to the masses. But at what cost? The economics of mass-produced, cheap plastic products have led to a single-use culture [26]. Where vacuum cleaners made in the 60's could you a lifetime [33], vacuums today last a median of 6 years [20], leading to rapid resource extraction and significant post-consumer waste.

What has changed over the years? Despite improvements in weight, efficiency, and price, the amount of time spent on house-work has not significantly decreased [18] since the invention of the vacuum cleaner. As new technologies emerged, public aware-ness of cleanliness and nutrition increased [18], raising the demand for housework and leading to a growing reliance on technol-ogy.

CARE ETHICS AND DESIGN
Care ethics literature

Although care can be defined in various ways, feminist ethicists Joan Tronto and Bernice Fisher, describe it as "an activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment" [30]. The work of care ethicists is proposed as an alternative to the "uncaring" aspects of neoliberalism [6], which tends to promote individualism and independence. In its opposition to individualism, care might be a relevant alternative to consumerism, being based on acquiring consumer goods for individual happiness. In care ethics, individualism is opposed by the interdependence of humans and non-humans alike.

Care has also become a recent topic of interest in the design community, with examples relating to the fields of robots [13], clothing [36], and repair practices [17]. Care ethics relates to design in the belief that "The rational approach to design, driven by efficiency and dictated by the logic of the market, is not able to care for life in all its dimensions" [36]. The logic of care ethics can be applied in various variations: caring about (topic of interest), caring with (tool for care), or caring through (using something to care for something else) [15]

design prompts for workshop
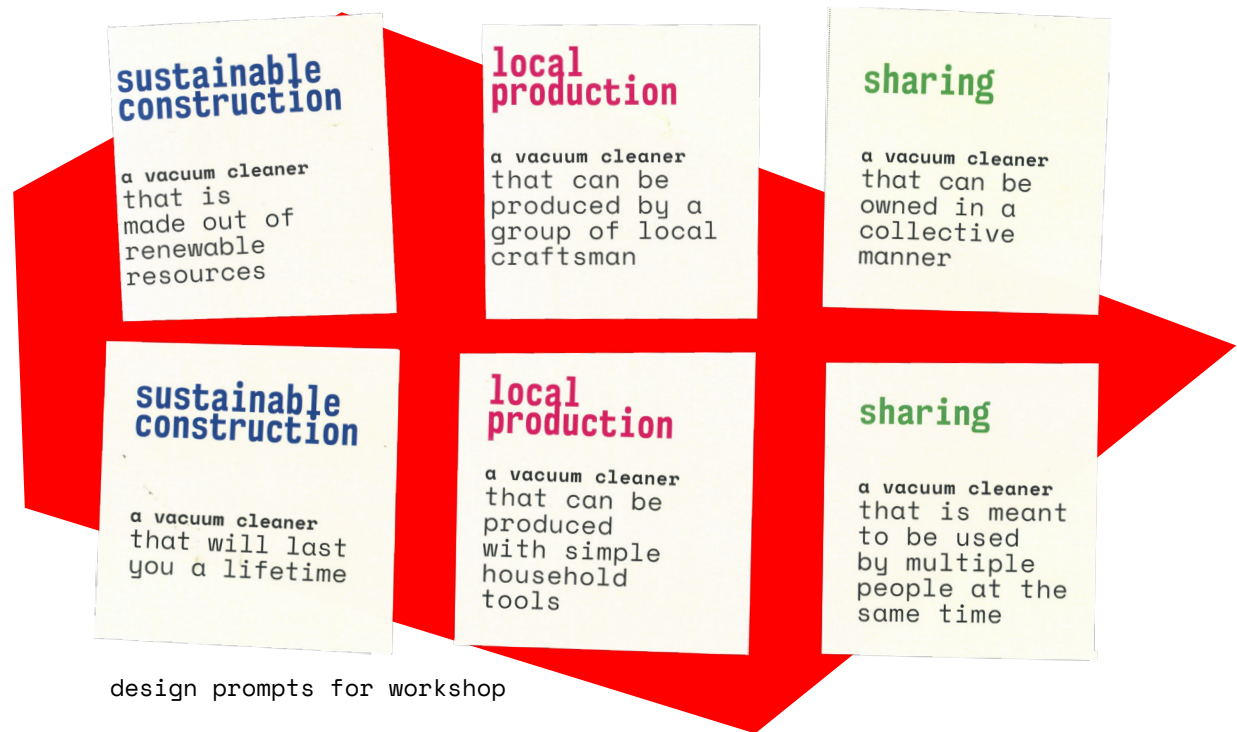
Care method

Within the context of this research, care is used to define the intent of the critical design activities, opposing it to consumerism. As described in the history of design, it's mostly nature and local communities that bear the brunt of consumerist behavior. By designing with the intent to care for nature and local communities, I try to bring more balance to this equation. From now on I will call this specific design intention "the caring intent".

Within the context of the workshop, the caring intent manifests itself in a set of cards. Instead of receiving the full intent at once, students receive 3 rounds of cards with different facets of the caring intent (see image) to make sure that all parts of the caring intent are considered. Both renewable construction and long-lasting cards relate more strongly to care for nature, although retrospectively in a relatively limited and human-centered manner. The other four cards revolve more around caring for local communities; supporting local economies and interrelated use.

The design prompts on the cards embody different variations of care: designing an object that lasts a lifetime, might be considered an act of care for the object, whereas designing an object that can be produced by a local craftsman can be considered care through design, as the object is used to care for the jobs of others.

CRITICAL DESIGN
Critical design literature

Although critical artifacts appear in the whole of design and art history, the introduction of Critical Design has helped to popularize its practice. The term was originally introduced in Herzian tales in which it is explained as making use of design to reflect on "cultural, social and ethical impact of technology" [9]. In critical design the "designed artefacts acts as an embodied critique or commentary" [2], opposing it to affirmative design. Thought and conversation sparked by the design are considered more important than the usability of the object. Critical design largely relies on speculative design, introduced by the same Dune and Raby [10] helping to explore future possibilities, also within an organizational context [24]. When speculating, designers often reconfigure contemporary technology in novel ways [2] to create alternative ways of being.

Critical making sets itself apart from a critical design by its community-oriented approach, focusing on the shared act of making [19] instead of the shared discussion of an individually made object. Being material-driven and embodied it offers an alternative to critical thinking (more abstract and linguistically-based), which is typically used to spark debate on controversial topics (such as consumerism).

reconfigurations

provocative presentation
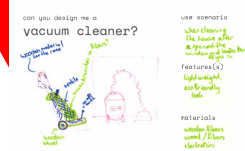
critical concepts

group work and discussions

Critical design method

In the context of this research, speculation is used as a tool to explore future possibilities of consumerist-free design education. The objects and speculative texts critically revolt against consumerist industrial design intends such as "improving convenience" or "decreasing cost of production" by switching design intent to "care for local communities and nature". For the objects, this is done by reconfiguring existing electronic products (various parts of broken vacuum cleaners) and materials (felted wool, paper, plastic sheets) to create alternative ways of using vacuum cleaners. The design examples' goal relates to critical design; acting as a provocation for the field of design education.

The workshop relies more on critical making, as alternative vacuum cleaners are designed in a group context (3/4 students). By designing vacuum cleaners based on a critical intent the workshop aims to spark conversation on the importance of caring for local communities and nature through design, specifically in the context of our education at the TU/e Industrial Design Master.

REFLECTIVE DESIGN
Reflective design literature

Design and reflection have been used in a combined manner, especially in the context of critical design. As explained earlier, the role of critical design is not always to be usable, but rather to provoke the reflection of the user. Senger et al. [27] note that "although critical designs have the potential to spark reflection by users, they are often directed at designers themselves, to defamiliarize and thereby open up design spaces". The extremeness or unusuality of objects in Critical Design helps question rather than "passively propagate, the existing politics and culture" [4]. In reflective Design, "interpretive flexibility" and "participation" are mentioned as important characteristics of constructive reflection by design [27]. It sees important use in the role of reflection for rethinking dominant metaphors and values.

An important distinction to make within reflection is the difference between reflection-in-action and reflection-on-action. Reflection-in-action, a concept introduced by Schön relies on active, in-the-moment reflection and sets itself aside from reflection-on-action, which takes place after the event and is often more structured in order [23]. Were the former form of reflection relies on film or notetaking to be documented, the structured approach of reflection-on-action can be documented for example with structured sheets.

examples of reflection sheets

Reflective design method

Within the process of designing alternative vacuum cleaners reflections happened both in and after action. An example of a reflection-on-action is the realization of a lack of material knowledge when having to select a renewable material. However, since reflection-on-action is rather hard to document amid a process, the workshop relies more on a structured reflection-on-action.

Bell and others' idea of defamiliarization is used in the combined stacking of care prompts. Since students often focus on one important aspect in their design, having to design for both long-lasting, shared, and locally producible, leads to unusual process and design outcomes, so, making it easier for students to reflect.

4 reflective sheets were introduced to document both personal and group reflections. The sheets are structured to bring to the conscious mind, the relation between the specific critical design prompts (now) and past and future design activities within their education. The sheets questioned designers' familiarity with the prompted topics and the valuation of the same topics within the department and their future work.

"If [care for local communities & nature] is part of your design [assessors] love it, but they would not promote them"

★ local craftsman → most unknown

student comments

Guide for a DIy vacuum cleaner

The DIY vacuum cleaner is based on open-source principles and intends to be produced by everyone instead of a few factories. The design is based on readily available parts and so promotes reuse over using virgin materials. The publicly available guide for construction clarifies how you or a neighborhood crafts person could make a comparable vacuum cleaner.

FINDING 1
Lack of basic knowledge

"I used metal [as a renewable material], but maybe it's not that sustainable … ?". During the reflective fragment of the workshop, students rated their knowledgeability on designing with renewable materials, to support sharing or local production with their designs. At least half of the participants felt they lacked the knowledge to make educated decisions on one or multiple of topics. Students say that "sustainability" and "shared" have become buzzwords in our study, though, projects can receive an excellent without ever considering them since they are not part of the assessment rubrics. Students are thus expected to see using renewable materials or supporting local production as just another topic of interest (rather than a necessity to prevent consumerism). The basic knowledge courses students have to follow in preparation for their TU/e Industrial Design master's are largely aimed at the electronics industry. They consist for example of basic electronics and programming and for-profit entrepreneurship, relating to corporate funding and startups.
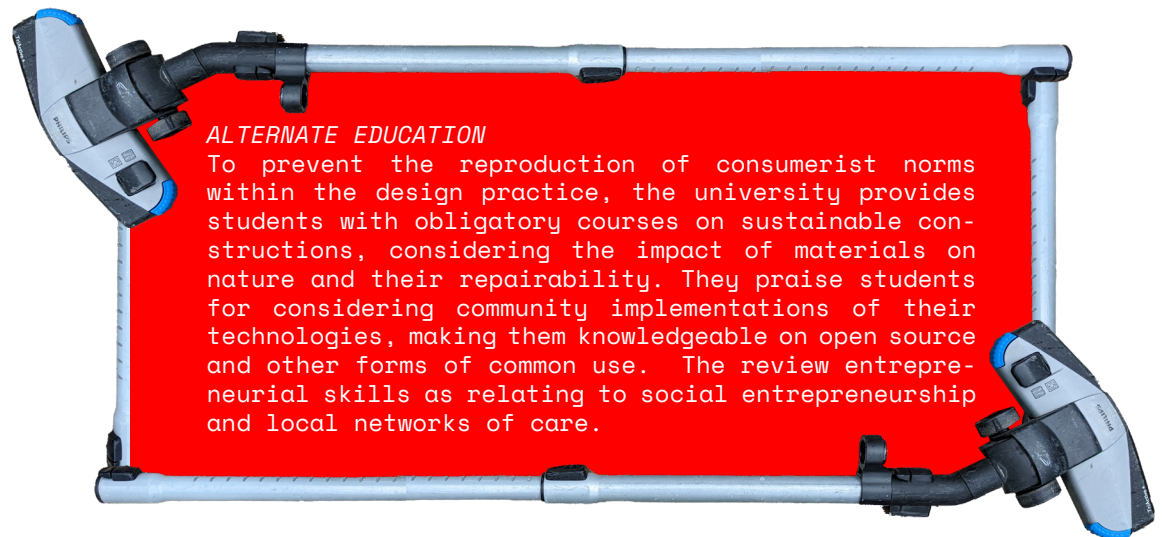
ALTERNATE EDUCATION
To prevent the reproduction of consumerist norms within the design practice, the university provides students with obligatory courses on sustainable constructions, considering the impact of materials on nature and their repairability. They praise students for considering community implementations of their technologies, making them knowledgeable on open source and other forms of common use. The review entrepreneurial skills as relating to social entrepreneurship and local networks of care.

A shared vacuum cleaner, both in use and ownership. Two people can jointly make use of the suction power of the cart that is being pushed through the neighborhood. People with dusty homes use lengthy hoses that reach all corners of one's home. All parts and paint colors are freely distributed and parts can be installed and maintained by a local handyman


use scenario

In uni, with classmates

-Student house

use of familiar contexts in workshop

FINDING 2
Reproduction of norms

When discussing the idea of CommonVac with one fellow design friend, he stated that he, as well as his housemates, would not be able to fit a visit of the shared vacuum cleaner in their "busy calendar or the hectic life" and would rather own a vacuum individually. This scenario of asking your friends and possibly rejecting an alternative design, is a situation that occurs often within our education, as we gather most input from our friends and relatives; we practice right? Sheets of the workshop show similar examples of basing our design on a related scenario; for instance, seeing "shared usage" in the context of a student house, instead of for example a public space. However, not being asked to gather input outside of our bubble leads to (unintentional) reproduction of inequality or capitalist matrixes of domination "in large part due to "institutionalized and unconscious bias" [8]. We as designers are educated to listen to people's needs, yet, end up "giving people what they want" [29], which is very different from encouraging the internal changes that might be vital for social change [29].
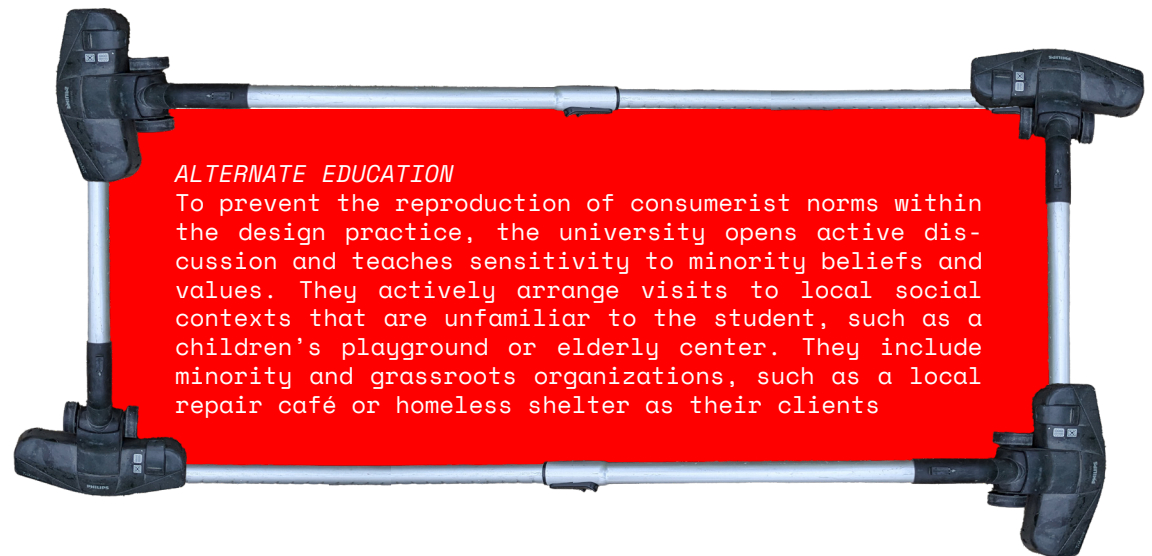
ALTERNATE EDUCATION
To prevent the reproduction of consumerist norms within the design practice, the university opens active discussion and teaches sensitivity to minority beliefs and values. They actively arrange visits to local social contexts that are unfamiliar to the student, such as a children's playground or elderly center. They include minority and grassroots organizations, such as a local repair café or homeless shelter as their clients

FINDING 3
Techno-optimism

"I am not sure how to not use electronics" exclaimed one of the students during the workshop. This is not weird, considering the historical relationship between TU/e and electronics Conglomerate Philips [14] and the fact that most design universities in the Netherlands are technical universities. Our assessment criteria describe the realization of our designs as creating a "prototype with multiple sensors/ actuators", evaluating "technical drawings" and "PCB design" [31]. In the reflective segment of the workshop, students describe how the incorporation of technology and innovation are both being highly important aspects for assessors, rating them above sharing, and local production. However, over-reliance on technology within design marginalizes indigenous knowledge [34]. Also, techno-optimism might lead to inequality within communities since the benefits of technology are not equally distributed between men and women [32]. Lastly introducing more and more technology-infused designs in the market might lead to stronger dependence or techno-lock in [22], raising our standards (cleanliness in the case of the vacuum cleaner) and so increasing our consumption.

"I am not sure how to not use electronics [to make this cleaner]"

A felted wool cover for your shoes to clean the dust. They might not reach all corners, but aren't we a little too obsessed with those anyway? Made out of the wool from the "Kempische Heideschaap" (a local sheep breed) and paper lint, they can be easily made and maintained locally.

"Have you considered adding a moist sensor on the sole?"

ALTERNATE EDUCATION
To prevent the reproduction of consumerist norms within the design practice, the university broadens its education on technology, for example on the technology of repair or more local or indigenous interpretations of technology. Designers are taught to question the necessity of including electronics just as they question the need for other design decisions.

reflection (2/4)

How **important** are sharing, local production, sustainable construction deemed in the master Industrial Design at TU/e? And what **other** topics or features might be deemed more important?

Assessors couldn't care less   Assessors loves to see this

reflection (2/4)

How **important** are sharing, local production, sustainable construction deemed in the master Industrial Design at TU/e? And what **other** topics or features might be deemed more important?

Assessors couldn't care less   Assessors loves to see this

incorporating tech and innovation rathed more importantly than local,sustainable, shared (yelllow)

A MANIFESTO

Dear fellow students,

It is time to demand some drastic change and not ignore
That our education supports the big technical capitalists at core

Because for you to pass oh they will insist
"A led strip or other smart technologies is what we missed"

Who cares about the use of our design for society? If you can pass
"Just ask some friends and do a quick user test"

"We provide great collaboration with Volkswagen, Philips, or another BV"
Because the only collabs to be offered bring big bags to TU/e

Ooh please don't get too radical in your PIV (ed.vision statement)
or they will ask you *"What's the use for industry?"*

Dear fellow students,

We should demand collaboration with NGOs or social workers
That care about our local communities instead of their pockets

To include courses in equity and sustainability cross-departmental
Instead of having physics or calculus as fundamental

And instead of rich interactions course number three
We have technology of repair as part of our technical degree

We teach designers to listen carefully to those labeled as outliers or minority
And so become the Netherlands' first caring design university

Dear fellow students,
Join me and demand
For design and care to go hand in hand
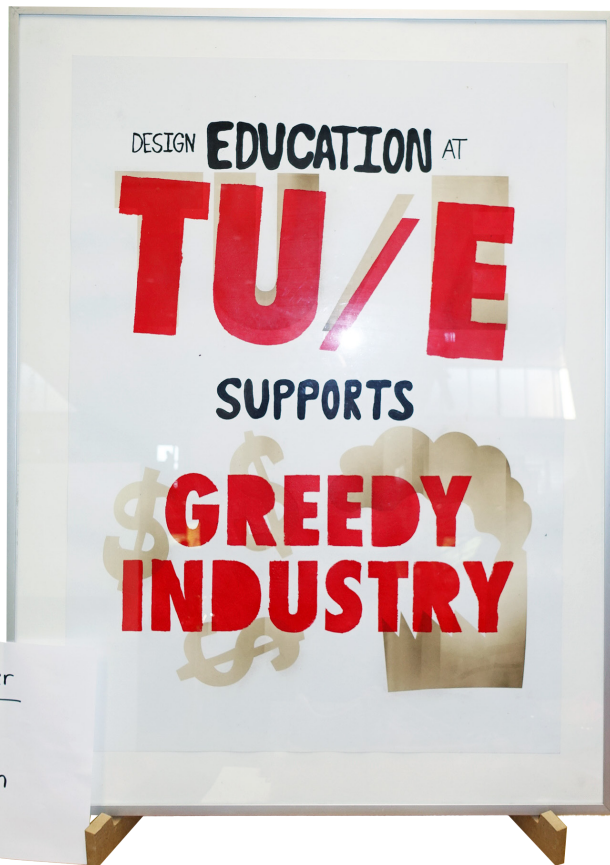
CONCLUSION

Based on the insights from three critical-making workshops with a sample of 10 students from the TU/e Industrial Design Master this paper has presented the following topics (1) a lack of basic knowledge on materials and processes to care for nature or communities through design (2) an accepted lack of outside or alternative perspectives in design processes (3) obsessive promotion of including electronics in design.

The findings from the workshop are in exact opposition to the characteristics of ecological literacy, plurality of ideas, and enactment of degrowth that are presented in both alternatives to consumerism; post-capitalist design and post-growth education. Thus, I have come to the preliminary conclusion that my design education supports consumerism, rather than preventing it.

DISCUSION

Although the aim of this paper is not to generalize, I believe the same results might be found in other Dutch or non-Dutch design universities. With the lack of public financing, universities are forced to pursue other forms of income, which has resulted in growing ties between universities and the industry (that thrives on consumerism). Cernat even reasons that "the conception of the knowledge as a public good has been abandoned in favor of applied research serving corporate interests" [7].

Based on this research, I hope to direct more future efforts to free universities from their connections with uncaring industries. Basing myself on care principles; how can we direct our knowledge creation in life-sustaining directions? How can universities be interrelated in their struggle for academic freedom? How can students set up networks of care, to support and learn from each other's consumerist alternatives?

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