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Christian Villum

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Ethical Design: The Competitive Edge of the 21st Century?

Living in today's technology-driven world, we are all subject to the consequences of design decisions in our everyday lives. Choices that affect not only the shape and function of digital technologies, but their ethics and thus the lives and welfare of consumers. Companies' ability to design ethically is proving more important than ever.

By Christian Bason and Christian Villum

The consequences of design choices and our ethics — that is, the concepts and principles that guide us in determining whether our actions ultimately help or harm society — sit in the very fabric of the products and services that we make, for better and for worse. But with the rapid scaling of digital technology, these consequences are propelled to unprecedented heights.



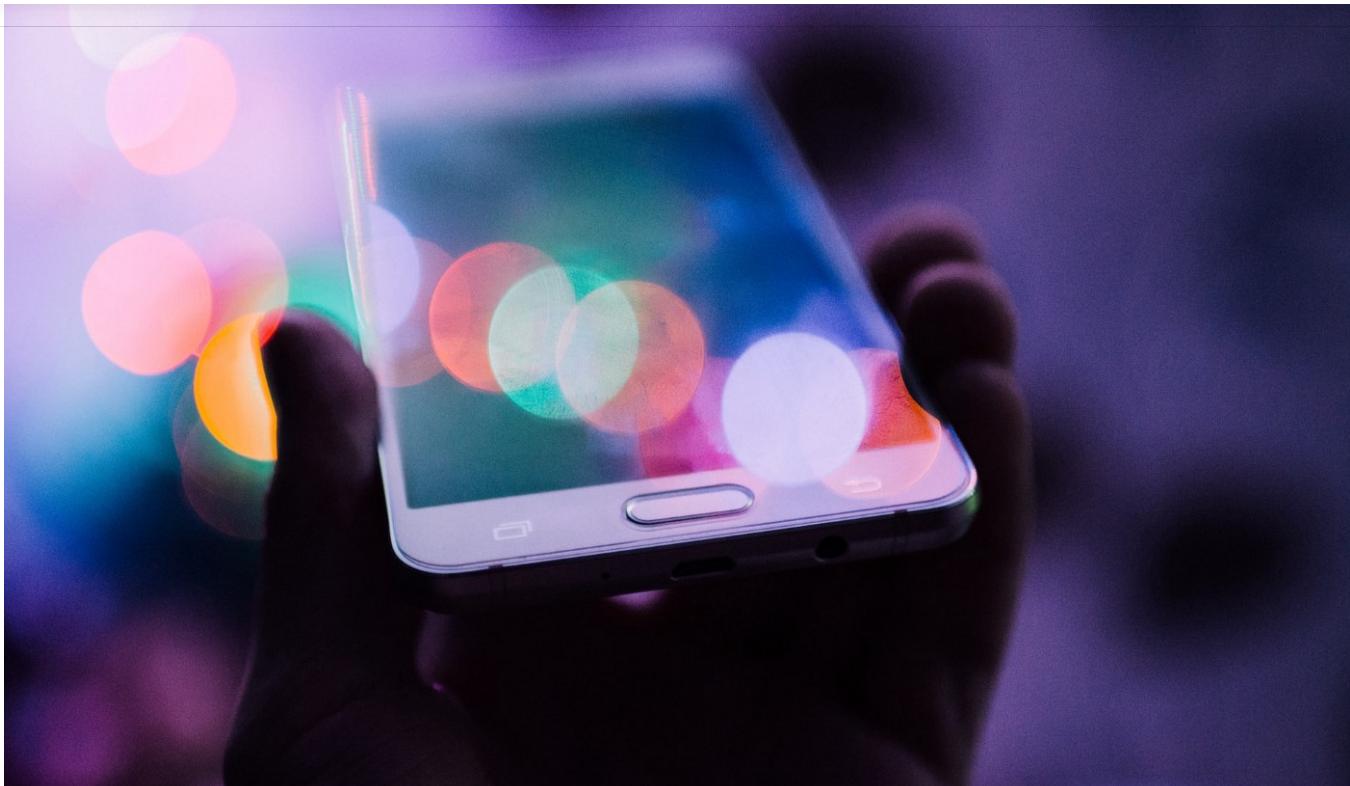
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To illustrate this point, let's consider a flashy new credit card that captured headlines around the world. Developed in partnership between Apple, a technology firm, and Goldman Sachs, a bank, the card promised customers a range of cutting-edge features.

According to the marketing pitch, this included no fees, daily cash back and seamless integration into Apple's mobile devices, as well as a "new level" of privacy, security and transparency. Finally, the card allowed consumers to analyze their spending patterns and calculate how much they could save in interest charges by paying off different portions of their balances. All of this is powered by some rather savvy artificial intelligence algorithms.

Now let's meet three people who all played different roles visà-vis the Apple Card.

First, meet Steve. Steve is a customer who was excited by all its smart features and thus signed himself up for it.

Second, meet Tim. He's the CEO of Apple. Tim has a lot of employees; let's pick one of them — we'll call her Lucy. She is one of the programmers who took part in crafting the



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Steve, being really happy with his card at first, convinced his wife to get one, too. But soon he made a startling discovery: despite the couple having a shared economy, Steve's credit limit on this card was ten times higher than his spouse's. No one could explain why: the Apple Card's algorithm simply made this highly sexist assessment. Dozens of other customers stepped forward and soon social media overflowed with scathing critique of the new product.

Tim naturally didn't decide for his new prestige product to be misogynist. But he faced massive pushback from this story, as did his company and its banking partner. We can imagine him being even more frustrated by this incident than Steve.

Lastly, our imaginary Lucy (the only made-up character of the three in this true story) surely didn't put that specific gender bias attribute into the software code either. In fact, we could imagine she was ashamed of having helped put it into the world and probably considered changing her job as a way to make amends.

Navigating unethical design

All three people in the Apple Card story felt the undesirable consequences of unethical



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Apple many years ago, but you would imagine that a guy of his position would somehow fly above algorithmic discrimination. But no. No one is above that. And here is the real stinger: This is not just any algorithm cooked up by two guys in a basement for quick cash. This is the best artificial intelligence that the world's leading technology provider, in partnership with the world's most profitable bank, could build. It sets the highest possible bar for the future we're heading towards. And still it fails to tackle the ethical dilemma on which it stands: How to give people credit in a fair, balanced and transparent way.

The Apple Card debacle is emblematic of one of the big ethical challenges of the 21st century: technological solutionism. This balances extreme digital convenience against minimizing complex systemic challenges to a mathematical normative logic. This logic goes as follows: technology has an answer (actually, an app) for all our problems.



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Our society is still defined by biases that are largely invisible at face value, but all too present in the data that it generates. Including the very data that was used to train the Apple Card algorithm. Our current solutions don't fix the problem. They just gloss it over.

The wider point is that algorithms, by definition, are biased to some degree since they weigh certain parameters more than others. The challenge is to choose which biases we can live with. Since biases of the past may not be the biases we want in the future, the algorithms that control people's lives are inherently political: They are always up for negotiation.

Opposing the trend

Unsurprisingly, the opposition towards unethical black box artificial intelligence algorithms is growing. With global currents such as the Silicon Valley "tech-lash," we have seen Google employees doing walkouts to protest their AI development work being used for military purposes.



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We also see a growing Chinese state surveillance overreach which has reached a disturbing pinnacle by introducing a social credit score system to limit social services, access to train tickets and flights to misbehaving citizens. It is becoming ever clearer to citizens (and CEOs, programmers, etc.) around the world that ethics are not automatically baked into the digital products and services they either make or use on a daily basis.

This begs the question: will a more ethical approach among companies to shape our digital future be not only a utopian fantasy, but an actual demand from an increasing part of the global population in general, and global workforce in particular? Could it be that Steve, Tim and Lucy — or at least Steve and Lucy — want a different digital future? Or, more accurately, could it be that they demand a different digital future?

If so, it appears that finding a way to systematically act ethically is any company's best bet of remaining relevant in the future we are heading towards. Perhaps not only to stay relevant, but to stay competitive. Is ethical design the key competitive edge in the 21st century?

Designing for ethics

Within industrial design, a rule of thumb says that 85 percent of a new product's environmental impact is defined in the design phase. This means that if firms wish to reduce their products' footprint when it comes to sustainability, they must carefully consider how they approach the earliest phases of product development.





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A similar point can arguably be made when it comes to the design of digital products and services, including artificial intelligence algorithms. It is the early, front-end considerations concerning the ethical properties of a product or service that often times define how it ultimately will perform.

However, while much is still to be learned in firms and among designers about products with low, zero or even positive environmental impact, the field of “ethical design” in the digital space is even less mature. The example we opened this essay with is a case in point: if some of the most powerful and smart firms in the world can make such grave mistakes when it comes to ethics in their consumer-facing products, what hope is there that more down-to-earth organizations can fare better?

There is a pressing need to see ethics as a design challenge, and to start working in more reflected, nuanced ways to ensure ethical design becomes part of corporate and organizational practice.





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As famed designer Charles Eames once suggested, design is the process of arranging elements in a way so as to achieve a particular purpose. As a systematic, creative process for innovating in a human-centered way, design embodies a range of working practices that provide opportunities for making more ethical, responsible products and services.

Today, questions of ethics are not necessarily — perhaps even rarely — embedded into digital design work. However as the pace of technological development increases and more and more “intelligence” becomes available to engineers, coders and developers as well as leaders and CEOs as they build future products, we need to find ways to bring ethics and design much closer together.

The question then becomes: how might one embed ethical practices into the way in which products and services are designed? And might we start with one country — Denmark —





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years, starting in the 1930s, the highly functional, clean, well-crafted and unadorned aesthetic became characteristic of “scandi” coolness.





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Back then, it was mostly a question of uncluttering the home with simple, affordable yet modern furniture. This was achieved in part by using new technology in treating and shaping wood, in part through designing for industrial mass production.

Later, during the rapid economic growth throughout the 1960s, 70s and 80s it led to progressive design for such areas as play (think LEGO), air quality in homes (think VELUX) and water quality (think Grundfos). Today, the ambition of making life better through design is as strong as ever; it is still inherent to the Danish design DNA. Characteristics of this DNA include a human-centered approach, a holistic view of product environmental impact, and an ambition to create truly transformative products and services.

In this age of accelerating technological change, this means that design originating in Denmark should also consider the hidden, but potentially life-changing (or threatening) functions of technology in a deeply ethical way. We imagine that Danish designers (as well as CEOs, coders, etc.) could be among the first to embrace industry-wide codes of conduct or guidelines as they endeavor to shape the products that will shape our future.

Indeed, we (Danish Design Center) are currently working with a number of experts, design agencies, the Industry Foundation, and the Confederation of Danish Industry to create an “ethical compass” tool for designers engaging with clients that wish to leverage the power of artificial intelligence, data and data ethics, and behavioral design in new product offerings.





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The vision is to turn ethical design into a competitive parameter for Danish companies by making ethics an integrated design material in the development of new digital products, services and business models.

The compass will be co-designed together with larger corporations that are already in the process of applying ethical thinking to their digitalization strategies. Subsequently, the compass and associated tools will be tested with a range of small and medium-sized enterprises within fintech, healthtech and mobilitytech.

The tools will be made available as open source, and thus free for all to use, and at the same time they will be part of an educational offering targeted at designers and design agencies who wish to make ethics part of their offerings, and to SMEs who see the opportunity to strengthen their global competitiveness by building and selling ethical products.

This is one bet on finding a way to integrate ethics in design decisions at the earliest stages of the...





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Postscript: The Digital Ethics Compass toolbox is now available for free on the Danish Design Center website.

Christian Bason

Christian holds a Ph.D. and is CEO of the Danish Design Centre, Denmark's lab for sustainable growth by design. Before that, he was Director of MindLab, the Danish government's innovation team. He has authored seven books, most recently *Leading Public Design*; his writing has appeared in, amongst others, *Harvard Business Review* and *Stanford Social Innovation Review*. He is a lecturer at Oxford Saïd Business School, the European School of Administration, the Henley MBA, and Copenhagen Business School; and he is a member of the board for the Royal Academy of Architecture, Design and Conservation, The Rockwool Foundation's Intervention Committee, the Centre for Leadership, and a member of the World Economic Forum's Global Future Council on Agile Governance.

Christian Villum

Christian is Director of Digital & Future Thinking at the Danish Design Centre where he examines new ideas in the span between technology and design thinking. He has a background in maker technology, new business models, sharing cultures, open data, and open design, internet culture and hacktivism. His previous work includes cofounding and heading the experimental Platform Art & Technology hub, being a frontrunner in the use of Creative Commons content licenses and building global communities for the UK-based non-profit Open Knowledge Foundation. He is a co-editor and co-writer of the book *Open Source City*.

This essay is a part of the anthology “Ethics @ Work: Dilemmas of the Near Future and How Your Organization Can Solve Them”, edited by Kris Oestergaard (Re:Humanize Institute, 2022). Available [here](#).

