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Design for the Real World: A Look Back at Papanek from the 21st Century

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ABSTRACT

An advocate for responsible design, Victor Papanek had visionary ideas on design theory that he presented in his book Design for the Real World (Papanek, 1971, 2019). This paper presents an overview of his book from the perspective of cur-rent 3rd year industrial design students, members of GenZ, combined with the perspectives of the educators/authors who read the original edition of the book in the 70s and 80s. The perspectives of the educators combined with the interpretations of current day students (from very different generations) reveal an interesting story about the Austrian-born American designer and educator's writings. In this paper we reveal the continued relevance and critically analyze Papanek's writings by illustrating through twelve descriptive and reflective themes how his views on socially and environmentally responsible design live on. This paper highlights Papanek's values of designing thoughtfully and for all, while revealing the details on the relevance of his writings five decades after the original publication.

Keywords: Design for all, Design teaching and learning, Sustainability

INTRODUCTION

In 1971, Victor Papanek introduced his visionary ideas on design theory in his book *Design for the Real World*. In the fall of 2021, current 3rd year industrial design students, members of GenZ, read individual chapters the 2019 edition of this book (Papanek, 2019), wrote a critical review, and presented their overviews and findings in two lengthy class discussions that allowed them to 'read' the entire book. This paper presents an overview of his book from the perspectives of these future industrial designers combined with the perspectives of the educators/professional designers/authors who read the original edition of the book in the 70s and 80s (Papanek, 1971). The perspectives of the students and educators (from very different generations) reveal an interesting story about the Austrian-born American designer and educator's writings. In this paper we reveal the continued relevance and critically analyze Papanek's writings by illustrating how his views on socially and environmentally responsible design live on.

Taking his early design inspiration from Raymond Loewy, Papanek went on to study architecture with Frank Lloyd Wright. An early follower and ally of Buckminster Fuller, a designer and systems theorist, Papanek proposed principles of socially responsible design, both in theory and practice

ultimately working on collaborative projects with UNESCO and the World Health Organization. In *Design for the Real World* (Papanek, 1971, 2019), Papanek professed his philosophy that objects or systems work as political tools for change. He became a controversial voice within that time frame as he declared that many consumer products were frivolous, excessive, and lacked basic functionality causing them to be recklessly dangerous to the users. His ideas seemed extreme at that point in history although they were echoed by many environmental philosophers at the time, but perhaps viewed from the 21st century seem prophetic.

Papanek is known as being an advocate for responsible design and a representative for the first generation of the "environmental movement in design" (Skjerven, 2019, p.203), In his visionary ideas on how design could/should be practiced, one of his mandates was to think differently about ordinary people by putting users first when designing. He spent time observing indigenous communities in developing countries, working directly with, and studying people of different cultures and backgrounds. Papanek designed for people with disabilities often in pursuit of a better world for all. He also addressed themes that have continued to be overlooked in design in the 21st century - inclusion, social justice, appropriate technology, and sustainability.

Papanek ultimately earned the respect of many talented colleagues. He would go on to design, teach, and write for future generations. Opposing the ideals of planned obsolescence and the mass consumerism that fuels it, his work encompassed what would become the idea of sustainable design and decreasing overproduction for the consumer market. Themes from *Design for the Real World* remain relevant evidenced by various authors (e.g., Clark, 2018; Hawthorne, 2012; Fineder & Geisler (2010), and today it has become one of the most widely read books on design, resulting in Papanek's voice continuing to push designers to uplift their morals and standards in practicing design.

This paper highlight Papanek's values of designing thoughtfully and for all, while revealing the details on the relevance of his writings five decades after the original publication.

REFLECTIONS ON DESIGN FOR THE REAL WORLD

Papanek starts out the preface of his book thusly, "There are professions more harmful than industrial design, but only a very few of them" (Papanek, 1971, p. IX). This is strong language about a profession that many practitioners would profess is about helping people become empowered by the products that they use. As young students studying design and reading the first edition of this book in the mid 70s and 80s, we found these to be powerful words and expected that the career that we were preparing for would find ways to better the world through design. Yet today, 50 years after its original publication, industrial designers are still part of the problem, responsible for creating objects that don't always consider end-users, pushing consumerism, and when objects are discarded, they contribute to chemically harmful e-waste and mounds of non-degradable stuff.

While some other scholars have looked at Design for the Real World and Papanek's contributions to design practice and theory, there is no research that highlights the perceptions of students. For instance, Skjerven (2019) critically reviews Papanek's contributions and places them into the Nordic context; Clarke (2018) investigates the 'politics of design' and highlights some of Papanek's contributions such as codesigning and users as crucial participants in the design process; and Hawthorne (2012) highlights Papanek's work as the "humanitarian design movement" (p. 32) and his anticipation of universal design debates, slow cities movement, and the maker culture (p. 34). What each of these scholars has in common is that they identify Papanek's work as posing timeless queries around equity, moral issues, environmental concerns, and human access to designed things.

GENZ MUSINGS ON DESIGN FOR THE REAL WORLD

Papanek chose to organize his book in two parts: How It Is, defining and criticizing how design was taught and practiced in the 70s, and How It Could Be, giving suggestions for better ways of engaging and practicing design. Our GenZ industrial design students read the most current 2019 publication. The following twelve descriptive themes are summaries of what the students learned from each chapter by reading *Design for the Real World*.

Design Art and Craft

The idea of an artist expressing their own thoughts even if it does not benefit the consumer spread from arts to crafts and designs. Papanek, as an example, explained that the machine (camera) has taken over the artist's job in landscape art. Papanek claims photography "made 'copying nature' possible for anyone with enough wit to push a button" (Papanek, 2019, p. 44). Many artists took the opportunity to express their thoughts of the machine through various art forms, sometimes in a bullying way poking at the machine in hopes it would eventually go away. Papanek says machines could never make mistakes and then gave examples of artists who purposely made mistakes and learned from them. Papanek believes anyone can be an artist without even trying.

Design as Complexly Functional

Should things be designed to be functional, or aesthetically pleasing? Papanek explains that these questions are the yin and yang and shouldn't exclude each other. The function complex is illustrated by a circle that represents six segments: Method- how something is made, Association- what meaning we tie to an object based on the past, Aesthetics- how the look of an object influences its perception, Need- often superficial wants and desires that lead to unnecessary products, Telesis- objects must come from and belong in the spaces they are in, and Use- does the product successfully fulfill its operation. If these methods are practiced wrongfully, the way we design things can hurt the world and therefore us. Furthermore, designer's need to take cues from nature to inform the way we make our things because we see beauty in the patterns of nature, but we also see a complexity that is difficult to understand.

It is elegant on the surface, but incredibly complex underneath. When designing, none of the arrangements of patterns are the right decision, although some of them may seem righter than others due to the intended use. Often designers will naively think that form follows function but the better saying by Frank Lloyd Wright is "form and function are one" (Papanek, 2019, p.6). This is not to be confused by thinking that creating optimal function will lead to a good form. They are both variables that must be married harmoniously to create an optimal product or system.

Industrial Design as Broken

Design has evolved according to the human need at the time. Design institutions such as the Bauhaus helped define taste. Most major design schools in America continue to utilize Bauhaus design courses that have undergone several revisions. Papanek began to question the design establishment, to critique contemporary and unsustainable development, and to propose alternatives. Despite the evolution of design, Papanek faulted designers for prioritizing capital over safety. Papanek believed the aim of design is to alter human surroundings and tools. Designers have a great deal of responsibility for the consequences their creations have on society. Their social and moral judgment must be brought into play long before creating, choosing whether this design will be on the side of the social good or not. In the face of our modern society's ever-increasing complexity, there are more things that need to be planned and created, and history has demonstrated the necessity of design safety.

Design Teaching and Learning

Papanek asserts that design education teaches skills that are too methodical and process oriented, rather than incorporating a much broader thinking. He suggests learning is an evolving practice taught through patience and experience. Within a broadening design education, a designer must be taught to design in integrated ways, or with unity. The comprehensive whole of a consumer and their environment, thoughts, and livelihood is what makes integrated design. Designing-as-a-whole should involve a thorough and comprehensive design process with team interaction. Papanek urges designers and design students to work from broad to narrow, which may in turn expand out again into an abundance of options.

Failures, Sustainability and Future Gazing

Papanek contrasts what he considers good products with ones that fail people due to various reasons such as monetary greed, and unforeseen consequences. He focuses on the social and moral responsibility designers suggesting they must analyze the past and the future consequences of their designs. Papanek's stance on sustainable design challenges the way our industry works. Papanek reinforced the idea that while we are constantly making more, how much of it is worthwhile? With all that is available on the market, what needs enhancing, who needs better design, and how can we begin to move toward a more environmentally responsible, or sustainable design methods? As industrial

designers, if we are to be human centered, then our products should work far into the future to benefit the user, not the market. The greater issue is not merely that our products fail, but that because they fail, they do not meet the needs of the very consumer they are designed.

Obsolescence and Value

Planned obsolescence promotes consumption and dilutes value, but obsolescence is not always a bad thing. For example, disposable syringes help hospitals as they are easy to use and eliminate the need for costly sterilizing machines. If a disposable product makes sense, designers must consider two key points. First: does the price affect its temporary character? Disposable products should reflect transitory use in their pricing. Second: what happens to the disposable article? Two optimal options are: use the process of pollution to bring about positive results and consider biodegradable materials over plastic and metals that will never disappear.

Papanek categorizes products as: *valued as permanent, unthinkably thrown away*, and *semipermanent*. *Permanent* objects include family heirlooms, things valued for sentimental reasons, or a love of craftsmanship. *Throw-away* products include things like Kleenex and returnable/recyclable bottles (returned rather than tossed objects). *Semipermanent* objects include products like cameras and other high-fidelity equipment that are used for a limited time until true technological improvements appear. What is the point if products are designed that don't work and inevitably only contribute to *product pollution*? Knowingly creating unsafe products, especially when done just to save a few dollars, is morally wrong. We can achieve this through emotionally durable design or by perfecting a product until it properly works so that we don't design a new version every couple of months.

Nature as Designer's Teacher

Papanek encourages interdisciplinary exchanges and research to broaden the spectrum of design problem solving. Three central concepts are proposed: (1) design should be inspired by nature including animals, plants, and environments; (2) crystallography can advance innovation where shapes and forms can be used. For example, tetrakaidecahedrons present an endless possibility of creations where these shapes can be combined and the structures have inherent strength; (3) bionic design or the study of animal behavior throughout evolution, has vast possibilities that can aid design planning, medical application, waste elimination, and pollution management.

Environmental and Ecological Design

As a proponent of environmental design, Papanek emphasizes that the earth's environment has the biggest impact on people and that designers have a responsibility to actively innovate in ways that minimizes harmful impact to the natural world. The largest grievance is that too frequently, systems or products are designed with only two goals: (1) achieve the operation the design promises, and (2) to gain as much monetary profit as possible from

this design. These goals result in what Papanek calls pollution through products which sees the production of a product as a use of resources, a polluting manufacturing process, and the discarding of the process. More items must be made to sell more, thus creating more pollution. Papanek's solution is to design with systems and larger impact in mind. Design that simply exists to solve one problem in a very specific and profitable way does not often consider the system, culture, or environment in which it will function. He posits that designers have a responsibility to consider the entire process of the design, from manufacturing to the disposal of the product, to reduce pollution. Papanek's ideas influenced and can be seen in the current ideas of a circular economy and circular design. Too often designs are life accessories that may be nice, but their value is not worth the environmental damage. It is frustrating to see that so many environmental issues mentioned in this book have worsened, with no real attempt at solution in sight. This creates a moral imperative for designers. We have fewer environmental resources today and are seeing the impact of a history of wasteful choices for the sake of marketing and money. The question is, how do we find a way to make rewarding lives and careers for ourselves as designers while doing the best we can not to actively damage our communities and our world?

Seeing and Sharing

Papanek suggests that most designers are focusing on the wrong issues. He presents a series of triangular diagrams in which he shades in a tiny portion of the triangles at the very top and leaves most of the triangles empty. The shaded regions represent the designer's share, and the unshaded regions represent *the real problem*. Papanek believes, that designer's work should benefit humanity. Papanek offers a solution: designers can improve the lives of the poor in the world by offering a *kymmenysket*, or tithe (one tenth of their time) to devote to solving their problems. In this way, designers can influence the behavior of individuals and societies around the world.

Creative Blocks and Rebelling to Innovate

Papanek clearly indicates that design is in its simplest form a way of solving problems and he seems to be fond of psychological ideation. He believes that most solutions are subconsciously driven during daily events. Papanek tells us modern society is built to harbor conformity among its peers, while education systems and medical remedies are set up to block alternate creative thinking. He proposes seven thought blocks of alternate thinking to understand all possible angles to a problem: (1) perceptual blocks relate the way various people visually interpret problems differently; (2) emotional blocks refer to social pressure people feel when they are given the opportunity to differentiate from social norms; (3) associational blocks keep people from utilizing all the tools available to them; (4) cultural blocks refer to people having different biological senses based in their culture; (5) professional blocks prevent people from working outside their career-based problem-solving skills; (6) intellectual blocks prevent many visual problem solvers from achieving a solution even though it could be easily understood using a graphing

or analytical method; and (7) environmental blocks mess with the psyche of people based on their ideal work environment. Papanek believes that it is important to be a rebel and break free from traditional thought processes when trying to innovate. Furthermore, the main obstacles to innovation, according to Papanek, are personal influences such has culture, social groups, and more.

Design for Survival and Survival through Design

Papanek warns against over-specialization in products that ultimately fill our trash bins and landfills. He suggests that society is growing too large to understand itself and respond to its understanding. He tells us that good design comes through shaping and modifying all interactions and interfaces, physical and others. Innovation comes from the meeting of borders from two differing areas of knowledge - engineering and art - creating designs that are both aesthetic and functional and serve an audience of many different people without sacrificing the details that make them extraordinary.

Papanek advises that humans could survive through design because designing is basic to all humans. Design should look to the future, anticipate changes, and connect all people. For us all to survive, designers must learn to redesign.

Responsible Design: Five Myths and Six Directions

Industrial designers are often tasked with *finding and solving* problems. Papanek tells us to "Design for people's needs rather than their wants" (Papanek, 2019, p.219).

Five myths of many industrial designers according to Papanek:

- *Mass Production:* designing mass produced products means the market is huge.
- *Obsolescence*: designing things to wear out keeps our economy moving.
- *People's "Wants":* all people want extravagance. (There is a range of wants that people have.)
- *Designer's Lack of Control:* (The designer has a lot more control than they think.)
- *Quality No Longer Counts:* (Excellent design and the highest possible quality always wins.)

Six potential directions for designers to go in:

- *Design for the Third World:* More people now do not have electricity than people before the invention of electricity.
- *Design of Teaching and Training Devices for People who are Disabled.*
- *Design for Medicine, Surgery, Dentistry, and Hospital Equipment:* New medical equipment is often a new style shell around the same old machine.
- *Design for Experimental Research:* Laboratories often have crude equipment.
- *Systems for Sustaining Life Under Marginal Conditions:* Sub oceanic mining and experimental stations on asteroids.

- *Design for Breakthrough Projects:* Many products have reached a dead end as far as further development, leading to additive design. Reanalyze the basic problem.

DISCUSSION

The twelve descriptive themes identified and reflected upon by our GenZ students reveal a great deal about the relevance of Papanek's work 50 years after Design for the Real World was first published. Interestingly, the students explicitly indicated that the most profound aspect of Design for the Real World is how it remains relevant and topical. They expressed that Papanek acknowledged issues that are still present today and reflected on how the issues surrounding the profession of industrial design are ever present and likely even existed prior to Papanek's book. The core issues related to industrial design were woven throughout our students' musings as take-aways related to current understanding of design teaching and learning, design thinking, the nature of innovation and creativity, human-centered designing, and the roles and responsibilities of being a designer.

When considering the specifics of the twelve themes identified by the industrial design students it is interesting, for example, that the theme of Seeing and Sharing reveals the values and beliefs instilled by current day educators that focus on designing for all and on users, rather than approaching design as an artform where the process and product relates to the self rather than others. The theme of Failures, Sustainability and Future Gazing reveals that the students understand the inherent characteristics of the design profession where it requires learning through making mistakes and the need to consider the future when designing things in the present. Creative Blocks and Rebelling to Innovate, tells us that students are curious about enhancing their personal design processes and attempting to make sense of how to advance creative problem solving.

When considering the twelve descriptive themes together as a collection of reflections it is clear the students are thinking about industrial design as a complex profession. The themes highlighted here are incomplete insofar as the students provided deeper elaborations on the book than what can be written here, but we chose to highlight these to illustrate how the students were bringing together various facets including problem solving, problem identification, design processes, responsibilities, and more. The complex lens that Papanek creates provided words, phrases, concepts, theories, practices and examples that aided the students towards more advanced ways of describing their own views on designing. Through this lens, the students began to talk about industrial design in more precise ways and even advanced their own design processes.

CONCLUSION

On the surface, the twelve themes highlighted by our 3rd year industrial design students developed from Papanek's book *Design for the Real World* may seem like pure descriptions taken from the book, but it's important to

remember that they are interpretations and reflections that combine the present with the past. In this paper we transcend two generations of designers: the authors who originally studied and were influenced by Papanek when the book first came out and GenZ students who discover the continued relevance of Papanek 50 years later. The thoughtful musings of our students remind us that whatever era we live in, design is a complex, multifaceted profession that is connected to the past while being focused on the future. It is our hope that this paper will inspire other educators to use the rich history of industrial design to teach present day students.

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