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Introducing New Design Disciplines Into a Traditional Industrial Design Program

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Abstract

The disciplines of design and design research are rapidly transforming. Sanders and Stappers (2013) illustrate how traditional design disciplines focused on product are being replaced with emerging disciplines focusing on "people in the context of their lives." As an industry veteran and experienced design educator, I am well versed in the traditional method of effectively making consumer-oriented objects, but in the rapidly evolving world of contemporary design this expertise seemingly becomes less relevant each year.

This paper reviews the quiet reframing of our sponsored third year industrial design studio course to explore aspects of emerging design disciplines, sharing five student projects that demonstrate the natural evolution in mindset from product-oriented to context-oriented problem definitions. Finally, it discusses how these emerging disciplines align with the values of the millennial generation and the importance educators include training in new disciplines to remain relevant in the contemporary design world.

Keywords: Design for Well-Being, Experience Design, Transformation Design, Design for Innovation, Sustainable Design

1. Introduction

The disciplines of design and design research are rapidly transforming. Sanders and Stappers (2013) illustrate how traditional design disciplines focused on product are being replaced with emerging disciplines focusing on "people in the context of their lives." As an industry veteran and experienced design educator, I am well versed in the traditional method of effectively making consumer-oriented objects, but in the rapidly evolving world of contemporary design this expertise seemingly becomes less relevant each year.

My typical course process focuses on exploration of form, material, color, and technology to enhance user interactions in mass-produced products. This maps well to a definition of industrial design provided by Moody and Stanley, who in 1984 stated that “industrial design seeks to relate hardware to the dimensions, instinctive responses, and emotional needs of the user where these are relevant requirements” (cited in India Design Council, 2016). However, over 30 years later, this definition seems to limit the potential impact and influence of the creative skills and methods taught to designers. A moderately expanded version comes from the Industrial Design Society of America (IDSA, 2016), who currently defines industrial design as “the professional service of creating products and systems that optimize function, value and appearance for the mutual benefit of user and manufacturer.” While this definition adds the notion of systems to the ’84 definition, it remains focused on the function, value, and visual appearance of an object.

In contrast to both of the previous definitions, the International Council of Societies of Industrial Design (ICSID, 2016) has recently unveiled their more progressive approach, posing that "industrial design is a strategic problem-solving process that drives innovation, builds business success and leads to a better quality of life through innovative products, systems, services and experiences." This definition embraces an increasingly inclusive view of industrial design aligning with the position of Sanders and Stappers (2013), who argue contemporary design is anchored in context and rapidly transforming to require a broader definition, thus placing responsibility upon me to update my course methodologies to reflect this new philosophy and prepare my students to meaningfully engage with the rapidly evolving design world.

2. Method

This semester my third year studio course of twelve students worked with a leading global marketer of innovative, premium products who utilize a relationship-based sales method carried out by an independent force. We worked directly with the company’s design leaders to create a framework for development that would allow students to explore and define a variety of problems from any aspect of the brand experience, with the resulting short brief stated in entirety below.

> Project Overview:
> The project will last 16 weeks, or the Fall Semester of 2015, and will involve 3rd year student designers. The project will explore the values, needs and desires of Urban Millennial food culture. The students will perform a variety of design research and development activities, including hosting a sales event in company format and organizing events to validate their conceptual and final product designs. The students will work in teams through the research and concept generation phases of the project, but will ultimately be responsible for developing individual proposals for the project.
>
> Project Deliverables:
>
> - Teams will create a PDF of their final design research presentation.
> - Students will create a PDF of their final design presentation formatted for his or her personal portfolio.

1.1. Project Research and Process

To develop a further understanding of the tools and areas that would be necessary to analyze potential solutions, the students were required to perform research in several areas to establish a qualitative and quantitative familiarity with the brand and sales base they would be working in. Central to these tasks was their hosting of a sales event for their peers with an experienced consultant; participation in a workshop on culinary culture and practice with a popular private home chef, and study of the millennial generation to understand their values and differences from other groups.

1.2. Project Synthesis

Students were given the challenge to frame their own projects, allowing them to synthesize any aspect of their research into a meaningful, persona-driven narrative, which naturally resulted in a wide variety of proposals. Their general conclusion indicated the company produces useful products of desirable quality, though somewhat incongruent with the needs of a younger generation. They found the greatest difficulty in connecting with millennials lay in overall food culture and value differences manifested in the sales and delivery methods, product use and material selection, and overall communication methods. If this project had been approached with a traditional object-centered mindset, these critical contextual and cultural issues preventing development of the brand-consumer relationship would have been overlooked.

3. Studio Project Results

Because the students were free to respond to their research findings in whatever form they saw best, a variety of project types emerged. Students were not exposed to the aforementioned emerging disciplines at the beginning of the project; rather, the professor introduced them on a case-by-case basis as they became relevant. This generally occurred in the latter third of the project, as students were solidifying their design directions. Many students had naturally gravitated towards these emerging disciplines but often required an additional insight and push to fully embrace them.

Five students were asked to contribute to this paper by sharing their project development experiences. In the next five sub-sections, they reflect on their evolution from a traditional object-oriented mindset to a broader understanding of what design could be.

1.1. Design for Well-Being

In my research, I found an interesting relationship between an apparent millennial distaste for single-use gadgets with strict instructions for use (likely stemming from reliance on life with products like smartphones that are highly intuitive and adaptable), and the rise of slow living (a lifestyle movement in the younger generation marked by a conscious effort to structure life around meaning, fulfillment, and purpose with a “less is more” approach to consumption). I decided to embrace these principles in my design and combine them with understanding gained from my research to create products that will help millennials simplify their experience to fit in with their lifestyle.

To do this, I created a line of ambiguous products that allow the user to determine their ideal purpose, thus enabling a unique relationship between object and owner based on individual patterns of usage. This goal runs counter to the aims of the brand’s traditional product line,

which is designed to accomplish a single task. Instead, my products advocated a simpler approach built on fewer products that accomplish the majority of food preparation needs. They reflect the millennial desire for ease, simplicity, and meaning manifested in both slow living and smartphones. The end user decides on the object's ideal function, which can shift as different opportunities/problems present themselves, promoting the kind of easy, ambiguity-fueled creativity that is uniquely appreciated by younger generations who are accustomed to intuitive products.

Near the conclusion of my process, I realized I was attempting to design for well-being, which is the activity of designing with the explicit intention to support people in their pursuit of a pleasurable and satisfying life (Desmet, 2013). By promoting the slow living principles, I created a product that both adapted to and improved upon the user's preexisting lifestyle, thus unintentionally centering my design on well-being. I hoped to create something that would counteract the fast pace of today's society and celebrate simple form, creativity and overall well-being. By embracing more than just the aesthetics of design, my final forms became more powerful.

1.2. Design for Experience

I first became interested in experience design while attending a company sales event that felt vastly foreign in a millennial mindset. My concept was developed under two research insights: first, that "people buy experiences, not products" (Priority 3, 2016), and second, a hypothesis that contextual experience influences the customers' reactions to and opinions of a product. If customers experience a product in a setting they associate with something undesirable, it will become an undesirable product. When a comfortable setting, such as a home, is degraded with associations millennials find unattractive (such as a sales pitch), that connotation will carry over to the product. However, if customers are in a setting that is not only comfortable but positively stimulating, there is a significantly higher chance the product used in the event will be highly desired. If the environment is seen as enticing and valuable, that will influence product perception positively. Since the brand's only sales channel is one-on-one demonstrations, this experience is an essential gateway: millennial customers will either be attracted or turned away.

Realizing this, I examined experiences that millennials did find appealing, such as tasting events at a downtown chocolate boutique, and applied my findings to the product demonstrations. I made a few minor but significant changes to design an experience that would attract rather than repel millennials. I ultimately hosted a cooking class with four main differences from the original event: first, the locale was a hip public venue rather than a home, bringing positive associations; second, the focus was on the food rather than the products, removing the 'sales presentation' structure that millennials found artificial; third, socializing was central to the event rather than discouraged, properly instilling the 'party' feeling that the original stifled gathering had lost; and fourth, the event was very hands-on. These changes, though subtle, created a wildly successful event. Guests posted photos on social media and asked if we would be hosting a similar event in the future, and one even expressed interest in hosting his own.

As I stepped away from traditional product design to complete this project, I found myself open to more creative and successful solutions than I would have previously developed. The company's team was impressed with the drastic difference in the reception of the exact same products – one in particular had been specifically disliked at the traditional sales event, but generated significant interest at the dowtown pop-up class.

As a designer in training, I became more capable of finding the most valuable solution rather than finding just another viable solution, and have realized an ability to solve problems for businesses regardless of their products or services. This project has caused an evolution in my career goals and my future design plans will include work in experience design.

1.3. Design for Transformation

My initial research indicated that millennials, on the whole, are very environmentally conscious and supportive of people and organizations that promote this cause. They have also embraced recent changes in legislature around the world legalizing urban beekeeping, and as a result organic honey and urban beekeeping have become trendy in this age group. Based on this research and my personal knowledge of honey and beekeeping, I explored how a new product might encourage millennials to adopt a new beekeeping hobby. To do this, I would need to develop a product that supports the health and well being of both human communities and natural ecosystems while fitting naturally into the user's current lifestyle.

I also learned about transformation design, an interdisciplinary process that attempts to create behavioral change through design, (Jonas, Zerwas, Von Ashelm, 2015) and found it aligned with my goal of persuading urban millennials to bring beehives into their lives. Though this new method seemed daunting, I soon found it made identifying problems and discovering new solutions far easier than my previous process centered on form-giving and stylizing. With these new insights I created a product that combined a compact beehive and planter for use in urban environments. By combining the two products, I was able to create something familiar that would not feel like a radical departure from current lifestyles, but would be more supportive of valued environmental causes and provide a comfortable and easy entry to urban beekeeping.

This experience has changed my perspective on design. Previously, I approached design with a styling focus, but now I have realized that it is far more important to me to design products that help move people towards new behaviors and modes of interaction that promote positive change. Furthermore, this shift of mentality has made assigning form far easier than my previous methods that considered form first. As I moved towards a transformation mindset, my designs began to evolve naturally based on principles rather than style, and I found it easier to develop meaningful products as I focused on a core motivation.

1.4. Design for Innovation

In the course of my research, I met a young couple that sold the majority of their possessions and moved into a camper in order to pursue their passion for outdoor experiences full time. I was interested in how a product could impact their situation, realizing they would not want traditional storage bowls, but something more durable and adaptable, which led me to create a new concept category within the company's current product line. I worked to develop a multi-use, highly flexible and durable container made of heat-resistant silicone in a form that can be used freely according to the needs of the owner, featuring hanging and fastening affordances and both lid and bag-style closures.

When I explained my direction to the corporation, their designers noted this was a new product category they had no experience in and were unsure of. I soon learned that I had deviated from the traditional industrial design standard of updating existing product categories, but had now entered the field of design for innovation, a discipline centered around envisioning and investigating new product meaning through broader, in-depth

exploration of society, culture and technology (Verganti, 2009). This process bypasses incremental innovation or improvements to existing products and leads to what Norman and Verganti (2012) call radical innovation, or the creation of products heretofore unseen.

This project has opened my eyes to what my role as a designer can be. My exploration of innovative design has taught me to look for meanings rather than incremental enhancements. It has also taught me to exercise my own judgment with confidence, which was strengthened as I was allowed to explore, adapt and pivot to more meaningful design directions.

1.5. Design for Sustainability

Through my initial research explorations, I learned that millennials value both sustainability and experience more than other demographics. I wanted to combine these values, which led me to develop a method of creating sustainable products that participants could make on their own at local workshops. To do this I developed a new variety of collagen-based biodegradable plastics, which are formed using simple pressurized steam molds and colored with dehydrated powders derived from local invasive plant species. I then validated both the production and economic models by hosting several workshops to test the ease with which participants could produce these biodegradable bowls and whether or not they valued the final product.

By producing these products in workshops on a local scale, my project developed sustainable products for everyday use, eliminating waste from both the product and manufacturing levels and providing millennials with the experience they crave to bond with an object. Though the workshop component of this project runs contrary to typical corporate mass-production methods, its sustainable nature is increasingly necessary in our evolving economy, an important mindset for designers to embrace. Cooper explains that design for sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony to support present and future generations (as cited in Page, 2014). Though the company was uncertain as to the implementation of this type of product, material and manufacturing method into their current business model, they recognized its inherent value as a way to promote sustainable products with millennial representatives.

I knew nothing about the materials and processes needed to create natural plastics before this project, but I knew how to seek out relevant information and pursue creative solutions. As I worked along this path and further developed this ideology, I was able to seek out new knowledge and access new arenas to explore design solutions within. This is turn gave me the ability to create more sustainable and valuable products for the future.

4. Discussion and Conclusion

Contemporary design students are not naturally limited to a 20th century mindset regarding the limits of their potential influence. However, they will respond to whatever boundaries are put in place by programs and individuals, including antiquated definitions of design. By removing those artificial boundaries from the framework of this course, students naturally applied their own talents and skills to a broader context than they had previously been given in traditional industrial design education. Students will certainly not become experts in these emerging topics without further training, but the success of this semester's course work suggests that students can apply the principles they have been taught and safely be introduced to a variety of fields within design.

As the students gained exposure to design that focuses more on context and impact rather than object, their personal definitions and understanding of what industrial design could be has increased to include the contemporary ICSID definition of design that includes experiences with products, systems and services. Every student in the class pushed beyond traditional industrial design practices; they focused on the underlying issues of the design challenge rather than restyling to better resonate with a millennial audience. This was accomplished to different degrees among the students. In fact, several students have altered their outlook to the extent that they no longer consider themselves solely object makers anymore. This has proved important for the program as well as the individual. As students define for themselves their own project approach, they find meaningful connections that increase the quality of learning and interest in a product by transcending specific markets and objects that may not have mass appeal and moving into more flexible, less concrete disciplines. Importantly, it also demonstrates the willingness of a program to evolve and explore the shifting definitions of design rather than holding onto the methods and values of yesterday.

This process also triggers reflection on personal and institutional definitions of design and encourages programs to discuss and place themselves within the greater design context. I would propose a key difference to the previously stated definitions: design involves the act of discovery and definition. Our program currently embraces a traditional definition and, like many programs in the United States, will be slow to install formal programs in emerging disciplines like the ones shared in this paper. However, it becomes incumbent upon us as educators to provide a series of introductions to students so that they are aware of alternative career paths and areas of study that might resonate with them.

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