

Chapter 9

Product Design in “Post-Smart Era”: Explanation of the Student Competition of Japan Industrial Design Association as an Example



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Abstract Under the banner of “Smartification,” the industrial world has been developing products to create a society and lifestyle that is reduced time and labor. On the other hand, the concept of “benefit of inconvenience” which focuses on the positive aspects of time and labor experiences that are at odds with smartification, is attracting attention. Furthermore, there is a movement in Japan that favors a lifestyle that takes time and labor, known as “Teineina-kurashi (in Japanese).” The author named the recent trend of pervasive values that are at odds with smartification “Post-Smart,” based on the Post-modernism that occurred as a reaction to Modernism in the 1970s. In this study, I focused on the benefit of inconvenience as a necessary design concept in the post-smart era, and I organized requirements for creating the benefit of inconvenience. Then, I conducted design work for university students majoring in product design to create products with the benefit of inconvenience. As a result, we could create several product ideas that won prizes in a design competition on the theme benefit of inconvenience.

Keywords Product design · Essence of designing · Post-smart · Benefit of inconvenience · Tolerance for inconvenience

9.1 Essence of Design

Nowadays, the word “design” has permeated the world and can be seen and heard in various situations. On the other hand, there is still a misconception that “design is merely the act of beautifying the appearance of an object.” Product design, as the name implies, is the design of industrial products. In the first part of this paper,

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I explain the essence of product design to establish a base for “utilization of the benefit of inconvenience” in the practice of product design.

9.1.1 An Example of the Good Design Award in Japan

When discussing the essence of product design, a product often picked up is the “NANOPASS 33” insulin needle, which won the Grand Prize at the 2005 Good Design Awards in Japan. This syringe has no significant novelty in terms of appearance. However, the company created a “painless” syringe by devising an ingenious needle shape. This value of painlessness is a value for human beings in minds, and the process developed to make such value has been recognized as a good design (Japan Institute of Design Promotion, 2005). In other words, the essence of product design is to create new values for human beings and society (Japan Institute of Design Promotion, n.d.). As the product design adage “Form Follows Function” suggests, beautiful form is a secondary value that emerges in the pursuing value for human beings and society, not an essential value.

9.1.2 Exploration of Essential Value

As I mentioned earlier, the essence of design is to create new value for human beings and society, so it is vital to find the essential value in the age. This section considers the negative aspects of convenience, referred to as the “Harm of convenience” in a study of the benefit of inconvenience.

The upper part of Fig. 9.1 is a conceptual diagram showing the evolution of remote communication tools in Japan, with the vertical axis representing the ratio of each media (Ministry of Internal Affairs and Communications, n.d.; Hakuodo Institute of Life and Living, n.d.). From the days when letters, telephone calls, and faxes were the mainstream, the main tools of remote communication shifted to e-mail when NTT DoCoMo launched the cell phone e-mail service in 1997. In addition, starting with “mixi” in 2004, social networking services (SNS) have appeared one after another, and the mainstream of remote communication has shifted to SNS. Naturally, the convenience of contacting distant friends and family has improved. On the other hand, in a fixed-point survey of daily life conducted by the Hakuodo Institute of Life and Living (Hakuodo Institute of Life and Living, n.d.), some findings seem to contradict the improvement in convenience of communication. The percentage of respondents who answered, “I am a person who my friends on various matters often consult” was 41.6% in 1998, compared to 27.8% in the 2020 survey, a drop of nearly 14% in 22 years (Fig. 9.1). These data suggest that the increasing convenience of remote communication has not led to the development of deeper relationships that friends can consult.

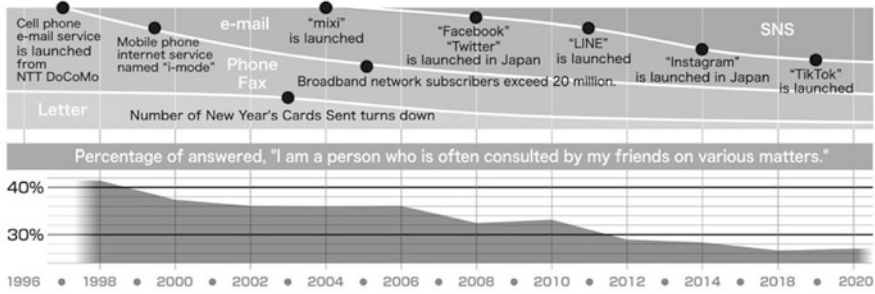


Fig. 9.1 Conceptual diagram showing the evolution of remote communication tools in Japan (Kageyama, 2021)

Thus, we can say that convenience products and services also have some negative aspects. However, the general design philosophy in the modern era implicitly pursues the development of new products that bring about a more convenient and comfortable life than the previous one. In this age of diversified values, pursuing mere convenience does not necessarily lead to essential happiness. We live in an era in which it is even more necessary to search for essential values, to find out what people today are seeking and what things they feel happy about.

9.2 The Benefit of Inconvenience

While the pursuit of convenience is regarded as the basic stance of product and service development, the conflicting concept of “the benefit of inconvenience” is attracting attention. Products and services are designed to achieve some purpose for the user. Taking a camera as an example, we can say that a camera exists to achieve the purpose of capturing people and landscapes in photographs. Thus, convenient functions such as “autofocus” and “auto exposure” can reduce the time and labor required to achieve the user’s purpose. On the other hand, the benefit of inconvenience is a concept that is designing more time and labor into the process of achieving the purpose. At first glance, this concept may seem to generate disadvantages for the user. Still, as we have discussed this special issue many times, it is known to create various secondary benefits. In addition, as evidenced by the 3.60 million hits on Instagram when searching for “# Teineina-kurashi (in Japanese)” (reference date: August 2022), there is a movement that values a life that takes time and labor. “Teineina-kurashi” means careful living, a movement to consider the time and labor required to achieve a purpose as an “important factor to feel happiness.” For example, switching from cooking rice in an electric rice cooker to cooking rice in an earthenware pot and taking time and labor to cook the rice. This movement suggests there is a social demand for the benefit of inconvenience.

Moreover, in the industrial world, there are many cases where companies and organizations focus on the benefit of inconvenience. The Japan Industrial Design Association (JIDA) is a public interest incorporated association composed of designers who belong to design departments of companies and design firms. JIDA has held a design competition on the theme of the benefit of inconvenience for the past several years (JIDA, 2019). The fact that a group of designers, sensitive to changes in social trends and values, have focused on this concept suggests the social importance of the benefit of inconvenience.

9.3 “Smartification” and “Post Smart”

9.3.1 “Smartification” in Conflict with the Benefit of Inconvenience

The concept of “Smartification” is at odds with the benefit of inconvenience. Smartification is to build intelligent systems that optimize operations according to the situation. This concept is based on optimization using information and communication technology. From the perspective of the relationship between tools and humans, we can say that the initiative of the tool side will be stronger. “Smartification” has been a major development guideline in product design since the IT Revolution occurred in the early 2000s.

9.3.2 “Modernism” and “Post-Modern”

The era goes back to the twentieth century. The Industrial Revolution in the early nineteenth century brought mechanization of product manufacturing and, at the same time, encouraged the separation of design and manufacturing. Products produced by machines became cheap and inferior, and designers emerged to be a new type of professional, capable of designing industrialized products from the perspective of society and human life (JIDA, 2009). Since then, product design has developed through the rise and fall of various styles. In addition, when discussing the history of product design, the connection with war is inseparable. From the perspective of product design, the two world wars were a major motive for advancing functionalism and rationalization. Pursuing rational and functional products without excessive ornamentation was called “Modernism (Katsui et al., 2017)” and became the basis for product design development in the early and middle 20 centuries.

However, modernism underwent a major change in the mid-1970s. Pop and irrational designs have appeared at odds with the rational and functional, known as “Post-Modern.” These phenomena were a reaction against the emotional poverty

caused by excessive functionalism and rationalism, and they provided an opportunity to rethink capitalist society, industrialization, and material civilization in the twentieth century (JIDA, 2009).

9.3.3 “Post-Smart” Era

The spread of “Benefit of inconvenience” and “Teineina-kurashi” in response to “Smartification” can be thought of as similar to the composition of “Post-Modern” concerning “Modernism.” Under the banner of Smartification, efficient, and convenient products and services are being created one after another. However, history shows that trends in design development have waxed and waned. The author calls the movement that sees time and labor as essential happiness, represented by “Benefit of inconvenience” and “Teineina-kurashi” or “Post-Smart.”

9.4 Design Work with the Benefit of Inconvenience

In the midst of drastically changing trends in design, the search for essential value is vital for educational institutions that nurture the next generation of designers. For this reason, the School of Design and Architecture, Nagoya City University, has incorporated the benefit of inconvenience into its product design education program. This paper describes the design work conducted from November 2019 to February 2020 for the JIDA Kansai Student Design Award 2019, a design competition on the benefit of inconvenience. In addition, we will organize the main points when incorporating the benefit of inconvenience into design work by unraveling these design processes.

9.4.1 “Size of Inconvenience” and “Tolerance for Inconvenience”

First of all, we cannot say that the benefit of inconvenience is a concept that arises in all situations, regardless of user attributes, time, location, and so on. To create a product or service with the benefit of inconvenience, it is necessary to organize the conditions that tend to bring about the benefit of inconvenience. Let us consider the example of “coffee ground from beans,” which is often picked up as an example of the benefit of inconvenience. We can say that a cup of coffee ground from beans made on a holiday morning is a cup of coffee with a value that cannot be enjoyed with instant coffee. On the other hand, working families are generally busy on weekday mornings and do not have much time to enjoy a cup

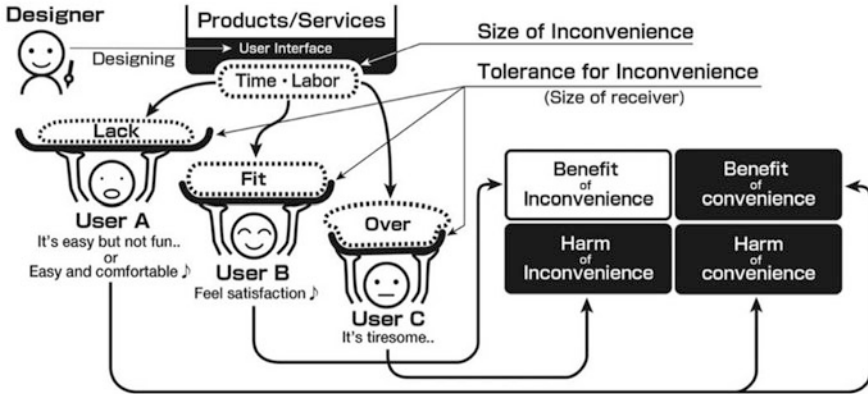


Fig. 9.2 Conceptual diagram showing the relationship between “Size of Inconvenience” and “Tolerance for Inconvenience” (Kageyama, 2021)

of coffee ground from beans. Thus, user attributes, location of use, time, and other factors significantly impact the conditions that cause the benefit of inconvenience. Figure 9.2 is a conceptual diagram showing the relationship between the “Size of Inconvenience” provided by a product or service and the user’s “Tolerance for Inconvenience.” The author defined the size of inconvenience that can be tolerated, which varies according to user attributes and usage situations, as the “Tolerance for inconvenience.” And, when the “size of inconvenience” provided by the product or service and the “Tolerance for inconvenience” on the user side match, the “benefit of inconvenience” which is a value different from convenience and efficiency, is brought about.

9.4.2 Theme Selection Considering “Tolerance for Inconvenience”

As mentioned earlier, organizing the relationship between the “Size of inconvenience” and the “Tolerance for Inconvenience” is vital to realizing a design with the benefit of inconvenience. Based on the above, I focused on “travel and pleasure” as a scene that is highly likely to bring the benefit of inconvenience. Travel and pleasure are pastimes that allow people to escape their daily lives. In other words, we can say that the “Tolerance for inconvenience” during travel and pleasure is bigger than in daily life. Thus, I set “Products that bring joy to travel” as the production theme and asked students to consider design proposals.

9.4.3 Design Process to Create the Benefit of Inconveniences

The duration of this design work was 8 weeks, and the process was as follows. In the first week, I explained the assignment and surveyed the theme. In the second week, to analyze the “pleasure of travel,” each student created a journey map of their most memorable travel experiences. Journey mapping is a method of UX design (Ando, 2016) that visualizes a series of user experiences across multiple touchpoints, including processes and user behaviors, and emotions. In the third week, I conducted a classroom lecture to understand the concept of benefit of inconvenience. In the fourth week, the students extracted episodes and problems by focusing on the ups and downs of the emotional curve in the journey map they had created. The fifth week was a divergence of ideas, in which ideas diverged from the viewpoint of adding “benefit of inconvenience” to the episodes extracted in the fourth week. From the sixth week onward, the process progressed to convergence of ideas, materialization, and presentation. I will present three representative design proposals produced by students in these practices and their thought processes.

9.4.4 “Matching Pillow” by Chiharu Arima

The “Matching Pillow” is a pillow for a Japanese-style inn that is made by selecting the provided “bag” and “contents” and making it by oneself. Designing a pillow for travelers who often have trouble sleeping because it does not fit their body shape creates the value of “being able to sleep well on a pillow that fits you even when traveling” by designing the time and labor of “making it yourself” (Fig. 9.3) (Kageyama, 2021).

Figure 9.4 is a journey map created by the student of this proposal during the second week (Kageyama, 2021). While analyzing his travel experience, he focused on the episode of “not being able to sleep well because the pillows at the inn did not fit.” Next, in the process of diverging ideas to solve the episode’s problem, idea divergence was conducted for the benefit of inconvenience. A solution to the problem of “not being able to get a good sleep due to a pillow that doesn’t fit” already exists, an example of “multiple pillow selection services” offered by some



Fig. 9.3 “Matching Pillow”

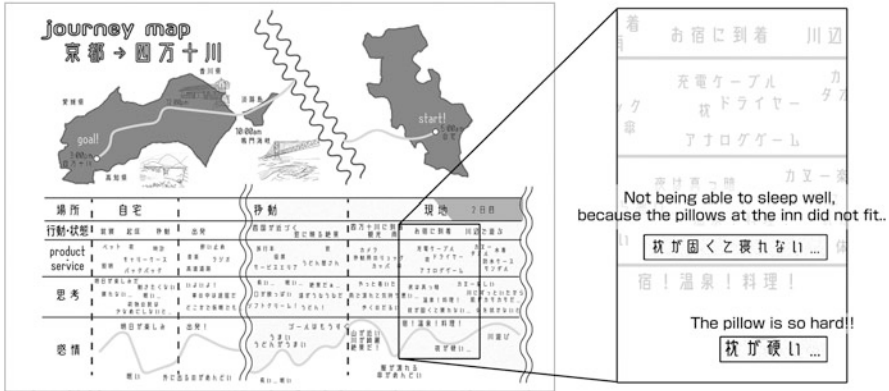


Fig. 9.4 Journey map made by the author of “Matching Pillow”



Fig. 9.5 “Quietness”

business hotels. However, the student has created a new “making a pillow with own hands” style by designing labor and time to achieve the purpose. We can say that this idea could not have been created by the conventional design concept of reducing the time and labor required to achieve a purpose.

9.4.5 “Quietness” by Hiroko Yamamoto

“Quietness” is an outdoor lantern installed at the entrance of a Japanese-style inn in a mountain village. The lantern has a space for a smartphone, which is the power source, so the user cannot use a smartphone while the lantern is in use. In addition, this product’s function of “gradually dimming light as eyes adjust to the dark” allows one to enjoy the “beautiful starry sky” that was difficult to notice when going out with a smartphone (Fig. 9.5) (Kageyama, 2021).

The student of this proposal focused on the episode “when I went out at night from a mountain village hotel and saw a beautiful starry sky” from the journey map she created. Then, she diverged ideas for a product that induced this experience. Since the primary purpose of lanterns is to illuminate the surroundings, we can

say that the idea of gradually diminishing light is challenging to generate in a conventional design concept. However, from designing for the inconvenience, she created the idea of slowly dimming the lights.

9.4.6 “Gopen “by Kota Aibara

“Gopen” is a coin-operated locker with a pedometer attached to the key. The coin-operated lockers are installed at train stations near tourist attractions, and Gopen users can use them free of charge if they walk a predetermined number of steps. This system induces an action of “walk a lot,” and the user’s range of activities is more comprehensive. As a result, unexpected discoveries and encounters are made, such as stores in back alleys that you would overlook if you were walking along a standard route and scenery that you will not find in a guidebook. In addition, this design proposal has the potential to become a viable business, as the cost of installing the fee-free lockers could be funded by the surrounding tourist attractions that would benefit from them (Fig. 9.6) (Kageyama, 2021).

In analyzing his travel experiences in a journey map, the student of this proposal focused on “the starting point of a trip is when putting luggage in a coin locker” and attempted to redesign the coin locker. Suppose he follows the conventional design philosophy of reducing time and labor. In that case, he tends to come up with convenient ideas such as “coin-operated lockers that can be reserved via an app” or “coin-operated lockers with web-based information on their location and usage status.” However, from the viewpoint of designing time and labor into the experience process, he came up with the idea of “adding a pedometer function to the key, and if the user does not walk a certain number of steps, free service is not available.” In addition, this proposal won the Grand Prize at the JIDA Kansai Student Design Award 2019 (JIDA Kansai Bloc, 2019).

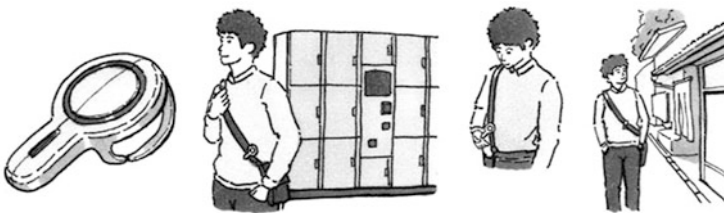


Fig. 9.6 “Gopen”

9.5 In Closing

These design proposals were created by students who carried out design work to make the benefit of inconvenience. We can say that each proposal is a design idea that could not have been created by conventional design philosophy, reducing the time and labor required to achieve a purpose. As mentioned at the beginning of this paper, the essence of product design is about designing things and services with an eye to their value to human life and society. It is precise because we live in such an era that the concept of benefit of inconvenience is being embraced by designers whose role is to create happiness for the next generation. In this age, the pursuit of convenience alone will not produce essential happiness.

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