

Past-Practice Challenges Trigger Today-Sustainable Ideas

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ABSTRACT

In this paper a new approach of creative sustainable design from the past is proposed and introduced. The approach is based on the social practice theory, Vision in Product Design methods (ViP)¹ and techniques like culture probe and interview. The paper closes with a pilot done by the author to test the approach and further discussion.

Keywords

Sustainable design, Social practice, past, ViP, Cultural probes

1. INTRODUCTION

Increasing dependent on energy import and the effect of climate change has given rise to present-day concern about energy saving. In Europe, per household account for around 25 percent of the total direct resources consumption of society.² Although many new efficiency energy consuming products are currently being designed and introduced, household electricity consumption in Netherlands for instance, has still increased by 24 percent in the past 20 years.³ It shows incremental modification in current product that cannot change people's use habits, nor feasible ways of achieving the goal of energy saving, thus in the field of sustainable design, real radical innovation is required.

A way to innovate is by looking backward the past. How can we learn from our ancestors when such energy-consuming techniques not exist? How can we learn from the ways our ancestors organized daily life in the past? But we cannot simply go back or copy their approaches, thus a sensible bridge is needed to connect those insights to today's context. This thus gives rise to the following question: What methods can we use to create the right path?

The paper explore in a way that use the concept from ViP method³ and social practice method, as well as using culture probe as a tool to intervene into people's daily life in order to explore the possible creative solutions under this topic,

In order to test the approach, a pilot study was done by the author in a specific daily practice: preserving food at home. As the refrigerator is widely used by people to preserve food at home, it consumes the second-largest volume of electricity in most homes. Refrigeration and freezing are two of the most common forms of food preservation used today⁴, as indicated on the other side,

products also shape people's daily practice and behavior.

Using this intervention to generate concepts proved to be inspirational and useful, some interesting finding will be therefore discussed of the end of the paper.

2. HOW IS SUSTAINABLE DESIGN RELATE TO SOCIAL PRACTICE THEORY

Sustainability is such a broad concept that one can find many approaches or principles in design discipline that serve this goal. Such as low-impact materials application, energy efficiency design, durability design and reuse and recycle design.⁵

In social practice theory, daily life is viewed as a set of approaches of socially shared practices or routines while varieties of products are used.⁶ This means that product is an aspect that designers can use to influence people. Kuijer and Jong defined three levels of innovation in this respect: Technical innovation, Use behavior innovation.⁷ Designers can influence practice with new products, thus changing practices and people's resource consumption. From this point of view, give designer greater space to learn from the past.

3. THE REASON OF CHOOSING VIP METHOD

But how can designer assess and choose potential insights from the past practice? In ViP method, a sensible way is provided to us¹ (figure 1).

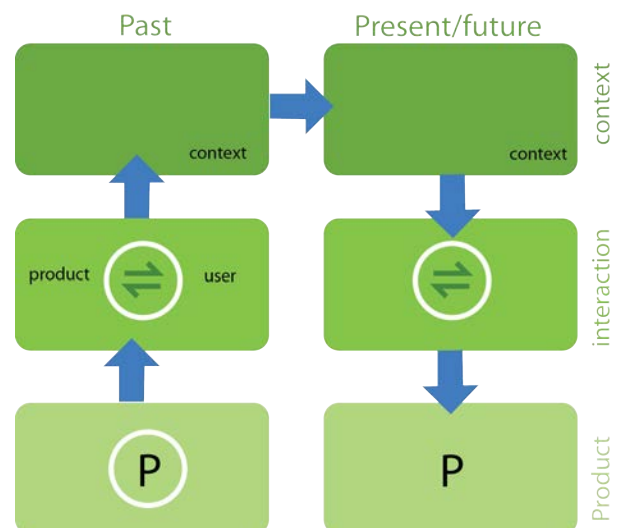


Figure 1. Model of the ViP approach

There are three levels of product descriptions: product as concrete form; product as a relation of people; product as a part of larger context. In order to get concrete ideas, designers “destructure” (down to up) from the past and present, and “design” (up to down) for the future.⁸ With the ViP method four context factors help to organized the relationship of past and present/future, which can be defined as state; principle; development and trends. The relations between the four kinds of factors can be described as follow:

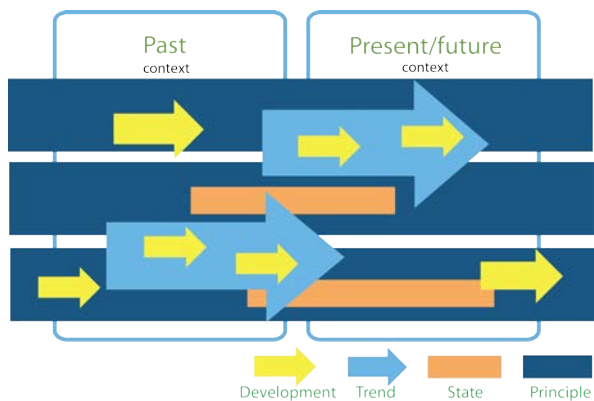


Figure 2. The four context factors of ViP

Principles are the underlying rules, either universal or personal but they are supposed to be unchanged over the course of the time; while states remain the same during the visible future but do not have to be stable over time. Developments concern some observable movement in the environment around, and some developments can be regarded as trends, and those are usually related to people. It is true that every designer must have had been conscious while designing. But in ViP by listing those factors designers can better visualize and organize their thoughts and by choosing the factors designers can better control the results. For instance, if a designer chooses the factors that seem irrelevant, it is harder to get product out naturally but gives more chances to develop out of box ideas. The set of factors chosen by designers is the starting points for the design.

Using the method of ViP, designer can evaluate the past practices. How is the practice meet the principle, and how is it conflict with the trends? What kind of development can be track back to explain the change of practice and how is the state we can relate be the same? By considering those factors, gives designer a clue to intervene his insights into people’s daily life.

4. CHALLENGE! USE CULTURE-PROBES TO INTERVENE IN PEOPLE’S DAILY LIFE

Culture probes is considered a helpful tool for people to reflect on their daily routine. According to our topic aims to study such daily life practice, such a familiar environment of people—it is essential to provoke inspirational responses of people thus break the

dilemma that designer will easily being constrained to design from the needs that people tell them, rather than identify latent ideas. Moreover, not only needs, it is also essential to know about people’s beliefs and desires, their aesthetic preferences and cultural concerns.⁹

When design of the culture probes, the insights from initial work are taken into account. For the aim of sustainable design, the culture probes must be able to encourage critical reflect of how current products and practices shape the social conditions and people’s experiences¹⁰. It will be discussed in detail of the pilot study.

5. EXPLORE POSSIBLE SOLUTIONS

The approaches is using social practice theory and ViP method as a basis, and translate the insights into culture probes and further use it as a tool to intervene in people’s daily life, thus trigger further insights. The approach is generally described into 3 steps:

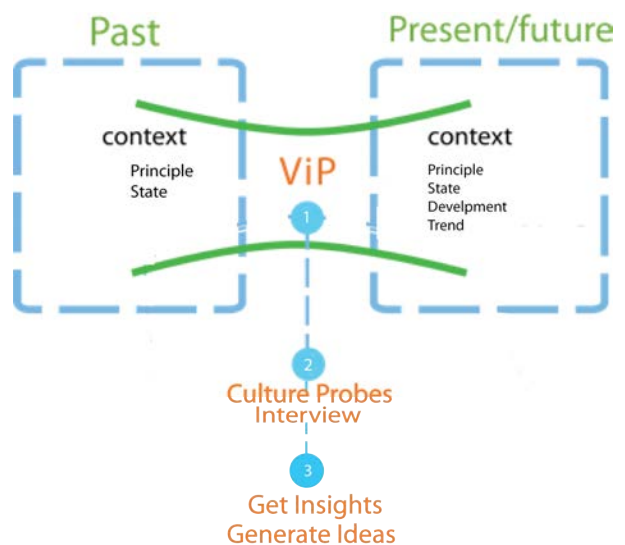


Figure 3. Model of the approach

5.1 Step one: Get insights from the past

By identify the principles, states, developments and trends, one can find the products of the past that reveal the ways of how our ancestors deal with the same problems of today. Thus designers get an overall feeling of the past context. Then designers try to find reasonable links of the factors.

The goal of this step is to find several interesting past practices that regard to have the potential of today.

5.2 Step two: Intervene in people’s daily life

In this step, 4-5 people will then be chosen to use the culture probes free of charge in the way they want for a period of time. After designers have collected the culture probes, othersuch as a personal interview will be conducted for designers to get further insights.

5.3 Step three: Get insights and general ideas

To get insights is to discover add-qualities with those factors. For instance, trends like people are more aware of time can be state as an add-quality like “increase time efficiency”. Sometimes some trends are highly

related to high-consumption techniques and products of today that will be seemed as conflicted to sustainable practices from the past. Thus it's also useful to look at the principle and states. To see what latent/high level needs are revealed in those factors that might be cooperate or dominate for today in a more sustainable way.

After defining the add-qualities, it's then time for the designers to look back on the meaningful practice he has found. Possible solutions will be the combination of the practice with the added qualities. Using a Morphological chart to combine the Practice and qualities in a systematic way, each practice and quality does not necessarily have to have one to one correspondence. Designers then choose the most potential combinations as a starting point to general concepts and ideas.

5. PILOT

A pilot under the topic of preserve food at home is conducted to test the approach.

5.1 target group

In this case, the culture probes as a booklet (figure 4) and was given to four participants due to the author personal network. There are two girls and two boys. Two of them from Taiwan; one of them from Columbia and one of them was from Mainland China. There are two designers, one mechanism engineer and one systematic engineer and all of them are master student now studying in TU Delft, three of them live on their own and one girl lives with her boyfriend.

5.2 The design of the Culture Probes

The booklet was designed according to several guidelines conducted from previous studies as followed:

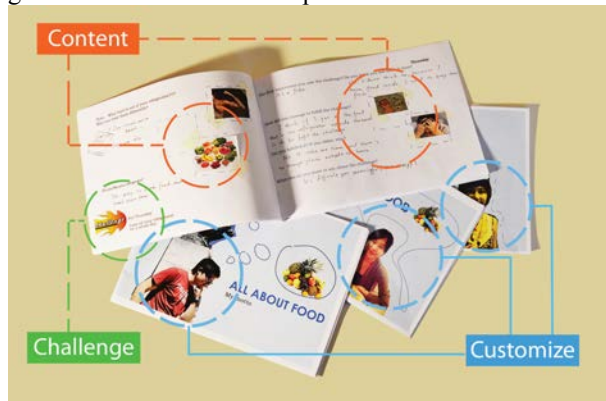


Figure 4. Culture Probes

Guideline 1: Content co connect many aspects of everyday life

People preserve food and the practice itself is related to many aspect of everyday life. The domain can be expand such as their cooking and eating behavior and those are all potential research areas. So it's important

to cover more aspects rather than only focus on the food preservation. In that way it also makes the booklet more friendly and natural.

It is also worth mentioned that have some consistent topic with the booklet along time that help to reveal tiny changes of people's life.

Guideline 2: Customized-Make it more attractive!

In order to make the booklet more attractive, the front page was designed with each participant's photo so every participant got his/her own booklet.

By using different layouts can also makes the booklet funnier to do thus let the participant willing to play with it. Such as pictures will also contain richer information than words.

Guideline 3: Challenge people!

Some challenges were added to challenge people on some of the days. A little stick is pasted on the challenge that the participant has to peel off the stickers when the day comes. It's like a little "surprise". It does not matter so much if the participants cannot fulfill the challenges. The challenges aim to evoke participants' responses, whether they can fulfill the challenge or not it will trigger them to reflect. There are two kinds of challenge in the booklet, one is to close your refrigerator for one whole day, another is prepared a three dishes meal for yourself at one time. I noticed all the participants failed at the first challenge, most importantly, they did not even think about doing it, one mentioned this challenge as a joke which gave me more thoughts about people's reliance of refrigerator today.

5.3 Give the booklet and arrange interview

The participants are asked to do the booklet day by day. After that I did a few personal interviews. After all had finished, a small gift is given to each participant as appreciation.

5.4 Case Results

From the previous finding, from the culture probe study and interview, developments, trends, states and principle are found and the add-qualities were defined based on them. The results was shown in the morphological as shown in figure 5:

Past Practices	Add qualities	Resources of the qualities
a. Reserve food in the winter (use environment)	A. Reduce time pressure	Trend & State
b. Put apple with potato	B. The enjoyment of shopping	Trend & development & Principle
c. Make jams	C. Emotional evolved	Principle

Figure 5. The morphological chart of the pilot

There are many combinations can be generated from the morphological chart, some combinations are really

triggered product ideas. One of the concepts is the combination of

Past practice: a (Reserve food in the winter(use environment)) +

Add Quality: B The enjoyment of shopping + C Emotional evolved

Concept description: People like shopping experience. One reason is the display of food in the shops appears more attractive than the food storing in the refrigerator invisibly. In the past, people usually stored food outside of the house to make use of the low temperature. All of above indicated the new product idea could be using the nature environment to preserve food in winter thus reduces the energy consumption while displaying the food in a shopping shelter that gives people a shopping experience.



Figure 6. Concept combine a&B,C

Beside this, several combinations also find potential, such as the combination c (make jams)&A, C (emotional evolved), it has triggered the idea of simplifying the process of making jams and add joyful experience to it.

6. CONCLUSION

From the result we can see the approach indeed create a path to connect the past and present/future. It is also shown that because the approach considered the context of today, some ideas generate from it have the potential to replace the dominant practice today. By doing different combinations of past practices & add-qualities, it will trigger concept in a tangible way. By choosing the methods of context study and select factors, designer can also better control the process and drive to personal desirable results.

7. DISCUSSION

After the pilot, there are several findings relate to the approach:

Finding 1: The culture probe could be replaced to other forms of delivers, which is a more space for designers to explore.

Finding 2: The effect of the culture probes decrease when participants are more familiar with it. I get more insights from the participants who haven't done this kind of task before.

Finding 3: It is the combination of one practice with two or more add qualities that gives more potential concept. I assume this is because today's context is more complicated than the past.

Finding 4: It is hard to say by now whether the generated ideas will be accepted by the people, further test and assessment are expected to take in order to evaluate the proposal approach.

8. ACKNOWLEDGEMENT

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