Inter-object
another life of everyday object

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Abstract

Inter-object project examines the method for creating fictional objects (inter-objects) by combining two everyday objects, demonstrates people’s feedback on the inter-object produced by the author and collects people’s own inter-objects inspired by the inter-object concept. This project aims to reveal more meanings of everyday objects and get people involved in and enjoy the creative design thinking and making.

During this project, sketch diary was kept by the author for observing and studying everyday objects. Meanwhile, the inter-object concept was born. The sketches for creating the inter-objects were transformed into real objects in prototyping process. Furthermore, based on the making process, the inter-object recipes (the instructions for making the inter-objects) were designed and presented to people. Their feedback on the inter-objects and inter-object recipes were collected by interviews. Moreover, these inter-object recipes together with other components which build the inter-object questionnaire were sent to more participants’ home. As a result, the participants illustrated and described their own inter-objects in the questionnaires.

The inter-object concept provides new meanings to everyday objects. The inter-object recipes demonstrate the making process and allow people’s free modification. Inspired by the inter-object recipes, people designed their own inter-objects which either redesigned the inter-object designed by the author or created new inter-objects. All of these inter-objects illustrations from the participants indicate their observation and imagination of everyday objects.
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Introduction

What will happen if two everyday objects fuse with each other? With this unexpected question, I start my thesis project. During this project, the inter-object concept is invented to answer the question. Moreover, this thesis explores the inter-object concept and its meanings.

In this introduction chapter, the following four parts will be described: the motivation of the thesis project; the definition of the inter-object and inter-object recipe in the thesis project; the research questions; aims and the structure of the thesis.

Motivation

Human beings are surrounded by the objects every day. We drink coffee from a mug, carry a cotton bag when shopping and wear a ring when we get married. The objects build a system of tools shaped by the needs, opportunities and dreams of man (Harni, 2010:16). For me, these objects are full of stories. I am fascinated by reading and discovering these stories from them. Furthermore, inspired by these stories, I am willing to find a method to create new stories with the everyday objects.

On the other hand, during years of studying in the design field, I enjoy the pleasure brought to me by the creative thinking and making process. In addition, I dream of a design form which also brings non-designers to participate in the design process and encourages them to be the designers. Finally I believe, as a result, the participants will share the joy of the design thinking and making.

With all these motivations mentioned above, I start my exploration and experimentation of the everyday objects.

The definition of the inter-object and the inter-object recipe

The original meaning of an inter-object is a phenomenon of dreams, in which there is a perception of something that is “between” two objects. Some examples from the literature on dreams include “a piece of hardware, something like the lock of a door or perhaps a pair of paint-frozen hinges (Hobson, 1988),” and “something between a record-player and a balance scale (Meltzer, 1984).” Inter-objects are new creations derived from partially fused blends of other objects. Inspired by the original meanings of the inter-object, in my thesis, the inter-object means the object which consists of elements of two everyday objects. These two everyday objects have subtle relevance. Meanwhile, the inter-object reveals the links between these two everyday objects and arouses people’s imaginations and critical thinking of the everyday objects. Moreover, inspired by the original meaning of the word “recipe” for cooking, the word “Inter-object recipe” used in the thesis means the instruction for making the inter-object. Similar to the cooking recipe, the inter-object recipe encourages people to design and make their own inter-object by combining everyday objects at home.
Research questions and aims

As mentioned above, I invented the inter-object concept for the thesis project. In addition, this thesis seeks to answer the following questions around the inter-object concept:

1. What are the inter-object and the inter-object recipe?
   1.1 How do everyday objects tell stories?
   1.2 What are the links between two everyday objects?
   1.3 How to create the inter-object from everyday objects?
   1.4 How to create the inter-object recipe?

2. What are the meanings of the inter-object and the inter-object recipe?
   2.1 What are people’s reading experiences of the inter-object recipes designed by me?
   2.2 What are people’s interpretations of the inter-objects designed by me which are shown in the inter-object recipes?
   2.3 What kinds of inter-objects do people create?

By asking the above research questions, this thesis project aims to bring a new method for creating a fictional object which questions the meanings of everyday objects, reveals the links between them and, finally, gives them their second lives. Furthermore, I hope the thesis project encourages people to be inspired by the inter-object concept and see everyday object from another perspective. Finally this project aims to get people involved in the creative design thinking and making and enjoy them.

Contents of the thesis

This thesis consists of 5 chapters, each of which will be briefly described in the following:

Chapter 1 introduces this thesis project.

Chapter 2 indicates the related backgrounds. In this chapter, the following four design areas which are related to my thesis topic will be discussed: critical design, open design, object categories and constructive design research.

Chapter 3 reveals the method for this project. This chapter demonstrates how the inter-object project proceeds. As a result, the research questions will be answered along with the process. Additionally, this chapter consists of the following five parts: sketch diary, prototyping, inter-object recipe visualization, pilot study and inter-object questionnaire. In sketch diary part, I observed and researched everyday objects around me and documented my observations and thinking in the sketch books. Meanwhile, the inter-object concept was born after a few weeks of sketching, and the ideas for making different inter-objects were sketched in the sketch book. Furthermore, in the following prototyping part, these inter-object ideas were made and tested with real materials. After the prototypes were finished, in the following inter-object recipe visualization part, the inter-object recipes were visualized based on the prototyping steps in the previous part. These inter-object recipes were printed out which were ready for people to read and react. Moreover, people’s reactions to the inter-object recipes were examined in the following pilot study part by the interviews. After the interviews, based on people’s feedback, the unclear information in the recipes was fixed for better reading experiences. These final inter-object recipes together with other components which build the inter-object questionnaire were posted to people’s home during the following inter-object questionnaire part. At the end of this part, the collection of returned questionnaires from people was showed and their own inter-object ideas were documented and analyzed.

Chapter 4 concludes the thesis. The whole research process will be briefly reviewed and the findings from the project will be analyzed. Following this, I will also document the new findings to myself as a designer. At the end of this chapter, the future possibilities for continuing the inter-object project will be discussed.

These four chapters build the main structure of this thesis.
This chapter consists of the following four sections which are related to this thesis project: critical
design, open design, object categories and constructive design research. Additionally, the inter-object
project combines critical design and open design; it is inspired by object categories and situated in the
field of constructive design research.

Critical design

Critical design uses speculative design proposals to challenge narrow assumptions, preconcep-
tions and gives about the role products play in everyday life. It is more of an attitude than any-
thing else, a position rather than a method (Dunne & Raby, 2007a).

Critical design concept was first used in Anthony Dunne’s (1999) book Hertzian Tales and later in
Critical Design are traced to the Italian Radical Design and architecture of the 1960s-1980s (Koskin-
en et al., 2011: 90). Critical design builds on its attitude and extend this into today’s world (Dunne &
Raby, 2007a). It is obvious that, as Dunne & Raby (2007a) mention, many people are doing critical
design but they might have never heard about the term. People have their own way of defining what
they do. The mainly purpose of critical design is to make people to think, but at the same time critical
design also raises awareness, exposes assumptions, provokes action, sparks debate and even entertains
in an intellectual sort of way, like literature or film (Dunne & Raby, 2007a).

Design can be described as falling into two very broad categories: affirmative design and critical
design. The former reinforces how things are now, it conforms to cultural, social, technical and
economic expectation. Most design falls into this category. The latter rejects how things are now
as being the only possibility, it provides a critique of the prevailing situation through designs that
embody alternative social, cultural, technical or economic values (Dunne & Raby, 2001).

Critical design mainly makes people think. It stimulates people to dream how design will be used and
why in this way. It encourages people to imagine the stories around the objects and direct using sce-
narios in their own minds. As a student in design field for 7 years, I am always fascinated by imagining
how and where product will be used and who will use it. When I see a product in the shop or from me-
dia, the using scenario sometime is more interesting than the product itself. Critical design is a kind of
design which focuses on people’s thinking experience. It is more about values and an attitude, a way of
looking at design and imagining different possibilities rather than the narrow definitions of what can
already be seen in shops and media (Dunne & Raby, 2007a).

Dunne and Raby describe critical design as a product genres in their book Design Noir: The Secret
Life of Electronic Objects. Critical design is one approach and genre to product design which offers a
very limited experience. Similar to Hollywood movies, critical design emphasis on easy pleasure and
conformist values:
This genre reinforces the status quo rather than challenging it. We are surrounded by products that give us an illusion of choice and encourage passivity. But industrial design’s position at the heart of consumer culture (it is fuelled by the capitalist system, after all) could be subverted for more socially beneficial ends by providing a unique aesthetic medium that engages the user’s imagination in ways a film might, without being utopian or prescribing how things ought to be (Dunne & Raby, 2001: 45).

Nowadays, much of design now in the shops acquires its value and meaning from narratives of production (Dunne & Raby, 2009). It is driven by the new materials and process how the designer exploits. Dunne and Raby say that the stories told about many objects stop at the point that the object actually comes into being, but with critical design, that’s exactly the point where stories begin (Dunne & Raby, 2009). In my thesis project, as mentioned previously in the introduction chapter, the inter-object recipes I send to people is a questioning and critical process rather than solving problems and providing answers. I explore that how people react with design and what the story will be afterwards. In this way, it is very strongly linked to the critical design field.

Critical design borrows methods and approaches from art which is shocking and extreme. However, more significantly, critical design needs to close to everyday life (Dunne & Raby, 2007a). Critical design should be given the right form which is the balance between too weird and too normal. If it is too weird, people might treat it as art; if it is too normal, it will be “effortlessly assimilated” (Dunne & Raby, 2007a).

Risk watch (Figure 1) demonstrates one critical design example designed by Dunne & Raby from their project Do you want to replace the existing normal (Dunne & Raby, 2007b). In this project, Dunne & Raby design the objects for the time we have more complex and subtle everyday needs than we do today. Additionally, there is a speaker in the risk watch. When people place the risk watch to her/his ear, the rubber nipple in the risk watch deflects and activates the special device inside which allows the speaker to speak a number. The number corresponds to the political stability of the country people are in at that time.

Figure 1. Risk watch (Dunne & Raby, 2007b).
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Figure 2. Compass table (Dunne & Raby, 2001).

Figure 3. Mari Chair Hijacked (Guixe, 2013).

Figure 4. Enzo Mari chair (Artek, n.d.).
Compass table (Figure 2) indicates another work from Dunne and Raby (2001) from the placebo project. 25 compasses are set into the surface of the table. Those compasses will twitch and spin when objects like mobile phones or laptop computers are placed on it. They design this object to remind people that electronic objects extend beyond their visible limits.

Mari Chair Hijacked (Figure 3) constitutes an instruction sheet designed by Marti Guixe (2013). Guixe hijacked the Enzo Mari chair (Figure 4). Enzo Mari chair consists of pre-cut pine boards along with assembly instructions and nails. Builder makes the chair by following the instructions. However, Mari chair hijacked (Figure 3) deliberately misunderstands the original construction of the Enzo Mari chair in order to enable builders to create a fire pile from exactly the same number of pieces. As a result, Mari Chair Hijacked questions “the idea of a chair, its meaning, what design is nowadays, its functionality and the multinational enterprise behind it” (Guixe, 2013).

As mentioned above, Risk watch (Figure 1), Compass table (Figure 2) and Mari chair hijacked (Figure 3) demonstrate how critical designers use designed products to stimulate people to think and question the limited range of emotional and psychological experiences offered through these products (Dunne & Raby, 2007a). According to Dunne & Raby, this is one important role of Critical Design:

> Critical design, or design that asks carefully crafted questions and makes us think, is just as difficult and just as important as design that solves problems or find answers. Being provocative and challenging might seem like an obvious role for art, but art is far too removed from the world of mass consumption ... To be effective... Critical design is related to haute couture, concept cars, design propaganda, and visions of the future, but its purpose is not to present the dream of industry, attract new business, anticipate new trends or test the market. Its purpose is to stimulate discussion and debate amongst designers, industry, and the public (Dunne & Raby, 2001: 58).

### Open Design

Nowadays, the roles of designer and user are complex. Designers have traditionally been treated as the “creative guy” and the users as the “receiver” (Stappers et al., 2011: 142). However, the traditional relationship between designer and user has been questioned and surpassed in a growing variety of ways (ibid.). Among these varieties of ways, open design is one method:

> Open design has numerous aims; some of the most important ambitions include breaking down the barriers between designers and end-users, making it possible for non-designers become designers, amateurissimo and cutting out the middle-man by having end users fabricate the products they need (Stappers et al., 2011: 142).

Open design existed at the end of last century, and it was defined at that time as “design whose makers allowed its free distribution and documentation and permitted modifications and derivations of it” (Abel et al. 2011: 11). Until now, open design is actively developing, being updated and influencing the world of design (ibid.).

Open design has a significant impact on the ways of designing everyday objects which are experienced by everyone. Moreover, the user experience offers the background material for designing. By encouraging users to imagine and design everyday objects with their own experience, it will be a co-creation process between designer and user. The final product results in user’s own choice under designer’s guideline. In this way, the role of designer constitutes part creator, part researcher, part facilitator and part process manager (Stappers et al., 2011: 147). What is more important, the user will receive more experience of imagining and making the artifacts than just the final products.

Under open design concept, there is one design direction called DIWAMS - Do It With Already Made Stuff (Hartmann, 2011: 216). It encourages people to treat finished products as the newest raw materials, and make their own choices by manipulating these already made products (Holt, 2008: 21). Facing our environmental issues and pollution from mass production, DIWAMS is definitely a meaningful design method for now.
As the environmental crisis grows ever more urgent, an awareness of ecological values is spreading. Overtly Eco-friendly trends run rampant in corporate communications and marketing, plastering buzzwords like “sustainability” all over every conceivable campaign and industry. Despite the hype, the growing Eco-consciousness is a truly interesting movement that deserves attention for its simplicity, as well as the reutilization processes it inspires. DIY is good, but DIWAMS - “Do It With Already Made Stuff” - is infinitely better (Hartmann, 2011: 216).

As what Hartmann mentioned above, human being’s over consumption of environment is becoming increasingly serious these days. This is not only because of an increasing human population, based on the simple premise that more people would need more materials to support their basic living (Chapman, 2005: 3). In fact, the speed of consumption of environment grows much faster than the increase of human population (ibid.). It would be more precise to say that the mess human beings are in today more likely results from unsustainable developments in the way we design, manufacture and consume objects in the modern world rather than the increased resource consumption which comes from the increase in human population (ibid.). Facing the urgent environmental crisis, designers need to pay attention to sustainability in the design project. As a good method for sustainability, DIWAMS encourages people to remix the existing objects which can be old or new and in this way decrease consuming on raw material from nature. DIWAMS focuses on re-using what is already made (Hartmann, 2011: 217).

One good example of DIWAMS is the online community “Ikea hackers”. It is for sharing people’s results of modifications on and re-purposing of Ikea products (Saakes, 2011: 223). Big Lampan Lamps designed by Saakes (2013) demonstrates one example from this online community (Figure 5). Big Lampan Lamps consists of several small Ikea table lamps. Saakes shared the instructions for making this lamp on “Ikea hackers” platform for everybody to be able to make it by following these instructions. In this way, designers are designing the tools and techniques for the end users who are the designers and makers of the products they need, want and desire (Saakes, 2011: 223).
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Object Categories

Object categories is the concept invented by Pekka Harni. In his book *Object Categories* (2010), Pekka classifies household objects into the following seven categories: Hand-tools, containers, encased equipment, body objects, clothing, furniture and holders:

The purpose of the classification is to study the organization of the forms of artifacts, the significance of their parts and the basic properties of tools, and to explain the connections and relationships between objects and the environment. The classification describes the most important basic properties of the objects (Harni, 2010: 40).

Furthermore, in chapter Classification of the parts of objects-basic elements, Harni describes the following thirteen basic elements of objects (Figure 6) which can be found in different combinations in all seven categories of movable objects of the home: 1. Blade or working end 2. Handle or haft 3. Interface/button 4. Encased equipment 5. Vessel part 6. Holder 7. Flat base 8. Anthropometric surface 9. Seat surface 10. Horizontal surface 11. Cabinet 12. Frame 13. Feet (Harni, 2010: 102).

![Figure 6. Classification of the Parts of Objects-basic Elements (Harni, 2010: 103).](image)

Based on mentioned above, Figure 7 demonstrates the generally combined way of traditional objects and their basic elements of organization. However, Harni points out that the object of recent design has not always been primarily to create a functioning entity (Harni, 2010: 110). For example, critical design mentioned previously is rather to arouse attention and make people think. As a result, Harni demonstrates his “object cocktails” concept in the end of the book (ibid.). Moreover, by introducing the object cocktail concept and related idea of avant-garde “design design” objects, Harni goes towards an idea of fluid use of free combinations of object categories or their basic elements (Figure 8). By completely mixing the traditional arrangement of parts, meanings are added to the object:

*Designers are actually meaning-makers. Just as a chef might add a minute trace of balsamic vinegar to a reduced tomato sauce, the designer is continually seasoning and adding depth to the consumable experiences driven by designed objects and experiences* (Chapman, 2005: 150).
Object cocktail constitutes a good framework of mixing everyday objects, and in this way, designers are able to bring “flavors” to everyday objects and everyday life. Each flavor designers add to the product is like “hidden motors deeply embedded within any given product’s semiotic make-up” (Chapman, 2005: 150). These flavors are waiting to be tasted. The activation of tasting process happens when people come to check the object. The flavor will reveal itself and force the mind of the perceiver to pump for meaning (ibid.). The tasting process leads people to think the meanings of the flavor during the
The inter-object concept in my thesis project is similar to object cocktail concept in the respect that it allows for creating new object by freely assembling existing objects or parts of them. There are endless ways of combining them but only some can create certain meanings. Similar to cooking, designer is like chef who is testing and selecting the “tasty” one by trying different “ingredients”. Furthermore, in my thesis project, this role of the designer is also offered to and shared with user.

**Constructive Design Research**

Constructive design research refers to design research in which construction - be it product, system, space, or media - takes center place and becomes the key means in constructing knowledge. Typically, this “thing” in the middle is a prototype. However, it can be also a scenario, a mock-up, or just a detailed concept that could be constructed (Koskinen et al., 2011: 5-6).

As Koskinen mentions above, construction constitutes the necessary part of constructive design research. Designers make prototypes, products and models. Often those constructions are made in workshops or studios with appropriate tools and machines (Koskinen et al., 2011: 43). The imagination of the designer becomes true in these places. When discussing this enterprise as a specific way of making research, Koskinen claims that the construction which is structured and understood as experimental work has to be observable and reportable (Koskinen, 2009: 16). Thus in this research approach, knowledge is gained through constructing.

In the book *Design Research through Practice*, Koskinen et al. (2011) mention three frameworks for constructive design research. One of the frameworks is showroom. Critical design mentioned previously is described as one of the successful research programs in Showroom (Koskinen et al., 2011: 40). Additionally, Dunne mentions that often the final process for their work is to disseminate them through exhibitions or publications (Parsons, 2009: 145). Thus in this framework, exhibiting objects such as prototypes, photographs and videos is a very important part for research. As a result, the space where the artifacts are shown becomes a showroom rather than a gallery, encouraging a form of conceptual consumerism via critical “advertisement” and “products” (Dunne, 2005). In this way, the showroom is compared as the show window of a shop, which brings critical design to everyday life.

Showroom relies on debate rather than statistics ... It questions the way in which people see and experience the material world and elicits change through debate (Koskinen, et al., 2011: 94).

On the other hand, the documentation of the constructing process is important for constructive design researchers - as it is for practice-led research field which grounds also in the sphere of making and showing. Furthermore, Scrivener (2002: 25) states that the documentation can assist in capturing the experiential knowledge, and in this way, what the designer learns from the practice becomes explicit, accessible and communicable. Moreover, Mäkelä and Nimkulrat (2011) utilize documentation in two ways: documentation of making artefacts and documentation for making artefacts. The former happens at the same time when the design researcher gradually forms material into artefacts (Mäkelä and Nimkulrat, 2011). The latter happens before the actual creation of artefacts when the design researcher is looking for inspirations (ibid.).

My project is situated in the field of constructive design research. The final results can be shown either in exhibitions or publications which offer a medium for people to read, think and debate.

In this chapter, the four related backgrounds are demonstrated above. Based on these backgrounds, the next method chapter will demonstrate the whole process of the inter-object project.
Method

This chapter shows how the inter-object project proceeds. The following five parts which demonstrate the processes of the project will be discussed in this chapter: sketch diary, prototyping, inter-object recipe visualization, pilot study and the inter-object questionnaire.

Sketch diary

Diaries are used widely in social sciences to gather ethnographic data (Pedgley, 2007). In my thesis project, sketch diary constitutes an important tool for documenting my observation and thinking of everyday objects by drawing. As design educator Mari Lecanides-Arnott writes: *Drawing translates the abstract idea into the tangible, the seen* (Lecanides-Arnott, 2014). I kept sketch diary for four months at the beginning of the project. During this period, sketch diary kept me very sensitive to the objects around. Based on my experience, it is obvious that sketches not only expressed my thoughts but also stimulated my new thinking. In my case, interesting thought always came when I was sketching. I think my drawings in sketch book makes “intuitive thinking” and “the imaginative leap” visible (ibid.). Furthermore, the sketch diary I made for this study consists of sketches I drew for 3 books (Figure 9). In addition to these drawings, the pages of the books also contain dates and short texts that explain what the drawings depicts.

By reviewing the sketch books now, I realize that the sketch diary can be divided in three parts which demonstrate how my mind flowed at the beginning of the project. Additionally, I entitle these parts based on the drawings as following:

1. Object tells story

In the beginning, sketch diary was an important tool for documenting the objects which impressed me and brought me thoughts. For me, these objects and thoughts act as great inspirations and sources. As I sketched the objects and scenarios happened in real life, sketch book led me to study how objects told stories. Thus at this stage, sketching acted as the process for collecting inspirations and materials by seeing objects and everyday life. As Alexander Tzonis writes: *seeing is not just looking, but observing and understanding* (Tzonis, 2001: 22).

2. When objects meet

After a few weeks of observing everyday objects, sketch diary led me to find new ways of seeing objects by comparing two everyday objects. More specifically, when I brought two objects which had subtle relevance together, they started communicating in my mind and demonstrating the hidden links between them. Furthermore, people’s using experience also adds more links between human beings and objects. As a result, by letting two everyday objects meet, it stimulates people to think and reveal the links between “objects and objects” and “objects and human beings”.
3. Inter-object

In this part, objects started fusing with each other. This is the stage when inter-object concept was born. After part two “When Objects Meet”, I found out two objects which had subtle relevance. In this part, I figured out how to combine them into one object. As a result, the ideas for making different inter-objects were sketched and the new object started to have another life. Moreover, the prototyping process started at this stage. Sketch diary also became the link between design thinking and design action.

In the following part, my sketching process will be demonstrated. Additionally, these sketches are divided in three parts as described above, but the related explanation is written afterwards. For the explanation, I reviewed each sketch and tried to put main ideas behind the sketch into the words.

Figure 9. The sketch books.
This story happened in my friend’s apartment. She invited me for dinner one evening. However, she was still cooking when I arrived at her place. Then I just went to the kitchen to chat with her and also watch her cooking. During her cooking, I noticed that she put a plate on the cooking pot. She explained that she bought the cooking pot without a lid from the second-hand shop so that she used the plate as the lid for the pot. The cooking spoon was naturally lying on the plate. It was quite hustle when she picked the plate as there was no handle for the hot plates. She used the kitchen towel to move the plate. After I left her place, I sketched this in my diary: cooking pot with a plate as lid. What she need is just a handle for the plate (Figure 10).

I planned a trip to New York City with friends. Applying a USA travel visa beforehand was necessary for me. When I handled all the materials to the USA embassy, they also asked me to submit a return envelope with a valid stamp where they would put my passport with new visa in and send it to me. This reminded me of my experience long time ago. I had some pen pals at that time and we sent letters to each other often. Sometime I left a return envelope with the letter I sent to friend, and this return envelope expressed the message: waiting for your reply (Figure 11).
This scene happened in the metro station. The lady was wearing headscarf, holding big shopping bags in her both hand and chatting on the phone with the phone under the headscarf (Figure 12). It was convenient for her to put the phone under the headscarf so that she could talk on the phone without holding it. She discovered the hidden function of the headscarf. The idea of a hat with a phone case came automatically when I was drawing. It is a hat instead of headscarf, with a small case on the belt for phone. Phone becomes the most important belonging for human being these days. Do people need to carry their phone next to ears all the time?

I got flu the day when I came back from the New York trip to Helsinki. I stayed in the room and relaxed after I got home from airport. Without energy to clean, I noticed that my trash can was like disaster that week with all the tissue, package and so on. That trash can aroused my interests in observing the trash I threw every day. As a result, I documented the trash can and the trash inside for one day. Furthermore, I added a black frame for the trash can (Figure 13). Similar to the black frame of the art piece presented in the gallery or museum, trash can becomes a 3-dimensional frame or exhibition space now. Perhaps people would get some thoughts from the trash they threw as what they get from art museum.
This is a scene happened on my working desk (Figure 14). I was cleaning the desk to make more space and those two bananas were put on the lamp by me naturally. After cleaning, I sit down, banana and lamp appeared in front of me. It attracted me and I started sketching the scene in sketch book. It seems like banana is resting on the lamp like koala, or maybe one day in the future it will be possible to grow bananas from a lamp.

I saw this scene through the metro window: one bird was resting on the top of the streetlight. Streetlight became a rest place for the bird. After I arrived home, I drew different kinds of "seats" for birds on top of the streetlight (Figure 15). Maybe that bird on the streetlight was wondering where the trees she/he stayed on at the same place before were.
That day I moved into a new place to live. All my stuff was packed in a few suitcases. There was no furniture and lamp in the new room. I just connected my old clip light with the handle of the suitcase to get some light in the corner of the room (Figure 16). This scene totally described my situation that day with everything unsettled.

When objects meet

Imagine that clock and fan become the same size and same shape standing next to each other in a hot summer day (Figure 17). They have similar working way of rotating but show different results: time and wind, which are both invisible. If the clock also rotates as fast as the fan, what will it bring?
People get fresh juice with a citrus squeezer in kitchen. Imagine a “crazy fresh juice lover” has different size squeezer for lime, lemon, orange and watermelon. Similar to the screw driver with all size changeable heads for different screws, people get the expected results by rotating the handle. Now the screw driver and citrus squeezer fit in the same box and share the same body.

By rotating the working head, blender changes the formats of fruits and vegetables; by rotating the pointers, clock shows the passing of time which changes the format of everything. Which one is more powerful, the clock or blender (Figure 19)?
This is a thought of comparing wedding ring and screw cap (Figure 20). Both the wedding ring and screw cap have different sizes matching the corresponding fingers or screws. The screw threads keep the screw and screw cap connecting tightly; the power of love keeps wedding ring connecting with finger tightly. Which one is tighter? Which one will last longer?

The working methods of cheese peeler and razor are similar although one is for cheese and one is for beard. Imagine putting the razor blade on the cheese peeler. As a result, the razor blade is used to cut cheese now (Figure 21).
**Inter-object**

Figure 22. Clock and SD-card, sketch on paper, 25 November 2013.

SD-card (secure digital memory card) is often used in digital camera for saving photos and videos. What if there is also a SD-card slot in the alarm clock (Figure 22)? What will be saved in the SD-card then? Will all the memories be saved?

**Inter-object**

Figure 23. Clock and drawer, sketch on paper, 25 October 2013.

Clock pointers function as showing the time. Now they are the locks for the small drawers which are built inside the clock (Figure 23). When the pointer moves in front of the drawer, people cannot open it anymore. What kinds of stuff will people put inside the drawer then?
There were lots of left over plastic folks from previous parties in my kitchen drawer. Those folks led me to think and draw the image of this comb (Figure 24). The comb is combined by several folks. Imagine that a lady with long hair is using it; her hairs are shuttling through the folks like spaghetti.

Hat and lid are quite similar in many ways. both of them stay on top of something: lid is on the top of cooking pot where food cooks; hat is on the top of human head where our thoughts “cook”. Moreover, both hat and lid function as keeping things warm with similar shapes. By adding the knob of the lid on the top of the hat and cutting a hole aside, the link between the hat and lid become visible (Figure 25). The hole in the lid allows the steam to escape, and the hole in the hat not only functions the same but also can be seen for some thoughts to escape.
The peephole in the door allows people to peep the other side of the door. By moving peephole from the door to eyeglass, it builds a pair of peep-glasses (Figure 26). People would ask the person who wears it: “what are you peeping at?”

What could be the link between high-heeled shoe and wine glass? Both of them make their targets higher and in this way more elegant. By changing the heel of the high-heeled shoe into the feet of the wine glass, these two objects start to experience each other’s life (Figure 27). How would the lady who wears this high-heeled shoes feel?
Inter-object

Figure 28. Clock and mug, sketch on paper, 27 November 2013.

By connecting mug handle with clock, people could hold the clock like holding a cup of tea (Figure 28). Drinking tea or coffee brings short break to a busy working day. This clock reminds people to have a break for coffee or tea.

Figure 29. Toaster and USB-cable, sketch on paper, 02 December 2013.

An increasing amount of household appliances possess computer chips which allow them to perform intelligently. By connecting the chip to computer with a USB cable, the household appliance could be “taught” more skills for promoting its performance. In another word, its “brain” has been updated. What if a USB-cable grows from a toaster (Figure 29)? Will the toaster become “smarter”? What kinds of new skills will the toaster learn?
What if switch could turn time off? As demonstrated in Figure 30, press the switch and the clock pointers will stop rotating. This constitutes a placebo object as time does not really stop. When will people press the switch and turn the clock off? Can we really stop time in the future?

Figure 31. Gloves and socks, sketch on paper, 16 January 2014.

One day, I borrowed a pair of long sleeve gloves from a friend as it was cold outside. This long sleeve gloves brought me the inspiration of connecting gloves and socks together. By combining half of the socks and half of the glove together, the sock-glove demonstrates the link between hand and foot (Figure 31). Is it also a joke about evolution?
Figure 32. Glove and wedding ring, sketch on paper, 16 January 2014.

As demonstrated in Figure 32, by applying transparent material in glove, people could see whether there is a ring on the ring finger of the person wearing it or not. It is a glove for people who want to show their wedding ring and marital status all the time.

Figure 33. Small cup and big cup, sketch on paper, 27 January 2014.

By combining a small cup with a big cup, it constitutes a cup with foot which is similar to wine glass (Figure 33). Now one of the cup turn into the other one’s support. Are they like the relationship between leading role and supporting role in a movie?
One day I washed my hand but there was no hand towel. As a result, I just dry my hand quickly with the pants I was wearing naturally. This reminds me of some scenes from the movies that people are in a hurry and dry their hands on their pants. Maybe we need the pants with towel-like materials on them for drying hands in those cases (Figure 34).

Comb and gardening folk have similar structures. By adding the handle of the gardening folk to the comb, they fuse with each other (Figure 35). Now when people comb their hairs, they are holding the handle of the gardening folk. Will they feel their hairs become some plants from garden by using this comb?
**Inter-object**

Figure 36. Cooking spoon and dish washing brush, sketch on paper, 04 March 2014.

Wooden cooking spoon is a nice handle for dish washing brush. The curved surface of the spoon is perfect for applying brush hairs. Imagine the hairs “growing” from the back side of the spoon. Dish washing brush and spoon fuse with each other, and the wooden spoon starts to be part of kitchen brush now.

Figure 37. Filter and eyeglass, sketch on paper, 06 March 2014.

People can easily get what they need by using a filter in the kitchen. The size of tea filter is similar to the eyeglass. By attaching the tea filters to the glasses, it constitutes an “information selector” for our eyes (Figure 37). Would people see a different world and receive cleaner or selected information by wearing it?
Sometimes people wipe the table with arm. By cutting the shirt and locking the edge of the sleeve, it starts another life as a kitchen towel. People will see sleeve hanging in the kitchen now.

Sometimes people treat a hat as a container with scarf and glove in it. By replacing the bottom of the bag with the hat, it builds a hat bag (Figure 39). The bag is growing from the hat, and the hat starts another life as the bottom of the bag now. What will people put inside?
Figure 40. Knife and mirror, sketch on paper, 25 March 2014.

By connecting the knife on the back side of the mirror, it builds a hand mirror (Figure 40). People hold the handle of the knife when they check themselves in the mirror. Will it be a surprise for them when they turn over the mirror and see the knife?

Figure 41. Cups and tray, sketch on paper, 26 March 2014.

People often use cups in different ways besides drinking: put pens into it, use it as flower pots and so on. Trays are made for holding all different kinds of stuffs. When cups fuse with tray, cups loose the function of drinking things (Figure 41). It becomes the landscape on the table. How will people use it?
Figure 42. Cups and pitcher, sketch on paper, 27 March 2014.

The pitcher is built by one cup at the bottom and several cups without bottom on the top (Figure 42). It shows the relationship between the pitcher and cup: the pitcher as a container holds the water which will be divided in different cups later.

Sketch diary allowed me to sketch my observations and thoughts of everyday objects in a diary format. This diary indicated different stories from and inspired by everyday objects. However, these stories are not isolated with each other. By reviewing my sketch dairy at this stage, I realize that there are several everyday objects appearing many times in the sketch book. In another word, these sketches of the same object build a fluent story running through the diary. For example, Figure 43 demonstrates different sketches of the clock on different dates. As a result, the sketch diary develops the ideas of the same object further and prevents early crystallization of the design development (Goel, 1995:218).

12 October 2013
Inter-object

22 October 2013

25 October 2013

26 October 2013

16 November 2013
Sketch diary built a virtual workshop at the beginning of the design process (Figure 44). In this virtual workshop, all the materials were manipulated by sketching. The materials were objects and scenarios from everyday life. These materials were collected and updated based on my living experience. The design tasks encouraged me to observe and save more materials related. Sketch book stimulated me to review the tool box and take some interesting materials out by sketching, which was the part: object tells story in my sketch book. This step brought lots of inspirations for idea generating. Based on the inspirations, I started manipulating those materials and sketching different ideas, which became the main part of sketch diary. Sketch diary showed all the virtual try out prototypes on the paper which allowed me to review the whole process. Figure 23 to Figure 42 shows some of those virtual try out prototypes.
As mentioned in the previous part, the sketch diary offered different ideas and sketches for making inter-objects. Based on these sketches, inter-object prototypes were produced in this part. Simultaneously, the prototyping process was documented by sketch diary and photography.

These topics will be described in the following sections: the overview of the prototyping process, the inter-object prototypes and the making process for each of the prototypes.

**Overview of the prototyping process**

The prototyping process was conducted in the beginning of January 2014. After 2 months of observing and researching on everyday objects through the sketch diary, the ideas for making the inter-objects were conducted from two-dimensional sketches to three-dimensional prototypes. What was more important, the prototyping process allowed me to experiment with and test the ideas from the sketch books with real materials. For me, the prototyping process was similar to a cooking process, more precisely, the test cooking process before presenting a new dish. The processes of collecting and choosing different materials for making the inter-objects were like preparing different ingredients before cooking. These materials were either my old stuffs or from the second-hand shop. The way of combining everyday objects together was like the process of chopping, cooking and seasoning the ingredients. It brought “flavor” to objects. Additionally, the hand tools that people could easily find at home were used for making the inter-objects. The working table where I made the prototypes was similar to the kitchen work table (Figure 45). The whole prototyping process happened on this table. Furthermore, by scanning, printing and posting the sketches from my sketch books on the wall, the sketches and the making process interact with each other directly.
As mentioned previously, the prototyping process was documented by sketches and photos. It seems evident that sketch diary not only documented the prototyping process but also the new ideas for making inter-objects invented during the prototyping process. On the other hand, the photos taken during the prototyping process displayed the making process directly and allowed me to review it afterwards (Figure 46).

Figure 46. The photos taken during the prototyping process.

During the prototyping process, ten prototypes were made based on the ideas from the sketch book. From these, the following five prototypes were selected for the next step: bag with hat (Figure 47), small cup with big cup (Figure 48), glove with sock (Figure 49), lid hat (Figure 50) and tray with cups (Figure 51). All of these ideas strongly express the inter-object concept and the tools for making them could be easily found at home. This is the reason for choosing them for the next step. The following part shows the photos of each inter-object prototype. In addition, the steps for making them are described in an instructive format.
Instructions for making the inter-object 1:
1. Cut the bottom of the bag with scissors.
2. Fit hat into the bottom of the bag. Furthermore, figure out the seam between hat and bag and mark it with pen.
3. Cut out the extra part of the bag with scissors by following the mark.
4. Sew the bag and hat together with needle and thread.
Instructions for making the inter-object 2:
1. Check the instruction of the glue.
2. Apply the glue on the bottom of one cup.
3. Glue the cup with the other cup.
Instructions for making the inter-object 3:
1. Figure out the seam on the glove and sock. Mark it with pen.
2. Cut the glove with scissors by following the mark.
3. Cut the sock with scissors by following the mark.
4. Sew the glove and sock together with needle and thread.
Instructions for making the inter-object 4:
1. Cut a hole on the side of the hat with scissors. Cut the cross on the top of the hat with scissors.
2. Apply the knob on the top of the hat through the cross.
3. Overlock the edge of hole on the side of the hat with needle and thread.
Instructions for making the inter-object 5:
1. Check the instruction of the glue.
2. Apply the glue on the bottom of the cups.
3. Glue the cups and tray together.

Above are the five inter-objects and their making processes. Following this, these inter-objects and their making processes are transformed into illustrations.

Inter-object recipe visualization

Based on the prototyping process described in the previous part, in this part, the inter-object recipes were visualized. The aim of visualizing the instructions for making the five inter-objects is similar to the cooking recipe. The intention of inter-object recipe is to encourage people to get inspired by the inter-objects illustrated in the recipes and, in addition, design their own inter-objects by combining everyday objects at home.

The inter-object recipe visualization process translated the making process of each inter-object into the illustrations. The visual language for illustrating the inter-object recipe was simple. However, it should be totally understandable by the readers regardless of the language they speak. As a result, there were no texts in the inter-object recipes. As Kirsh mentions, illustrations are easier to understand than texts:

*The illustrations save memory because they allow the viewer to look at all the facets of the situation at once rather than sequentially as in a paragraph of prose, they save the cognitive effort of visualization, and they allow for more ready understanding of the text, particularly when the correspondence between textual element and visual element is easy to map. (Kirsh, 2002:4)*

In the envelope on the next page, five inter-object recipes and the template are demonstrated:
Above are the five inter-object recipes. In the next part, I will give account of the pilot study when these five recipes were sent to people’s home for testing. In the next step of the study, the recipes were adjusted based on the participants’ feedbacks.
The pilot study examines people’s reactions to the inter-object recipes. The feedback was collected through interviews. In the interviews, I asked participants’ reading experiences with the inter-object recipes and their interpretations of the inter-objects. The former revealed unclear illustrations in the recipes which needed to be modified further. The latter contributed to the answer of the research question about “people’s own interpretation of the inter-objects”.

Four participants joined the pilot study: Jay, Lisa, Emma and Hanna (names of people in this chapter are changed to preserve anonymity). Jay is around 30 years old, male, and his work is related to Landscape Architecture. Lisa is around 30 years old, female and with software engineering background. She is now a researcher related to new media. Emma is around 50 years old, female, and she works in educational research area. Hanna is about 40 years old, female. She is an artist in the field of craft and drawing. These four participants were asked to react freely to the inter-object recipes posted to their houses (Figure 58). A few weeks after sending the recipes, dates and places for interviews were confirmed by e-mail. The interview with Participant 1 Jay was conducted on 27th July 2014. The interview with Participant 2 Lisa was conducted on 7th August 2014. The interview with Participant 3 Emma was conducted on 11th September 2014. The interview with Participant 4 Hanna was conducted on 3rd October 2014.

The interview questions were prepared beforehand based on these two main topics: people’s reading experiences of the inter-object recipes and people’s interpretations of the inter-objects. The detailed interview questions are listed in the appendix. The interviews were recorded and after the interviews, the oral contents were transformed to a written format.


**Reading experiences of the inter-object recipes**

The interviews were started by asking the interviewees to describe the “papers” by themselves. During the interview, the word “paper” was used instead of “recipe” in order not to limit the interviewees’ imaginations. These are how they described:

- **Jay**: I am thinking (pause) they are something like the instruction papers.
- **Lisa**: I would say (pause) they are the instructions for creativity and exploration; creative craft exercise.
- **Emma**: I see them as the instructions for combining different things. They show what kinds of things should be combined, what kinds of tools you can use and the process of how you do it. All of these are very clear and I like the visualization.
- **Hanna**: I see them as the tests of how my thinking proceeds … kinds of tests in logic, patience. (Laughs) because it took time to sit down and read these papers as these days I have been so busy with my own work … these papers test me on how I speak visually with drawings, communicate with drawings and get people to interact by drawings.

As mentioned above, Jay, Lisa and Emma saw the inter-object recipes as the instructions, whereas Hanna saw the inter-object recipes as tests. Furthermore, Lisa mentioned that they were very open instructions which allowed their readers to modify them freely. In addition, Emma pointed out the components of the instruction: objects for combining, tools for making and steps for making. On the other hand, Hanna considered the inter-object recipes as the tests of thinking and drawing. She drew her own thinking in the inter-object recipes. Moreover, she mentioned that her drawings in the inter-object recipes indicated what was in her mind at that moment. As she explained, she drew on each page without checking the following pages. She described it in this way:

> I wanted to just do one thing at a time and let it proceed from that ... I did not care what came next and I did not want to try to make sense of it.

The interviewees were also asked where they would expect the inter-object recipes appear. These are how they answered:

- **Jay**: From the design shops...
- **Lisa**: I do not have any expectations of where to get them. (Pause) I am thinking it will be really nice to approach in the community. In that sense like kids and parents. (Pause) Maybe newspaper is a good way if people still read newspaper these days. Because it will reach wide audience. I never got this [inter-object recipe], I mean I see some books like craft books. But it [craft book] is different. This [inter-object recipe] is more creative.
- **Emma**: I was thinking more that these are instructions for school ... I was thinking that this might work as good examples to provide ideas for the students, even the kids. It shows how to think about combining objects.
- **Hanna**: These [inter-object recipes] remind me of the psychological test I went through two years ago for applying one job.

As the interviewees answered above, they had their own different expectations of where to receive the inter-object recipes. For Jay, he treated the inter-object recipes as the designed instructions which could appear in the design shops; whereas Lisa and Emma both mentioned that the inter-object recipes benefited the kids. Lisa said that she could imagine the kids and parents having a nice Sunday afternoon by reading these instructions and making objects together. On the other hand, Emma considered the inter-object recipes as good examples and inspirations for bringing creative thinking to the students. However, for Hanna, the inter-object recipes reminded her of the psychological test paper she went through before, which appeared in the employment recruitment processes.

I also asked all the interviewees whether they showed the recipes to other people. Lisa, Emma and Hanna did not show them to other people, but Jay had shown them to his friends:

- **Jay**: I showed them [inter-object recipes] to three friends and they had so different reactions and comments. One of my friends gave each idea one special name.
- **Me**: How did your friend name them?
Jay: Each inter-object in his own way. “The naming process was fun”, Jay said, “It was nice conversation with my friend about these papers.”

All interviewees considered the illustrations in the recipes clear and easy to understand. However, when I asked them about their interpretations on the marks in the recipes (Figure 59), Jay, Lisa and Emma indicated that they did not notice the marks when they were reading the inter-object recipes as the marks were quite small. They agreed that the mark need made bigger to catch their attention. However, Hanna noticed this mark when she was reading. In addition, she drew her own interpretations of it in the paper. As she mentioned, these drawings are what was in her mind at that moment. Figure 60 and figure 61 demonstrate two examples of Hanna’s drawings in two inter-object recipes. She drew potholder and boot on the marks in the inter-object recipe 3. Meanwhile, in the inter-object recipe 4, she drew the door of the cupboard and a human being’s head on each of the mark.

On the other hand, after being pointed out the mark in the inter-object recipes, Jay, Lisa and Emma elaborated on their interpretations of them. Jay saw the marks as “object like this”, the object which functioned the same way as the example but had a different shape. On the other hand, Emma saw the marks as “think”, which encouraged readers to open their minds and invent other objects which could be combined. The interviewees’ comments indicate that, except for the sizes, the marks here do function the way they are supposed to.
When asked whether they would like to receive more recipes in the future, Jay, Lisa and Emma said that they would like to read more. Furthermore, Jay indicated that the inter-object recipes showed him the links between objects which he did not notice before. These links were very attractive to him. On the other hand, Lisa considered the inter-objects as a balance of conflicting objects.

Interpretations of the inter-objects

After interviewing the participants’ reading experiences of the inter-object recipes, in this part, I document their interpretations of the inter-objects shown in the inter-object recipes. During the interviews, the participants were asked to choose and name the inter-object(s) they were interested in among the five inter-objects. Figure 62 demonstrates all participants’ choices and the name they gave for the inter-object. The naming process offered one more way of seeing people’s interpretations of the inter-objects. It also brought more interactions between the interviewers and interviewee.
**Table 62. Summary of the inter-objects the participants were interested in (mark X) and the names they gave for the inter-object.**

<table>
<thead>
<tr>
<th>Inter-object</th>
<th>Inter-object 1</th>
<th>Inter-object 2</th>
<th>Inter-object 3</th>
<th>Inter-object 4</th>
<th>Inter-object 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[Bag with hat]</td>
<td>[Small cup with big cup]</td>
<td>[Glove with sock]</td>
<td>[Lid hat]</td>
<td>[Tray with cups]</td>
</tr>
<tr>
<td>Jay</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Everything has its place</td>
<td></td>
<td></td>
<td>Touch me</td>
<td></td>
<td>Solidify of scene</td>
</tr>
<tr>
<td>Lisa</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cup 2 cup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emma</td>
<td>X</td>
<td></td>
<td>Protecting</td>
<td>Steam hat</td>
<td>Pen holder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flower holder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanna</td>
<td>X</td>
<td>Strange</td>
<td>X</td>
<td>Explorer</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glass tower</td>
<td>Metamorphosis</td>
<td></td>
<td>Break</td>
</tr>
</tbody>
</table>

According to Figure 62, Jay talked about the inter-object 1, 3 and 5 during the interview and named these three inter-objects. Lisa talked about the inter-object 2, 3 and 4 and named the inter-object 2. Emma talked about all five inter-objects and named the inter-object 2, 3, 4, and 5. Hanna talked about all the inter-objects and named all of them. Each inter-object and interviewee interpretation of it will be discussed in the following parts.

Jay named the **inter-object 1** “everything has its place”. He described it in this way:

*The first thing attracted me is the bottom of the bag. Often the bag has a quite flat bottom, but this one the bottom is partly flat and partly round. People put all different kinds of things in the bag every day and something round would fit better in this bag. (Pause) For example, a watermelon (laughs).*

Furthermore, Jay mentioned that this inter-object recipe stimulated him to design his own version of it (Figure 63).

*I would like to use the clown’s hat for “everything has its place”. I think it will be lovely. I will put very special hats. I think it is quite practical. You can use it every day for shopping. It is also quite fashionable.*

On the other hand, Emma described the inter-object 1 as a critical object in the way that the hat fitted the bottom of the bag. She imagined different shapes for the hats. For her, it is demanding that the hats are matching the bottom of the bags.

Lisa named the **inter-object 2** “cup 2 cup”. Inspired by it, Lisa made her own inter-object (Figure 64). She also used it to express her interpretation of the inter-object 2:

*I would say it is a creative experiment. I connected the white stool with three cups underneath. I wanted this because I had the wooden stool which was a bit higher than the white stool (Figure 64), and I wanted the white stool the same height as the wooden stool so that I could use the keyboard I was using. [When I was figuring how to make the white stool higher] this image [inter-object 2] immediately popped up in my head. (Pause) I was thinking it is about everyday objects in your house and you will think about their identities.*
Lisa also mentioned that these cups were not permanent glued with the stool as she might use the cups later. Instead of glue, Lisa used the blu-tack to secure them temporarily.

Emma considered the inter-object 2 as a vase. She named it “flower holder”. Emma liked the combination of the two cups shown in the recipe and she commented that the connection was beautiful. Additionally, she would like to put the inter-object 2 on the table or shelf with flowers in. Emma also elaborated on her imagination of making the inter-object 2. “I think you can connect very different kinds of glasses”, Emma said, “If you go to second-hand shop, then it is easy to think how they would
Inter-object

fit with each other”. She also suggested using colorful cups for making: “If these cups are colorful, you can get very nice combinations.”

Jay named the inter-object 3 “touch me”. “It is very warm and comfortable”, Jay said, “I just want to wear it and it also protects my arm”. When asked his interpretation of the inter-object 3 and the relationship between the glove and sock, he answered in this way:

They [inter-object 3] are warming and protecting our arms and legs. They are both amiable and you just want to touch them. “Touch me” is a new object which combines [the user’s] memories [of the sock and glove].

Jay imagined using the inter-object 3 outdoor in winter. He said: “the illustration of the glove in the recipe makes me feel very warm”.

On the other hand, Lisa saw the inter-object 2 interesting and she would like to make it. When asked why she did not make it, she answered in this way:

I was not convinced to destroy my favorite socks, but my favorite socks looks better with the gloves, for example, the colors. So if it [the sock] is already somehow going to be broken, I will tear apart that I do not really care. I do not want to destroy something I like, but also I do not want to use something I do not like.

Lisa needs the glove and sock which she like but at the same time are broken. In this way, she feels she gives them their second lives.

Emma named the inter-object 3 “protecting”. “Protecting” stimulated her to imagine combining different elements from the clothes, not only the sock and glove. She also indicated that she would use contrasting materials for combining, i.e., leather and knitting.

Hanna named the inter-object 3 metamorphosis. For her, the inter-object 3 showed how the glove and sock fused and transformed into another object.

Lisa considered the inter-object 4 as the plate cover for keeping food warm when she only read the first page. However, she realized that it was a hat after reading the following pages. She described the inter-object 4 in this way:

I think it is a [method for] redecorating your hat, but I would never think about using the knob on the drawer like [what] suggested in the paper. If I decorate my hat, I would immediately jump to the handicraft shop where they sell buttons and colorful ribbons. I would never think about [using] something I could just detach from my home as decorative item.

As mentioned above, Lisa treated the inter-object 4 as a new method for redecorating a hat. During the interview, she also showed the prototype she made (Figure 65). She used her own hat and the knob from her broken old drawer for making (Figure 66). When I asked her if she would use the prototype she made, she answered:

I need to make it better. I want to decorate my hat but I am not totally convinced with this wooden piece [the knob]. I want something metal. I do want to redecorate my hat to make it more unique. I would like to use the material which is more conflict with this felt material [the material of the hat], so I will develop it in the future. But I also need to think about the way to make it without damaging too much. I do not want to cut a hole [in the hat] and then realize I made a mistake and all that. So if there is a clever way or a clever object that has some holes already, I can just tie the knob with the thread. That is the easiest.

During the interview, Lisa came up with a better idea that she would use in the future for decorating her hat:

Just now I am thinking about the clever way to do this hat lid. I would find a piece of magnet and sew it or glue it on the inner side of the hat. Then I can attach different pieces on the top [of the hat]. The piece need to be something metal or something I can glue metal or magnet on the bottom. It can go beyond crazy. Besides the knob, it can be a flower, or it can be something really dramatic shape. It also becomes changeable.
As mentioned above, Lisa redesigns the inter-object 4 and she will try her new idea in the future.

On the other hand, Emma considered the inter-object 4 as a funny object. She named it “steam hat” and described it in the following way:

I see that you can, (Pause) how to say, it is a hat that you can lift up [by holding the knob]. This [the hole in the hat] is also for the “steam” when you are very angry (laughs). This [inter-object 2] is practical and this [inter-object 4] is critical.

As mentioned above, Emma had a clear graphic in her mind: an angry man with the inter-object 4 on his head. Meanwhile, the steam was coming from the hole in the hat.

Hanna named the inter-object 4 “explorer” and she drew the eyes looking back to the readers under the hat. Figure 67 demonstrates her drawing.

The inter-object 5 was named “solidify of scene” by Jay. He described it in this way:

Freeze or solidify a scene in everyday life. It [the inter-object 5] will stay in the room all the time and functions there. It is a super normal object.

Furthermore, Jay imagined and described the usage scenario of the inter-object 5.

I will put it on the desk. I will treat it as the object for categorizing things. I can imagine that I take a pen from it when I am writing or reading; I throw my key on it when I arrive home and take my key from it when I leave home to work. It is for organizing small stuff.

Similar to Jay, Emma treated inter-object 5 as a container and holder. She named it “pen holder”.

Except for the inter-object recipe 1 to 5 mentioned above, the inter-object template was also included in the letter that was sent to pilot study participants. As a result, all the participants see the template as something to be filled. Furthermore, Emma indicated it in this way:

Now I need to go some places where there are a lot of different objects and then I have this one [the inter-object template]. Maybe I get lots of ideas when I see different objects and then I fill the paper with my ideas. I will start to combine these objects.

Similar to Emma, Jay and Lisa demonstrated that they might fill the template in the future.

According to the interview, people see inter-object recipes as clear illustrations, except for the mark ... in the recipes as mentioned previously. After the interview, the marks ... in the recipes are change into bigger question marks (Figure 68).
The pilot study shows that the inter-object recipes brought the four participants the concept of inter-object and the instructions for making the inter-object, but at the same time the inter-object recipes did not limit the participants’ free imaginations. As a result, the participants gave different and personal interpretations of each inter-object. What is more important, the participants talked about their imagination of their own inter-object and also the usage scenarios. All those feedbacks support me to proceed to the next part: inter-object questionnaire, which uses inter-object recipe 1-5 as examples and encourages people to design their own inter-object.

Figure 67. Hanna drew the eyes looking back to the readers under the hat.

Figure 68. The marks ... in the recipes were changed into bigger question marks based on participants” feedback.
This chapter consists of two parts: the inter-object questionnaire package and the inter-object questionnaire results. The former is the package I sent to the participants’ houses which explains the inter-object concept and encourages them to design their own inter-objects. The latter consists of the participants’ feedback to this package.

The inter-object questionnaire package (Figure 69) includes the introduction letter, the inter-object recipes 1 to 5, the questionnaire and the return envelope. The contents in the envelope on the next page show the introduction letter, the inter-object recipes 1-5 and the questionnaire. In addition, the introduction letter (Figure 70) briefly introduces the inter-object project and how the inter-object questionnaire package proceeds. Moreover, the inter-object recipes 1 to 5 (Figure 71-75) offer the examples and inspirations for creating the inter-objects. The questionnaire in this package (Figure 76) is the page where people can illustrate and describe their own inter-object. The return envelope is for the participants to send the questionnaire back to me. The abovementioned different components are printed in different color papers. The introduction letter is printed in the blue paper; the inter-object recipes are printed in the white papers and the questionnaire is printed in the yellow paper.

Figure 69. The inter-object questionnaire package which includes the introduction letter, the inter-object recipes 1 to 5, the questionnaire and the return envelope.
After finishing the inter-object questionnaire package mentioned above, 15 participants were contacted and their home addresses were confirmed. Moreover, the inter-object questionnaire packages were sent to these home addresses in the end of September 2014. As a result, at the beginning of October 2014, I started to receive the returned questionnaires one after one. Until 26 October 2014, I received 11 of them. Additionally, one participant made her inter-object and sent me the photo (Figure 79). These returned questionnaires are listed in the following parts:
1. Choose two everyday objects around you for making your Inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tong.ren@alto.fi).

2. Illustrate & describe your Inter-object:

3. Tools for making:

Figure 77. Returned questionnaire 1.
Figure 78. Returned questionnaire 2.
Inter-object

Figure 79. The inter-object made by participant.
1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tong.ren@aalto.fi):

- Cactus or other plant
- Fancy coffee cup or glass

You can buy some really special ones from a flashmarket or thriftstore and line them up.

2. Illustrate & describe your inter-object:

- Plant inside cup or glass only for aesthetic reasons.

3. Tools for making:

- Other
- Shovel

---

Figure 80. Returned questionnaire 3.
INTER-OBJECT RECIPE

1. CHOOSE TWO EVERYDAY OBJECTS AROUND YOU FOR MAKING YOUR INTER-OBJECT (YOU MAY GET INSPIRATIONS FROM PREVIOUS RECIPES). ILLUSTRATE & DESCRIBE THESE TWO OBJECTS (YOU MAY ALSO SEND PHOTOS TO TONGREN@ALTO.FR)

- Martini glass
- Glass container (Frigoverre 0,5 l)

2. ILLUSTRATE & DESCRIBE YOUR INTER-OBJECT:

- Serving dish

3. TOOLS FOR MAKING:

- UV-glee
- Scissors
- Other

Figure 81. Returned questionnaire 4.
Figure 82. Returned questionnaire 5.
1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to fonl.ren@aalto.fi).

Candle holder + Glass

2. Illustrate & describe your inter-object:

Fest glass

3. Tools for making:

- [ ] Can
- [ ] Candle
- [ ] Scissors
- [ ] Pencil
- [ ] Other

Figure 83. Returned questionnaire 6.
1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tony.ren@aalto.fi):

   ![Object 1: Paper clip]
   ![Object 2: Set of earplugs]

2. Illustrate & describe your inter-object:

   ![Inter-object: Cool running music set]

3. Tools for making:

   ![Tools: Glue, Marker, Scissors]

   THAT'S A CELL PHONE

   Cool running music set!
   No more tangles! No more accidental pull-outs!

Figure 84. Returned questionnaire 7.
1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tong.ren@alto.fi).

2. Illustrate & describe your inter-object.

3. Tools for making:
   - V. Pedestal for contact lenses
   - 2. Salt/Pepper holder in kitchen
   - 3. Other

Figure 85. Returned questionnaire 8.
1. CHOOSE TWO EVERYDAY OBJECTS AROUND YOU FOR MAKING YOUR INTER-OBJECT (YOU MAY GET INSPIRATIONS FROM PREVIOUS RECIPES). ILLUSTRATE & DESCRIBE THESE TWO OBJECTS (YOU MAY ALSO SEND PHOTOS TO TONG.REN@AALT.OT).

2. ILLUSTRATE & DESCRIBE YOUR INTER-OBJECT.

3. TOOLS FOR MAKING:

- [ ] can
- [ ] scissors
- [ ] pencil
- [ ] other

electricity fan: we can save energy and time at the same time by combining 2 functions in one.

Figure 86. Returned questionnaire 9.
**Method**

**Inter-object**

**INTER-OBJECT RECIPE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>EMAIL</th>
</tr>
</thead>
</table>

1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tong.ren@aalto.fi):

- **laptop**
- **spoon**
- **lipstick**
- **charger**
- **coffee cup**
- **mascara**

2. Illustrate & describe your inter-object:

3. Tools for making:

   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]
   - [ ]

If you include the charger inside the laptop, it would be great (do not take so much space)

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Figure 87. Returned questionnaire 10.
Inter-object

1. Choose two everyday objects around you for making your inter-object (you may get inspirations from previous recipes). Illustrate & describe these two objects (you may also send photos to tong.ren@aalto.fi).

- A big tip/spice ball
- A nutcracker, a little explosive

2. Illustrate & describe your inter-object:

3. Tools for making:

   - [ ] Nuts
   - [ ] Small pieces
   - [ ] Clips
   - [ ] Welding points

   This combination allows you to crack your nuts without the risk of losing any of your precious food. How convenient!!

Figure 88. Returned questionnaire 11.
As mentioned above, the participants illustrated and described their own inter-object in the returned questionnaire. These returned questionnaires demonstrate the participants’ own interpretations of the inter-object concept.

By reviewing the returned questionnaires, I realized that the participants’ inter-objects can be divided into two categories: the inter-objects which redesign the inter-objects I designed in the inter-object recipes and the new inter-object. The former inter-objects are shown in Figure 89. The latter inter-objects are shown in Figure 90. As mentioned in Figure 89, these inter-objects redesign the inter-objects I designed by changing parts of the everyday objects. Furthermore, all the three inter-objects in the Figure 89 are linked to the inter-object 2 [big cup with small cup]. On the other hand, the new inter-object demonstrated in Figure 90 indicates the inter-objects which combine two new everyday objects or demonstrate the new combination ways which have not been shown in the inter-object recipes. These new inter-objects represent the participants’ new interpretations of the inter-object concept.

Figure 89: The inter-objects which redesign the inter-object in the inter-object recipes.

Figure 90: The new inter-object.
Through the inter-object project, the inter-object concept was created for making fictional objects; the inter-object recipes were designed for guiding people to make the inter-objects and the inter-object questionnaires were constructed for collecting people’s own inter-objects. This thesis project demonstrates inter-object as a new method for creating fictional objects and, as a result, encourages people to join in the creative thinking and designing processes by imagining and making their own inter-objects.

The inter-object concept was invented from my sketch dairy which I kept for documenting my observations and thinking of everyday objects by sketching at the beginning of the thesis process. Furthermore, based on the inter-object concept, five inter-objects were made demonstrating the new meanings of everyday objects. Rather than showing these three dimensional inter-objects to the participants, the inter-object recipes, i.e., the open instructions for making the inter-objects, were designed and presented to them. In this way, the recipes allowed the participants’ free modifications and encouraged them to become the designers. In addition, through the interview via the pilot study, feedback was collected on the inter-objects and the inter-object recipes. This feedback showed different people’s interpretations of the inter-objects concept and the inter-object designed by the author. This feedback documented in the pilot study part constructed important information for people to read, think and debate. Based on the pilot study, the inter-object questionnaire package was designed. It provided another creative way to collect people’s feedback on the inter-object concept. The inter-object questionnaire used the inter-object recipes as examples and inspirations. It asked people to illustrate and describe their own inter-objects in the questionnaire. As a result, the returned questionnaires indicated the different inter-objects designed by the participants. The whole research process demonstrates my experimentation with and exploration of the inter-object concept.

The inter-object concept allows creating a fictional object by combining two everyday objects or parts of them. It stimulates people to examine the links between these everyday objects and discover more links between everyday objects around them. It is worth noting that this method brings the everyday objects their second lives. Meanwhile, it also allows the viewer and user to see the new meanings of the existing everyday objects from their own perspective.

The inter-object recipes clearly display the making processes of the inter-objects with the simple illustrations. They enable people to understand these making processes and the inter-object concept. As a result, the participants interpreted the inter-objects in different ways and this encouraged them to illustrate and describe their own inter-objects. These participants’ inter-objects can be briefly divided into two categories: the inter-objects which redesign the inter-objects designed by the author in the inter-object recipes, and the new inter-objects. The former represents the participants’ interpretations of the inter-objects in the inter-object recipes. They redesign the inter-objects by changing parts of the everyday objects shown in the recipes. The latter, the new inter-objects, indicates the inter-objects which combine two new everyday objects or demonstrate the new combination ways which have not been shown in the inter-object recipes. These new inter-objects represent the participants’ new interpretations of the inter-object concept. However, both of the inter-objects in these two categories reveal new links between everyday objects through the participants’ observations. In the future, this method (i.e. inter-object recipe) could be developed further for giving birth and support to explorative design processes also for other designers.
The inter-object project not only contributes to the new findings of the inter-object concept but also leads me to discover more about myself as a designer. More specifically, the inter-object project developed my abilities to express and communicate with sketching and, especially, reveals the tight connection between sketching and me. During this project, the sketch diary was kept for three months which consumed three sketch books. This is the first time for me to keep an intensive diary for such a long time. My passion for sketch diary was shown in the beginning of the project already. I was eager to look for resources for sketching and satisfied by finishing a day with these sketches. As a result, sketch diary led me to realize that sketching is not only a way to document thinking but also a way to stimulate it. Moreover, these sketches in the sketch books and the sketch diary method will benefit my future career as a designer.

As mentioned previously, the inspiration for designing inter-object recipes comes from cooking recipes. During the inter-object project, five inter-object recipes were produced clarifying the instructions for making the inter-objects. At this stage, I dream of an inter-object recipe book which consists of many different inter-object recipes. Similar to a cooking book, the inter-object recipe book will offer people many possibilities for “cooking” everyday objects. To achieve this goal, explorations should continue of the inter-object concept.

During this current project, the participants illustrated and described their own inter-objects in the questionnaires at home. However, another possibility for continuing this project could be bringing the participants from home to the inter-object workshop. In this workshop, different everyday objects and the inter-object questionnaire package would be provided for the participants to illustrate and create their own inter-objects. Moreover, the final results would be shared among the participants in the workshop and publicly through an exhibition.

Based on what mentioned above about the future possibilities, the inter-object project will continue exploring the inter-object concept and expanding people’s imaginations of everyday objects.
References


References
Appendix: Interview questions

1. How will you describe the paper you got from me when your friend ask you?
2. Where do you expect to see these paper come from?
3. Where did you put these paper?
4. How long did it take for you to read the paper at the first time? Where did you read it? Was there anything not clear in the paper?
5. Did you read it again afterwards?
6. Did you show them to your friends?

Please pick something you like from these paper

7. What name do you want to give for the object? You can write it on the paper.
8. How will you describe the object to your friend?
9. Who do you think would like to make it and use it?
10. Where will you put it and when will you use it?
11. Did you make anything?
12. How long did the making process take?
13. Where did you make it?
14. Where did the material come from?
15. Was any part difficult to make? Did anybody help you?
16. How was the making process feel?
17. Where did you put your work?
18. Did any people comment on your work?
19. Will you give it to anybody as gift? Who?
20. Do you feel that you are like a designer when you were in making process?
21. Do you want to get more recipes later?
22. Will you give these recipes to your friend as gift?
23. Do you think that you will fill in the last paper someday?