LIGHT

AND OTHER STORIES

A Study of Tangible Emotional Interaction in Design

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CATALOGUE

P R E F A C E

This project is a final chapter, a collective memory and an on-going draft of my exploration on the road of design. I regard it as a conclusion for my two-years design tryout. I give my genuine thanks to the persons who watched me, supported me and helped me along the way, through the rainy days.

My supervisor Carl-Johan Skogh, examiner Marcus Janke and external critic Sara Ljungblad, for words of wisdom and honest opinions, helping me taking my project to a higher academic level;

Glass artist Micke Johansson, for finely realizing my idea into tangible products with outstanding glass blowing mastery and handcraft;
Other glass artists who pointed me the direction, for generous knowledge sharing;

Technician Arne Jacobson, Joachim Harrysson for guidance and support along the production.
Friend Cynthia Yao, Shuting Fang for material delivery, the final object would not be possible without you.

My father and mother, for the help, love and support.

My dear classmates, friends in HDK, for being there always.

And David Lynch, for all time inspiration.

A B S T R A C T

The project is a study of design and emotions. A design method for creating tangible emotional interaction is concluded-storytelling, open-end design and slow design, through an applicable design object. With a series of "growing lighting", I want to address the design value on the experience, rather than the object with a certain function itself, in order to create emotional connection and interaction between object and people. The ultimate goal is to form a design philosophy to act on emotion and psychological issues in the life style of modern society. Additionally a design reflection upon today's society is also discussed in this article.

To achieve the goals I try to apply adapted research method on design for tangible interaction, both from a personal point of view and the view of the users. "Interaction design" here is based on a tactile/physical level, through materials, or other natural features of objects, questioning subject-object relationships- how to realize emotional bonding through design, opening up the possibility of individual interpretation of the audience, to empower, to move, to cure.

S E T U P - B A C K G R O U N D / G O A L

Having experience in industrial/interaction design and user study, I put a lot of value on object-human interaction in design. To create interaction, especially on an emotional level, there are media that is tangible, closer to human body and everyday life, which will evoke emotion and create peace psychologically. Natural material, "analog" or crafted products provide people a kind of nostalgia while a lot of things are digitalized nowadays. Practicing with hands-on design, trying different techniques myself, I try to create emotional connection between object and user in my master's study.

THE VALUE OF DESIGN

"Art does not serve merely as a means to increase our happiness, or our success in attaining the things we value in life, but rather as a vehicle through which to express our commitment to those values."-Curious Emotion, Ralph D. Ellis(2005)

I believe design of today should not serve merely its physical function, but rather have psychological function as well, to move, to cure, to help committing to a certain value. Design, like art, serves as a handle-providing an opportunity of "pulling up" individual enaction of curiosity/ memory /dream/novelty, and create narratives.

HOW WILL AN OBJECT HAVE A "SOUL"?

If I want the object to "have a soul", I need to put "soul" in it. The experience/emotions/ communication regarding the interpretation of audience individuality can hardly be achieved through words, drafts, pre-picturing. For the designer, the possible emphatic experience is achieved along the way, in the process of practical working, when touching the material, working with it,trying different forms, filtering the disturbing information/signs, finding the right language to talk to people, to tell the story and to interact, just like the artists/craftsmen with this tacit knowledge. For the user, they develop the personal narrative and emotional connection with the object in the similar way, through directly experiencing the object.

DESIGN FOR EXPERIENCE IN THE AGE OF DIGITALIZATION

"sphere of authenticity is outside the technical"

*-Walter Benjamin "The Work of Art in the Age of Mechanical Reproduction"*

In 1930s Walter Benjamin in his book "the work of art in the age of mechanical reproduction", discusses the concept of authenticity, particularly in application to reproduction. He also introduces the idea of the "aura" of a work and its absence in a reproduction. Benjamin argues that through the act of reproduction something is taken from the original by changing its context. His concern even though is formed in the time when art firstly contradicts with mass production, interestingly it is still of realistic significance in today's age of electronic media. If we say Benjamin's theory is about the loss of authenticity in physical existence of art, the similar situation we face today is the same value lost in the large scale of digital communication taking over the natural way of human contact, along with the explosion of information, also affecting the spiritual message art or design could deliver.

"If success in communication was once the art of reaching across the intervening bodies to touch another spirit, in the age of electronic media it has become the art of reaching across the intervening spirits to touch another body. Not the ghost in the machine, but the body in the medium is the central dilemma of modern communications."- Peters, John Durham

We are provided with such multiple platform of communication nowadays, however the core desire of instant communication is less about accurate content and more about "here-and-now"-Sensing the other people's reactions and feelings as well as hearing what they say. This fact in the natural way of interaction is often neglected when designing for "smarter" products. The non-verbal communication is rooted deeply in human behavior, which distinguish human with machine. The same way of communication and interaction is also true when it comes to human-object relations.

A MULTIPLE STORYLINE

The aim for this project is to attain three objectives on the issue of design and emotions-a concluded design method with an applicable design object, a design philosophy and a design reflection.

DESIGN & EMOTION

A DESIGN METHOD

A DESIGN PHILOSOPHY

A DESIGN REFLECTION
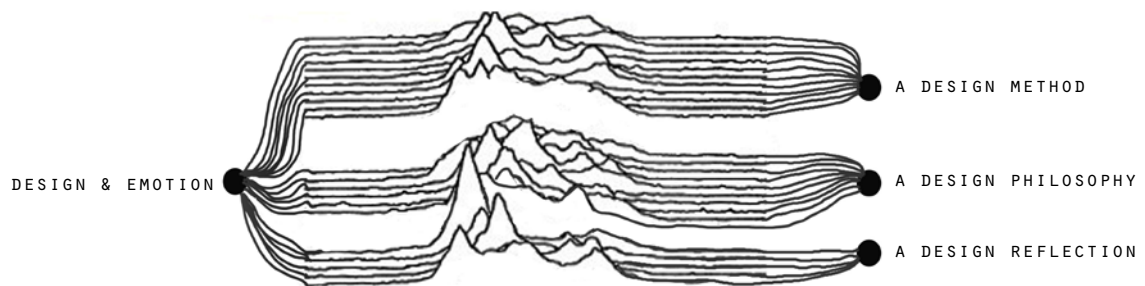
GETTING INTO THE NARRATIVE
-RESEARCH AND ANALYSIS

I approach the topic through two ways of research-to read about the related theoretical study and to talk with people about their feelings and reactions. For the emotion we create in our mind, it has a lot to do with psychology-how our mind fill in the gap of fragmented information we collect, and create coherent narrative. Science tells facts, not solutions. However to make a solution, one need to be aware of the facts.

Emotions are extremely individual and differs along with people and the context. So the second part of research I try to create "random" conversations with people around me, providing them samples-"trigger"/"conversation starter" in order to have a peek into how they create emotional interaction and narrative upon a certain tangible object. Before the research I intend not to frame the conversation, not leading the topic into mechanical or quantified way of user inquiry, rather to keep it open and flexible with the interviewee's natural way of narrative flow. Through this adapted user study method, I abandon the conventional elements of a user study framework, and apply a holistic research draft to get into the field of design and emotions. Considering emotion being "never complete stories", the ever-changing feature and non-describable factor existing in most cases, in the research about emotional connections I want to avoid abstract conceptualization, and reveal the subtle, unconscious aspects in an emotional experience as much as possible.

"READ"----------------------"TALK"

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"READ"

Subject-object relation

In subject-object relations, there are several "factors" acting upon how we encounter and build up a emotional connection with certain objects or events. Objectively the outside environment, or the object itself -the "stimuli" provides the "affordance"-according to James J. Gibson on the theory of visual perception, which triggers the act of suject. The subject in on the other hand, enact, instead of passively react, to this trigger, through direct experiencing, creating this unique and authentic emotional connection. "The mind is pre-tuned, looking for subtle patterns of unfamiliarity and novelty."(Curious Emotion, Ralph Ellis) Because of this pattern of mind activity, how we encounter an object, or the context of this subject-object interaction is crucial, setting the stage for possible narrative and emotional bonding that comes along.
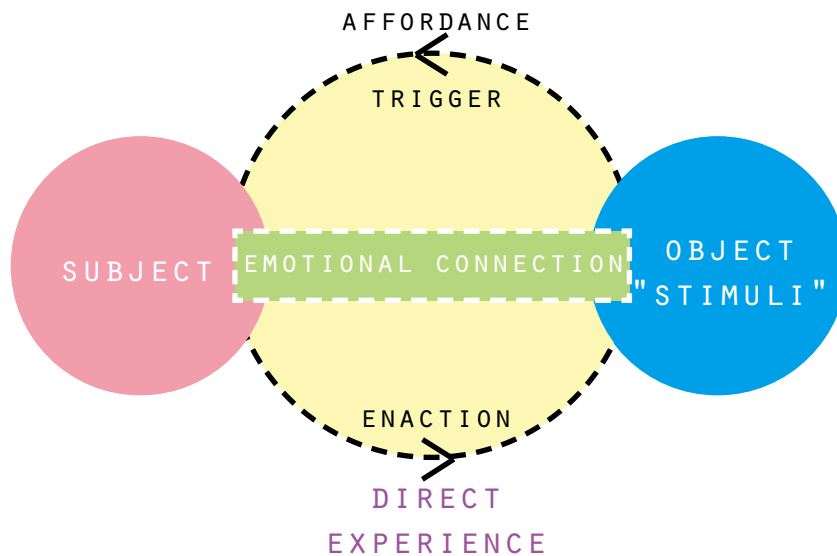
Direct experience

"The concept of experience, where the subject and object meet and merge with one another, is a key issue in designing emotionally meaningful products. This is because experience is a space in which all faculties especially emotions are activated"(The Design and Emotion Society)

When we "meet" a new object, it is like meeting a new people. Our relationship develops because there are certain events for creating experience.

On an emotional level, this subject-object relation depends on our direct experiencing rather than simply acknowledging the felt sensed involved in the interaction with the physical world. There is a difference between being aware of the meaning and directly experiencing the meaning.

What's more, there is a constant editing in our mind. The narrative we create from an object is never final.

"We fill in gaps in our immediate experience, based on the past and anticipated course of events."-James Averill

The temporal dimension in our mind when dealing with emotional experiences decides we only create coherent narrative, not scattered fragments.

Merleau-ponty's theory on consciousness

"We must look in order to see". Merleau-ponty emphasized the body as the primary site of knowing the world. In his account of roles of "body schema" and "body image" in consciousness, the body of the subject takes responsibility of enacting a subject-object relationship. This may seem theoretical, but examples can be seen in working people. The mastery of craftsperson's hand work, results from how one develop this schema. The tacit knowledge of craftsmen is achieved by hands-on practice, and constant failure, which makes their work in a absolute meaning-just like Benjamin Walter's concept of "aura"-"its presence in time and space, its unique existence at the place where it happens to be."-the independence the original artwork of the copy. The authenticity of a piece of art or on the greater context, of an designed object, is the basis for subject-object emotional connection development.

According to Merleau-ponty, the body forms "body-image" out of the information received from the body; the "body schema", by contrast, is based on sensorimotor imagery. When the two are not consistent in some situations, there is a gap between the world we perceive and the "reality". In an extreme case is that the phenomenon of "phantom limbs"- the sensation that an amputated limb is still felt by the subject as if it is attached to the body and is moving appropriately with other body parts. If we look at this

Merleau-Ponty's theory on conciousness

inconsistency in the way we create new objects, so as to say , in the subject of design, there are also citable phenomenon or problems, when it comes to interaction, when the expectation from natural behaviorial habit is not what we get in the designed products. More details on this matter will be discussed in later chapter of reflection.

"TALK"

For the informal interviews which I would rather call conversations, I provide people tangible experiences rather than concepts, as conversation starter. The reason of doing so is the natural feature of emotion as ever-changing multiple drafts, and the non-describable factors. There are certain individual experiences or interactions we create with the outside world which is crucial for building up emotional connections, but most of times these connections are unconscious and could not be told by words. As someone who want to involve people in such narrative, the collection of information for me is not about proofs or facts, which can be found in psychology studies, but personal stories from real people, about an artifact, a feeling or a memory.

"Everybody experiences far more than he understands, yet it is experience, rather than understanding, that influences behaviour."
-Marshall Mcluhan
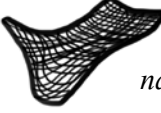
Before the conversation starts I select a series of "non-products" and invite people to look at, to feel and to smell, using any possible sensory way to interact.

The objects involved in this collection are:

1. A lava stone

2. A part of a broken balloon

3. A bunch of natural wool

4. A piece of silk

5. A piece of casted resin in the texture of a walnut

6. A industrially shaped, marble stone in heart shape, colored pink.

I picked the objects in miniature size, with not purposely identified function(non-products).

1. *natural material/formed by nature*

2. *man-made material and form*

3. *natural material/non-woven*

4. *natural material/woven*

5. *man-made material/natural form*

6. *natural material/man-made form*

When the direct sensory experience is formed, physical property of the "non-products" works as trigger for certain individual narrative, this is when I ask them to:

Put them in order according to:

•Which one you feel is more sincere/true

•Which one you feel most curious about

The participants place the objects in order after a few minutes and I start the conversation by asking about their reasons to do so- how they feel about the particular object and how it affects their choices. To my satisfaction, it results in the engagement of conversation, which opens their thoughts to reflect and to tell stories based on more or less their own personal emotional experience. Because there are nothing such as guidance or direction in the conversation, the information I got are closer to the non-describable emotional experiences they create with the object.

What I found out after this on-going conversations with dozens of people:

1.The emotional experiences are individual. Different approaches and completely different ways to understand objects exists vastly, which are based on the past experiences and personal memories.

2.Different levels of perceiving and building up narrative.

a) Sensory information

b) Cognitive evaluation-identification of material/ object

c) Reflective storyline-how it's made/previous experience/personal stories

"because it is light and soft"

"it is natural"

" beacuse it tells me what it is."

"my mom used to have one in her bag"

THE MERGING POINT

According to American psychologist James Averill's theory on emotional feelings, The emotional experience in our mind are on three levels-" feelings of", "feelings about" and "feeling like".

The theory from the Psychologist is consistent with the information I collect from real life conversations.At this point the "read " starts to merge with the "talk".

"Feelings of" describes the bodily reactions when feeling emotional. This is based on sensory information. For example, feelings of pain, feelings of smoothness. On account of the physical world we are in, it could appear in the description about texture, warmth, tension, pressure and so on. In some theories, emotions are "basically feelings as they occur".(William James) In the conversation, some people also give reasons based on"it is light and soft", "I like the touch of it" this kind of sensory feelings. Sensory experience is an important part contributing to emotional feelings. It is also fundamental when considering experience rich design. The sensory experience should not be abandoned for functionality. This means the interaction between object and people should be made tangible. There is a natural way of enhancing human-object interaction, which is not object/machine centered like the most cases in electronic product design nowadays. The sense of touch and smell need to be paid attention to just as the most dominate visual and auditory senses.

"The feelings about" corresponds to value judgments and evaluation of certain situations. For example how one feel about the piece of art or an event. According to some psychologists, the cognitive appraisal is however more obvious when one try to describe a certain emotional feeling. It is a easy way to relate and open up possibility of interpretations from other people's perspective. The subjectiveness of emotion shows a lot on this cognitive appraisal, for it is largely based on each individual's own past experiences, present circumstances and future expectations. For designers, to give meanings to artifatcs is also subjective, because it is extraction from the designer's point of view. In this sense, to evoke emotions through design one should not

aim for the understanding or even empathy from all, which would only cause detachment and misreading.

The term of "feeling like", James Avrill describes as "instrumental response", which is the highest order experience taking into account the relation between subject and object. In the field of design this could be applied through consideration of product semantic. However the "decoding" from user's is beyond designer's pre-picturing.

instrumental response
"feeling like"

cognitive appraisal
"feelings about"

bodily reactions
"feelings of"
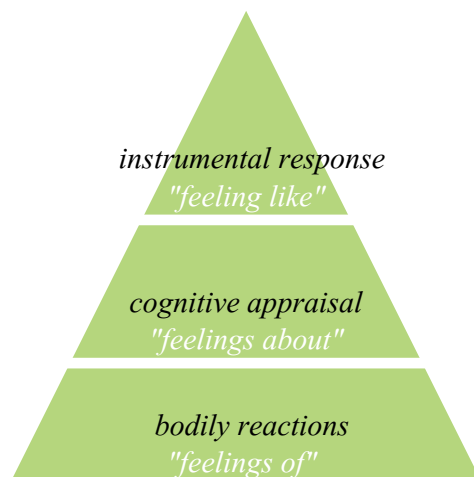
CONFRONTATION
  -PROCESS AND IDEATION

AN AURATIC ARTIFACT

Emotions and stories. Dependence and belonging. Nostalgia and affection. I believe everyone could make a list of artefacts that's of certain significant meaning to themselves, things they are drawn into, things with stories, things they keep for a long time, things for rememberance, things for forgetting, things that makes them secure, things that they depend on without any obvious reasons to others.

When I look back at my list, the first thing that comes up is piece of wool felt on my grandpa's drawing table. I remember it so vividly though it doesn't provide lots of appealing features in other's eyes.

My grandpa is a painter. He does Chinese painting and calligraphy. This is an art involving ink, mineral colors, brush and thin rice paper. I remember from my childhood standing before the table holding my arm up straight with an ink-soaked brush-grandpa is my first art teacher. There is always a piece of felt that is under the rice paper when drawing. Functional reason is to keep the paper "up"-since it is very thin, and absorb the additional ink from the painting.

I love it. I remember the warmth and softness of it, the dots and marks of color on it, the fibers, the inkish smell...all rooted deeply in my mind. I love it not only for it is such a beautiful artefact, but it has value and meaning to me. It reminds me of home, of my loving grandpa and my own culture. I feel naturally connected to it.

Tangibly interactive objects are storytellers. They are "growing" over time, into layers of meaning. Their "growth" are made tangible when sensory experience is involved-visual, auditorial, tactile etc. The meaning of this artefact is co-creation of people(designer, craftsmen, user), nature and time. The unique character is added by this one and only process, or as Benjamin Walters calls it, the "aura".

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FINDING THE STORYLINE

Form follows narration

I want my story to begin in domestic environment, in people's homes. This is based on the considertation of keeping the concept close to the forms of existence. And I'd like to keep it open, not aiming for a certain kind of home products. To define is to construct. And construction is the begining of destruction. To create emotional connections I'd rather search for ways of tangible interactions than forms and formats. I hope the right "language"-forms and formats will come naturally with the right storyline.

Inspirations from nature

Nature is the greatest artist of all time. Her works are always my source of inspiration. She is also an amazing storyteller. The things formed by nature. The natural wonders growing in wind and earth. Erosion, fossils, marks and bones, minerals are her story books. She always has a way to tell demonstrate them with right tempo and wonderdul skills

In search of "side-effects"

Anything that physically formed as natural consequence of certain human action is indication of human existence. Examples of natural consequences can be seen everywhere in the nature. But what I am looking for is the ones formed by human interaction with the physical world. Something grown naturally with time, with less purposes.

I begin to look into everyday life, the low-tech or low-fi ways of living. Fractions on sofas. coffee marks on a wooden table top.Pillings on the textile. Polished look on teeth of a comb. Burned marks inside a lamp. Straches. Wounds. Traces of human existence.

Stories and songs, written in the language of pressure, tempreture, movements-"side-effects of certian human action". They cause physical changes on appearance of artefacts, and add values to their meaning.

The design process begins like a daily practise. I look for "side-effects" caused by human action, formed by power of nature. My search is a hands-on experiments of material, shapes, tryouts.

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salt crystalization
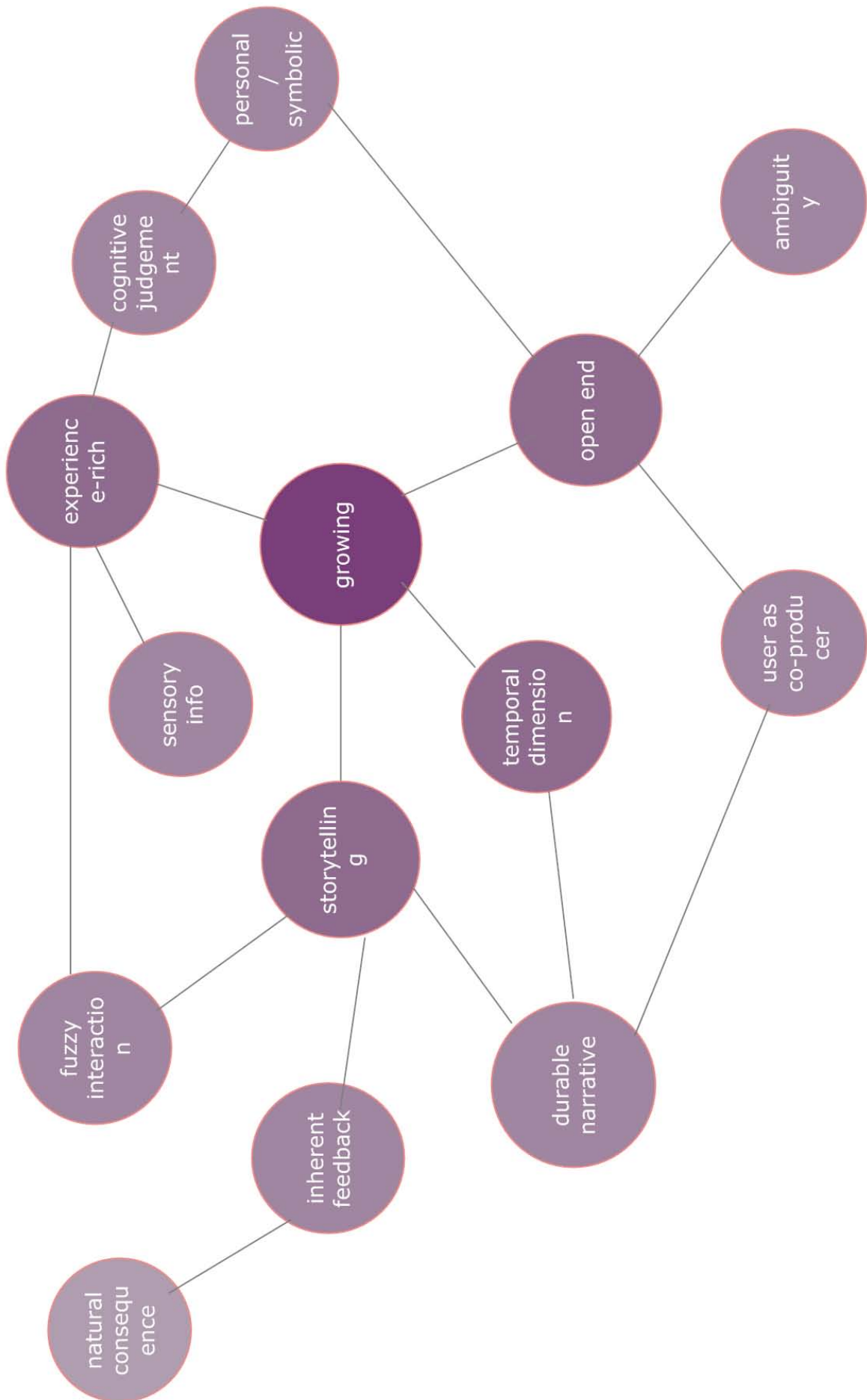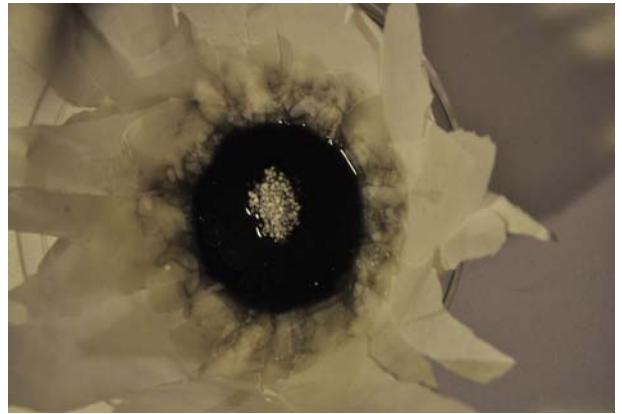
Growing natural wonders

As the experiments went on I begin to try manipulating the natural process of growing. With few human effort, I try to make the interaction work naturally between the layers of daily life activities.

Heat-Evaporation-Tempreture change-Volume change-State change-...

I look for a visualization that is noticeble and enjoyable. Most importantly of all, it will be applied in my design language.

I found salt.

Right tempo. Right language. Right principle. Applicable. Beautiful.
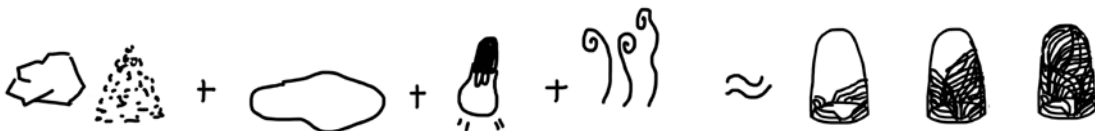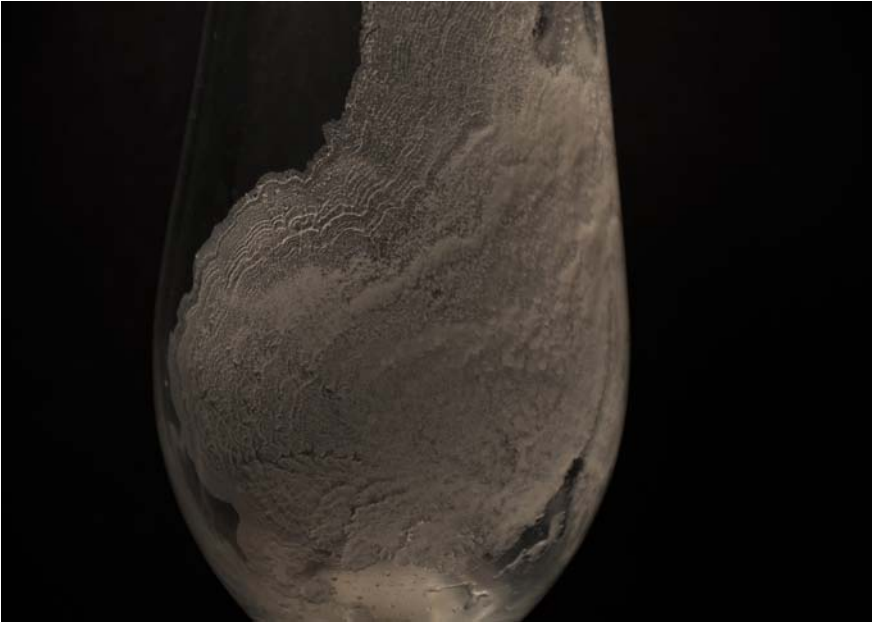
Storyline

Human activity-light-heat-evaporation-solubility change-crystalization

Crystalization on transparent glass forms-growing lampshade

Tempreture change-humidity change-light on-light off-speed of crystalization change

Human activity-side effect-appearance of lighting change-effect upon domestic environment

The storyline-a growing lampshade.
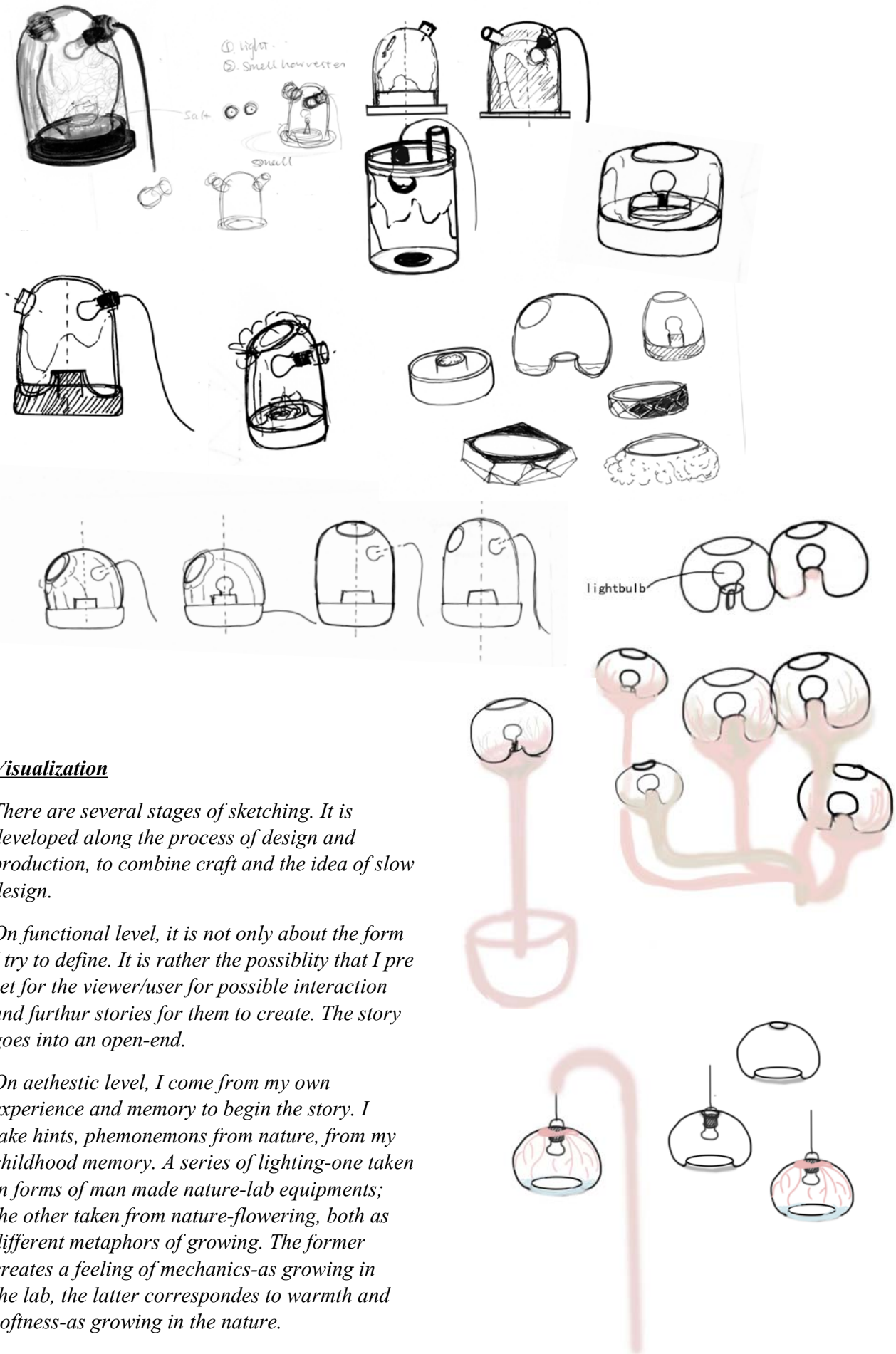
Visualization

There are several stages of sketching. It is developed along the process of design and production, to combine craft and the idea of slow design.

On functional level, it is not only about the form I try to define. It is rather the possiblity that I pre set for the viewer/user for possible interaction and furthur stories for them to create. The story goes into an open-end.

On aethestic level, I come from my own experience and memory to begin the story. I take hints, phemonemons from nature, from my childhood memory. A series of lighting-one taken in forms of man made nature-lab equipments; the other taken from nature-flowering, both as different metaphors of growing. The former creates a feeling of mechanics-as growing in the lab, the latter correspondes to warmth and softness-as growing in the nature.

Make it happen

Key in the realization part is the glass blowing. The form of the glass part has two necessary openings, one for installzation one for evaporation, this made it tricky to do with free blowing.

However free blowing is the best way to realize my concept of slow design. I want to leave the marks of handcraft-imperfact it may be, but it is a sign of dedication and a trigger of story-a sign for user's cognitive evaluation.

After days of searching contacts, I found a glass artist in Smaland, Sweden for cooperation. The details of the production are discussed and I went south to be present in his hotglass studio while production. To realize the original idea, there are some trial and errors. Being there watching the whole process is truely amazing experience for me.

With his glass blowing excellence, my sketch is in the end wonderfully realized with free blowing skills without any molds. The sizes and outline has the feature of free blowing randomicity and organic beauty. That is just what I am looking for.

The other parts in the design is made by myself according to this satisfactory production of glass part. They are made by wood turning in the material of red beech and white birch

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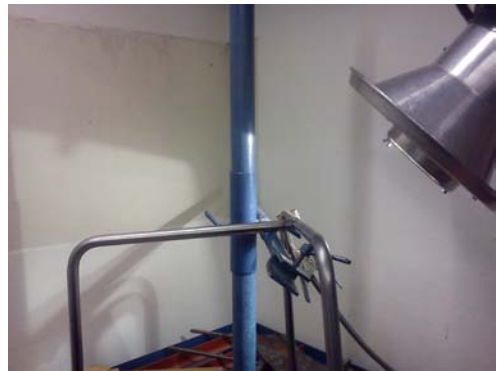
R E S O L U T I O N

LIGHT AND OTHER STORIES

A trace of human existence, a "side effect" of an physical interaction-the warmth from light creates a naturally growing salt crystal lampshade. Slowly unfolding layers of narrative build up emotional connection between human and objects . Is it man-made nature indoors? Is it an apparatus to harvest smells or a display case for treasures? The real is defined in terms of viewer's experience. User as co-producer of the story, creates authentic meaning and emotional commitment.

Lab equipments

Tablelight

Glass, beech(stained), steel

300x220x220mm

200x140x140mm

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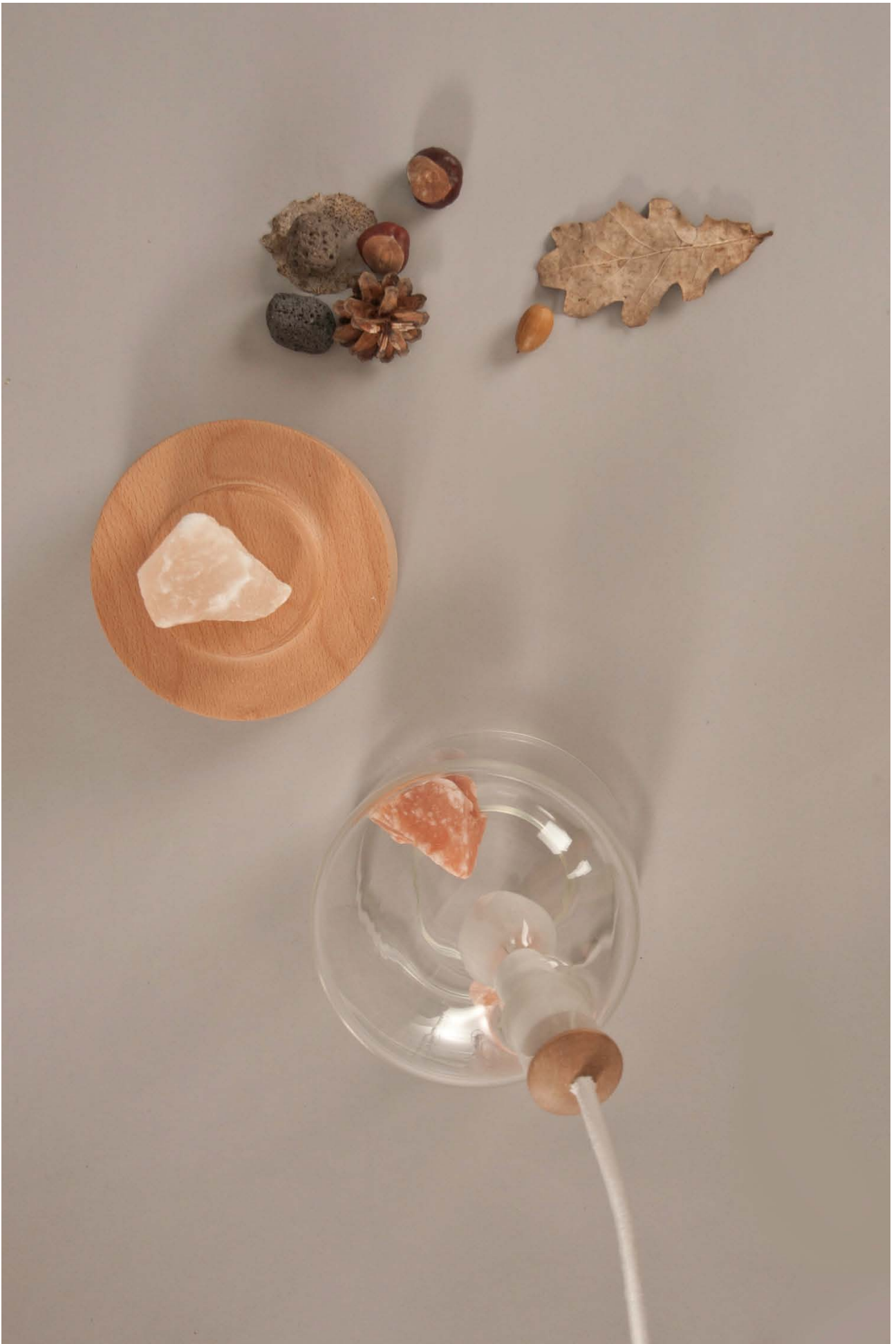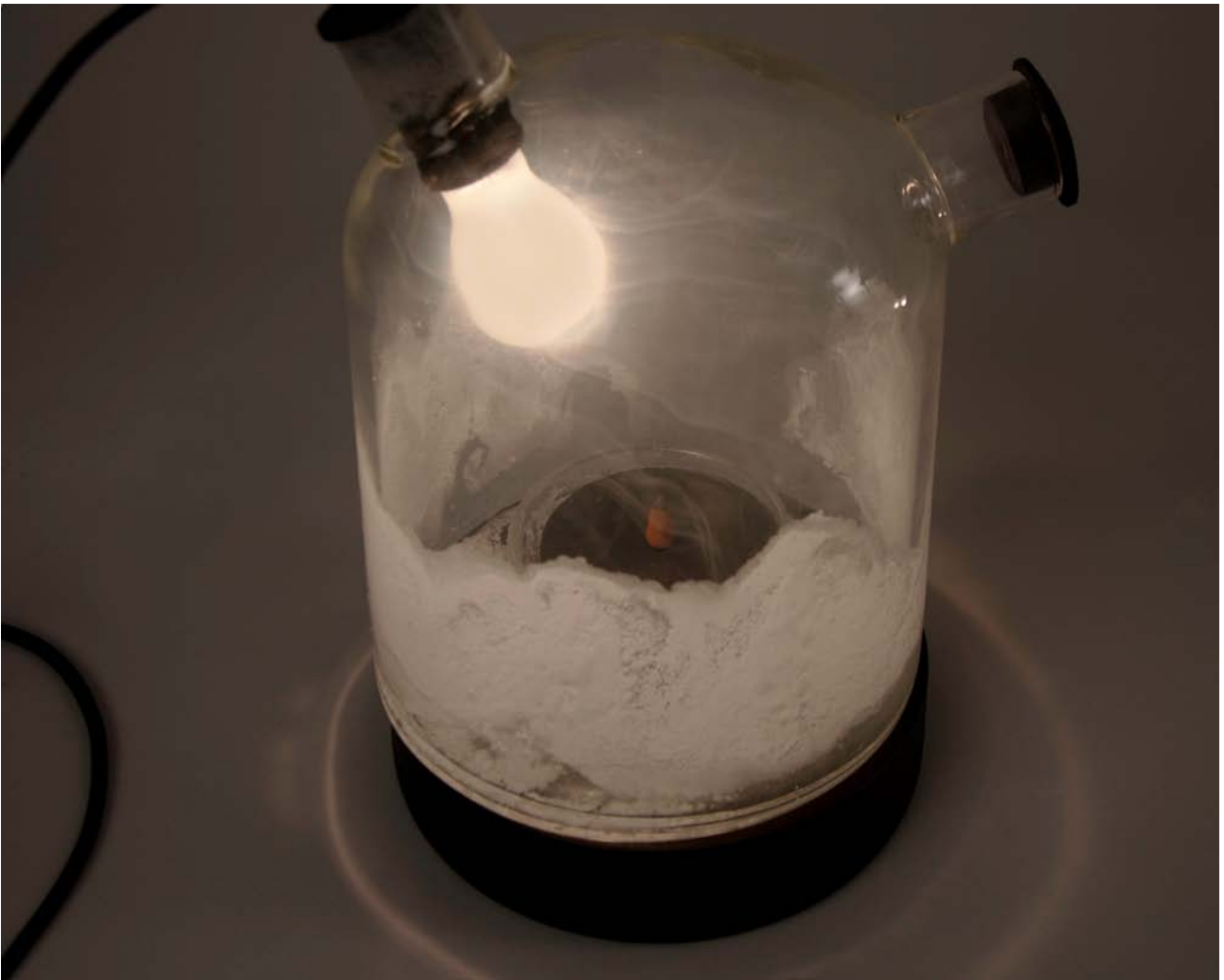
<u>Flowering</u>

Floorlight

Glass, birch, steel

1100x600x600mm

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REFLECTION

REFELCTION ON DESIGN ISSUE

The key issue in this project is to study design and emotions-how objects evoke emotions and how emotional connection between subject and object can be realized in design. The assumption or personal starting point for this issue is the belief that design's psychological functionality-design could work, like art, playing the role on creating an opportunity for personal emotional journey. This is based on my personal reflection on design's role in today's information society background.

New view upon artifacts

The experience an artifact evokes is of equal importance as the functional aspects it provides. Experience is where subject and object meet, get emotionally attached, and create meanings. The artifact itself is loaded with meaning not just by the pre-programming of the designer but also by each individual user through the experience and interaction over time. The emphasis is on the experience one artifact creates, the potential narrative it could evoke, which may seem invisible or unreachable in traditional meaning of product gestalt. What else, it is often easily ignored when functionality being the central matter of design-for example designing for virtual products or digital interfaces.

An explorative design method

I plan to explore a design method through an applicable object-as an example of possible approaches towards design and emotions. This method should be applicable on a general level for design for emotional interactions and experience. I concluded it through my own trial and error in this project and intend to generalize it with broader meaning in the field of design.

•Storytelling

Storytelling is what I have been practising during my master's study. For this project I mainly construct the story within three aspects:

1. Inherent feedback

S T O R Y T E L I N G

"Inherent feedback-natural consequence of the action, help to reduce both cognitive and emotional gap between subject and object, and may therefore seen as a primary agent of empathic engagement."

"What appeals to us in the direct approach is the sensory richness and action-potential of physical objects as carriers of meaning in interaction. Because they address all the senses, physical objects offer more room for expressiveness than screen-based elements. A physical object has the richness of the material world: next to its visual appearance it has weight, material, texture, sound etc.Moreover, all these characteristics are naturally linked."

-"On the creation of meaning in interaction design through feedforward and inherent feedback" Tom Djajadiningrat, Kees Overbeeke & Stepha Wensveen

The feedback of certain action decides whether the interaction is comprehensible and coherent. Often on the design of electronic products it is neglected to keep the feedback from the product consistent with people's expectations for the same action in the natural world. For example on a CD player or a smart phone, pushing a button could mean "play the music", "start an app"or" turn off"-there are so many possible consequences but none of them is consistent with the action"pushing the button"'s natural consequence. People get used to this kind of digitalized or machinelike user scenario, and there is no way to make expectations-even the buttons look the same. We can hardly say this is a natural or humane way of interaction, it is very machine centered. This causes perception burden. The occasional malfunction of the product would destroy the "trust" that is fragilely built upon by the user. In this complicated situation one would only be easily irritated, not to say to open for emotional bonding with the product. The user manual that often comes with a electrical product ruins the romance at the first sight.

The inherent feedback or the natural consequence is what designer need to consider in an interaction when designing the narrative for the user.

2. Fuzzy interactions

Another suggestion on storytelling in design, is to allow fuzzy interactions. This means to consider human as human, to allow mistakes and vulnerability. In a fuzzy interaction, design aims for less precise outcome and richer experience, presenting user with artful scenarios to be slowly engaged.

3.Durable narrative

An emotional experience is an on-going process. The narrative or meaning created by the designer or the maker should not be static. There is a tempo in the story, which helps the user to develop emotional engagement and commitment.

"The product would be a fusion of psychological and external "realities", the user would become a protagonist and co-producer of narrative experience rather than a passive consumer of a product's meaning. The mental interface between the individual and the product is where the experience lies.-Dunne. A and Raby F, Design Noir: The secret life of electronic objects

People cannot engage deeply with artifacts where there is no growth, no change, no narrative and only predictability. In order to find the togetherness and smooth and seamless shift, I looked for the "side-effect" from human interaction with the natural world(change of temperature, volume, sound, appearance, movement etc.) in order to evoke sensations of mutual growth.

Steadily unfolding narrative maps the special and authentic human-object relationship. Therefore the user influence the narrative through the very nature of interaction, which creates intimacy and direct experience. To grow the lampshade in the process of using the lighting, I find a natural consequence in the interaction and a sensory authentic on-going emotional bonding.

"Everything that deceives may be said to enchant."-Plato, The republic

If we apply this philosophy to the design of narrative experiences, it becomes clear that

OPEN END

both knowledge and understanding are agents of destruction. Durable narratives must therefore attempt to side step the deflowering gaze of the consumer, maintaining enchantment while not necessarily being fully understood.

•Open end

If we extract the key points in storytelling methods, it could be seen that an open-end story laid the basis of all interactive activities in experience rich design. Because this allows the user to create individual authentic experience and have their own "version" of the story. In this way, their "version", how different or unexpected it might be from the designer's pre-programming, is based on their very own past experience and memory, can produce the emotional connection that every experience rich design is looking for.

"Although designers can elicit emotional responses, the explicit natureof the response is beyond control. The unique assemblage of pastexperiences particular to each user determine this."

"Narrative experiences may not be over-programmed; spontaneous occurrences create the magic between the subject and object...It is vital that sufficient ambiguity is present, leaving space for the inclusionof the user psyche." -Emotionally Durable Design, Jonathan Chapman

Nothing exists without its opposite. To invite user as co-producer of the story, and allow mutual growth could mean in design, there needs to be an open-end. However in my actual design conceptualization, I have felt that this openness also means a certain amount of limitation. User produce one and only experience based on a frame the designer has provided. How the product grows is pre-tuned by the designer, just as the plots line been set in the story. In the case of the first set of table lamp design, I based my concept on my own childhood memory of mom's lab equipments. It is a specific image that may have various emotional response from different audience. The designer provide the stage, the left is for the user to decide. To use it for display, for collecting smell or just as a table lamp, the "real" is different in different context.

•Slow design

I always have high respect for artists or craftspersons who work with tacit knowledge-a skill that is mastered with practical exercise and experience.

"Through repeated failures, one becomes familiar with a material and its characteristics."-Slow art, national museum Stockholm

They make art, in a slow way, against the modern high-paced way of living and quick-consumption. The whole process almost becomes ceremonial-a meditation or a self-reflection, gradually putting emotions inside the objects, slowly using the physical structure as language, even poetries, to speak to the right audience.

As for the audience, the identification of how it is made, the mark that is left on the object during production , as Benjamin Walters put it, the aura that is left in the object from the manufacturing or designing process, create an empathic experience. The non-verbal communication not only exists between people and object, it exists between people who designed/made the object and people who get to buy it and use it. A product, hand crafted or industrially manufactured, could all communicate with the user emotionally, through the empathic process. The sensory experience that is provided by the object in the interaction-the texture, warmth, look, smell or the sound, later becomes the basis for user's cognitive evaluation- how it is made and how much time and effort has been devoted to this process. It is this devotion that evoke the communication emotionally.

When I am conducting this project, I tried a new design scheme. Combining my initial idea or sketch, I look for the possible recources I could find, and then make decisions based on the real life situation. This is not only a consideration for practical purposes, it is my try out for the slow design method. The realization of idea is equally important as the idea itself.

I start early with assumptions and production plans. I contacted glass artists, craftsmen about my idea, my concerns and possibilities for this project. I intend to get their professional guidance

and look for possible cooperation opportunities. After tons of emails and couples of calls I have set my order in a lab glass factory in Shanghai. Me myself, is however, went on the way to Smaland in Southern Sweden, to visit a glass master's studio in the woods-a place carrying reputation from the past for handcrafts and glass art- glasriket. I went there with my sketches and communicate with the artist and his assistant about how I want it to look like and how we are going to make it. The tricky part in this process is because my stand point and idea is to address handcrafts in the slow process of design, it is important how the object is made-not in search for precision or exact shapes. The mark or traces from a hand crafted piece will add more value. So I intend to avoid mold for the final shape. We tried different ideas for production without molds. It is a difficult process and requires a lot of experience and skills from the craftsperson. To everyone's satisfaction, things went extremely well. The final results is gained with his excellent free blowing mastery. The Glass "bowls" are beautifully done, with slightly differences in shapes and marks from a hand blowing technique.

SLOW DESIGN

REFELCTION ON DESIGN RELAVANCE

As most of my former projects I investigate the modern lifestyle and problems follows. I try to empower the emotionally healing property of design. This project I will also focus on modern society symptoms, particularly on how we are changed when facing multiple platforms of communication and information gathering. The loss of direct experience and sincerity in smart products is the central concern when thinking about today's design. My choice of this topic is based on my own design experience-formerly on digital products and human-computer interaction. The lack of balance of body and soul exists on some electronic product design. The central dilemma in modern communication is also on the same issue. How will we stay true, stay human, when we are consuming products that gradually build mechanical habits on us?

The design topic-tangible emotional interaction, is the resolution I personally think may have effect on the problems that exists in today's information society. I want to address the importance of the physical world which we all live in, the actual human contact instead of the virtual interface, the emotion we have as human, the reliance on nature. I hope to build up emotional connections, catch subtle feelings and apply in language of design/art, in order to satisfy emotional needs, tell the story from tactile objects to relate and connect, creating a sense of security and belonging in modern daily life scenario.

"The emphasis is on people, on how we, as human beings, interact with the physical objects in the world. This interaction is governed by our biology, psychology, society, and culture. Human biology and psychology do not change much with time: society and culture change very slowly. High technology changes rapidly, but everyday life changes slowly." –Donald Norman

We are living in a time when materialization comes to a level of extreme, when other things need to be loaded with more value, like emotions, experience, analog interaction, and human vulnerability. It is not a time to chase after precision, but the warmth of humanity.

Phantom limbs

Phantom limbs describes a sensation after the limb or an organ being amputated from the body, the attachment and its presence can still be felt from time to time.

If we look back at the history of product development since the industrialization, the changes in the way we use objects and interact with the world is quite obvious. In today's age of electronic media, our life is becoming more and more digitalized. Smart products have been changing our way of living and communicating. While things are getting quicker and more precise with the aid of products, which makes our goals achieved more easily and effortlessly, the actual "contact" with the product is reduced, therefore our physical experience of using a product, interacting with a product is reduced vastly. Take a obvious example, the physical interaction with tools. The interface between us and a tool used to be the surface of a handle, a gear, a brake.. etc. We get tactile information from the product, as well as visual, auditory and other sensory stimuli. Then the "interface" becomes buttons on machines, different controller, when computer especially pc appears, everything is done through a click of a mouse, or input of a keyboard. Today things are getting more and more screenlized, with touch screen widely applied in various products.
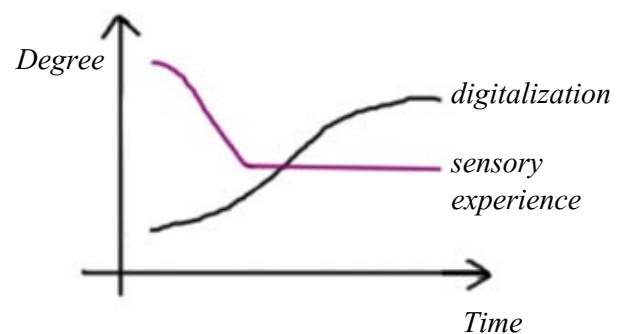
If we say tools are the extension of our hands, then this physical "extension" is becoming shorter and shorter, now is almost reduced down to dots on the touch screen. "Our invisible hand" has been physically amputated, but sometimes our sensation of phantom limbs still remain, lingering, haunting our physical interaction with an object.

Two contradictory examples can explain this from the case of my grandpa and one of my friend who was continuously obsessed with digital electronic products like smart phones. When first using the computer my grandpa really had a hard time using the mouse, comprehending the connection between a physical click at hand and an action on screen. In my friend's case it is the other way around, he was so used to touch screen that he tends to try to touch and press or doing other screen based interaction gesture when switched to a more analog device. The lost experience is like a lost limb, we still feel them sometimes. The emotion we put into an object through this experience, lost and gone, sometimes makes us wonder, like the a piece of old melody, or the appearance of an unplayed piano, keys covered by dust, telling the story of the time we spent, things we have been through.

While we are pursuing a way to get to the end faster and easier, with less human effort, the experience and interaction come along with the physical product and the real physical natural world become less. So is the emotion we created or could be created in this process. They become scarce. As products today get more "smart", with a reduction of physical experience, it get less sincere and true. Because a conventional digitalized life means that there is always a chance to alter, later, to update. This is a feature or "side-effect" of all things that became more virtual, they get less serious, Providing us an endless circle of quick updating and when come to the sense of physical world, quick consumption.

The loss of sensory experience should not be the cost of getting to a smarter future. Design should be about balancing between body and soul. There is a point where the things we are pursuing and things we already have in the nature meet in perfect balance, whether or not be digitalized.

The value I want to deliver in my design, is that to be simple and sincere. Through my own effort to search for the lost experience, to regain the emotion, to balance the experience and function. Digital or analog? This is not a question of which, but How.

It is time when we consider human as human not machines. The tolerance of mistakes, and vulnerability are the beautiful things in human. We should also consider things like emotions, dreams, beliefs even when we are planning our physical world, since they are the things we value, to exist as human.

From reflection to implementation

On a project that aims for openness and individual experience, me as the designer should also consider how much of my own interpretation needed to be put in the possible result. As is mentioned before, the openness of the story is based on the premise of certain kind of "stage" or limitation. In a defined space, the freedom of imagination could then sparkle.

The choice of final visualization on this project is mainly from the consideration of how to fully get the idea of tangible interaction and emotional bonding through. The media could be various. Somehow my own limitation is in the context of everyday life. I aimed for "low-tech" products instead of addressing the digital products directly in my design(the latter seems to be more of an direct answer to my previous reflection). This is my consideration to keep the project-both the theoretical part and the actual visualization as a coherent whole, avoiding critical approaches; (More discussion on this will be found in "reflection on process") and also the consideration of subject-object relationship depends a lot on the context-in this case, a scenario of exam exhibition.

The lighting, as a main media I have chosen to visualize upon, is firstly a reasonable result of the "side-effect" of salt crystallization, secondly it also has its own design code. Lighting as we know it, is a sign of human existence. Where there is a light, there is human activity around. This human existence is interpreted subtlety by the on-and-off of lighting, of which the natural consequence could be logically visualized on the object itself-the lampshade. The choice of salt is not based on functionality but rather experience(there are also other substances in the kitchen that has the similar crystalization process.)In the end we should say, the human's behavior, how careless or indifferent they might be, caused the mark of existence and traces of time on an artifact, through a natural phenomenon. This man-made nature plays on the boarder of human-object interaction, creates the tangible method of visualizing narrative.

The form, the material choice is a natural consequence when I am doing slow design. It is a result from both actual resource I have got

and my personal experience and observations. I try not to label it with any personal codes-be it cultural or professional background I have myself. I think it is something that comes naturally in my design. I try to keep true to who I am and do the design sincerely towards people. How invisible I might want to be behind the project, I believe there is personal marks on it no matter what. There will be the cultural marks from me. One typical or extreme example when it comes to the feeling of "man-made", is what I extract from my own childhood memory-the feeling of wonders and curiosity in my mom's chemistry lab. Another opposite case of something growing naturally in the form of flower is also true to me. I feel right about them both. And I believe people will have new stories on my provided plotline for them, however different they might be from mine, I will be always exited to hear. They will be equally cherishable and enchanting to me.

REFELCTION ON SUSTAINABILITY

I worked on projects of similar design issue-emotion and physical interaction, especially for the young "high-mover" generation. It is not because of personal mind of nostalgia, , it is rather a commitment to my design value-to encourage the action of staying, rooting and connecting-the value of home and belonging.

In these design projects, I put the artifacts in the center of the stage, which as a storyteller, delivers certain meaning and reasons. But this time I decided to work on design and emotions in a different way-through subject-object interaction and direct experiencing. So the object I design acts as co-author of the story. How the story goes is completed by each individual user-as co-producer. In this way an object is loaded with meaning. And it is this meaning that becomes significant for each individual user. We feel emotionally connected to it-based on various reasons but all come from the direct experience we had with it. We feel natural to grow old peacefully and appreciate this mutual growth with the object together. The objects in our homes are not only to serve their designed functions, however, there is a phycological aspect-the emotion we create with it over time.

It is like a friend. The traces we left through using and interacting with it, are the genuine marks of existence of time and people. This kind of subject-object bonding can hardly be found in a digitalized products. It is even less possible when the quick updating strategy of the digital product market try to encourage consumption. It is in the face of digital abstraction that the estimation of the real rises. Opposed to Walter Benjamin's auratic value of the original work, are the compositional features of its reproduced instance.

Once a sincere bonding is formed, there is fewer reason to pursue the additional newer stuff-the urge of consumption. I think sustainability is not only about recycling and re-using. It is also a peaceful way to interact with the world around us-through growing old with it-longer life span and more human sincerity.

"GROWING"

SLOW DESIGN — *designer as co-author* / *reflective experiecne*

STORY TELLING — *durable narrative experience* / *user as co-producer*

OPEN END — *individual* / *authentic experience*
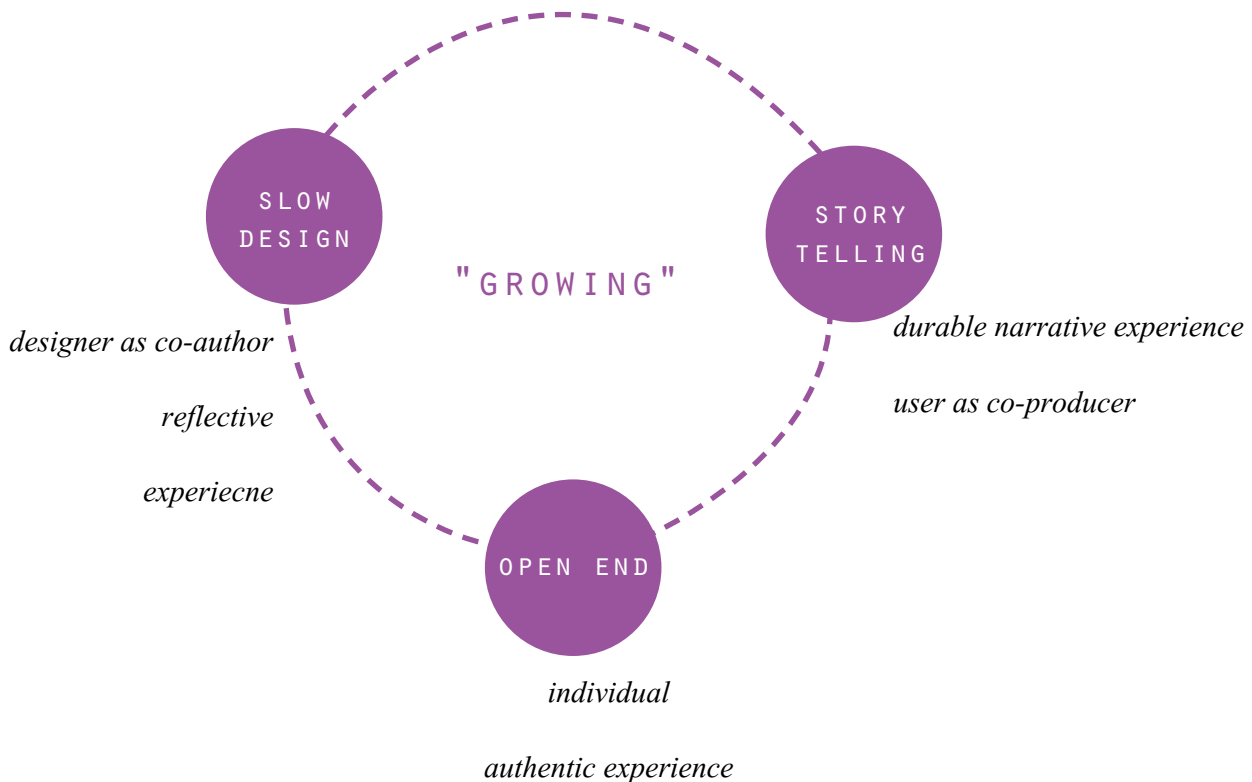
Growing-the use over time

The idea of growing comes naturally when I try to map the methods and key issues in this project. It is not only a approach in conceptualization towards the three design methods, it's also a central focus point in this project. A just noticeable difference-JND as Donald Norman calls it, exists in the object that decides the tempo of the story(the together experience), which is crucial when considering design to enhance the emotional link between subject and object.

"Houseplants-Patient yet tangible forms of feedback-consciousness alterity-felt sensation of the interaction with an autonomous object."

"Incremental growth, advances in micro-steps that only begin to show their presence through the passing of time.-an emotional commitment."
-Emotionally Durable Design, Jonathan Chapman

In the application of this concept, I try to look for the natural interaction that already exists in the natural world around us. I set the scenario in everyday life, domestic environment, look into the basic daily activities people can have and the "side-effects" it produces. To find the right tempo of the storyline is the main thing for me to decide on the design. The activity of human is the sign of human existence-showing various phenomenon around human body-the pressure, the body temperature, the air movement or certain natural consequence that follows a human action on domestic products. The final choice of growing salt crystallization is based on my consideration for its noticeable visualization on the process of growing as well as the absolute logical consequential effects on a functional lighting. Moreover the poetic and artful scene it grows into is a key for opening up personal interpretations-which is consistent with my previous definition on psychological function of design-serving as "a handle" for emotional experience.

Effects on behavior

"Objects that evolves slowly over time build up layers of narrative by reflecting traces of the user's invested care and attention."

"Personal experiences and emotional meanings complete the image of the object whose appearance and functions are but initial cues as to their broader meaning. The more an individual consciously or unconsciously relates to the sensory/aesthetic, cognitive/behavioral; and personal/symbolic qualities of an object, the more profound is the attachment."-Emotionally Durable Design, Jonathan Chapman

The growing feature of an artifact-changing slowly over time according to the natural consequence of certain human action, gives the audience or the user a feeling of togetherness, especially when the growing part is dependent on the human dedication. Take a simple example is our intentions to keep house plants in our homes. The activity itself requires caring and attention from time to time, yet people enjoy doing that. It is not in any sense a burden but a necessary way to achieve certain kind of emotional attachment. The process of using an object, or even keeping and caring for an object decides the nature of this emotional commitment. The object grows into a visualization of this commitment which also enhance the emotional experience.

REFLECTION ON PROCESS

From facts to practice

I approach the topic of emotional experience firstly from reading about related psychology , neuroscience studies. Scientific studies broadened my horizon on this matter and provide me new approaches. When I look back, I realize the things I learned in the books has in the end more or less affected my decision making and choices of directions in this project.

The model of James Averill's on emotional experience give me a clear view of the layers an emotional experience consists of. The psychological study also makes it clear that no matter how we manage to reduce the actual process of emotions in our mind into comprehensible structures, there is still a large account of uncertainty and temporal dimension in this matter. Because emotions are extremely individual, based on different past experiences and memories. It could vary a lot on different subjects. So in the context of design, for me it is earlily realized that it is not possible and not even necessary to make a "common solution" on the matter of design and emotions. I decided to look for a more generalized design method that could be relevant to the field of design and be adjusted in different design contexts. Then I try to apply this design method on one or several objects, as examples of my exploration on methodology.

Keeping the balance

The more I am into the theory, sometimes it is more difficult to focus on one design aspect. There is a decision I need to make at the concept phase- to keep it open and adjustable or narrow it down to one design approach, which had somehow led to a road of critical design. This kind of choices commonly exists in design processes. Science gives me facts, but not solutions. As a designer I need to find my way through the facts I got, into a reasonable visualization. This kind of thinking was going on and off during my whole process. There are times when I feel unsure and lost in the words and concepts. Design is always about keeping the balance.

When I jump out of my own circle, the talk with people and the reflection from the outsider's point of view cast away the mist for me. When I realized the real life talk is consistent with the theoretical analysis, the road in front of me becomes clear. I begin to know my role as a designer, not a researcher or psychologist, I should not bother to prove the facts but rather try to utilize them in my design. At this point I have abandoned the research or experiments on sensory experience and haptic sense.

There is a natural duality in this project which I did not realize at the beginning. A design approach is at most cases requiring sense of reason, but emotions or feeling are more related to sensibility. Two different parts in the brain often causes confusion and contradiction. During the process of working on design and emotions it is natural to have the ups and downs, I deal with the problem just in the way like facing my own self-calming my own state of mind. I try to make sense out of the exploration, give reason to every step I take however also trust my intuition and feelings. I was so drenched in the thoughts of finding the lost experience when I began to realize I have come to a narrow road. It is not the actual experience that needs to be regained, it is the attitude towards design for experience that needs to be emphasized. So I decide to rethink the value of my design, and design in the bigger context and stay true about my process and myself.

Process as part of end results

The emphasis on the process of making is one of the key issues in my project. For me the actual making process of the object is as important as the object itself, in order to address the method of slow design.

To practice this method takes some courage because there is always uncertainty ahead. After trying out different material for realization I began to look for glass artists and craftsmen for cooperation. Their participation is crucial not just for the realization of my idea, more for the idea itself. The method of slow design require dedication from the designer, the involvement of the resources along the entire process of production.

The final idea is developed along the way, with the participation of maker, material provider in every production section.

It is the first time for me to work this way, dealing with uncertainty practically and mentally. The conflict happens with myself. I have to work outside my comfort zone and keep trying to gather resources from outside, in order to get as close as possible to the original idea in my mind. I start with several primary sketches, which is open for changes along the way. There is also a time plan issue on the practical aspect. The idea is narrowed down through communicating with the craftsperson, trying different ways of making. In the process, one can only try the best according to the actual conditions and make several back-up plan in case any section fails. The idea is being constantly developed, just like the emotional experience of people, has multiple draft and time dimension. The final object is a result of craft excellence, my design language and a undeniable a tiny little piece of luck. This may not be a successful case of project management but it is my sincere try out.

THE END

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APPENDIX 1-PROJECT PLAN

Degree Project Plan-Tangible emotional interaction
Peitong Chen
HDK
2013/02/27

Background

"Art does not serve merely as a means to increase our happiness, or our success in attaining the things we value in life, but rather as a vehicle through which to express our commitment to those values."

"One eye sees , the other feels."-Paul Klee

Having experience in industrial/interaction design and user study, I put a lot of value on object-human interaction in design. Before I come to Sweden, to me this mainly applies digitally, connecting people and machine through an "interface". However, to create interaction, especially on an emotional level, there are other media-more tangible, close to human body and everyday life, which will evoke more emotion and create peace psychologically in modern high paced life. Natural material, analog or crafted products provide them a kind of nostalgia while a lot of things are digitalized nowadays. Practicing with hands-on design, trying different techniques myself, I try to create emotional connection between object and user in my master's study.

How will an object have a soul? How will an object emotionally interact with people?

What I gained from my explorations in my former projects is: If I want the object to "have a soul", I need to put "soul" in it. The experience/emotions/communication regarding the interpretation of audience individuality can hardly be achieved through words, drafts, pre-picturing. For the designer, it is something achieved along the way, in the process of practical working, when touching the material, working with it, trying different forms, filtering the disturbing information/signs, finding the right language to talk to people, to tell the story and to interact, just like the artists/craftsmen, working with tacit knowledge. For the user, they develop the personal narrative and emotional connection with the object in the similar way, through direct experiencing the object. I believe design of today should not serve merely its physical function, but rather have psychological function as well, to move, to cure, to commit to a certain value. Design, like art, serves as a handle-providing an opportunity of "pulling up" individual enaction of curiosity/ memory experience/dream/novelty.

Objectives

I want to continue the exploration with design and emotions. I put more value on the experience, rather the object with a certain function itself, to create emotional connection and interaction between object and people. The ultimate goal is to form a design philosophy to act on emotion and psychological issues in the life style of modern society. "Interaction design" more on a tactile/physical level, through materials, or other natural features of objects, questioning subject-object relationships-how to realize subject-object-bonding, opening up the possibility of individual interpretation of the audience so as to empower, to move, to cure.

To achieve this I try to apply adapted research method on design for tangible interaction, both from a personal point of view and the view of the users.

In this way I develop my own design philosophy and try to use my cultural language on design. *From the graph adapted from Sanders, my focal point in this project can be seen from the position of circle "design and emotions".*
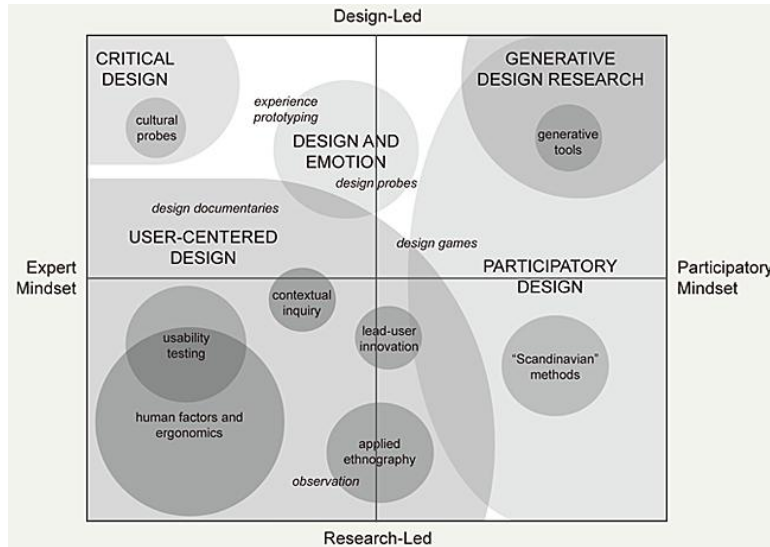
Figure 1Topography of design research(Sanders, 2008)

Key words

Direct Experience, Tactility, Emotion, Interaction, Storytelling, Improvising

Target group/Value

I investigate the modern lifestyle and problems follows. I try to empower the emotionally healing property of design. This project I will also focus on modern society symptoms and the problems.

While we are pursuing a way to get to the end faster and easier, with less human effort, the experience and interaction come along with the physical product and the real natural world become less. So is the emotion and relation to the object we created or could be created in this process. They become scarce. As products today get more "smart", with a reduction of physical or sensory experience, they bear a possibility of altering, as a result of which they get less sincere and true. I want to remind people of the value of life being simple and sincere, and appreciate the slowness in growing and bonding with the world and others.

It is time when we consider human as human. The tolerance of mistakes, and vulnerability are the beautiful things lying in humanity. We should also reconsider design, together with things like emotion, dreams, beliefs when we are planning our physical world, since they are the things we value, filling up the emptiness of existence.

I hope to create emotional experience, catch subtle feelings, search for stories in my design to allow individual interpreted authenticity and apply them in language of design/art to deliver those values.

Issues

1.   How will an object evoke emotions?

47

(form/material/experience/function/meaning…)

2. How will tactile features of an object effect emotional connection?

3. How will design, like art, play the role on creating an opportunity for personal emotional journey and interpretation ?

4. How much will I as individual designer, put personalized interpretation(from my own cultural background, my value system), in an object to reach an emotional interaction with the viewer?

5. Will emotional design research involving participants produce positive effects for description and delivery of a emotion related design?

Methodology

1. Storytelling

I will continue using the method of storytelling in my design process, making the object a communication piece.

2. Adapted research methods

The goal of the research is to contribute to the idea development/adjustment of the final result, through test-modification loop. Some user centered design research methods are adapted in this context.

Experience prototyping/empathy/interview

3. "Slow Design"-design method exploration

A self design method exploration of hands-on working-test-modification loop, until the final result is reached.

Possibilities of outcome

1. Objects in everyday life scenario/installation(experiential, tactile, sculptural)

2. Process documentation/study result

APPENDIX 2-MAPPING

"The concept of experience, where the subject and object meet and merge with one another, is a key issue in designing emotionally meaningful products. This is because experience is a space in which all faculties especially emotions are activated"(The Design and Emotion Society)

"Everybody experiences far more than he understands, yet it is experience, rather than understanding, that influences behaviour."(Marshall Mcluhan)

"The art work must invite us to really make contact with the emotional ,meaning which 'it speaks not 'being aware', but direct experiencing". (Ellis)

This effect depends on our directly experiencing rather than simply intellectually acknowledging the felt qances involved. The artwork must invite us to really make contact with the emotional meanings to which it speaks, rather than just thinking about them. There is a difference between being aware that something has a certain meaning and directly experiencing the meaning. We

"We fill in gaps in our immediate experience, based on the past and anticipated course of events." (Averill)

""Emotional processes involved in generating and using industrial design objects have only begun to be explicated. They begun with an initial impression of the object, continue through actual experiences utilizing it, and culminate with degrees of emotional attachment to it." ("Gerald Cupchik")

*"Inherent feedback-natural consequence of the action, help to reduce both cognitive and emotional gap between subject and object, and may therefore seen as a primary agent of empathic engagement." **

fuzzy interfaces present users with complex, artful scenarios that must be learned and mastered-less precise outcome and richer experience.

INHERENT FEEDBACK

FUZZY INTERACTION

DURABLE NARRATIVE........Smooth Morphic Shifts*

USER AS CO-PRODUCER OF NARRATIVE

"JND" Donald Norman.

"Objects that evolve slowly over time build up layers of narrative by reflecting traces of the user's invested care and attention.
"Houseplants-Patient yet tangible forms of feedback-conciousness-alterity-felt sensation of the interaction with an autonomous object."

"Incremental growth, advances in micro-steps that only begin to show their presence through the passing of time.-an emotional commitment

Personal experiences and emotional meanings complete the image of the object whose appearance and fuctions are but initial cues as to their broader meaning. The more an individual conciously or unconciously relates to the sensory/aesthetic, cognitive/ behavioura; and personal/symbolic qualities of an object, the more personal/symbolic qualities of an object, the more profound is the attachment.

"phantom limbs"

?

"body schema"

"body image"

Merleau-Ponty's theory on conciousness

OBJECT STIMULI

(J.J.Gibson, Donald Norman)

AFFORDANCE

TRIGGER

ENACTION

EMOTIONAL CONNECTION

SUBJECT

"COHERENT NARRATIVE" TEMPORAL DIMENSION

DIRECT EXPERIENCE

INSTRUMENTAL RESPONSE

"FEEL LIKE"

"FEEL ABOUT"

COGNITIVE APPRAISAL

"FEEL OF"

SENSORY EXPERIENCE

EMPATHY

STORY TELLING

TACIT KNOWLEDGE

"GROWING"

OPEN END

SLOW DESIGN

EMPATHY

NON-VERBAL COMMUNICATION

"CONSTANT EDITING" NEVER FINAL
"multiple drafts"(Dennett)

3. Art can "inspire" us without giving us pleasure in net terms.

2. Art reveals meditations beyond entertainment, decoration, didactic illustration, or pleasure. In experiencing art, we want a form of symbolization that can intensify our emotional experience, rather than merely reduce it.
   1. The real multisensorial purposes of our organiazati xxxx an xxxx of accoutering an apparitions and increased interest that precede the presentation of a given stimulus. As Merleau-Ponty (1941) says, "We must look in order to see xxxxxxxx

"curious emotion"-Ralph.D.Ellis

("the mind is pre-tuned, looking for subtle patterns of unfamiliarity and novelty.")

As a design process, high touch design harnesses psycho-physiological knowledge to develop user-friendly products and humane environments. As one of the most striking aspects of today's visual culture, it suggests a willingness to de-sign experience-centered rather than seamlessly.

The representation of tactile sense in the brain
(The accidental mind, David J. Linden)

"Communication is much about sensing feelings and reactions as it is about hearing what they say""-emotional sensing
"the real is defined in terms of viewer's experience, it is that which would evoke an immediate(therefore authentic) emotional response."
"the connection could aim for allowing people's interpretations of signals and signs.
"The interface at the skin"-Lone Hansen

Concept of "Aura"
"sphere of authenticity is outside the technical"(Walter Benjamin, "The work of art in the age of mechanical reproduction ")

It is in the face of digital abstraction that the estima-tion of the real rises. Key is the unique presence in time and space—what Walter Benjamin in his seminal essay "The Work of Art in the Age of Mechanical Reproduction," defines as Aura. The spacie-temporal structure itself becomes the medium, of-fering a concrete, one-off experience directly to the address-ee. Opposed to the auratic value of the original work are the composition al features of its reproduced instance.

"Although designers can elicit emotional responses, the explicit nature of the resopnse is beyond control. The unique assemblage of past experiences particular to each user determine this."

"narrative experiences may not be over-programmed; spontaneous occurences create the magic between the subject and object...It is vital that sufficient ambiguity is present, leaving space for the inclusion of the user psyche." (Emotional Durable Design, Jonathan Chapman)