The geography of objects

Asian and westerners' cultural differences of thinking and things

Jeonghwa Seo

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By Jeonghwa Seo

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Preface

This thesis is a discussion regarding the method of reflecting psychological difference in the West and the East that cause significant difference in thinking and behavior in design process. I mainly take the cross-cultural research method in order to discover what can be beneficial for the other culture.

My interest rooted in criticism of globalization. Consequences of globalization have made us believe that people in the everywhere share universal perspective of world. However, I am questioning if we have universal viewpoint. In cultural psychology and cognitive science field, great attention has been shown to the assertion that human cognition is not everywhere the same.

To borrow Kenya Hara's expression, design is a behavior that creating formal outline of cognizing the world through designing object or communication method[1]. However, there has been no study that tried to consider cognitive difference in the East and the West as a context of design. Huntington, the author of 'Clash of civilization', mentioned that it is dangerous assumption that "people from the other cultural background may think the same way."

Through this thesis, I am discussing follows:

1. I study on cross-cultural cognitive difference and its effects on the real life.

2. I explore the relation between design and cultural psychology.

3. I discuss how psychological identity can be considered in design process.

The results presented herein provide an interface for examining the way designers consider cultural differences in psychological level as well as the interwoven experience of design and psychological identity in the design process.

[1] Design of design, Kenya Hara, 2006
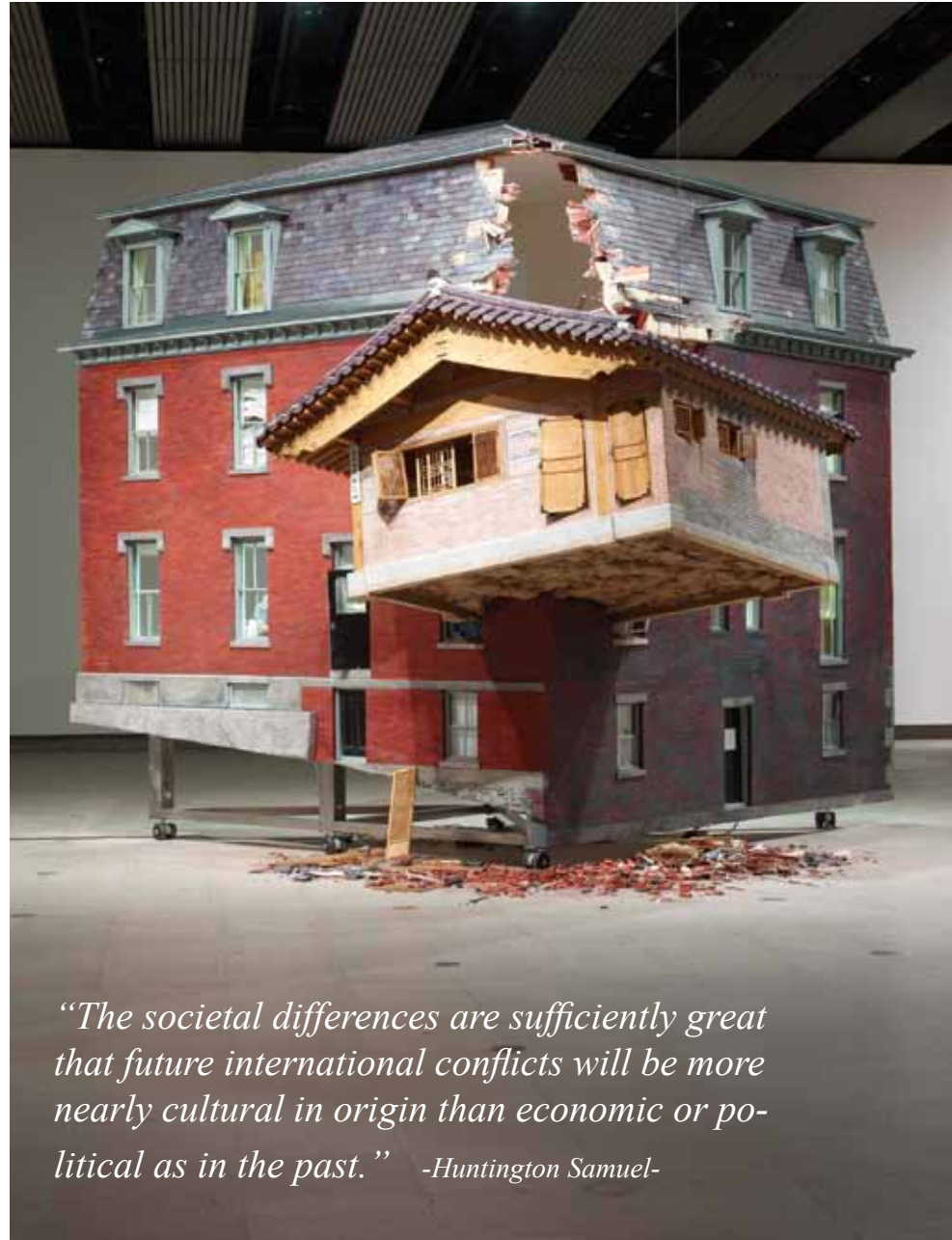
"The societal differences are sufficiently great that future international conflicts will be more nearly cultural in origin than economic or political as in the past." -Huntington Samuel-

Background
Globalization: opportunity or crisis?

"The impact of globalization has been economic, social, and cultural, but what distinguishes is current globalization process is the mind-trigging pace of these changes and the way the changes are rapidly transforming the identities of local cultures and identity. Often referred as McDonalization, it has disastrous consequences for diversity cultures." [2] As we see in the quotation, the globalization has massive impact on the cultural identity. This standardization of identity is obviously lead by western cultures, which has made significant development for current leading social, political and economical system. These developments are still role model for many Asian countries. As a result, Asian cultural identity strongly transforms its identity to western cultural identity and getting lost its own way of living and thinking.

Asian countries tend to confuse modernization with westernization. I found the two main reasons of this tendency from inner and outer aspect. Internally, the notion of 'Global standard' and so-called 'American standard' has forced people to alter their social structure and cultural heritage into global stereotype. Externally, the practice of global companies offering a 'One world standard' for all Asian cultures has taken one of the most important role in altering people's self consciousness into one global standard.

Although globalization has several negative impacts we must accept that the process of globalization cannot be washed away. In this sense, globalization has brought forward the need as the potential for an investigation on cultural diversity and its influence on design. With continuously increasing international trade, this appears to be yet another window of opportunity for the design community.

[2] Uday A. Athevankar, 2006

CHAPTER 1

How we see the world differently?

Research on cultural difference in cognition

1-1 Nature of thought is not everywhere the same

"More than a billion people in the world today claim intellectual inheritance from ancient Greece. More than two billion are the heirs of ancient Chinese traditions of thought. The philosophies and achievements of the Greeks and Chinese of 2,500 years ago were remarkably different, as were the social structures and conceptions of themselves. What is interesting is that the intellectual aspects of each society make sense in light of their social characteristics." [3]

Over the past few decades, a considerable number of provocative studies regarding difference of east and west in cultural psychological aspect have been conducted. To sum up, they assert that human cognition is not everywhere the same.

American psychologist Nisbett mentioned about nature of thought through his book 'Geography of thought'. First, that member of different cultures differs in their "metaphysics," or fundamental beliefs about the nature of the world. Second, that the characteristic thought process of different groups differ greatly. Third that the thought processes are of a piece with beliefs about the nature of the world: People use the cognitive tools that seem to make sense-given the sense they make of the world.[4]

If his assertion is true, people would have difference preference and perspective of the world and object in the sense of using, comprehending, and reacting.

[3,4] The Geography of thought, Richard Nisbett

1-2 Cultural differences in neural function

*Even everyday experience with letters and numbers shapes functional neural organization.*

There have been a considerable number of studies that attempted to investigate the psychological difference that related to cultural difference in neuroscience field.

Recent behavior work suggests that culture specific experiences shape cognition in precise ways. Western culture place more value on independence and individuality than do Eastern cultures, resulting in an attentional bias toward individual objects, with less regard for context and relationships among objects,. In contrast culture emphasize interdependent relationships and monitoring of context, resulting in attentional bias toward contextual, relational processing of information.

Let us look at behavior neuroscience study that conducted by Gutchess, Welsh, Bodurogˇ Lu and Park of University of Illinois. When they evaluated neural basis for cultural differences in an event-related fMRI study, East Asian and American participants incidentally encoded pictures of a object against a meaningful background. Americans, relative to East Asians, activated more regions implicated in object processing, including bilateral middle temporal gyrus, left superior parietal/angular gyrus, and right superior temporal/supramarginal gyrus. In contrast to the cultural differences in object-processing area, few differences emerged in background-processing regions. These results suggest that cultural experiences subtly direct neural activity, particularly for focal objects, at an early stage of scene encoding.

Through the research we might expect the patterns of attention and perception, with Easterners attending more to environments and Westerners attending more to objects, and Easterners being more likely to detect relationships among events than Westerners.

Test of Cultural differences in neural function associated with object
processing through neural function. (fMRI test)

A. Americans > East Asians

B. Americans > East Asians

Americans

East Asians

East Asians
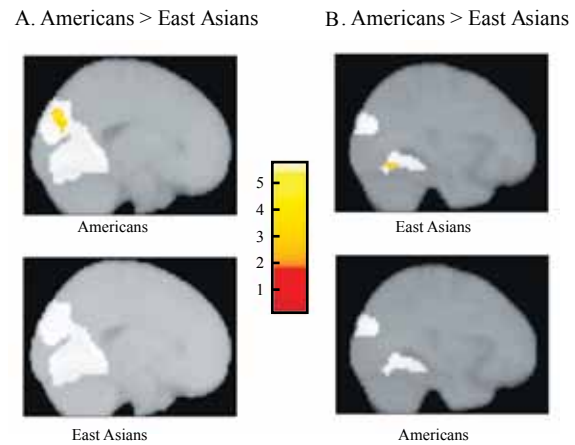
Americans

Cultural differences in background-processing regions were tested for the
picture minus baseline contrast in the white masked regions. The left panel
'A' illustratesthe left superior occipital activation that was greater for the
Americans than for the East Asians. The right panel 'B' displays the greater
activation for the East Asiansin the left occipital/fusiform gyrus. 'B' shows
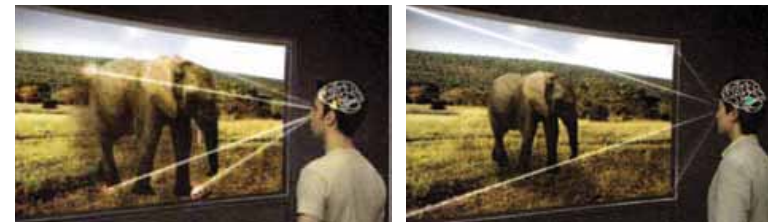
that Asians attend more broadly to their environment, so that their frame of
reference may include several objects.
Patterns of attention and perception, with Easterners attending more to en-
vironments and West erners attending more to objects, and Easterners being
morelikely to detect relationships among events than Westerners.

Aristotle   Confucious

1-3 Where the differences come from?

*Research on psychological differences*

    Cognitive differences are inseparable from the social and motivational ones. People hold the beliefs they do because of the way they think and they think the way they do because of the nature of the society they live in.[5]

    Let us discuss the cognitive differences in full detail by comparing characteristics of Eastern and Western culture. The data listed below are the culture cognitive differences and its findings from philosophical aspects.

[5] The Geography of thought, Richard Nisbett

A. Differences embeded in Cultures (West / East)

A. Medicine
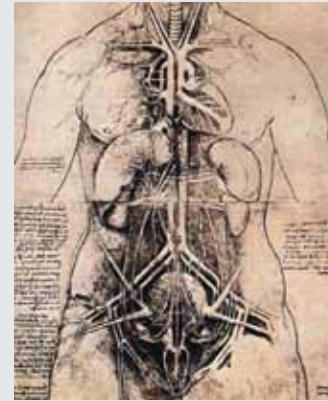
Disegno di Anatoimia Female, Leonard Davinci

Dissection

Medicine in the West retains the analytic, object-oriented, and interventionist approaches that were common thousands of year ago: Find the offending part or humour and remove or alter it. Dissection of bodies into their component parts was practiced by the ancient Greeks and, with hiatus during the Middle Ages,has been practiced in the West for the last five hundred years , as well. Dissection was not introduced- from the west, of course –to Eastern medicine until the nineteenth century.

Representation of epidermis and skeleton on the surface of the ear for purposes of acupuncture.

Acupuncture, Massage

The reluctance of the Chinese to perform surgery is completely understandable in light of their views about harmony and relationships. Health was dependant on the balance of forces in the body and the relationships between its parts. And there were, and are for many East Asians today, relationships between every part of the body and almost every other part. To get a feel for this vast web of interconnections, look at a modern acupuncturist's view of the relations between the surface of the ear and the epidermis and skeleton.

B. Science

Microscope
Observing visible evidence

Tools used for Feng sui to detect invisible energy flow
Observing invisible energy

C. Worldview

According to linguistic anthropoligists Eward Sapir and Benjamin Whorf, the differences in linguistic structure betweeen languages are reflected in people's habitual thinking process.
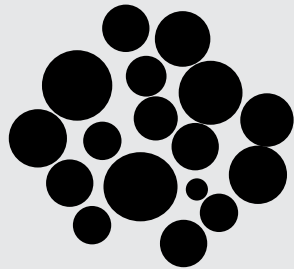

Ancient Greek Worldview
The greek philosopher saw universe as composition of atoms, collection of discrete objects.
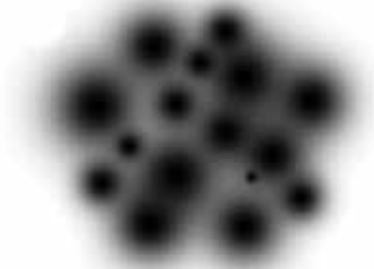

Ancient Chinese Worldview
For Chinese, the universe was a continuous medium or matrix within which interactions of things took place, not By the clash of atoms, but by radiationing influences.

D. Notion of whole

Collection
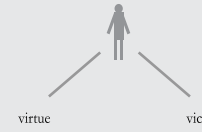Westerners understand the whole as the collection of individuals

One-ness
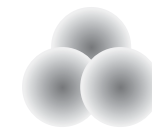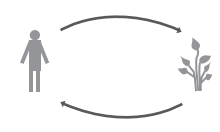The whole for Asian refers to one-ness.

E. Religion

virtue   vice

Religious confliction   Religious confliction

Harmonious coexiistance among religions

Notion of rebirth in the Eastern religion

Right / Wrong
Some of the many religious differences can be understood in terms of the "right/wrong" mentality of the West. Christianity is the only religion that finds it necessary to have a theology specifying essential aspects of God that this insistence on categorization and abstraction is traceable to the Greeks.

Both/ And
Eastern religions are characterized by tolerance and interpretation of religious ideas. One can be Confucian, a Buddhist, and a Christian in Korea and Japan (and in China prior to the revolution). Religious wars in the East have been relatively rare, whereas they have been endemic in the West for hundreds of years.

F. Family relation
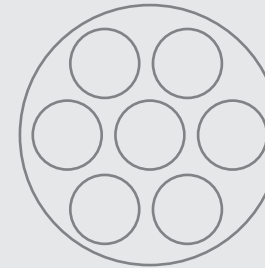
Indivisual
Western family relation comparatively see more value in the individuality than Eastern.
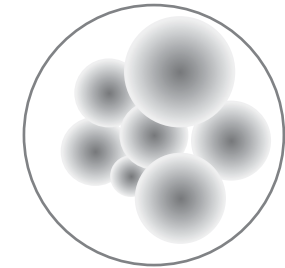
One-ness
The individual works not only for self-benefits but also for the entire family.

G-1. Language: Generic nouns

According to linguistic anthropoligists Eward Sapir and Benjamin Whorf, the differences in linguistic structure betweeen languages are reflected in people's habitual thinking process.

Duck   A Duck   The Duck   Ducks

Duck

Low-contextual communication
Noun in western language is unexeptable. Western languages force a preoccupation with focal objects as opposed to context. For example, English is a "subject-prominent" language. Theremust be a subject even in the sentence "it is raining"

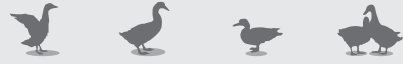**High-contextual communication**
Japanese, Chinese, and Korean, in contrast, are "topic-prominent" languages. For Easterners, action is something that is undertaken in concert with others or that is the consequence of the self operating in a field of forces.

G-2. Language: Verb vs Noun

You
Bird
Banana
Airplane
Apple
Noun
House   Car
I
Buildings
Bag

Run
Hide
Drink
Do   work
Verb

Make   Eat
Buy
Merge
Combine
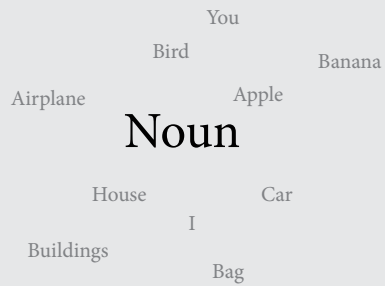
Noun centered communication
In English and other languages are often marked by syntax. When the conversation turns to waterfowl, you can say "a duck," "the duck," "the ducks," or "ducks" The normally obligatory to indicate whether you're speaking about an object or a class of objects, though sometimes the context can do the job.

Verb centered communication
Chinese and other Simitic languages, contextual and pragmatic cues can be the only kinds of cues the hearer has to go on.

H. Education

View of Delft , Artist: Jan Vermeer (1632-1675)

The first person visual point Subjective

Kumgang jeondo

Third person visual point Objective
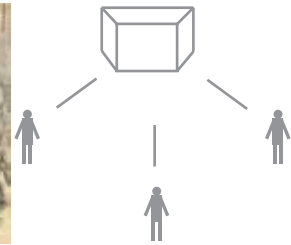
I. Education

Debate, Discover the knowledge
Westerners understand the whole as the collection of individuals

Reception, accept the knowledge
In Korea teacher takes a role as a deliver of knowledge.
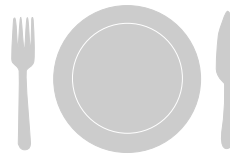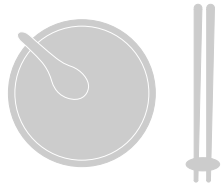
J. Architecture_floor plan

Divided, Fixed
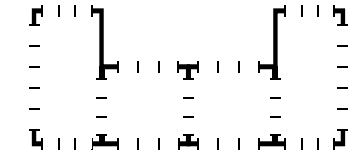
Flexible, Opened

L. Table setting
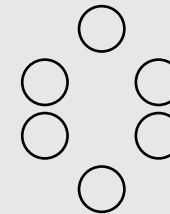
Divided
In western style table setting, each one has individual dishes and served food on it. Only few seasonings and side dishes are shared.
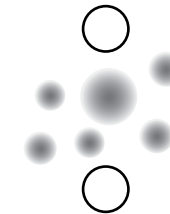
Shared
At the Korean table, each person is served an individual serving of rice and soup (guk); while several side and main dishes are arranged for everyone to share.

B. Psychological tests

We have discussed earlier that East and West have distinctive thought process. I have conducted 11 tests based on psychology studies that related to cognition process, which basically designed by psychologists. I will discuss about 2 most important results.

Discussion of the results

The overall result obtained shows surprisingly less distinctive characteristics than my hypothesis. Since the participants of the test A were students of design academy Eindhoven who living in the same environment, it seems that they share very similar cognitive characteristics. However, it was found through the test B that the linguistic difference makes distinction of holistic perception of Asian and analytic perception of Westerner.

Q5. Examples of item measuring preference for grouping by categories vs. relationships.

Test A: What goes with Monkey ? Banana or panda ?

Method
Ten Europeans, Northern Americans and ten Asians were participated in the experiment. Participants were students of Design Academy Eindhoven. Research was conducted in English. The research has basically conducted by Li-jun Ji, Zhiyong Zhang, and Richard Nisbett in order to measure preference for grouping categories vs. relationships. (Monkey and banana - Thematic relationships / Monkey and panda - common category membership)
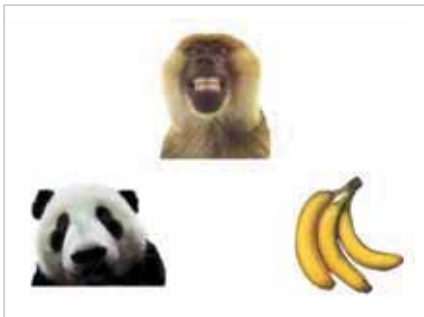
Result
The results obtained were less distinctive than my hypothesis and the result that Richard Nisbett team obtained. 20% more Westerners tended to categorize elements than Easterners did. Whereas in the book reviewed 50% difference for the same test, it showed 30% less tendency of categorization. Since the design academy Eindhoven is international environment, overall result on the survey A provided evidence that cultural context in the environment gives an influence on people's thought process.

Test B: How would you describe this picture ?

Method
The survey has produced responses from 20 individuals – 20 Dutch and 20 Koreans – all twenty or over. I showed picture to the people for 10 second and asked them to describe what they remembered from the picture. (Survey made by Masuda and Nisbett)

Result
Dutch people preferred to describe very specific individual object's characteristics than Koreans did. Westerners were highly focusing on delivering information regarding partial elements in the environment by noun. However, Korean people tend to describe overall atmosphere of the picture and then started to describe the partial elements with verb. Through the research we can safely say that linguistic difference is one of the most important causes for forming different thinking process.
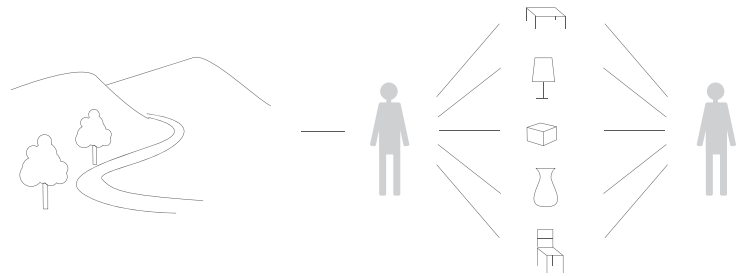
CHAPTER 2

Culture psychological design model

We see the objects through the cognitive process.
Cognitive process is not everywhere the same.
Thus, We see the objects in different point of view.

Design is a act of creating relationship between user and environment

2-1 Relation between design and cross-culture psychology

By observing and comparing the practical examples, we saw cognitive differences of thinking on psychological and scientific point of view. In this chapter, we will see the design model that provides the method of reflecting mentality of the local culture.

Design

To borrow Victor Papanak's phrase, "Design is the conscious and intuitive effort to impose meaningful order." [6] From this passage, we realize that design is intellectual formative activity executing the idea in our mind. Thus, how designer cognizes the world and translates it into design is closely influenced by their thought process that resulted from cultural experiences. Thus, design process and its result reflects cultural psychological characteristics of designer.

Cultural Design

If we see the global market, the cultural context of the design getting more and more important. By using local features in design as a strategy to create product identity in the global market, designers have noted the importance of associating products with cultural features in order to enhance product value. At this point, the field of Industrial Design has played an important role in this process of embedding cultural elements into products and in increasing their cultural value in the competitive global product market. Therefore, we could say that designing a product with local features in order to emphasize its cultural value has become a critical issue in the design process.[7]

Psychology and design

It is dubious that if psychological difference, the fundamental difference that makes patterns of human activity, is considered in design process. In this sense, obviously, we need a better understanding of cross-cultural communications not only with the understanding of cultural diversity as a superficial and visual feature, but also as a contextual and penetrating value origins from our mentality.

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[6] Design for the Real World, Victor papanek, 1971
[7] Wu, T. Y., Hsu, C. H., & Lin, R. T. (2004). A study of Taiwan aboriginal culture on product design, In J. Redmond, D. Durling, & A. de Bono (Eds.), Proceedings of Design Research Society Inter national Conference – Futureground (Paper No.238), Melbourne: Monash University
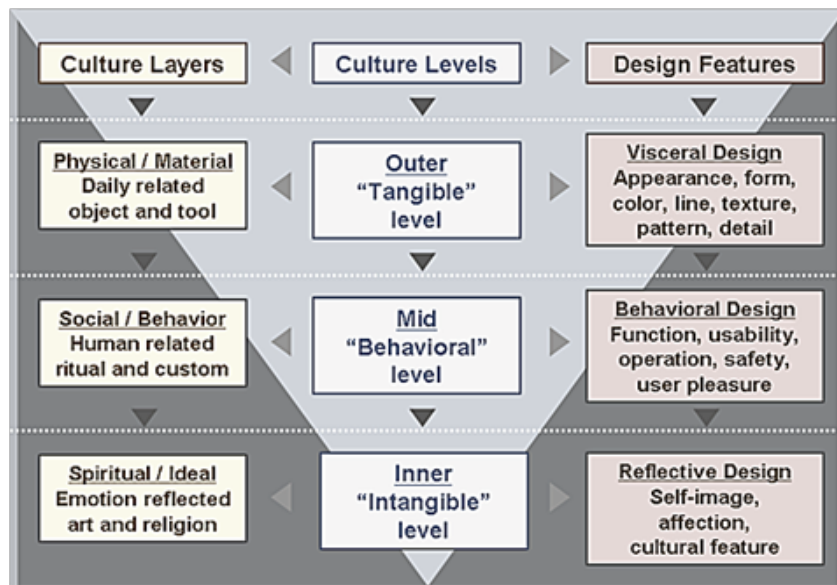
Three layers and levels of cultural objects and design features.

2-2 Three Cultural Levels

From the design point of view, K. Lee[8] has proposed a culture structure with multiple layers, including layers representing artifacts, values, and basic assumptions. These layers are identified by key design attributes, including attributes that reflect function, aesthetics, and symbols. Leong and Clark developed a framework for studying cultural objects that is distinguished by three special levels: the outer "tangible" level, the mid "behavioral" level, and the inner "intangible" level.

The three levels of the cultural object can be mapped as three levels of design features: visceral design, behavioral design and reflective design[9]. Visceral design concerns the appearance of a cultural object and aims to transform its form, textures, and patterns into a new product. The visceral design features become important where appearance matters and first impressions are formed. The behavioral design level concerns the use, function, performance and usability of a cultural object. Behavioral design features are the key to a product's usefulness. Reflective design concerns the feelings, emotions, and cognition involved in experiencing a cultural object. Reflective design features are the most vulnerable to variability, as a result of differences in culture, experience, and education, as well as individual differences.

[8] Lee, K. P. (2004). Design methods for a cross-cultural collaborative design project.
In J. Redmond, D. Durling, & A. de Bono (Eds.), Proceedings of Design Research Society
International Conference – Futureground (Paper No.135), Melbourne: Monash University.
[9] Emotional design, Norman, 2005

Step 1

Psychological and
cognitive characteristecs
of
Local culture

Step 2

Source of metaphor
embeded in the
local culture

Step 3

Application on behavior

Application on
Feeling, emotions and
Cognitions

Behavior design

Reflective design
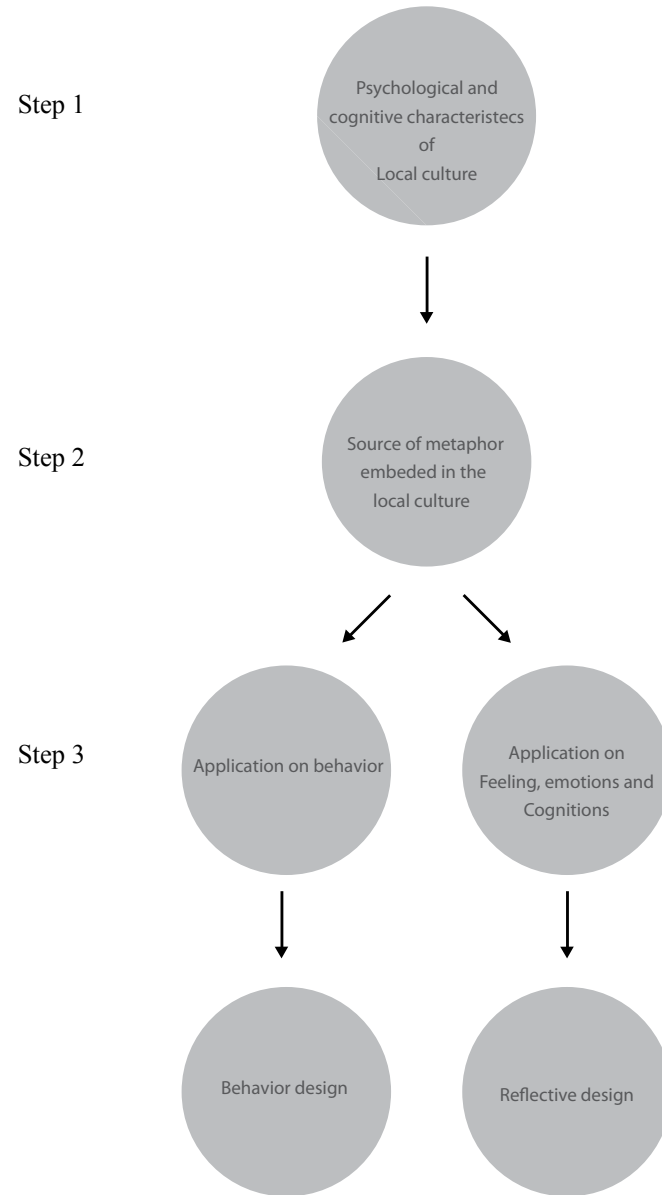
Mental culture design model

2-3 The cultural psychology based design model

Most of the design projects that try to use local culture for the context of design are resulted in visceral design. Since Visceral design can cre ate beautiful design as an esthetical sense, but does not deliver mental value of local cultures. As an Eastern designer when I see Western designers explore the Eastern traditional craft skills and materials, it lacks the consideration of spiritual background behind it. Also, for Eastern designers, it would also be impossible to design a behavior or reflective product without deeper understanding of cultural context and mentality of one the culture.

Thus, I propose a design model that reflects the mentality of the culture can be reflected in the design process in order to reflect the psychological characters of local culture, the mentality of culture will be considered in the earlier step of design.

The cultural psychology is based design model is composed of three steps
Step 1) Psychological and cognitive characteristics of
Local culture becomes a seed of design
Step 2) local cultural heritages or social custom is researched
in order to find the source of motif for the design
Step 3) Apply the cultural motif to design

By considering mental value in the basic stage of design, I expect deeper understanding of local culture is possible in design process.
In the next chapter, the application of this design model will be examined in-depth with case study of designing Eastern mentality into cultural objects.

CHAPTER 3

Design object by using culture
psychological Design model

Holism in the East

Everything in the universe is somehow related to everything else.

It is not possible to understand the pieces without considering the whole picture.

Westerners perceive environment in atomistic perception whereas Easterners see it as holistic perception. Easterners tend to see the contextual relationships of elements of the environment. On the other hand, Westerners tend to separate individual elements from the contextual relationships in order to classify and analyze each element by rule.

Western and Eastern cognition of elements

West - Atomistic perception   East - Relational perepstion
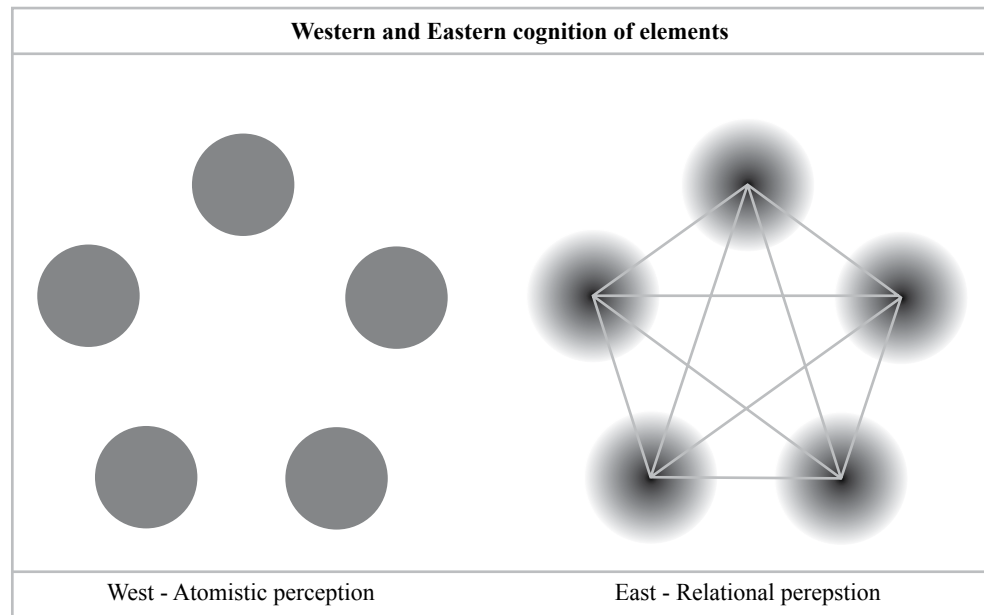
3-1 What Eastern cognitive characteristics can be considered?

As a case study of applying psychological difference in the objects we will see the Eastern mentality that will be considered for the design process.

Notion of object

In the East Asian countries such as Japan, China and Korea, the word 'objects' is composition of two meanings; occasion and objects. In the eastern language, the 'objects' literally signifies that a object exists in the complex relationships with the environment. The linguistic difference affects to peoples thinking and behavior. Therefore, we see that the linguistic difference present the evidence of difference in see the objects in different perception.

Comparison of Eastern and Western notion of object

West   East

English	Chinese	Japanese	Korean
Objects	事 物 Occasion Things	事 物 Occasion Things	사 물 Occasion Things
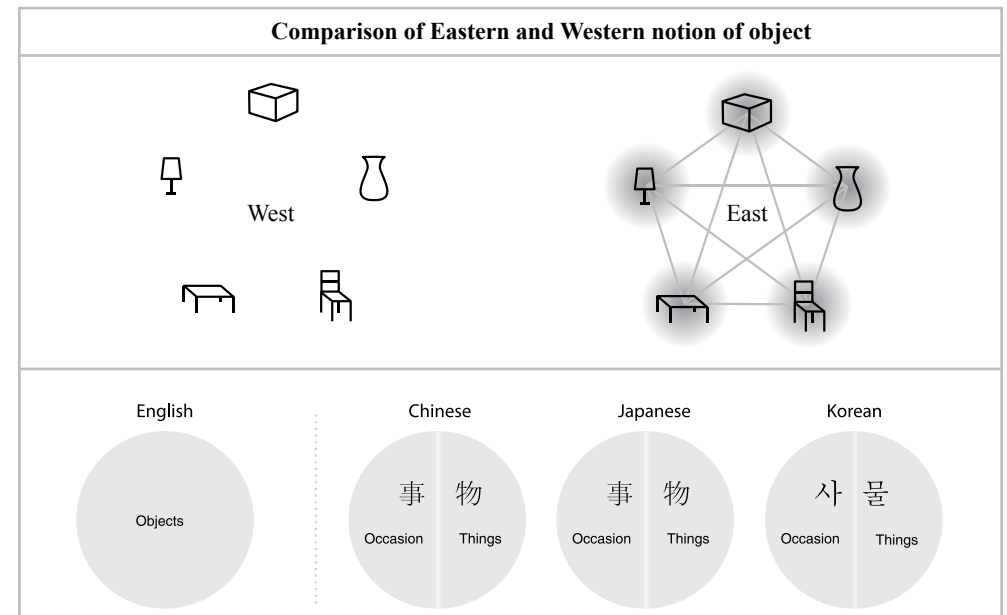
Design A

'Ripple effect' tea set

3-2 Ripple effect tea set

Case study of designing behavior by designing object
Case study A aims to design a behavior design object by using mental
culture design model.

Step 1	Step 2	Step 3
Mentality from East	Source of metaphor	Behavior desgin

Focus on Interde-
pendent
Relationship
among elements
of environments

Ripple effect
.
Posekjeong
Karesansui

Tea ceremony

Easterners understand the objects not as a discrete notions but as a continuous medium in the field.

Easterners tend to understand causual relationship in broader perception than Westerners. East-erners believe that small changes of individual person or objects can be a big impact on the whole.

Ripple effect becomes a metaphor of interaction among people during tea ceremony.

I found the cultural heritages that reflect Eastern social relationship, ripple effect, in the Japanese Ka-resan seui style garden and 포석정 (Poseokjeong)

Tea ceremony is not only a mo-ment for meditation buy also social interaction. I introduce new method of interact with people by using ripple effect as a metaphor.

on this table, one action can gen-erate series of events that may affects to the others behavior. Everything can be change just because one small action of actor. Eastern mentality regarding social relationship is herein designed into new tea ceremony behavior.

Eastern thought in social psychology
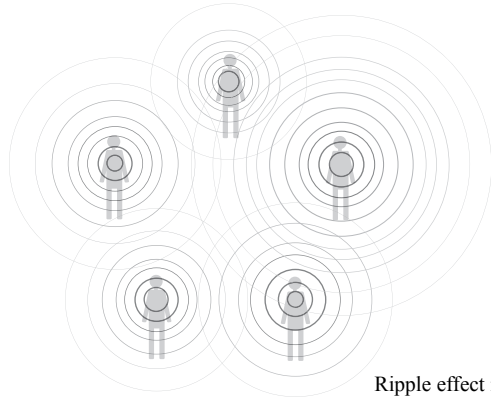
Ripple effect in social meaning

Eastern concept of social relation

As we have seen in the previous chapters, it is clear that Eastern and the Western cognitive identity are significantly different. The result from the overview of cross-cultural research makes it clear that both cultures have different perception on the world.

The different thought process affects on how we see the relationships among the elements of environment surround us. Eastern perception on the environment and human relationship is holistic where as Western perception is analytic and atomistic. In Easterner's perception, social relationship is complex and numerous numbers of variables.

Therefore, Easterners tend to coordinate their behavior with others and adjust to situations. They believe that small changes of individual person or objects can be a big impact on the whole. In fact East Asian s do pay more attention to the social world than do Westerners. Eastern perception on the social relationship is described as a term "Ripple effect." In the Eastern perception world is unpredictable pond that one action can generate serious of impact.

Ripple effect

Ripple effect is a term for describing Eastern way of understands social interaction and situation. Easterner's understand the situation in broader perception. It makes Eastern social interaction careful and modest. Eastern social life is interdependent and it is not liberty but harmony that was the watchword. In Eastern perception, the world is complicated, events are interrelated, and objects (and people) interconnected "not as pieces of pie, but as ropes in a net. As a metaphor that describes Eastern character of social psychology I chose ripple effect.

Lexical meaning

The ripple effect is a term used to describe a situation where, like the ever expanding ripples across water when an object is dropped into it, an effect from an initial state can be followed outwards incrementally. Examples can be found in economics where an individual's reduction in spending reduces the incomes of others and their ability to spend. In sociology, it can be observed how social interactions can affect situations not directly related to the initial interaction. And in charitable activities where information can be disseminated and passed from community to community to broaden its impact.The term has been applied in computer science within the field of software metrics as a complexity measure.

Cultural motif
Cultural heritages that reflects eastern perception on the world
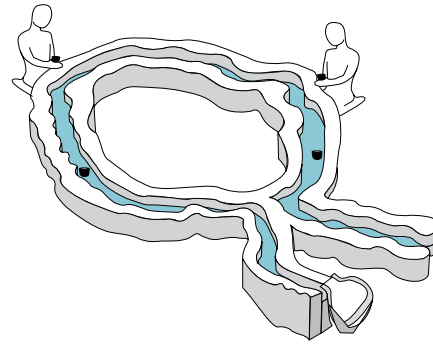
Korea _Poseokjeong

The Poseokjeong (Pavilion of Stone Abalone) site near Namsan in Gyeongju, Gyeongsangbuk-do South Korea, was built in the Silla period. The site once featured a royal pavilion–said to have been the most beautiful royal villa of the time, but the only remains today is a granite water feature. This abalone-shaped watercourse highlights the importance of water in traditional Korean gardens.

During banquets in the last days of the Silla kingdom, the king's official and noble guests would sit along the watercourse, chatting and reciting poetry, engaged in drinking games. One of the guests would start by enunciating a line of poetry, challenge one of the other guests to compose an appropriate second line while floating of cup wine in the water. Due to the variety of curves in the channel, the speed the wine cups transversed the course was influenced by the shape of the cup, rate of the water flow and the level of the wine in the cup. Should the cup of wine reach the guest before he could submit a suitable sub-sequent line he must consume that entire cup of wine and try again, and again, until the task was accomplished.
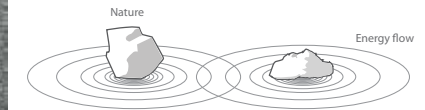
Japan_Karesansui-style garden

The Japanese rock gardens (枯山水 karesansui) or "dry landscape" gardens, often called "Zen gardens" were influenced mainly by Zen Buddhism and can be found at Zen temples of meditation.

Karesansui gardens can be extremely abstract and represent (miniature) landscapes also called "mind-scapes". This Buddhist preferred way to express cosmic beauty in worldly environments is inextricable from Zen Buddhism. The ripples of sand represents the flow of energy.

Unlike other traditional gardens, there is no water present in Karesansui gardens (or the karesansui compartment of a garden). There is gravel or sand, raked or not raked, that symbolizes sea, ocean, rivers or lakes.

Design A
Ripple effect tea set
New communication method
from Eastern cognition of casual relationship

Physical
interaction

Implicate Eastern social
interaction(ripple effect)
to tea ceremony physical
 interaction

Physical interaction during
tea ceremony enhances
mental communion.
Ripples of water surface
becomes a medium of
mental(verbal) interaction
and physical interaction.

Mental
interaction
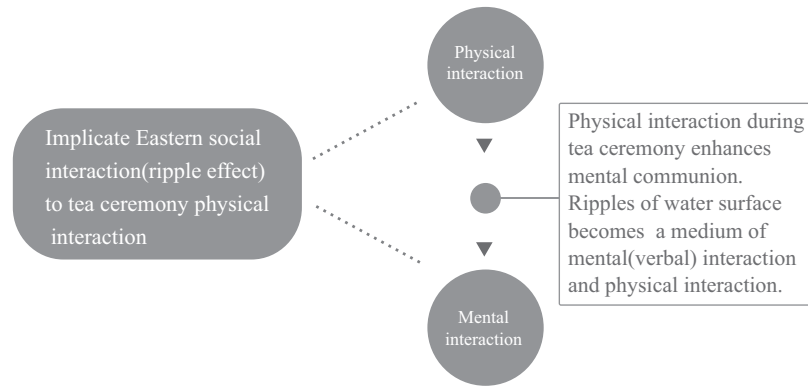
Ripple effect of water delivers actors action during tea ceremony

Mental interaction

Physical interaction_ ripple effect
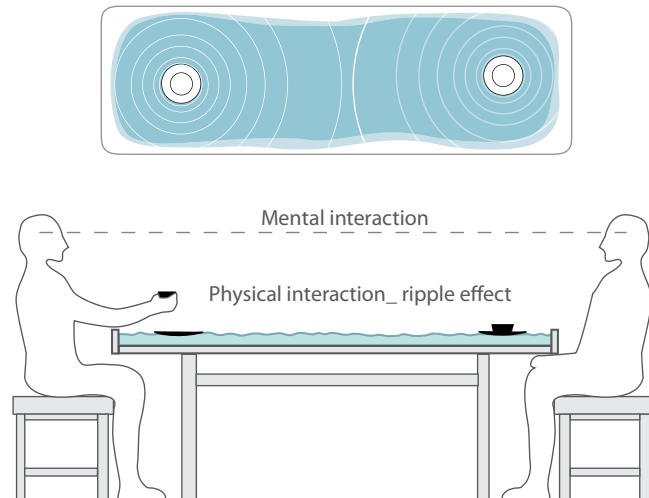
  On this table, one action can generate series of events through the physical
reaction of water. This table introduces new tea ceremony interaction by using
ripple effect as a metaphor of physical interaction.
   Tea ceremony provides the experience of stillness and silence rather than
dynamic and kinetic. The movement in the tea ceremony is not understandable
without knowing the formal method of tea ceremony. Thus, I propose a new
physical interaction of tea ceremony that reflects actor' s action by ripple effect
of water on the table. This ripple effect visualizes Eastern social relationship
through physical reaction of water. Ripple effect can create unpredictable reac-
tion on the water by the actors.

Physical
action

Visual
physical
reaction
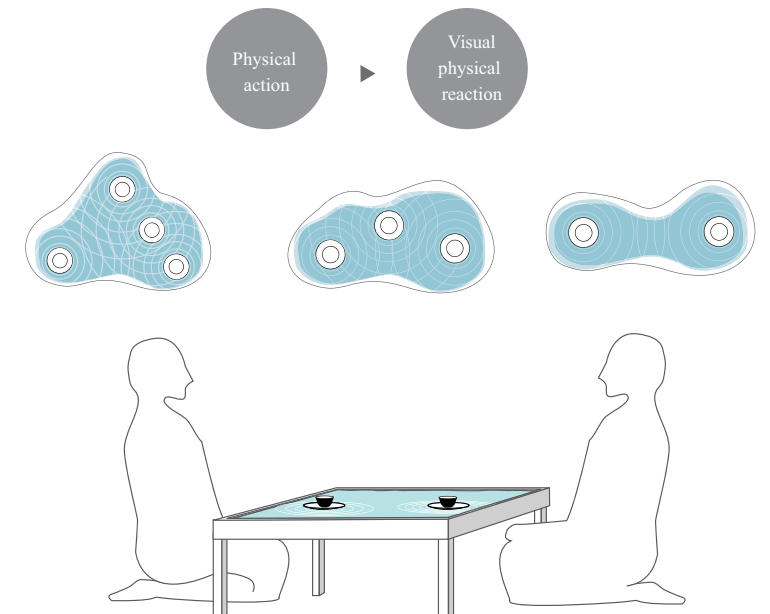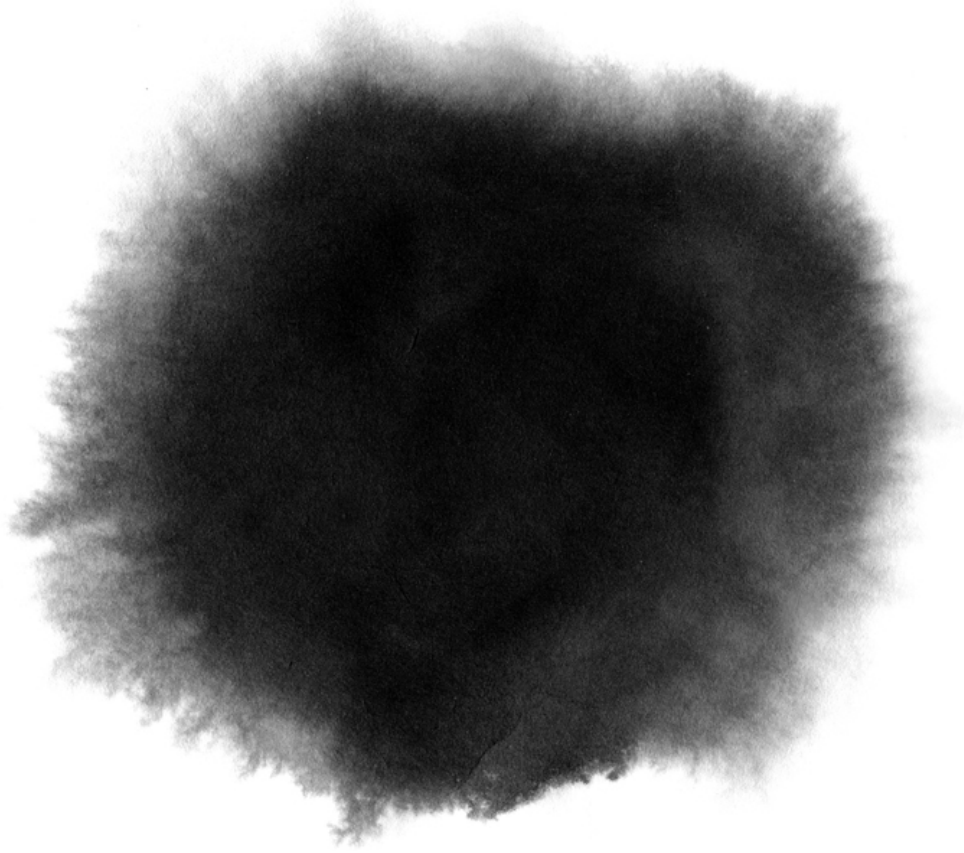
Design B

'The boundless' tea set

3-3 The boundless tea set

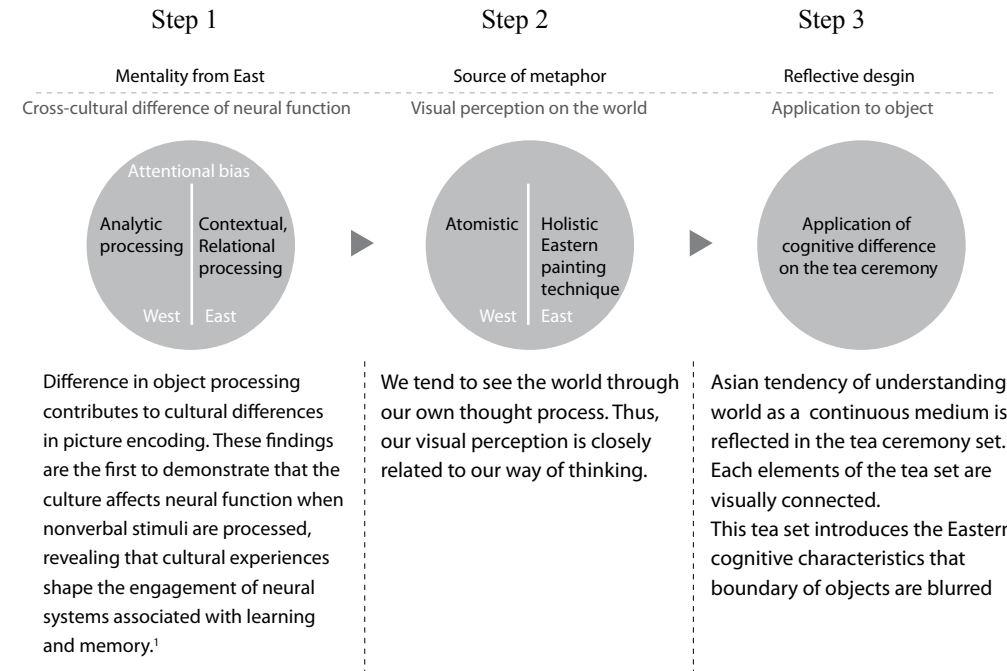*The 'boundless' tea set designing*

Case study of design behavior by object

Step 1	Step 2	Step 3
Mentality from East	Source of metaphor	Reflective desgin
Cross-cultural difference of neural function	Visual perception on the world	Application to object

Attentional bias

Analytic processing | Contextual, Relational processing

West | East

Atomistic | Holistic Eastern painting technique

West | East

Application of cognitive difference on the tea ceremony

Difference in object processing contributes to cultural differences in picture encoding. These findings are the first to demonstrate that the culture affects neural function when nonverbal stimuli are processed, revealing that cultural experiences shape the engagement of neural systems associated with learning and memory.[1]

We tend to see the world through our own thought process. Thus, our visual perception is closely related to our way of thinking.

Asian tendency of understanding world as a continuous medium is reflected in the tea ceremony set. Each elements of the tea set are visually connected.
This tea set introduces the Eastern cognitive characteristics that boundary of objects are blurred

[10] Cultural differences in neural function associated with object processing, Univ. of Illinois, Denise C. Park, 2006

Cultural motif

Cultural heritages that reflects eastern perception on the world

"The boundary of things in the second plane will not be discerned like those in the first. Therefore, painter, do not produce boundaries between the first and the second, because the boundary of one object and another is of the nature of a mathematical line but not an actual line, in that the boundary of one color is the start of another color and is not to be accorded the status of an actual line, because nothing intervenes between the boundary of one color which is placed against another. Therefore, painter, do not make the boundaries pronounced at a distance." (Martin Kemp, Leonardo on Painting)

Blurring and omission is the most fundamental and important technical expression of Eastern paintings.
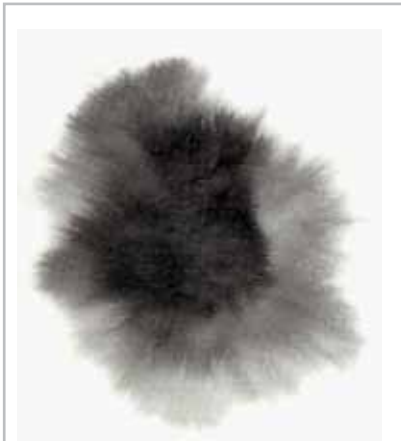
Bluring
Blurring in Eastern painting creates the   effect of bluring the boundary of background and objects in the painting.
It is directly related to **Asian's tendency of understand a object as not a discrete object but continuous medium.**

Omisssion
Painting where to empty is more important value than where to draw.
At the most basic level, "void" in painting refers to nothing other than "unpainted, empty space," But, much more is implied--all the more so as, philosophically, Buddhism, Daoism, and Confucianism each treat the notion in a different way.
"Just because I leave part of the work unpainted, it doesn't mean it's about the void."**In eastern perception omission does not refer to zero but it refers to the boundless of imagination.**


Negro hut with figures in plantain walk", pencil, ink, and watercolor
Emptiness in the Western picture regarded as "unfinished"
An unfinished watercolor by William Berryman, created between 1808 and 1816, depicting daily life in Jamaica from the early nineteenth century. Created using watercolor, ink, and pencil. The use of partial pigmentation draws attention to the central subject.

Design B
Boundless
Inspired by Eastern perception of the relational projection on the objects
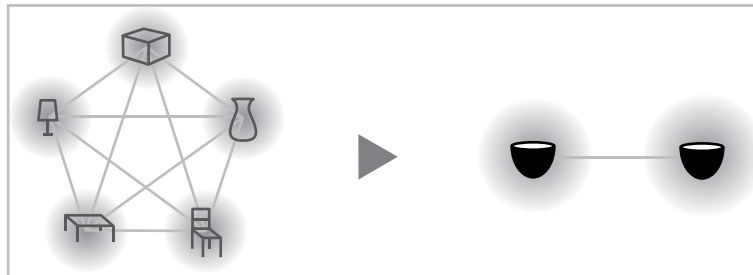
Relational projection of Eastern mentality

Inspired by Eastern cognition process, the elements of the tea ceremony are visually blurred. In Easterners perception, elements of the environment are interrelated.

This tea set makes users visually understand the Eastern perception that follows:

In the Eastern perception the world is continuous medium and empty space is full of invisible energy that connects each elements to the others.

Asian tend to see the big picture and they see objects in relation to their environments

Regard the world as complex and highly changeable and its components as interrelated.

Blurred boundary of two cups and a dish represents the boundlessness of self and others during tea ceremony.

During the tea ceremony this tea set breaks down emotional barrier and help users feel more attached to one another.
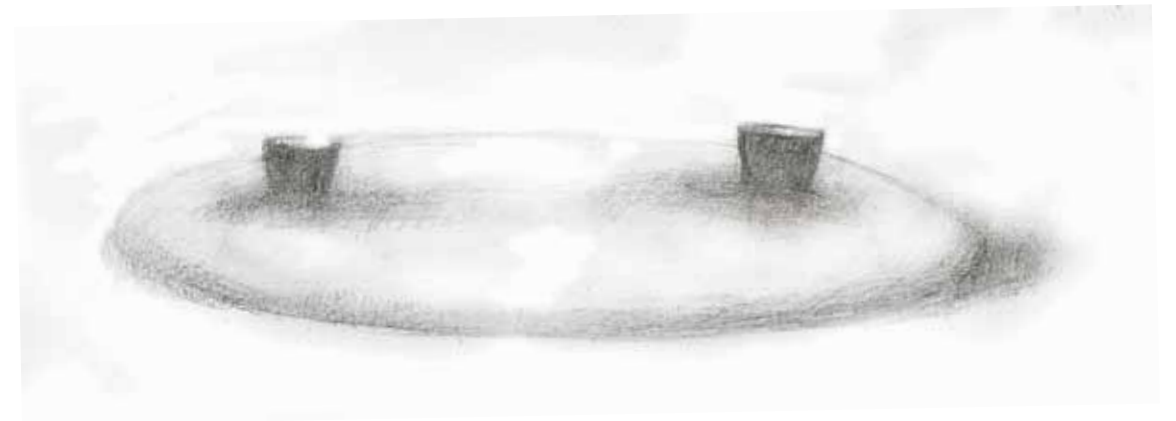
Conclusion

Up to now we have looked at the psychological differences in the East and West and its adaptation on object. Through this thesis I attempted to consider mental difference of the East and the West in the design process in order to consider the fundamental nature of the local culture. When designers dealing with cultural contexts of the product, considering the cross-cultural psychology will provide deeper understanding of each other's culture in the globalized world.

Most difficult part of this thesis was when I researched on the cultural context in the object and environments. This difficulty let me understand the fact that we are actually already too much globalized and even became identical in the way of living and thinking. Products that show the cultural identity are superficial and even deliver fictional local cultures.

Thus, My thesis focused on defining mental difference of two most significant flow of thought, Eastern and Western culture, by exploring material of cross-cultural psychology field and cultural design field. As a result I proposed a design method that cultural context can be considered in-depth.

The attempt to diving into cultural psychology field may be seen naive. However, I strongly believe that without understanding mentality of one culture, designer's role will be stayed in the superficial level. Furthermore, mislead cultures will be continually ended up with fictional culture.
Thus, design process that dealing with cultural context should be considered.
Further research

A further direction of this study will be to implement more aspects of cultural difference of East and West in the objects. I hope the further outcome of present thesis to provide a platform for producing penetrating cultural context in design.

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