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Cultural Differences in Design-based Product Evaluation:

The Role of Holistic and Analytic Thinking

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Cultural Differences in Design-based Product Evaluation:

The Role of Holistic and Analytic Thinking

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Abbreviation

ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
CAI	Computer-assisted Instruction
CAL	Computer-assisted Learning
CBL	Computer-based Learning
CBT	Computer-based Training
CN	China
DE	Germany
EFT	Embedded Figures Test
e.g.	For Example
H	Hypotheses
OA	Orthogonal Arrays
VS.	Versus
VWM	Visual Memory system

Chapter 1 Introduction

1.1 Motivation of the Research

Marketing is now becoming a world common discipline. Understanding cultural diversity equals to understanding your potential consumers are all vital for success in opening up new markets. When starting a business a cultural analysis needs to be investigated first. The differences among nations, regions, languages, regulatory environments, ethnic groups etc. in terms of cultural factors still exist in the market place and have obvious impact on the marketing practices of the business organizations (Ji 2001). From a company aspect, it is very important for marketers to realize that the markets are cross-cultural markets and to be aware of and sensitive to the cultural differences is a major premise for the success in the target marketplace.

In this research, there are three motivations of theories supporting this dissertation. The first theory refers to culture theories; it provides us the existing situation of this world. Culture differences bring us the diversity of human. The second part is design and consumer behavior theories. It provides us the relationship between designs and consumers, and also some basic knowledge of visual stimuli. The third part is thinking theory; it shows us that learning is like a bridge between visual stimuli from design and consumer behavior. The three parts of theories compose the theoretical foundation of this research.

Culture is regarded as a broad concept that embraces all aspects of human life (Jandt 1998). Culture can be learned, shared, compelling, interrelated set of symbols whose meaning provides a set of orientations for members in a society. These orientations, taken together, provide solutions that all societies must solve (Terpstra & David 1985). Nobody can deny that culture plays an important role for influencing around the globe. Managers of multinationals know the difficulties

of communication, not only due to different languages, but also due to different expectations and perceptions (Wittmer 2005). Broadly speaking, there are two main cultures from geography perspective, western culture and eastern culture. They are originated from different roots. This dissertation based on these two cultural groups of human.

Thinking styles is being understood as the very habit of thought. As an academic psychologist, Sternberg (1997) shows how thinking styles relate to cognitive styles. It is a theory that matches people to roles. No thinking style is better or worse than any other style (Sofo 2004). Some people can choose to use their thinking to suit a certain situation. Thinking style is as unique as a person's signature. Two different cultural residents with some certain styles of thinking become the subjects of this research.

Holistic thought involves an orientation to the context or field as a whole, including attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships. Holistic approaches rely on experience-based knowledge rather than abstract logic and are dialectical, meaning that there is an emphasis on change, recognition of contradiction and the need for multiple perspectives, and a search for the "Middle Way" between opposing propositions (Nisbett et al 2001). Analytic thought involves detachment of the object from its context, a tendency to focus on attributes of the object in order to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior. Inferences rest in part on decontextualization of structure from content, use of formal logic, and avoidance of contradiction (Nisbett et al 2001). The two different kinds of thinking style make thinking holders different. At last this will appear in their behavior.

Anthropological and psychological studies generally accept that cognitive processes and cognitive styles are connected to culture. Eastern and Central Europeans tend to be more interdependent than Western Europeans and North Americans, who tend to be more independent(Nisbett & Norenzayan 2002). Indeed, prior studies found that Eastern and Central Europeans do show signs of a more holistic way of thinking. According to Markus and Kitayama (1991), the same interdependent way of thinking can be a characteristic of certain African and Latin-American cultures as well. Analytic and holistic thinking theories have been used in

practical marketing research. This method connects consumers' psychological thinking with final decision behavior. So some marketing researchers tried to use this theory to explain the practical marketing especially in cross-cultural marketing. Over the past decades, many writers have noted cultural differences in perceptual judgment and memory.

People concentrate on where they can find something new or interesting. For this purpose, they use eyes to see firstly and afterwards they concentrate and move their eyes to focus. It was a question of what consumers search for, and visual attention relating to expectation or identity of the target. A special package will attract attention if it fits consumers' needs. The scope of this article is on those package design elements that create a product's appearance. It is well accepted that packages have an essential role in influencing the consumer purchase choices and intention at the point of purchase. Product design stimulates consumers' attention, and they interpret the information created by the visual elements on the package to comprehend the product.

Above motivations of this research determines that this research can be a cross-cultural and comparison research. The research areas are across psychology, marketing and culture researches.

1.2 Aims of the Study

Oversea marketing has always been complicate, because it associates with foreign cultures. If a new product or a new package wants to promote in a foreign country, managers need to consider the acceptance of this new package. In a mature market, consumers have already had the ideal impression of a product: what kind of package has good or high quality product; what kind of package contains poor quality product. At this time managers need to think about how their new promoting product should be.

There are several questions in front of promoting a new package product. Is there really existed that different groups of people have different views of a new package product evaluation? What are the reasons which make consumers have different evaluations of a new package product? How to make a new package product promotion more efficiently? All the questions are not easy to answer, but some ideas come out, which give some tips from prior literatures. The past literatures conduct that there may exist different views of new package products due to the exits

of holistic or analytic thinking consumers. It is broadly accepted that people from Western countries are more analytic; people from Eastern countries are more holistic. So we can get a point of view that people from East with holistic thinking are easier to accept the new package product. And people from West with analytic thinking are more difficult to accept the new package product. But all of these views are not in practical testing just in logical deduction. So in this dissertation one of the purposes is to test these ideas in an academic way.

Despite the growing interest in cross-cultural psychology in this area, researches want to certify above possible forecast in marketing research. Through this dissertation, it may set a way of new way to help us test the ideas. It aims that the results can make a better understanding of the relationship between culture and product evaluation from the visual stimuli. It aims that Easterners perceive a higher evaluation from package design than Westerners, and the reason of these differences is due to the different thinking styles, and also aims to find out how package (visual stimuli) works on consumers' product evaluation. It is hoped that it can find some rules that how consumers toward to different new package products. After considering about possible conditions in psychological situation and reality life situation, two conditions come out in this research. One is that consumers can see the original local high evaluated product; the other condition is that consumers can't see the original local high evaluated product.

1.3 Overview of the Dissertation

There are five chapters composing this dissertation. In Chapter 1, it briefly states the whole contest of this dissertation. It shows the background that what the marketing environment is and how other researchers did in the past. It also proposes the aims of the study, what kind of purpose this research wants to reach and what directions this research wants to go.

In Chapter 2, three sections elaborate the total theories of this dissertation. In the first section, it mainly focuses on the words of 'culture' and 'thinking'. 'Culture' - examines anthropological and literary approaches to the concept of culture, the characteristics of culture. This section also focuses on theories of thinking. The definition of thinking and some thinking theories are included in this section. But the most important place is the explanation of holistic and analytic thinking. This section compares the holistic and analytic thinking, and also discusses the reasons how holistic and analytic thinking appears. In the end of section, it provides the literature

evidences that holistic and analytic thinking in the other research, and how it can be found in our daily life. But in this section the most important idea we want to express is culture and this thinking style can bind together influencing consumers' behaviors. These theories make following field study research becomes possible. In second section, it elaborates the learning theories. Some relationships between visual stimuli and memory are referred too. And learning process also discussed in this section. In third section, it mainly focuses on the words of 'design' and 'evaluation'. The role of package and package elements are talked about in this section. But the important point of this section is to discuss the relationship between package and product evaluation. So chapter 2 fully describes the theories above.

In Chapter 3, it is the vital chapter of this dissertation. There are three studies in this chapter. One is pilot study; the second and third are main studies. In the pilot study, it shows most of considerations of whole research, for example, how to choose research object; how to confirm the design elements which want to be tested; or how to do the pretest and so on. In this pilot study it cleans the blocks for main study--- study 1 and study 2. In study 1, it tests the hypotheses under the implicit condition. It analyzes the data getting from questionnaires. It also explores more in details in three dimensions: whole package dimension, element dimension and change level dimension. Under the three dimensions, hypotheses are concluded between design-base package (visual stimuli) and evaluation formation. In the study 2, it tests hypotheses under the explicit condition; the analysis method is based on study 1.

In chapter 4, it summarizes all the results and findings in studies. Chapter 4 also outlines implications in the form of suggestions and recommendations to marketing managers and researchers. Some weakness of this research and future research directions are also mentioned in this chapter.

Chapter 5 shows a general summary of whole research in English and German.

Chapter 2 Theoretical Background

2.1 Culture and Thinking

In this part, it discusses the relationship between culture and thinking. It provides the evidence that Eastern Western cultures are different. These differences make Easterners are more holistic thinking persons and Westerners are more analytic thinking persons.

2.1.1 Understanding Culture

Culture is the very key word of this dissertation. In order to understand following statement and the dissertation, readers need to clearly know what culture really is. Many attempts have been made in order to come up with a definition for the term "culture" that is sufficiently exploratory and does justice to its complexity. Williams (1983) thought culture as *"one of the two or three most complicated words in the English language"*. Kroeber and Kluckhohn (1952) identified over 160 different definitions of culture from existing literatures. In the following sections, culture is discussed and defined as it is understood for the present dissertation.

2.1.1.1 Definition of culture

The word *"Culture"* was understood gradually by time. One of the earliest widely cited definitions by Tylor (1871) defined culture as *"that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society."*

Kroeber and Kluckhohn (1952) provided a widely cited definition of culture based on their comprehensive review of a large number of conceptualizations of culture :*"Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in*

artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of future action. "

After that Heobel (1960) defined as *"the integrated sum total of learned behavioral traits that are shared by members of a society"*. Downs (1971) defined culture as *"a mental map which guides us in our relations to our surroundings and to other people"*. Hofstede (1980) defined culture as "… *the interactive aggregate of common characteristics that influence a group's response to its environment*". He (1984) redefined culture as *"the collective programming of the mind which distinguishes one group of people from another"*.

From personal aspect, Culture is regarded as a broad concept that embraces all aspects of human life. Jandt (1998) thought of culture as a life experience in which people share problems, pleasures, tastes, eating habits, values, challenges… To understand a culture, you need to understand all the experiences that guide its individual members through life, such things as languages and gestures; personal appearances and social relationships; religions, philosophy, and values; courtships, marriages, and family customs; foods and recreations; works and governments; educations and communication systems; health, transportations, and government systems; and economic systems (Merrouche 2006). Almaney and Alwan (1982) contended that cultures may be classified by three large categories of elements: artifacts (which include items ranging from arrowheads to hydrogen bombs, magic charms to antibiotics, torches to electric lights, and chariots to jet planes); concepts (which include such beliefs or value systems as right or wrong, the general meaning of life); and behaviors (which refer to the actual practice of concepts or beliefs).

From the language aspect, the word *culture* apparently originates with the Latin cultures, which is related to *cultus*, which can be translated as "cult" or "worship" (Fang 2000). This meaning is helpful in understanding the use of the term. Members of a cult believe in specific ways of doing things, and thus develop a culture that enshrines those beliefs.

In total, culture can be viewed as consisting of everything that is human made (Herskovitz 1955); everything that people have, think, and do as members of their society (Ferraro 1990),

communication (Hall 1959; Hall & Hall, 1990), collective programming of the mind (Hofstede 1980), inherited ethical habit (Fukuyama 1995); a "tool kit" of habits, skills and styles from which people construct "strategies of action" (Swidler 1986).

Although provided plenty of culture's definitions, a definition by Terpstra and David (1985) serves to delineate what is meant by culture in this dissertation: ***Culture is learned, shared, compelling, interrelated set of symbols whose meaning provides a set of orientations for members of a society. These orientations, taken together, provide solutions to problems that all societies must solve if they are to remain viable.*** In this dissertation, ideal situation is that human provide solutions to the problems are all the same due to the have the same cultures.

2.1.1.2 Characteristics of Culture

Culture has its own characteristic. Cushner and Brislin (1998) outlined several characteristics of culture. These characteristics are on both concrete and abstract facets. They enable a better understanding of the true nature of culture. Five characteristics of culture are of special importance to this thesis, they are (1) culture is **learned**, (2) culture is **transmissible**, (3) culture is **unquestionable**, (4) culture are **interrelated**, (5) culture is **dynamic**.

Firstly, Culture is not innate, it is learned. After born, members of a culture learn ways of thinking until they have become internalized. This learning occurs under conscious or unconscious condition that leads one toward competence in a particular culture (Sarah, 2006). Culture learning always happens through interaction, observation, and imitation. Jandt (1998) clearly described that "Culture is not a genetic trait. All these cultural elements are learned through interaction with others in the culture". Secondly, culture is socially and collectively constructed and transmitted. People can spread culture through the spoken words and nonverbal actions. The use of symbols is the core of culture. The portability of symbols allows us to store them as well as transmit them. The books, pictures, films, videos preserve a culture that it deems to be important and worthy of transmission (Wittmer 2005). Thirdly, the values and norms of culture are unquestionable. There is no culture is wrong or right, and also there is no better or worse of a culture. Besides, a cultural value remains a 'value' though it may be compromised in real-life situations. Fourth, a culture can communicate more information via few words or

gestures. In other words, people belonging to the same culture are able to deduce what is not explicitly stated, on the basis of their shared cultural knowledge. Fifth, culture is dynamic. It is easy to notice that visible changes in costumes, foods and so on. And also some deep structures of a culture like values, ethics and morals, and attitudes toward society are so deep in the structure of a culture that they tend to persist generation after generation. Cultures don't remain constant; they can change through invention and diffusion. Change also occurs by borrowing from another culture. Although cultures can change, most change affects only the surface structure of the culture, the deep structure resists major alterations (Wittmer 2005).

It can't refuse another characteristic of culture, its heterogeneity. Every culture is heterogeneous for a variety of subcultures (Wittmer 2005). Therefore, it can't be practical to expect exact similarity in behavior among the members of the same culture; it is better to expect most of them. Each individual has distinctive features with him or her from the others. Hilgard et al. (2000) explains: *Even though cultural pressures impose some personality similarities, individual personality is not completely predictable from a knowledge of the culture in which a person is raised for three reasons: (1) the cultural impacts upon the person are not actually uniform, because they come to him by the way of particular people-parents and others – who are not all alike in their values and practices; (2) the individual has some kinds of experiences that are distinctively his own; and (3) the individual because of the kind of person he is, redefines the roles he is required to fit into.* But this point doesn't refuse that people are to be think, act and express in the same way under the same culture. The 'special' persons are only a small number. When doing the research on a cross-cultural issue, these 'special' persons won't be taken into consider. Research objects are only for the most human.

2.1.1.3 Cultural differences

After talking about culture's definition and characteristics, readers have already known that culture refers every aspect. Now it comes to say the cultural differences. In this research cultural differences are the basic point of view of this dissertation, this research can be continued only cultural differences are established. Broadly speaking, there are two main cultures from geography perspective, Western culture and Eastern culture. They are originated from different

roots. Following tables summarized the differences in philosophy, personal and societal values, which suggest an easy understanding of where the differences are.

Table 1: Western and Eastern philosophy comparison

Issue	Eastern Philosophy	Western Philosophy
Main schools	Buddhism, Confucianism, Hinduism, Integral Yoga, Islam, Taoism, Zen	Christianity, Rational, Scientific, Logical schools
Main principles	1. Cosmological unity 2. Life is a journey towards eternal realities that are beyond the realities that surround us 3. Circular view of the universe, based on the perception of eternal recurrence 4. Inner-world dependent 5. Self-liberation from the false "Me" and finding the true "Me" 6. Behavioral ethics	1. Feeling oneself as an element of the Divine 2. Life is a service (to the God, money, business, etc.) 3. Linear view of the universe and life, based on the Christian philosophy where everything has its beginning and the end. 4. Outer-world dependent 5. Self-dedication to the goal (success, happiness, etc.)
Search for Absolute Truth	• Systemic approach – all events in the universe are interconnected • Searching inside yourself – by becoming a part of the universe through meditation and right living *"Though he should live a hundred years, not seeing the Truth Sublime; yet better, indeed, is the single day's life of one who sees the Truth Sublime." ~ Buddha*	• More focused on individual events and the role of the person • Searching outside yourself - through research and analysis *"The truth that survives is simply the lie that is pleasantest to believe." ~ H.L.Mencken*
Individualism/ Collectivism	A human being is an integral part of the universe and the society. People are fundamentally connected. Duty towards all others is a very important matter. Collectivism is stronger.	A human being has an individualistic nature and is an independent part of the universe and the society. Individualism is stronger.
Improvement/ Evolution	Cyclic development, hence improvement is a never ending journey that has no limits.	Linear development, hence improvement has a goal. Development stops when the goal is reached.
Living Principles	Virtue *"Be satisfied with whatever you have, and enjoy the same. When you come to know that you have everything, and you are not short of anything, then the whole world will be yours." ~ Lao Tzu* *"The thought manifests as the word; The word manifests as the deed; The deed develops into habit; And habit hardens into character. So watch the thought and its ways with care, And let it spring from love born out of concern for all beings." ~ Buddha*	Ethic *"Refrain from doing ill; for one all powerful reason, lest our children should copy our misdeeds; we are all to prone to imitate whatever is base and depraved." ~ Juvenal* *"There is no real excellence in all this world which can be separated from right living." ~ David Starr Jordan*

Resource: Bibikova & Kotelnikov 2011

Table 2: Differences in personal and societal values

Top Personal Values	
Eastern	**Western**
1. Hard work	1. Self-reliance
2. Respect for learning	2. Hard work
3. Honesty	3. Achieving success in life
4. Self- discipline	4.Personal achievement
5. Self-reliance	5. Helping others
Top Societal Values	
Eastern	**Western**
1. *Orderly society*	1. *Freedom of expression*
2. *Harmony*	2. Personal freedom
3. Accountability of public officials	3. Rights of the individual
4. Openness of new idea	4. Resolve conflicting political views through open debate
5. *Freedom of expression*	5. Thinking for oneself
6. Respect of authority	6. Accountability of public officials

Resource: Wittmer, 2005

From table 1, we can see the philosophy roots of Eastern and Western cultures. Some of the thoughts are even opposite. Looking at the different values in table 2, it can be seen that, for example, for the Westerners "self-reliance" is a very important value ranking in the first place, whereas it is not important for Asians, being ranked the lowest. Generally Westerners want freedom; they want to decide on their own life and want as little influence from any third party as possible, whereas Asians are used to being in groups and appreciate collective situations. It is important to consider that cultures within East and West are very diverse. Generally, these tables provide an overall idea of how the cultures in East and West are different. These differences are the basis of this research.

2.1.2 Understanding Thinking Style

This section discusses thinking style. Thinking style can be understood as the very habit of thought --- the information processing strategies that people use recurrently in order to know the world around them (Norenzayan et al. 2002). Thinking style has been conceptualized in various ways. Thinking style is as unique as a person's signature. No thinking style is better or worse than any other styles (Sofo 2004). Psychologists want to test how thinking styles relate to cognitive styles. There are some useful theories as tools to help in matching people to roles. Differences in personal preference extend to choice of instrument to explore personal thinking style. The various approaches are used depends on what the goals are. Some people can choose to use their thinking to suit different situations while others can't adapt their thinking to different environments very easily (Sofo 2004).

2.1.2.1 Some thinking theories

As referred thinking was a kind of habit of thought, there are many thinking theories for different dimensions; the following mentioned theories can help us understand thinking style.

Four groups of thinking styles have been divided by Gregoric (2004): *concrete sequential thinkers* tend to prefer to process information in an ordered sequential way; *concrete random thinkers* tend to like to think as experimenters; *abstract sequential thinkers* like to think in ordered theoretical terms and *abstract random thinkers* tend to prefer unstructured and people-centered environments as the bases for their thinking. The conceptions that inform this model include how information is processed, whether the preference is along abstract or concrete terms or using sequential or random patterns. Hermann (2004) structured a Brain Dominance instrument by manager of training and development with General Electric. His model uses an analogy of brain function that can be put into four quadrants to characterize the way people think. Cerebral left hemisphere takes charge of analytical thinking preferring to focus on logic, analysis and facts; cerebral right hemisphere equates to future scenario thinking preferring to focus on intuition, integration, synthesis and a holistic view; limbic left hemisphere corresponds to action thinking focusing on detail, planning and sequencing; and limbic right hemisphere equates to

social thinking preferring to focus on the interpersonal, social-emotional and kinesthetic dimensions (Sofo 2002).

These theories are discussed here, because thinking styles are not a fix model for persons. One person can have different thinking styles on himself, when meeting some situations, a certain way of thinking comes out to help solve the problem. In this dissertation the following theory of thinking will help to solve the question when studying on cross-cultural marketing.

2.1.2.2 Holistic and analytic thinking

This dissertation relies on a framework about styles of thinking. Hermann (2004) suggested that a team could derive the individual thinking styles to all its members to determine a thinking style for the group. Nisbett and his colleagues developed a theory of holistic and analytic thinking after concluding in a number of disciplines including history, ethnography, and philosophy of science. They maintained that East Asians and Westerners reasoned in very different ways. These different forms of reasoning have been summarized by Nisbett and his colleagues (Nisbett 1998; Peng & Nisbett 1999) as holistic vs. analytic reasoning, which they defined in the following way.

> *Holistic thought involves an orientation to the context or field as a whole, including attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships. Holistic approaches rely on experience-based knowledge rather than abstract logic and are dialectical, meaning that there is an emphasis on change, recognition of contradiction and the need for multiple perspectives, and a search for the "Middle Way" between opposing propositions.*
>
> *Analytic thought involves detachment of the object from its context, a tendency to focus on attributes of the object in order to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior. Inferences rest in part on decontextualization of structure from content, use of formal logic, and avoidance of contradiction.*

2.1.3 Cultures and Analytic and Holistic Thinking

The purpose of this section is to discuss the relationship between culture and thinking, research purpose wants to explain that styles of thinking are influenced by cultural differences and people from West and East belong to the two kinds of thinking respectively.

2.1.3.1 Relationship between culture and thinking

Cognitive style, as defined by Riding and Rayner (1998), is "an individual's preferred and habitual approach to organizing and representing information" or as Ford et al. (1994) stated, "A tendency for an individual consistently to adopt a particular type of strategy is known as a cognitive style". Anthropological and psychological studies of general cognitive processes suggest that cognitive styles are connected to culture (Chen & Ford 1998; Nisbett, Peng, Choi & Norenzayan 2001).

Usually cultures rooted from Greece collectively labeled 'Western cultures' are more analytic and independent. The Greeks esteemed the individual and his right to live within the laws that he himself created and could change as needed (Nisbett, Peng, Choi & Norenzayan 2001). According to Hamilton (1973), the Athenians were a union of individuals free to develop their own powers and live in their own ways. This location of power in the individual seems to be intimately related to the political organization (independent city-states) and the tradition of debate among the Greeks (Lloyd 1990, 1991). According to Nisbett (2001), such cultures stress individualism and personal choice, sometimes to the point of disregarding the social constraints of society. Some cultures tend to be holistic in their views of the world. Nisbett (2001) in particular noted East Asian cultures rooted from China, as an example to how and why such a culture developed. The Chinese, on the other hand, fostered a sense of collective agency. The individual was part of a closely knit group, according to Confucianism, the role fulfillment between emperor and subject, parent and child, older brother and younger brother was important (Munro 2003). Hence, "individual rights were construed as one's 'share' of the rights of the community as a whole" (Nisbett, et al. 2001). Ancient China "the practice of public debate was relatively rare". Western cultures such as those in the United States were less concerned with context and social situations and tended to focus their attention more on individual objects and

people and apply logic to what they see. Individuals of Eastern cultures were a more closely knit social collectivity, in which they always view themselves in relation to others in the community. A research points to the idea that East Asians such as the Japanese and Chinese have developed a more holistic way of thinking. According to Nisbett (2001), both North Americans and Western Europeans showed analytic style of thinking.

There are some papers have supported this kind of view. Masuda and Nisbett (2001) revealed perceptual differences between East Asians and Westerners through an experiment in which underwater scenes were shown to Japanese and American participants. The participants were asked to recall what they had seen. The Japanese and Americans provided equal numbers of statements about which of the fish were larger than others, but the Japanese participants made about 70 percent more statements about the general environment, or field, surrounding the fish and twice as many statements describing relationships between the fish and the background than the Americans did. This study thus revealed differences between East Asians and Westerners. East Asians leaded to focus on the field and on relationships, whereas Westerners leaded to focus on objects and tended to detach objects from the field. These different styles of thoughts were categorized as holistic vs. analytic thought.

In an important paper "Culture and Cognition" Nisbett and Norenzayan (2002) proposed that cognitive processes differed according to holistic and analytic perspectives. They stated that cultural differences in cognitive processes tied to cultural differences in basic assumptions about the nature of the world. Scholars in a number of disciplines have maintained that East Asians and Westerners differed greatly in their methods of reasoning. For Easterners, holistic and analytic reasoning can be summarized as orientation to the context or field as a whole, including attention to the relationships between a focal object and the field; A preference for explaining events on the basis of such relationships; An approach that relies on experience-based knowledge rather than abstract logic and the dialectical. For Westerners, analytic reasoning can be summarized as a detachment of the object from its context; a tendency to focus on the attributes of the object in order to assign it to categories; A preference for using rules about categories to explain and predict an object's behavior; Inferences that rest in part on the decontextualization of structure from content, use of formal logic, and avoidance of contradiction (Nisbett & Norenzayan, 2002).

Some researchers were also gave some reasons. Munro (2002) summarized from philosophy perspective as follows: “The Platonists were more concerned with knowing in order to understand, while the Confucians were more concerned with knowing in order to behave properly toward other men”. The fundamental difference in social organization also influenced the way that science and mathematics developed in these ancient civilizations. For example, Chinese saw the world as interpenetrating and continuous, and recognized the importance of the whole field, they were able to analyze the behavior of the tides, and had knowledge of magnetism and acoustic resonance much earlier than the Greeks. However, because the Greeks gave preference to study the properties of an individual object, they were concerned with definitions and with devising systems of classification and rules in order to be able to understand, predict, and control the behavior of objects independently of their particular context. According to Lloyd (1990), he emphasized on debates led the Greeks to be concerned with ultimate foundations and rigorous explicit justification of a position. However, the emphasis on collective agency and harmony led the Chinese to the doctrine of the opposing forces of *YinYang*.

After long period of time and unchanged environments, people in West were become more analytic, and people live in the East were become more holistic.

2.1.3.2 Two examples about culture and thinking

Actually the difference between the Eastern culture and the Western culture can be seen in many different areas. The Eastern culture was more emphasis on looking at an issue holistically while people from the western culture tended to analyze different objects independently. Following two typical examples can show you analytic thought and holistic thought how they excite in daily life influencing people in different cultures.

Chinese Medicine and Western Medicine (Zheng 2011)

“As a part of the long-lasting traditional Chinese culture, Chinese medicine was quite advanced in ancient times. A doctor of Chinese medicine uses four methods to diagnose a patient, looking, listening, asking questions and checking the pulse of the patient. Comparing to today’s western medicine which relies heavily on performing laboratory analysis and tests, Chinese medicine can

be practiced in an easier and more straight-forward manner, and is able to cure the illnesses at their roots. ”

“The splendid historical accomplishments of Chinese medicine had everything to do with the divine culture of ancient China. Ancient Chinese science was emphasis on ‘heaven and humans becoming one’ and following the rules of the nature. For a human being, all his major organs are interconnected and form one body. If his inner organs are not functioning properly, the problems are reflected in his surface pulse, and in his facial expressions, his voice, and even his behavior. Someone who really understands Chinese medicine can easily find the root cause of a person’s illness from his surface symptoms. For example, one can know that the patient’s inner organs have become unbalanced. Chinese medicine also emphasizes on ‘adjusting’, ‘supplementing’ and ‘resting upon’ the body of the patient while the western medicine talks about ‘treating” the body’.”

“Western medicine doesn’t take this path. It studies the function of each organ through dissecting it. It studies what the illness is through looking at the structures of different parts and different cells of the body. Now Western medicine has progressed to performing research on molecular and genetic levels. Therefore using such a dissecting method makes it difficult to identify the illness at its root and cure it effectively. ”

*Language: Chinese and English (*Beichen Liang 2007)

Beichen Liang (2007) made a comparison of Chinese and English from holistic and analytic perspective. “Western languages are based on an alphabet whereas Chinese is an ideographic language originated from pictographs. Western alphabet is more atomistic and analytic by nature” and , “ Westerns languages is a natural tool for classifying and serving as a paradigm for codified laws, scientific classifications, and standardized weights and measures”. Unlike English words, “many Chinese characters cannot be understood until combined with other characters or put in a certain sentence context because they have multiple meanings. For example, the original meaning of character ‘东’ (dong) is east. But when it is followed by‘西’（XI, east）, the compound word ‘东西’（dong xi）refers to things or stuffs. When it is followed by 道（dao）and 主（zhu）, the compound word ‘东道主’ means host. Moreover, the written Chinese characters are equally spaced regardless of how many strokes they contain. There is no space between characters or

between compound words. Meantime, characters consisting of several characters are not grouped together or separated from other characters. As a consequence, written Chinese words have no definite visual word boundary. When reading Chinese, readers have to work out what characters belong together and what the characters mean, which makes the semantic identification of Chinese more contextual and holistic."

He also stated that the ratio of grapheme to phonemic components in Chinese is 10:1. As a result, there are many homophones in spoken Chinese. So in contrast to English speakers who pay more attention to content words and ignore structure of words, Chinese speakers pay more attention to the contexts or the whole sentences in order to understand the spoken language. Chinese language motivates a part-whole dichotomy, since the Chinese language is context-based; the understanding of Chinese requires holistic attention.

2.1.4 Analytic and Holistic Thinking Styles as a Study Focus in Marketing Research

Analytic and holistic thinking theories have been used in practical marketing research. These methods connect consumers' psychological thinking with final decision behavior. So many marketing researchers tried to use this theory to explain the practical marketing especially in cross-cultural marketing. Over the past decades, many writers have noted cultural differences in perceptual judgment and memory. Increasingly, scholars in the fields such as history and anthropology believe that human cognition is not the same (Nisbett 2004). This statement said that people of different cultures were exposed to different aspects of the world and have been taught different things. Philosophical texts indicated that the ancient Greeks had a sense of personal agency and emphasized analytical thought while the ancient Chinese favored harmony and stressed holistic thinking (Nisbett 2004). These approaches to cognition were rooted in the two cultures' distinctive social practices. Recent studies provided evidences that people in modern Eastern and Western cultures have inherited these ancient ways of thinking (Nisbett 2004).

Ying Dong and Kun-Pyo Lee (2008) revealed the relationship between cognitive style and webpage perception. In particular, webpage perceptions of people with different cognitive styles were compared, in their study hypothesized that differences between holistic thought and analytic

thought could be reflected in webpage perceptions. An experiment was carried out involving Chinese, Korean, and American participants. The users' eye movements, which can provide specific information about their cognitive processes, were recorded while browsing different language versions of a webpage prototype. Findings from the analysis suggested that the Chinese, Korean, and American participants employed different viewing patterns when viewing the webpages. It concluded that webpage design should be carried out according to the target audience's specific cognitive style in order to enhance perception and usage of a webpage.

Monga and John (2010) analyzed that why were some brands more elastic than others. In this article, the authors examined consumers' style of thinking—analytic versus holistic thinking—to better understand the elasticity of prestige versus functional brands. The authors found that holistic thinkers provided more favorable responses to distant extensions than analytic thinkers; however, for prestige brands, holistic and analytic thinkers responded equally favorably. Analytic thinkers were identified as the roadblocks for functional brands launching distant brand extensions.

Monga (2007) found that consumers evaluated brand extensions by judging how well they fit with the parent brand. They examined the process across cultures. They found that consumers from Eastern cultures, characterized by holistic thinking, perceive higher brand extension fit and evaluated brand extensions more favorably than did Western consumers, characterized by analytic thinking. One study supported the existence of these cultural differences, the other study supported that styles of thinking (analytic vs. holistic) as the drivers of cultural differences in brand extension evaluations.

Hans Baumgartner (1993) wrote that a methodology for studying holistic and analytic product perception, and some conditions under which products were perceived holistically or analytically were specified. The results of a study in which subjects had to classify triads of sweaters showed that the proposed procedure was useful for studying holistic versus analytic product perception and that consumers' classification behavior was systematically related to their motivational task set and two individual difference variables.

Section 2.1 showed that the theories of culture, thinking and the relationship of culture and thinking. It builds basic structure that cultures differences in Western and Eastern people. People from Western are more holistic and people from Eastern are more analytic. This is the basic start point of this research. The prior researches, especially in marketing, make this research can be successful.

2.2 Learning

In this part it discusses the meaning of learning. When people say the word "learning", they usually think it is "to think using your brain". The learning theory explains why the brain is the most incredible network of information processing and interpreting in the body when people learn things.

2.2.1 Learning Theory and Model

This basic concept of learning is the Cognitive Learning Theory (CLT). The theory has been used to explain mental processes when someone is influenced by intrinsic and extrinsic factors. Like a computer, outside environment do a kind of inputting. The different processes concerning learning can be explained by analyzing the mental processes. It defines that new information can be stored in human' memory for a long time with effective cognitive processes. On the other hand, ineffective cognitive processes result to learning difficulties and hardly that can be seen from an individual.

2.2.1.1 Definitions of learning

There are many different learning definitions like definitions of culture. Humanist learning theorists view learning as a function of the whole person and believe that learning can't take place unless both the cognitive and affective domains are involved. Many prior researchers defined it according to its way of using. The following are some of the definitions: Learning is the ways individual learners react to the overall learning environment (James 1996); Learning is distinctive behaviors which serve as indicators of how a person learns from and adapts to his environment. It also gives a clue that how a person's mind operates (Gregorc 2004); Learning are preferences that students have for thinking, relating to others, and experiences (Grasha 1990);

Learning styles are the way each learner begins to concentrate on, process, and retain new and difficult information (Dunn & Dunn 1999); Learning style are a consistent way of functioning that reflects the underlying causes of learning behavior (Keefe 1987). Learning is a channel when human input knowledge in their brain.

2.2.1.2 Learning model

Three dimensions of learning models as follows that describe learning. They are instructional preference models, information-processing models, and personality models (Johnson et al. 2008). Instructional models, known as social interaction models, examine the attitudes, habits, and strategies of learners. These models also examine how people engage with their peers when they learn. Information-processing models observe the way a person remembers information, senses, solves problem, and thinks. Personality models study the way a person reacts and feels about different situations. The different types of instructional, informational-processing, and personality models and inventories are presented in Table 3.

Table 3: Learning Styles Models: Instructional, Information-Processing, and Personality

Inventory Title	Author(s)	Published Date	Measures
Panel A Instructional and Environmental Preference			
Grasha & Riechmann Student Learning Style Scales	Grasha and Riechmann	1974	Describe the learner as one of the following: independent-dependent, avoidant-participant, and collaborative-competitive
Learning Preference Inventory	Rezler and Rezmovic	1974	Three concepts: abstract or concrete, individual or interpersonal, and student structure or teacher structure
Price Learning Style Inventory	Dunn and Dunn	1975	Environmental elements, emotional elements, physical elements, sociological elements, and psychological elements
Multi-Modal Paired Associates Learning Test (MMPALT)	Gilley	1975	Perceptual learning modalities: print, aural, oral (interactive), visual, haptic, and motor (kinesthetic)
Friedman & Stritter	Friedman and Stritter	1976	Preferences for pacing, influenced over learning, media, active role in learning, and feedback in learning
Cognitive Style Interest Inventory	Hill	1976	Symbols and their meanings, cultural determinants, and modalities of inference
Learning Style Inventory	Renzulli and Smith	1978	Learning context and teaching styles
Canfield & Lafferty Learning Styles Inventory	Canfield and Lafferty	1980	Conditions of learning, content of learning, mode of learning, and expectations for learning
Panel B Information Processing Preference			

Learning Style Inventory	Kolb	1976	How learners process and perceive information: assimilators, diverges, conveyors, or accommodators
Edmonds Learning Style Identification Exercise	Reinert	1976	Four types of learning methods: visual, verbal, listen (aural), and emotional
Inventory of Learning Processes	Schmeck, Ribich& Ramanaih	1977	Synthesis-analysis, study methods, fact retention, and elaborative processing
Gregorc Style Delineator	Gregorc	1977	Concrete-sequential, abstract-sequential, abstract-random, abstract sequential
Paragraph Completion Method	Hunt	1978	Need for structure, dependent or conforming
Approaches to Studying Inventory	Entwistle	1979	Reproducing orientation, meaning orientation, achieving orientation, non-academic orientation, and self-confidence
Study Process Questionnaire	Biggs	1987	Surface (instructional v. reproducing), deep (intrinsic v. meaning)
Panel C Personality Related Preference			
Myers-Briggs Type Indicator	Myers-Briggs	1962	Extraversion/introversion, Sensing/intuition, thinking/feeling, judging v. perceiving
Matching Familiar Figures	Kagan	1964	Impulsivity or reflectivity
Group Embedded Figures Test	*Witkin*	*1969*	*Field independence or independence*
Keirsey Temperament Sorter II	Keirsey	2004	Character and temperament into four categories: Artisans, Guardians, Rationales, and Idealists

Resource: Johnson, 2008

From the definitions and the models of learning, they show that learning is the links between information and receptors. It likes a bridge between information outside of body and human brains. Learning styles can make the information receive different? How does the learning work when refer to the culture issue? Following statements show how learning works in cognition.

2.2.2 Memory, Vision, and Association

2.2.2.1 Memory

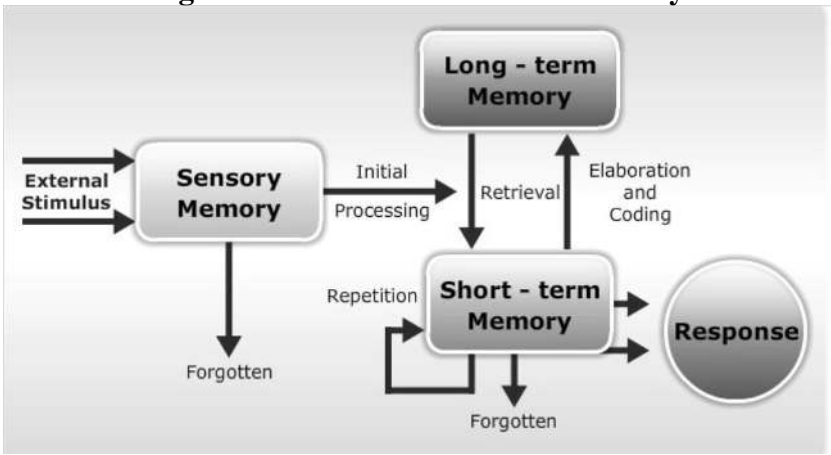
Memory is the result of learning. People agree that human's memory is like a library. The purpose of the library is to store books, magazines, music, and other materials. A library has a system of dealing and categorizing the materials so they can be used later. If new books or magazines come, they need to be replaced. If certain books are rarely used or never retrieved,

they are removed to make room for new ones. Only in this way human's brain can work well and clear.

James (1890) first defined primary memories and secondary memory. The primary memories are the information held in the "conscious present" and the secondary memory consists of information that is acquired, stored outside of conscious awareness, and then later remembered. Tulving (2000) proposed that memory was the "neurocognitive capacity to encode, store, and retrieve information". This distinction maps directly onto the modern distinctions between short-term memory and long-term memory (Scoville & Milner 1957; Atkinson & Shiffrin 1968). This approach has led to an extensive taxonomy of memory systems that are characterized by differences in timing, storage capacity, conscious access, and mechanisms of operation.

The Atkinson-Shiffrin model (also known as the Multi-store model, Multi-memory model and the Modal model) is a psychological model proposed in 1968 by Richard Atkinson and Richard Shiffrin as a proposal for the structure of memory. It proposed that human's memory involves a sequence of three stages, which are sensory memory, short-term memory and long-term memory as shown in Figure 1.

Figure 1: Multi-store model of memory



Resource: Atkinson & Shiffrin 1968

Sensory store—receives what the senses deliver but retains information for only a fraction of a second. In marketing areas, this means that it is easy to expose consumers to information, but it is difficult to make a lasting impression. Hence, stimuli must be brief and attractive grabbing

consumers' attention. **Short-term store**—information is rehearsed and is transferred to real memory in this stage of memory. If the data which is not rehearsed, it is lost. The message must encourage immediate stimulate retention, because the time available for memorization is very limited. In marketing research, this term is also important. In this research, author tries to make the participants research this stage, and remember what author wants participants to remember. **Long-term store**—a data bank which lasts up to many years with almost unlimited capacity. The data is organized through linking and clustering of information according to its meaningfulness. In marketing research area, the marketers must provide a message that can be readily linked to information stored in memory. Also, the advertiser should remember that the consumer interprets new information in consistent with data stored in the long-term memory (Atkinson & Shiffrin 1968). The multi-store model shows that the different types of memory used for different tasks. It is an explanation of how memory processes work. After hearing, seeing and feeling you can only remember a few. But if you repeated sensory, you will go to further stage. So repeating stimuli is an efficient way to remember something as a long terms memory. Author uses this theories in the experiment period.

2.2.2.2 Memory in vision

Visual Memory system

In this dissertation, it also refers to visual stimuli. So it is necessary to discuss the relationship between visual stimuli and memory. Recent research within the vision community between memory and vision has been quite fruitful. Here discusses the Visual Memory system (VWM) system. This system briefly represents relevant visual information in the service of a variety of ongoing tasks (Brady et al. 2011). The working memory system is used to hold information actively in mind and to manipulate that information to perform a cognitive task (Baddeley 1986). The last 15 years has researched on visual working memory, specifically for visual feature information (Luck & Vogel 1997). It concerns that both the processes of memory and the nature of the stored representations, so intersection between memory and vision is a particularly interesting domain of research (Johnson et al. 2008).

Visual Working Memory (VWM) is an active type of memory. It was understood to be a passive store. It organizes from visual. Another defining characteristic of VWM is its independent and its

information representation—not interfere with information maintenance in other modalities (Baddeley & Hitch 1974). Research has shown that an important resolution trade-off as the number of items remembered increases, the precision with which each one is remembered decreases, possibly with an upper bound on the number of items that may be stored (Zhang & Luck 2008) So, VWM's contributions play an important role in a variety of cognitive processes.

2.2.2.3 Associative learning

From the name of associative learning, it can be known that it is one for many learning process. The associative learning theory in combination with attributing theories form the theoretical base used in this thesis. What does associative learning mean? When a stimulus proceeds or coincides with a natural impression the stimulus can become associated with impression. It was first used in metal psychology area. It is a conditioning theory. But why use in this dissertation, the answer is that everything react differently in different conditions no matter animals or human beings. The associative learning bases on conditions. Optimal conditioning is the creation of a strong association between the conditioned stimulus (CS) and the unconditioned stimulus requires forward conditioning; the two conditions are the conditions usually are contained in associative learning research. So if conditions are changed, the research result can change. That is to say conditions become to be an important aspect to do psychological related research.

This associative learning theory can be used in many marketing areas, for example, marketers can use in product extensions, brandings and so on. The consumer can be viewed as an information seeker who uses logical and perceptual relations among events, along with his or her own preconceptions to form a sophisticated representation of the world. Conditioning is the learning environment that results from exposure to relationships among events.

2.2.3 Computer-based Learning

Learning technology is revolted by the technology changing the way people work, communicate, and learn. As the development of computer technology, Owning a computer is much easier that before. The rapid changes of technology had enabled trainers to use analogue movies and computer images created stimulating and effective training to their computer-based training in the 1960s and 1970s (Tucker, 1997). Studies showed that one important trend of corporate technical

training were Computer-Based Learning (Rath & Gaudet, 1998; Wilson, 1999; Bassi et al, 1998). A report projected 85.9% of the organizations would use multimedia, 69.6 % computer-based learning in 2004(Thompson et al., 2002). Studies showed that students' achievements and motivations improved when teachers' instruction matched students' learning (Wakefield, 1993). Martini's (1986) research showed a positive relationship between matching different Computer-Assisted Instructional methods with each learner's learning preference and his or her achievement in the subject. After a long time development of computer technology, more and more learners adopt computer-based-learning.

The term Computer-Based learning is defined as follows: computer learning is an interactive training experience between a trainee and a computer, in which the computer provides much of the stimulus (MetCalf 1997). The trainees present information, quiz, and test. MetCalf (1997) said that it was more effective and efficient to use interactive multimedia to deliver because this training delivery method was less expensive than traditional training delivery method and was more convenient for the trainees. Not only has this advantage, but also there are some advantages of computer-based learning by internet. Firstly, it centralizes training by computer learning. If tutors want to update context, they could make changes on the server and every trainee can find the most updated schedule from their computers right away; secondly, it helps to standardize the training or learning. That means everybody can get the same learning materials and information. This can guarantee the quality of the trainer and the training program would be the same; thirdly, it is convenient for trainees. Trainees have more control on when and where to receive their training, it is easier to access to the learning. If a trainee wants to learn at midnight, he could log in to the Internet from his home computer at midnight. They don't need to worry about the time. Organizations use multimedia as their training tools, because this can save time, expenses, traveling and so on.

Multimedia includes texts, audios, music, images, cartoons and videos. Multimedia make multimedia as an effective instructional delivery method, and tutors could receive feedback of learners immediately, and multimedia graphics, cartoons, audios and videos provide a more realistic environment and made the learning more effective and vivid. Some computer-based learning can case studies, it makes learners listen to the music or sounds, see the images or videos, Here we use computer-based training to make participants can see what research objects are.

Is it efficient for adults to use this kind of learning? Or is computer based questionnaire can be accepted by adults? Adult learners were described as goal-oriented, problem-centered, and self-directed learners. Adult learners were generally self-directed. They needed to be responsible for their own decision; and Adult learners were motivated to learn when they saw the immediate relevance to their professional or personal life (Wilson, 1999). In this research it uses online survey. All the participants are adult learners; they can handle the survey online.

Overall, section 2.2 discusses the learning process of human. It happens in the process of people perception from visual cues. In this dissertation, the associative learning is very important, it dominates the whole result. During the associative process, the conditions can influence result. So conditions become to an aspect in this research.

2.3 Design and Evaluation

In this part, it goes to the area of marketing research. It discusses that package as a communicator effects on consumers' decision. Design elements consider as visual stimuli influence on consumers' perception of product evaluation. At last this section refers to the relationship between package design and product evaluation.

2.3.1 Package Design

People pay attention to the places where they can find something new or interesting. For this purpose, they use their field of vision and afterwards concentrate and move their eyes to focus what they are interesting. It is a question of what people are searching for, and visual attention relating to expectation or identity of the target. A special package will attract attention if it fits consumers' needs. Visual attention relates to the environment and triggers by clues in the visual field which theories were targeted and feature-driven indicated (Jesper 2007). Several researchers have examined the connections between package and buying decisions (Stewart 1990; Young 2004), and package has developed as a silent salesman which expressed information of the product (Pilditch 1973) to a brand developer (Underwood, 2003). Although package perception may include a range of important non-visual elements (i.e., haptics) the focus here will be limited to visual appearances.

2.3.2.1 Division of package elements

The concept of package design is inherently multidimensional, incorporating multiple elements such as texts, shapes, graphic designs, logos, sizes, colors, illustrations, materials, textures and so on (Underwood et al. 2001). For consumers, the package is a kind of product, particularly for initial impressions formed during initial contact can have lasting impact. Every product attribute directly communicate such messages to the target consumers (Nancarrow et al. 1998), the design elements need to stand out in a display of many other offerings.

Ursula Hansen (1986) in his paper wrote that package had specific influence on buying behavior through three general package aspects: *communication*, *functionality* and *environment*. The communication aspect contained graphic design, information and brand promotion. *Functionality* contains practice conditions related to transport from a distributor to retail, use and storage, and finally the *environment* aspect primarily contained disposal of package after using. But it didn't reveal to how the three aspects influence on the buying decision or how these aspects perceived. But visually a decision from a consumer was made in the less than twelve seconds (Dickson & Sawyer 1990).

According to Ampuero and Vila (2006), a distinction was made between two groups of components: (1) graphic components included color, typography, the graphical shapes used and the images introduced; and (2) structural components included the shape and size of the packages and the materials used to manufacture them. This is a division which contains all elements of the design. According to Silayoi and Speece (2004) four main package elements potentially affected consumer purchase decisions, and they can be separated into two general categories: (1) visual and (2) informational elements. The visual elements consisted of graphics, and sizes and shapes of package, and related more to the affective side of decision-making, Informational elements related to information provided, and technologies used in the package, and were more likely to address the cognitive side of decisions. Meantime, visual elements were divided into two parts: package graphics, and package sizes and shapes, and package graphics were further divided into four parts: layouts, illustrations, colors, and typographies. Informational elements were also divided into two parts: package information and package technologies. This division is used in this research which supports clear categories of the package design.

According to above divisions, it can conclude to decide the packing visual elements are package size, shape, layout, illustration, color, and typography and package graphic. They will be discussed more in following sections.

2.3.2.2 Package elements

This section will take a closer look at the different components that enable a package to perform its task in marketing.

Size and Shape

According to Danger (1987), his research described that there was no fixed principles governing the physical shape of a package. The nature of the product was controlled by mechanical consideration by selling conditions and the way that the package was used. The package shape can be used to communicate images that influence consumer perception, appeal to the consumer's emotions, and establish desires for the product before the consumer reads the label. And also the size and shape of a product effects customer judgments and decisions. In prior study, Silayoi and Speece (2004) found that size and shape were much related to usability. Generally consumers perceived packages to be larger, even when they frequently purchased these packages and could experience true volume (Silayoi & Speece 2004). Although consumers thought of product pictures and graphics as a tool of communication, consumer focused to size and shape more from packages being convenient to use and carry. Participants agreed that package size and shape helped them judge product value for money (Silayoi & Speece 2007). The disconfirmation of package size before their consumption might not lead consumers to revise their judgments in the long term (Raghubir & Krishna 1999).

Different sizes appeal to consumers with different involvement. Here is one example of how shape and size communicate with consumers. Generics are usually packaged in larger size, which communicate to consumers who are specifically looking for good deals. Such consumers find the low price generics, in the right size of package, offers excellent value for money. In addition, this could imply that when product quality is hard to determine the package size effect is stronger (Silayoi & Speece 2004).

Color

There is a rich body of research on the usefulness of colors. Color is a specific element of package design which influences consumers' behavior. The literature on the topic of color can be divided into several categories, and organized based upon the idea that color can do many things which directly relate to consumer behaviors (Floyd 2004). Color can gain consumer attention. Gaining a consumer's attention is the first thing that a marketer or designers wants, as it is the first step for consumer purchase. Meanwhile, color is a specifically extrinsic cue of package design which is accepted by most researchers. Colors are one of the non-verbal signs that are recognized as an important marketplace phenomenon. The function of colors to attract attention is emphasized by arguing that colors are the most important visual sign to attract consumers' attention, as it is the first sign that the consumers notices on packages (Danger 1987). Another consumer researcher found that the colors accepted on packages by consumers may be limited, but preferences regarding colors and patterns may have an impact on brand choices (Kojina et al, 1986).

Floyd (2004) also said color also can be a source of sending information and conveying messages and associations. If consumers want to be able to make quick and easy decisions, they always use the process of categorization to make decisions easier. In this process they relate new information to past experiences and pre-existing information that color evokes an emotional response primly. In the decision buying process evoking an emotional response is a powerful way to persuade consumers to purchase, because color also has the power to differentiate brands. So color is an element which couldn't be ignore in package design research. Meyers-Levy and Peracchio (1995) suggested that color was assumed to be more vivid than black and white. That means black and white can reduce the vivid of the product. This point of view will be discussed in next chapter.

Extended research has been explored on color preferences. Firstly, the research showed that many variables affected color preferences, including gender, age, and personality (Floyd 2004). Secondly, consumers seem to have personal and cultural preferences for some colors over others (Grossman & Wisenblit 1999). Thirdly, using color as a cue on package can be a potentially strong association. So totally speaking, people in different cultures are exposed to different color associations and develop color preferences based on their own culture's associations.

Image

The third package element is package pictures or images. Pictures are extremely vivid stimuli and visual imageries on a package may enhance the product's accessibility to consumers. Fitzgerald Bone and Russo France (2001) highlighted a picture's capacity to serve as a framework for interpreting a package's informational components since pictures were likely to be processed prior to other components of a package. MacInnis and Price (1987) stated that a consumer viewing a product picture on a package was more likely to imagine how a product appearance, tastes, smells, or sounds. The imaging of the individual brand leads to brands being evaluated, improving the brand's likelihood of purchase. Underwood et al. (2001) also said that the positive impact of package pictures was primarily to increase attention to a brand. Other researchers also supplied important information of the image on package. Pictorial content represents concrete information that tends to be more influential in the decision making process than more abstract verbal information (Underwood et al., 2001). Moreover, in categories where product knowledge is low, the product picture may supply more highly informational (Underwood et al., 2001). Pictures on the package reveal the unknown product in a way that stimulates consumers' imagination. Also if little variance exists in price and perceived quality among brands, a product picture could be exceedingly important (Underwood et al., 2001).

Typography and Band name

When it comes to this package element, some findings have come up in previous research. Typography is a signal to express the meaning of the product; people get the signal to evaluate the product. Ampuero and Vila (2006) found that elegant products usually presented bold, large, roman, upper case letters with expanded characters. In contrast, accessible products of reasonable price were associated with both serif and sans serif typographies.

The brand name on package is responsible for providing information, creating more ability, building brand recognition and loyalty. A uniquely styled brand identity creates a recognizable signature that creates recognition among consumers and enhances their familiarity with brands and products (Ampuero & Vila 2006). The brand identity on packages is so critical in communicating a positive image to consumers, it is important to keep it as constant as possible. And the brand name is of primary importance to the current and future well-being of a product. The brand is a stylized name or a symbol, it identifies a single product or an extensive line of

products, typography and brand name are responsible for this, regardless of package form, shape, and size (Ampuero & Vila 2006).

Label layout

Here discusses the importance of the label layout. Ampuero and Vila (2006) found that non-selective, middle class products were associated with horizontal and oblique straight lines, circles, curves, asymmetrical compositions and the use of several elements. In contrast, high price products appeared to be associated with vertical straight lines, squares, straight outlines, and symmetrical composition with one single element. From this statement it can be said that layout of a product can refer its class among other product. Also Rettie and Brewer (2000) researched layout issues when they studied the recall of package elements. They found that elements were recalled differently according to their layout on the package. Reactions to labels are complicated. Labels also provide important extrinsic cues to be used by consumers to assess quality (Rocchi & Stefani 2005).

Logo

When looking upon the effects of the use of logo on the package, here applies the theory of Meyers (1998). The logo can be shown in many forms. The logo can also take the form of a symbol that has an association with the product or can simply be an abstract shape designed to achieve brand recall. For example, a bold logo will communicate strength, masculinity, and effectiveness. A cursive logo usually communicates elegance, lightness, femininity, and fashion. An angled or script logo provides an image of casualness, fun, movement, and entertainment. Generally, logo and brand name font are also needed to be considered in this research.

2.3.2 Package Design and Product Evaluation

2.3.2.1 Package design and its influence on consumers evaluation

It is well and wildly accepted that packages have an essential role in influencing the consumer purchase choices and intentions at the process of purchase. The studies on behavior communication have focused on the impact of the package appearance on various phases in the choice process. Past research findings were related to the current study, their findings contributed to the understanding of the impact of packages on consumer behavior. The past finding focuses

on the formation of the consideration set (Garber et al. 2000), product recall (Rettie & Brewer 2000), product and brand evaluation (Underwood & Klein 2002) has been emphasized. Beyond these it communicated impressions of brand personality (Orth & Malkewitz 2008). Following passages conclude the prior research about how package design or package design elements influence on consumers' evaluations.

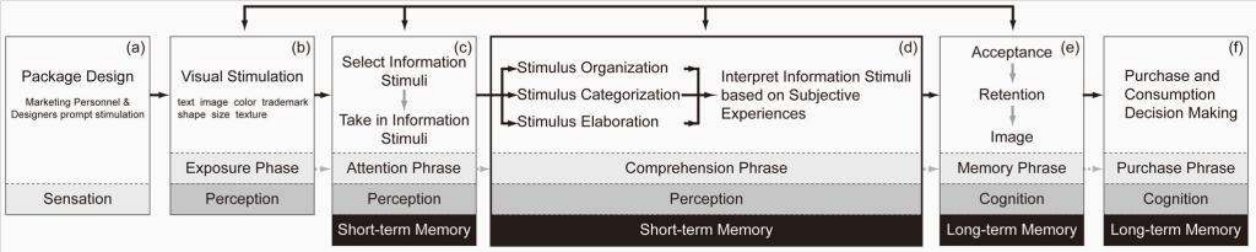
Over two third of purchase decisions are made in store (Underwood & Klein 2002). Package is integral to the marketing and distribution of products. Product package can play a vital role in the consumer's purchase decision. Package attracts consumers' attention, communicates product information, and builds brand. Even after purchase, package can continue to influence consumption experience. Hence, understanding how package variables such as shape, color, and graphics affect consumer perception, evaluation, and behavior is of theoretical and managerial importance (Folkes & Matta 2004).

Consumers spend little effort on cognitive processes like reading and comparing prices (Vanhuele & Drèze 2002). Consumers make extensive judgments from what they see (Folkes & Matta 2004). Pieters and Warlop (1999) examined the visual communication aspect in an eye-track experiment, where consumers saw unknown package brands and found a correspondence between gaze time and brand choice. Getting attention is still a key role for the in-store buying process and can bring in new consumers, simply because attractive package attracts attention (Selame & Koukos 2002). Consumers who have difficulties differentiating the brand's quality in the marketplace choose package that is able to break through the clutter of visual information (Pieters et.al 2002).The package is the symbol that communicates favorable or unfavorable implied meaning about the product. Food product expectations can be generated from cues from package too (Imram 1999).

Psychologically speaking, the uniqueness of package design will affect consumers' acceptance of a product, so a response model of consumers to products was proposed. In figure 2 and figure 3 they show that firstly product package is exposed and noticed, consumers recognize and categorize some visual elements or their combination. Next, they use the features of some stimuli according to their own subjective experience in the past, and cause meaningful information stimuli. Furthermore, memory will affect received information and the way interprets it;

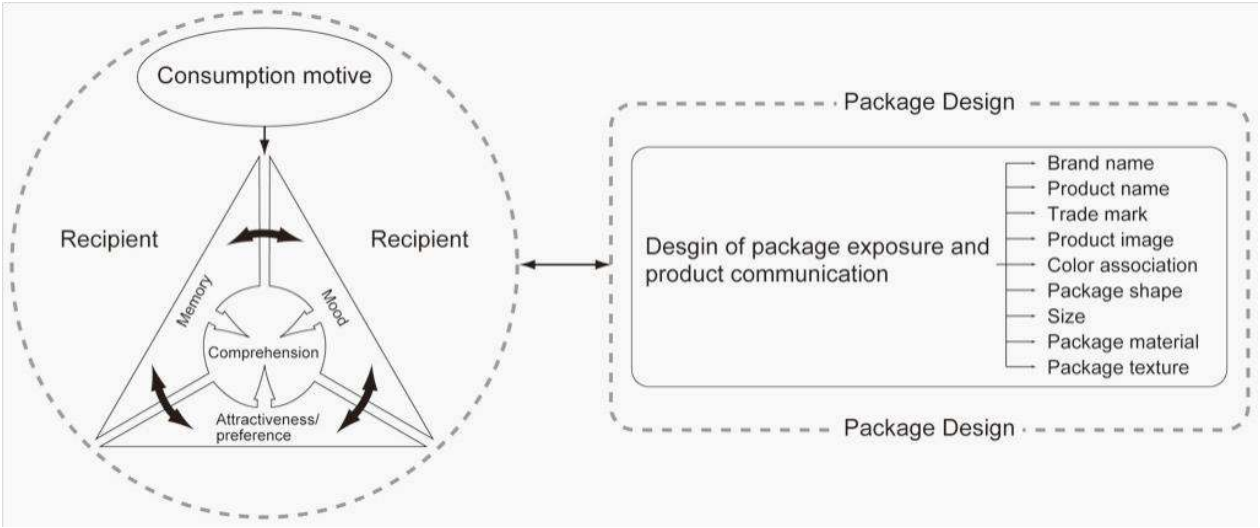
meanwhile the information which has received will create memory. After consumers accept messages and digest them into impressions, they can be used to interpret information for purchase or for decision-making (Wang & Chou 2006).The procedure of information processing when consumers perceive product package is used as the theoretical basis of comprehension modes of visual elements in this study.

Figure 2: The procedure of information processing for consumers perceiving product package



Resource: Wang & Chou 2006

Figure 3: Cognition model for comprehension of product package



Resource: Wang & Chou 2006

2.3.2.2 Package design and quality evaluation

This research hopes to test consumers' evaluation. It chooses to test consumers' evaluation of quality, so quality evaluation will be discussed here. Product design stimulates consumers' attention, and they interpret the information created by the visual elements on the package to comprehend the product. Quality evaluations are largely influenced by product characteristics reflected from package, and these play a role in the formation of brand preferences. If the package communicates high quality, consumers frequently assume that the product is of high quality (Silayoi & Speece 2007).

Consumers use quality attributes associate with quality (Olson & Jacoby 1972). These attributes are most often extrinsic attributes, which talked in previous section. As it has been used in the literature, the term "objective quality" refers to measurable superiority on some predetermined ideal standard or standards (Zeithaml 1988). For consumers, product quality is not objective quality but perceived quality, only existing in perceived process in consumers' minds. If the package symbolizes low quality, consumers transfer this "low quality" perception to the product itself (Underwood et al. 2001). It could say that product quality is an effective response, derived from product attributes in the grocery store. Generally speaking, consumers perceive quality from product attributes in the quality perceiving process.

Perceived quality is different from objective or actual quality; it is a higher level abstraction rather than a specific attribute of a product and also a judgment usually made within a consumer's evoked set. Perceived quality is a total assessment resembles an attitude. Consumer perceptions of quality have been proved to be affected by extrinsic cues, mainly packages. Perceived quality can be defined as the consumer's judgment about a product's overall excellence or superiority (Zeithaml 1988).

However, intrinsic attributes couldn't be ignored. Specific or concrete intrinsic attributes differ widely across products, when consumers use intrinsic attributes to infer quality. Anselmsson et al. (2007) found that important intrinsic grocery quality attributes, which consumers consider being equivalent to quality were taste, appearance, consistency, and texture, odor, ingredients, function and so on. Package influences on the extrinsic product quality by providing information and

creating a visual identity for the product (Zeithaml, 1988). Also Silayoi and Speece (2004) found that customers were prepared to pay slightly more for enhanced product value, which the researchers interpreted as an indication of consumers' desire for better quality. This is in line with cue utilization theory: when intrinsic attributes are unavailable, consumers feel more confident in their skills of judging the product quality by using the attributes they do have access to: the extrinsic cues (Immonen, 2010). From above statement, this research needs to reduce the intrinsic attributes influence the participants' evaluation as less as possible. Making participants focuses on extrinsic cues only.

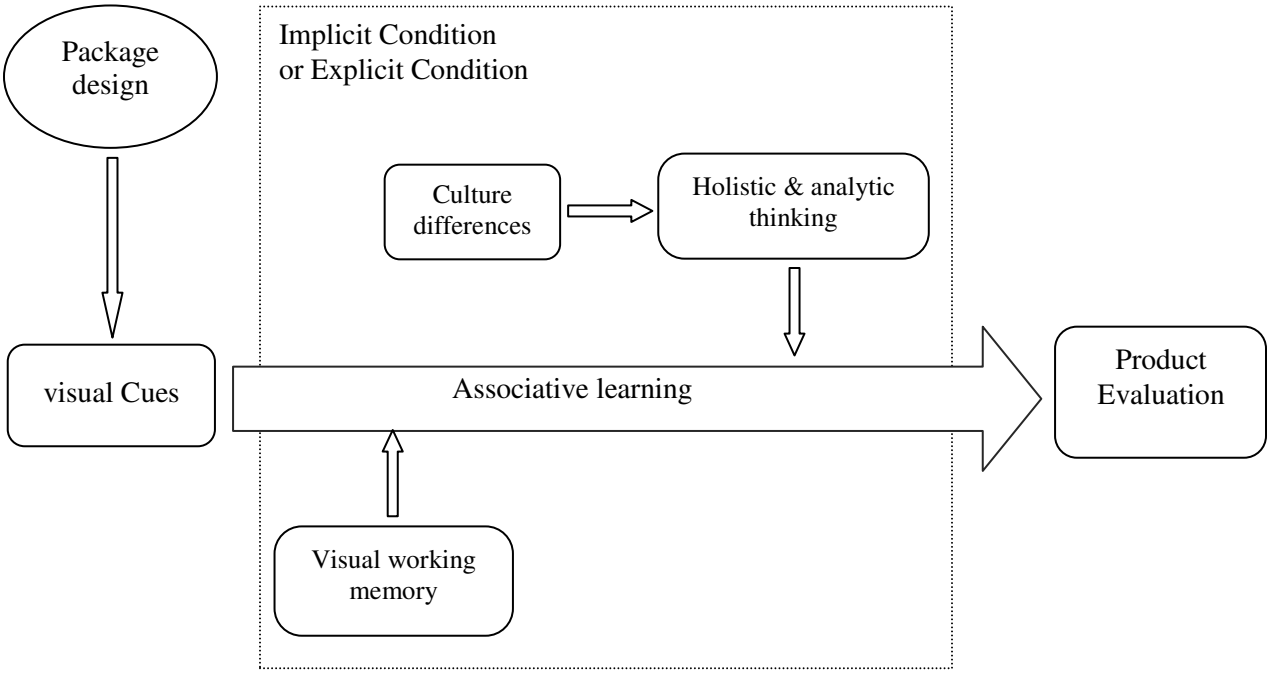
In section 2.3 the roles of package in evaluation are discussed; the design elements are also discussed; the basic information about quality evaluation also contains in this section. So there were enough theories to do further research.

2.4 The Proposed Model

Above sections 2.1, 2.2 and 2.3 express the main theoretic backgrounds of this dissertation. According to these theories, the research model is shown in figure 4. The basic line of this model shows that visual cues will affect product evaluations by associative learning; People make a judgment through what they see. This opinion comes from elaboration in section 2.2 and 2.3. In this research, all the visual cues are from package design; they are called design-based visual cues. The basic literature backgrounds of how the visual cues influence on quality evaluation can be seen in section 2.3. In the processing of judging from visual cues, holistic and analytical thinking work in the process. According to the discussion in section 2.1, culture effects people's thinking. As long-time development, people live in Western courtiers are more analytical, and people from Eastern are more holistic. Holistic or analytic thinking is considered as a mediator in the middle process of visual cues and product evaluation. So this research main subject is that cultural differences in design-based impression formation with holistic and analytic thinking. One of the important information which wants to express is that our research are under controlled conditions --- implicit and explicit condition respectively. Implicit condition is that consumers are under the situation they can't see other products to compare with the new package product. Explicit condition is that consumers are under the situation that they can see other products to

compare with the new package product. We want know whether conditions can influence on the evaluation.

Figure 4: Research model



2.5 Hypotheses

Following hypotheses are aims which need to be tested.

H1*: Consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures* ***in the implicit condition****.*

- ***H1a****: From the whole package perspective, consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures.*
- ***H1b****: From the design elements perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers.*
- ***H1c****: From the changes levels perspective, Eastern consumers perceive higher degrees of changes than Western consumers.*
- ***H1d:*** *Westerners are more sensitive to the changes than Easterners to the changes.*

Hypothesis 1 hypothesizes that consumer from eastern and western countries have a significant different in evaluation due to the thinking styles in implicit condition. In implicit condition, participant can't get any tips when they evaluate. H1 was tested in three dimensions. The three dimensions are the whole package perspective, the design elements perspective and the changes levels perspective.

***H2**: Consumers from Eastern cultures evaluate quality from packaging differently than consumers from Western cultures **in the explicit condition**.*

- ***H2a**: From the whole package perspective, consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures.*
- ***H2b**: From the design elements perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers.*
- ***H2c**: From the changes levels perspective, Eastern consumers perceive higher degrees of changes than Western consumers.*
- ***H2d:** Westerners are more sensitive to the changes than Easterners to the changes.*

Hypothesis 2 hypothesizes that consumer from eastern and western countries have a significant different in evaluation due to the thinking styles in explicit condition. In explicit condition, participant can get tip when they evaluate, this is opposite comparing with implicit condition. The analyses are also from three dimensions. The three dimensions are the whole packaging perspective, the design elements perspective and the changes levels perspective.

H3**: Consumers from Eastern and Western cultures both have the same evaluations toward design - based package **in the implicit and explicit conditions.

- ***H3a**: Consumers from Eastern or Western cultures have the same evaluations toward design - based package under the two conditions.*
- ***H3b**: Consumers from Eastern or Western cultures have the same sensitivities toward design - based package changes under the two conditions.*

Hypothesis 3 hypothesizes that no matter in the implicit condition or explicit condition consumers from Eastern or Western cultures have the same evaluations towards design-based package, due to their unchanged styles of holistic or analytic thinking. The analyses of this hypothesis refers to compare the whole package and the sensitivities of changes

Chapter 3 Empirical Studies

From above chapters there are enough theory background in cross-cultural thinking, design and associate thinking knowledge. In this chapter it needs to set up a way to make us be able to apply these theories in these hypotheses in cross-cultural research, especially, in visual marketing.

3.1 Pilot study

The aim of the pilot study was to find an efficient way to verify the existence of the differences in design-based evaluation between Western and Eastern people, and hoped the result could promote the follow research, study 1a, study 1b, and study 2, into practice.

3.1.1 Key Decision on Study Design

Before testing these hypotheses, the following questions need to be answered to make this research more clear and reasonable.

- What kind of package as research subject to research?
- What design elements to examine?
- How to find each standard element of wine bottle?
- How to find each changed elements of wine bottle?
- How to know who were holistic or analytic persons?

- What kind of package as research subject to research?

Wine bottle is a bottle used for holding wine, generally made of glass (from Wikipedia). There are millions of product packages why choose wine bottle? As the first sentence mentioned, Wine bottle is a bottle used for holding wine, generally made of glass, because it is always glass-made, this can make consumers or participants ignore the materials, avoiding misleading by the materials which packages use and focus on packaging itself in visual stimuli. The materials of a

package can influence on consumers' judgments of products; this was been talked in chapter 2 already. The other reason of choosing wine bottle is that some other products can use several materials. For example, biscuits can use plastic bags, paper-made box or metal box. It is difficult to unify common people's view. So the unity of material --- glass, used in wine bottle is one of important reasons to choose as this research object.

Secondly, wine can be found in most of countries, it is a basic and familiar food product both in West or East countries. In European supermarkets, you can find wine sold in many places, also in China and other Eastern counties wine and other alcohol drinks can be found easily. It is much unfired to choose a product which only one part of people knows about it, while the other part of people has little knowledge. For wine both Easterners and Westerners are familiar with wine and have the general knowledge of wine.

Thirdly, considered the design aspects, on one hand the elements of package design can be found apparently from wine bottle. Chapter 2 mentioned the design elements, such as shape, size. This advantage brings much convinces to show participants design elements which referred. On the other hand, because the colors of the wine bottle are always cold colors like brown or dark green, it is easier for consumer to notice the other visual stimuli and not disturb by background color from a package, although color is an important visual stimulus in package design area.

At last, it considers that these years the demand of wine consumption in Eastern counties is growing year by year. For example, the wine consumption in China is growing in contrast to a decline market for traditional grain-based alcohol – a trend that is linked to changes in lifestyle and health awareness. China bought 13.7 million liters wine which produced from France in 2009, becoming the biggest import countries except France and EU (the telegraph, 2010). Undoubtedly, the growing trend will continue in coming decades. Wines as gifts to friends or business partners are normal and common in China. From this point, wine research becomes more practical, especially a large number of unknown wine brands influx into new Asian market.

Based on above reasons, it is wise to choose wine bottle as research objects.

- What design elements to examine?

The concept of package design is incorporating multiple elements such as texts, shapes, graphic designs, logos, sizes, colors, illustrations, materials and so on. It is shortly said inherently multidimensional. This research only focuses on the visual aspects. According to former research four main packaging elements potentially affect consumer purchase decisions, and they can be separated into two categories: visual elements and informational elements. The visual elements are divided into two parts: package graphics and package sizes and shapes; package graphics are further divided into four parts: layout, image, color, and typography; the informational elements are also divided into two parts relate to information provided, and technologies used in the package. The information elements are not this research area, so they are ignored.

According to research purpose and research subject---wine bottle, illustrations parts can include not only image on wine but also logo on the body of bottle; shape parts also can include shape of the bottle and shape of the cap. So there were 8 visual design elements in total selected as our target design elements. They were color, size, typography (font), shapes (bottle and cap), illustrations (image on bottle and logo on bottle), and layout (position of image on bottle). In order to make sure academic theories represent common people's opinion. In pretest, there were 12 items of elements listed; some of them were not visual elements but informational elements. These items were mixed together. And invited 12 German students and 12 Asia students (10 were from Chinese and 2 were from India) to find which items did they thought referred to visual. Two raters who were blind to the purpose of this research classified listed. The results could be seen in table 4.

Table 4: Summary of listed visual cues of wine bottle

No.	Cue	Germany	Chinese	Total
1	Shape of bottle	12	11	23
2	Color	11	12	23
3	Size	11	11	22
4	Logo	11	10	21
5	Shape of cap	10	10	20
6	Image on bottle	10	10	20
7	Font	9	9	18
8	Image layout	10	8	18

9	Price	1	2	3
10	Company information	1	2	3
11	Vinification	1	0	1
12	Place of production	0	0	0

The results were satisfied. Only a few students circled price, company information, vinificaiton and place of production as design elements. Most of the participants thought these 8 elements which author chose were package design elements or package visual cues. A one-way ANOVA with the number of visual cues as a dependent variable was conducted. There was no significant difference between Germany students and Asian students ($M_{Germany}$= 7.0, M_{Asian}=6.75; $p > .1$).

We went to three big supermarkets in Kiel Germany, CITTI, Famila, and Real, choosing 44 wine bottles in varied prices, and other 19 local wine bottles from wine shops and super markets in Beijing China. Author took photos of them. Among the 63 wine bottles, author found that the colors of wine bottles were not diversified either brown or dark green. This was one reason that color wasn't in consideration. Another reason was that color was an important but it was a quite complex matter in people's perception which referred in second chapter. Consumers seem to have personal and cultural preferences for some colors over others (Grossman & Wisenblit 1999). The two reasons made to give up color element in this research, although color was an important visual cue in design. At last black and white pictures used in all experiments hoping this can reduce the bias on other design elements judgments.

According to findings 85 percent the size of wine bottle are always the same, 750 ml, only a few of them were larger or smaller than this normal size. So the size was ignored too. At last, there were 6 elements left in total. They were shape of bottle, logo, font of brand name, shape of cap, image on bottle and its position.

- How to find each standard elements of wine bottle?

Because this research was a compared research, an important step was to find the standard subject. According to this research a standard wine bottle need to find. This bottle was formed by

finding the standard six design elements (shape, logo, brand name, cap, image on bottle and its position).

For the shape of bottle and cap elements, they were easy to find, because the existing 63 wine bottles that we collected from wine markets in Germany and China helped to position them. The shape of bottle were 80 percent and the shape of cap were 90 percent almost the same. If you show people the empty wine bottle or cap without any other symbols on it, people can say the right answer easily and quickly. So they didn't make us hesitate to select the standard shape elements.

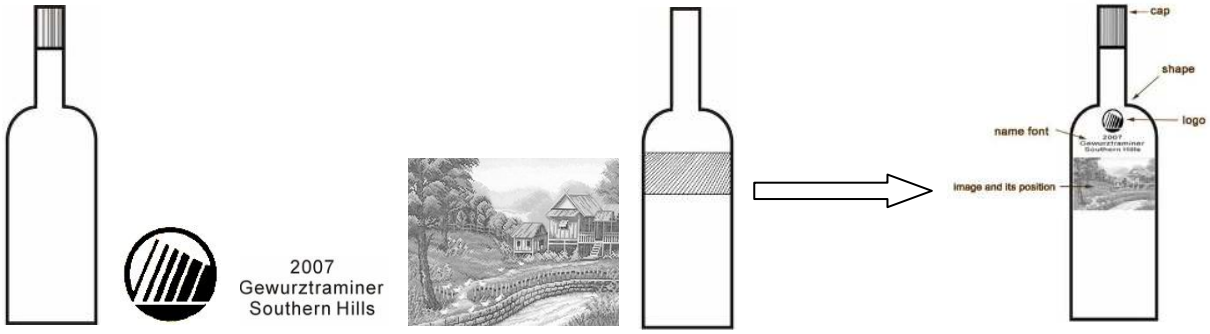
For the logo of wine bottle, some of wine bottles had logo on them, and others were not. Putting the wine bottle which didn't have logos aside, there were 48 logos of wine bottles left. Among these logos of bottles, they were in 2 categories, abstract logos and pictorial logos. Abstract logos were much more than pictorial logo. Henderson and Cote (1998) developed guidelines to assist manager in selecting or modifying logos. They set up a group of logos with flexible character from abstract design to pictorial design. This group of logos was borrowed to use here. Here chose the abstract logo as the standard logo. Because this kind of logo looks normal and not too much information on the logo that was what this research really want.

For the image on wine bottle, the process was the same as way choosing wine logo. Usually, wine bottles use landscape images on the body of bottles. Wine producers and package design managers want to use landscape images express their products more natural and advanced. This kind of picture could help consumer to have a good first impression. Depending on this point what chose at last was also a landscape with tree, river and house hoping that this image are more close to realistic normal wine package. The image's layout was easy to decide, because most of wine put the image at the same position --- under the brand, neither close to the brand nor close to the bottom.

For the brand name and its font, a brand name was fabricated 'Gewurztraminer Southern Hills 2007' so that participants couldn't get any information about this wine from the verbal of its brand name. When choosing the font of this brand name, author used Calibri font, because it is one of the most popular and simplest fonts in the daily life.

So far, all six standard design elements were chosen. These elements were compiled together; you can find the final standard wine bottle in black and white color below.

Figure 5: The formation of standard bottle

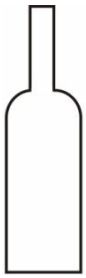
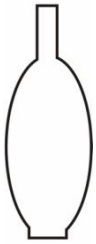
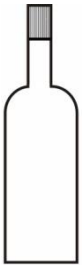
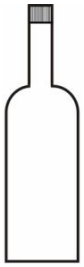
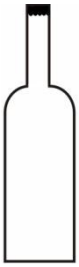
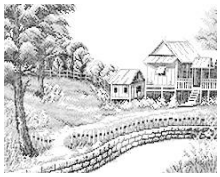
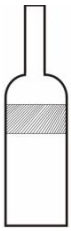


- How to find each changed elements of wine bottle?

Next steps were to decide the small changed elements and the big changed forms of each element. Based on the standard elements and the wine bottle photos from Germany and China, five new pictures for each element were drawn. For example the shape of bottle, it had 5 gradually changing patterns, these changes were all based on the confirmed standard shape of bottle and the wine photos from two countries. Also borrowed a group of logos Henderson and Cote (1998) developed.

13 German students and 12 Asia students did a test, asked them which were close to standard element and which was the most different from standard element. In this way, the small changed and big changed elements were selected. The results can be seen below.

Figure 6: Stand, Small changed, Big changed of six elements

Elements:	Standard form	Small changed form	Big changed form
Shape of bottle			
Shape of cap			
Logo			
Font of brand name	2007 Gewurztraminer Southern Hills	2007 GEWURZTRAMINER SOUTHERN HILLS	2007 Gewurztraminer Southern hills
Image			
Label position			

- How to know who were holistic or analytic persons ?

This was a vital question of this research. It needs to find an efficient way to know who were more analytic and who were more holistic, in other words, it needs to make sure Western people are more analytic and Eastern people are more holistic. Chapter 2 discussed the relationship between culture and thinking styles. And also found the way of testing holistic and analytic persons ---- EFT (embedded-figure-test). The Embedded Figure Test is designed to measure disembedding, a restructuring skill, which results from the use of style and a measure of both cognitive method and analytical ability and involves detecting simple figures embedded in larger, more complicated figures. According to Bonham (1988), the EFT was adapted from Gottschaldt's figures by adding colored patterns to increase complexity. Each complex figure included an embedded simple figure, the subject was to identify as quickly as possible; there were 24 figures in the EFT. The group version (GEFT) is a paper-and-pencil instrument which requires students to attempt to discern simple geometric figures from more complicated patterns.

The EFT has been used by lots of research in their cross-cultural researches. Three kinds of EFT were used recently. The first one was based on Wolfgang Horn; there were two columns of items. When found an embedded figure, circle the symbol representing the figure going first down the right column and then turn to the left column. The second was based on a complicated picture; answerers had to find detailed stuffs from this complicated picture (Monga, 2007). The third one was set by Withkin et.al. It was more or less like the first one, where the learners were asked to recognize a simple geometrical shape within a complex and confusing background. The simple pattern had to be found in the same size, the same properties, and the same orientation within the complex figure.

The pilot study used two of the methods, the second and third methods. The results can be found in the results part below.

3.1.2 Pilot study procedures and results

This pilot study had two main purposes. One was to test whether EFT can separate holistic and analytic persons efficiently; the other was to test whether Germany and Chinese had significant different judgments when they faced the same new wine bottles.

3.1.2.1 EFT Procedures and results

Procedures

Thirty-nine students at University of Kiel participated in the study. 20 students were Germany, while 19 were Chinese. Among the 39 students included, there were 22 females, 17 males. The average age of the participants was 22.35 years old (SD=2.89). Author did the EFT in one of the canteens at University of Kiel. All participants were introduced to EFT, and limited 10 minutes to complete this test anonymously. The EFT contained one page of introduction, two examples, and 10 questions needed to be answered.

Results

Based on the EFT scores, significant difference in thinking was appeared between the two samples ($t(37) = -4.1$, $p < .00$), with Germany students (M=5.7) performing better than the Chinese students (M=3.1) in the test. This result primarily showed that EFT was a measure of thinking between Germany students and Chinese students.

3.1.2.2 The evaluation of wine quality procedures and results

Procedures

Twenty-nine students at University of Kiel participated in the study. 15 students were Germany, while 14 were Chinese. Among the 29 students, there were 20 females, 9 males. The average age of the participants was 21.15 years (SD= 3.47). Author did the survey in one of the canteens at Kiel of University. All participants were introduced to the standard bottle, and were introduced high quality of wine in this standard bottle, then asked them how they feel about wine quality in this new bottle that showed to them. This survey limited 5 minutes to complete anonymously. This survey contained one page of introduction, 2 questions that needed to be answered.

Results

A one-way ANOVA with the scores of new bottles was run respectively. There were some significant differences between Germany and Chinese students. For Bottle No.1 ($M_{Germany}$ =76; $M_{Chinese}$ =56; P<0.05), for bottle No. 2 ($M_{Germany}$ =53; $M_{Chinese}$ =32; P<0.05).

3.1.3 Summary of the pilot study

The primary goal of this pilot study was to test that there was actual difference in terms of analytic and holistic thinking styles between Germany and Chinese samples. It was known that the Germany sample performed better in an objective measure of EFT than the Chinese sample, therefore Hypothesis was accepted. It made us to believe that Germany and Chinese exactly had different cognitive thinking, Germany more analytic and Chinese more holistic.

Another objective of this study was to explore people's judgments about changed package. Consistent with the original prediction, it was found that the two samples of students significant differed from each other in perceiving the same packages.

3.2 Study 1 --- Implicit Condition

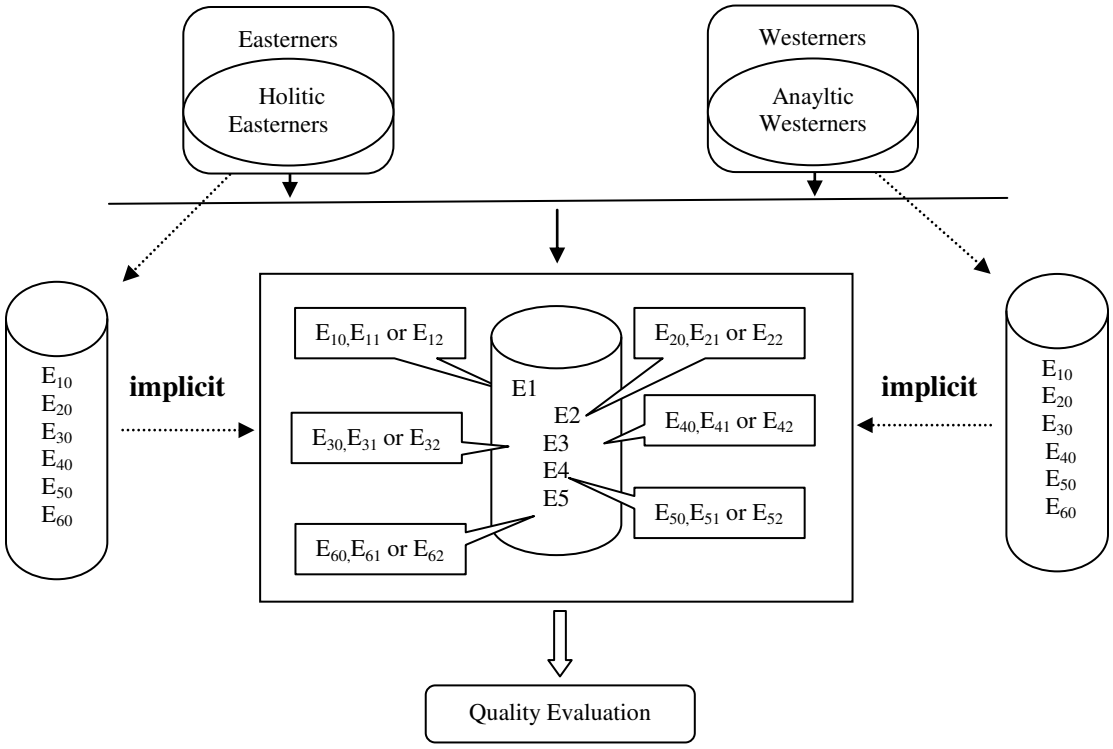
So far, the literatures and the pilot study demonstrated that cultural differences may cause the different views from package. According to the theories mentioned before, a number of facts have been identified that consumers would evaluate the quality of products from its package design. Physiologists explained that human associative learning made visual stimuli and product evaluation tied together, human associative learning involved converting cues to probabilities of consumer responses, which is capable of linking design with judgments in fluency context. Key of them is the degree which package designs "fit" with the design which well-known high quality products have in the exited real market. The new product design that fits well with the existed high quality product design in consumers' 'heart' may evaluate quite favorably.

This statement raises two directions can be explored. One is that whether holistic easterners and analytic westerns exactly have distinguished view of new package which may look like or may not look like in their memory, the other is to analyze the different changed package how they are influence on consumers' evaluation. Hence, the two questions need to be solved in Study 1.

The following figure presents the main structure of this study. In this figure, E is short for elements. E_{ij} represents that element it is. 'i' (i=1,2,3…6) is six elements, 'j' is the three levels of change (j=0 standard level; j=1 small changed level; j=2 big changed level). The E_{10}, E_{20}… E_{60} represent standard elements. E_{11}, E_{12}, E_{21}, E_{22}…E_{62} represent changed elements. The six elements

each have 3 levels: standard level, small changed level, and big changed level. Each element selects one level and six elements can form a new bottle. The new formed bottles are the objects which show to participants. From the figure 7, it shows clearly process of this study. In study 1, the participants are all under the implicit condition. This means participants couldn't see the original standard bottle when evaluating quality. In real life, this is also established. From this figure 7 we can get information that it is not to say all the westerners are Analytic westerns and all the eastern are Holistic easterners, only most westerners are analytic thinkers and most easterners are holistic thinkers. These existed holistic thinkers and analytic thinkers make various evaluations.

Figure 7: Frame of study 1



3.2.1 Study 1a

3.2.1.1 Purpose of this study

In this study, under the implicit condition consumers couldn't get any tip from original standard package when evaluating these new bottles. They can only recall the memory in their mind. Under this situation, we want to test the following hypotheses:

H1*: Consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures.*

- ***H1a****: From the whole packaging perspective, consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures.*
- ***H1b****: From the design elements perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers.*

3.2.1.2 Stimuli

In the pilot study the design elements have already been found. But according to resources, there were hundreds of combines of these six elements (3×3×3×3×3×3=729). It was not practical to test all of them at one time, so it needed to introduce some of mathematical and statistical method to decrease the numbers in study process. Hope that the method can help select the efficient bottles to test. Here the method of Orthogonal Experimental Design was found out to help reduce the target new bottles. So introduce Orthogonal Experimental Design first.

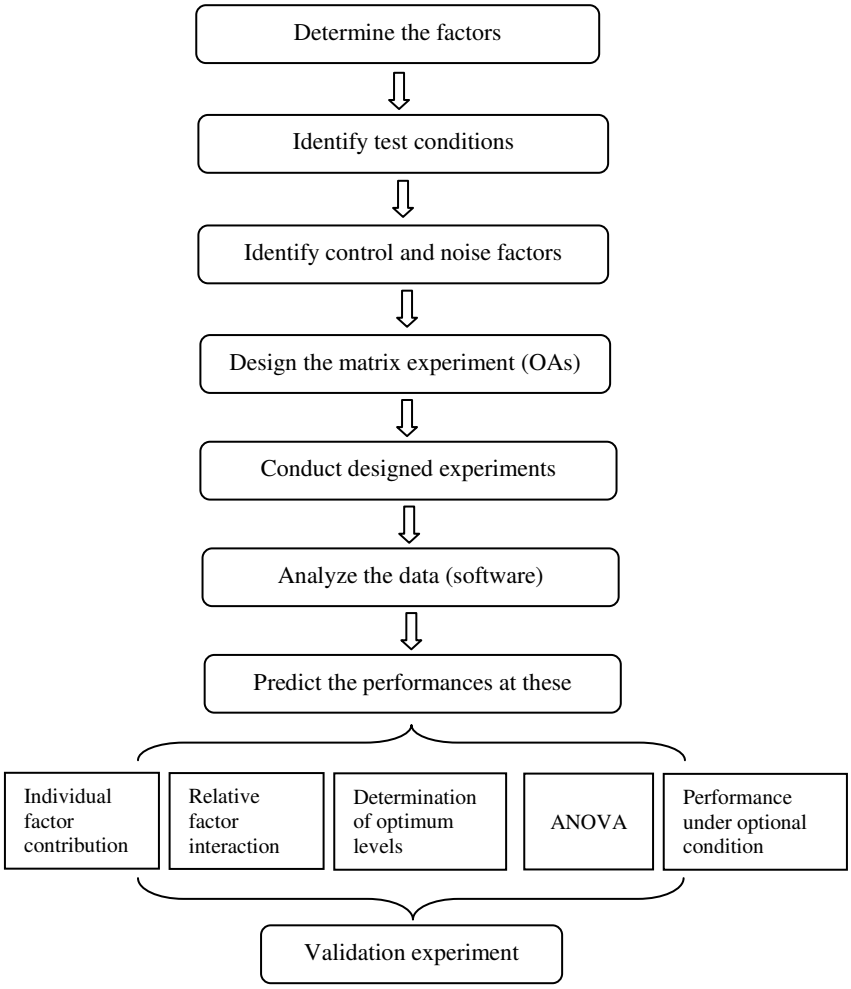
Orthogonal Experimental Design

An experimental design is a plan for running an experiment. Mr. Ronald Fisher developed orthogonal design, described in his seminal book *Design of Experiments*, based on agricultural experiments in England. A Japanese statistician Dr. Genichi Taguchi developed Taguchi's Orthogonal Array analysis to investigate how different parameters affect the mean and variance of a process performance characteristic that defines how well the process is functioning (Byrne & Taguchi 1986; Lochner & Matar 1990). This experimental design and analysis are used wildly in engineer industries. Taguchi method becomes the basic theory of orthogonal experimental design.

Over the years, this orthogonal design has been used widely in the chemical industries, automotive industries, natural science researches, operations researcesh and business and marketing.

The experimental design proposed using orthogonal arrays to organize the parameters affecting the process and the levels at which they should be varies. Instead of having to test all possible combinations like the factorial design, the orthogonal method tests a limited pairs of combinations (Fraley et al, 2011). This allows for the collection of the necessary data to determine which factors most affect experimental results with a minimum amount of experimentation, thus saving time and resources (Fraley et al, 2011). In this research, there are 729 combines; if testing all of them it will be a huge project. So it is wise to use this method to reduce scale of data collection. The orthogonal design method is best used when there is an intermediate number of a variable (3 to 50), few interactions between variables, and when only a few variables contribute significantly. There were 6 variables (elements) which are suitable for this method and variables are independent. See below for a pictorial depiction of these and additional possible steps of orthogonal design.

Figure 8: Process of Orthogonal Experiment



Resource: Fraley et al, 2011

Determining the design parameters is an important phase. In this research there are six elements. Elements are variables. Here they are logo, shape of bottle and cap, image and its position on the bottle, brand font. The parameters' level should be specified. For example, in agricultural experiments, a temperature might be varied to a low and high value of 10℃, 30℃ and 50℃ increasing the number of levels to vary temperature at increases the number of experiments to be conducted. In this research three levels of each element were settled. They are standard level, small changed level and big changed level.

Next phase is creating orthogonal arrays from the parameter design indicating the number and conditions for each experiment. Orthogonal Arrays (OA) are a special set of Latin squares. By

using tables, orthogonal array can be seen from tables. Consider a common seven 2-level factors OA as shown in table 5 below:

Table 5: Orthogonal Array L8

Orthogonal Array L_8 (2^7)

	FACTORS						
TRIAL NUMBER	A	B	C	D	E	F	G
1	0	0	0	0	0	0	0
2	0	0	0	1	1	1	1
3	0	1	1	0	0	1	1
4	0	1	1	1	1	0	0
5	1	0	1	0	1	0	1
6	1	0	1	1	0	1	0
7	1	1	0	0	1	1	0
8	1	1	0	1	0	0	1

In this case, referring to table 5, this is a seven 2-level factors table, these are seven factors (elements) A, B, C, D, E, F and G to columns 1, 2, 3, 4, 5, 6, 7 and 8 respectively for an L8 array. The numbers (0 or 1) in the row indicate the factor two levels and each row represents a trial condition. The vertical column represents the experimental factors to be studied; each factor has an assigned number. Each of the assigned columns contain four levels of zeros (0), and four levels of ones. Because the combination of the levels occurred the same number of times, the columns are said to be orthogonal or balanced of an array are formed. From the table 5, eight trials of experiments are needed, with the level of each factor for each trial indicated on the array. The experimental trials can be found in row. For example, trial number1 is all 0s that means all the factors are chosen 0 levels. The experimenter may use different orders for the columns, but the eight trials will cover all combinations, independent of column definition. The experiments can be operated by different experimenters but the content wouldn't be changed. The OA also makes sure that factors influencing the products are properly investigated and controlled during the initial design stage. Once the experimental design has been operated, the measured performance characteristics from each trial can be used to analyze and evaluate the relative effect or power of influence of the different parameters. The results obtained from the OA can get and analyze the following objectives: firstly it can estimate the contribution of individual influencing factors in the product' quality or evaluation. Secondly it can gain the best, or optimum, condition

for a process, or a product, so that good characteristics can be compared and sustained. Thirdly it can approximate the response of the product design parameters under the optimum conditions, the factors can be selected from the levels to know which the best level of each factor is. Orthogonal array experimental analysis is considered to be more superior to the traditional factorial design method. It raises the efficiency of experiments

And also there are limitations of orthogonal design. It can only be applied at the initial stage of the product design system. In some situations that orthogonal design techniques are not applicable, such as processes involving influencing factors that vary in time and cannot be quantified exactly. Here this research doesn't refer to the time factor, so orthogonal design was scientifically used.

The Analysis of Variance (ANOVA) is wildly and acceptably used to analyze the results of the orthogonal array experiment in product design, and to determine how much variation each result influencing factor has contributed. By studying the main effects of each of the factors, the general trends of the influence on factors, towards the product, or process, can be characterized. The characteristics can be controlled, such that a lower, or a higher, value in a particular influencing factor produces the preferred result. In this research, ANOVA is used many times. It helped to find the differences among elements or the levels of the elements.

There are six elements and each element had 3 levels. According to the above statements a table of orthogonal experimental array was set by running SPSS, and got a L18 (6^3) orthogonal table 6. Every trial can combine a new bottle, so 18 new bottles were set. They represented other more than 700 bottles.

Table 6: Orthogonal experimental array L18 (6^3)

Trial No.	Shape	Cap	Logo	Type font	Image	Label pos
1	1	1	0	1	1	2
2	0	2	2	1	1	1
3	2	0	0	1	2	2
4	2	0	2	1	0	1
5	1	0	1	2	2	1
6	0	1	0	2	2	1
7	0	0	1	0	1	2
8	1	0	2	2	1	0

9	0	1	2	2	0	2
10	2	2	1	2	0	2
11	1	2	0	0	0	1
12	1	1	1	1	0	0
13	2	1	2	0	2	0
14	2	2	0	1	1	0
15	0	0	0	0	0	0
16	2	1	1	0	1	1
17	0	2	1	1	2	0
18	1	2	2	0	2	2

(0= standard level, 1= small changed level, 2= big changed level)

According to this table, eighteen new bottles were selected. You can see that every single level of the elements was appeared 6 times. After this process, target bottles were found and determined which used to test hypotheses.

3.2.1.3 Sample

Sixty-two subjects were recruited for the Germany sample from students enrolled in a cross-cultural marketing course at University of Kiel, who could receive shopping coupons for their participation by lottery, these students got a piece of paper which was printed the links of questionnaire. Most of them answered the questionnaire at home in front of computer. 64 subjects were recruited for the Chinese sample from author's friends by sending the links of the questionnaire and then author's friends answered these questions. They could introduce this survey to other friends of theirs, like rolling snowball.

Germans represent the Western culture, and Chinese represent the Eastern culture. In order to reduce German and Chinese participants' differences from their background and social experience, so this research also tried to find the ages and academic degrees were very close groups. Their ages (M_{CN}=24.7, M_{DE}=23.2) were less than 25, they are the existed or potential consumers in the wine market.

3.2.1.4 Procedure and measures

Participants were given an online survey. Chinese answered the Chinese version questionnaire, while German answered the German version. All the online content and layout of the two questionnaires were the same, only the language were distinct.

In the first phase of the survey, people were forced to learn the standard bottle which was formed from six standard elements (shape, logo, cap, brand, image and its position). In this period, they saw the whole standard bottle as long as they wanted and then divided standard bottle into separate elements. Next step was to ask them to learn the six elements one by one by asking to choose what they saw just now. Each question asked an element what they saw just. There were six questions in this part. In every question, two wrong choices also appeared in order to disturb and enhance subjects' memory about standard elements and standard bottle. They need to choose what the standard element was from 3 choices (standard, small changed and big changed elements). In case participants chose the wrong answer, computer system would tip participants that you chose the wrong answer and they were not allowed to go to next page to next question. Participants had to choose again until they found the right answer and then they could continue. In this part, the purpose was to let subjects remember the elements of the standard bottle, meanwhile they knew what the other two levels of changes were.

The second part of the online survey was to let participants to see standard bottle again as long as they wanted. In a paragraph of sentences, participant was told that the standard bottle contained the greatest wine in it, marked 101 scores wine. And also, in this survey, participants were taught that the quality of wine depended on the package (bottle) only. That was to say the more similar to standard bottle; the higher quality would be in the bottle and vice versa. The bottle which was similar to standard bottle had high quality of wine in it, while the bottle was not looked like standard one was contained low quality of wine in it. Participants were asked the question: "how do you think about the quality of wine in this bottle" and answered the questions in a limited time, 10 seconds for each. Participants gave their evaluation score from 1 to 101 scale (1=extremely bad, and 101= extremely good).They needed to evaluate 18 bottles of wine which was selected by orthogonal design method. In order to balance the results of every bottle evaluation, the orders of 18 bottles appeared to participants were random.

In the next part, it was EFT (embedded figures test). In this research EFT was borrowed to test cognitive styles. It doesn't use pencil-paper test, but here used online survey in following way. The instruction was given to the subjects were as follows:

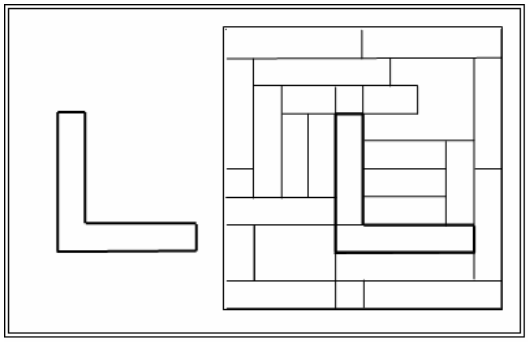
• *The simple shape has to be found in the same size, same properties, and the same orientation within the complex figure.*

• *The subject is not allowed to use a ruler or any other means to measure the size of the simple shape in the complex figures.*

• *There is more than one simple shape embedded in some complex figures but the subject is required to locate only the simple shape which is in the same proportion, size, and orientation as the specimen.*

• *The test is timed 1minute for each.*

Figure 9: one example of Group embedded figures test



At last, participants were asked about their familiarity and attitude of wine knowledge included three seven-point scale questions (from 1 to 7, 1= not at all familiar, 7=very familiar): how much do you feel you know about wine? I have a strong interesting in wine? I value wine as an important part of my current lifestyle? Then respondents were asked the last two other questions about their gender and age.

3.2.1.5 Result

Analytic-holistic Thinking

Differences between the Chinese and German samples were examined for the presence of anticipated cultural differences in thinking style. This research compared the Chinese and German samples with the embedded figures test (EFT), which reflect the ability to find more embedded objects in a figure, are indicative of analytic thinking. A one-way ANOVA with culture as the independent variable indicated that, as anticipated, the result showed that German subjects were significantly more oriented toward analytical processing than were Chinese subjects (M_{cn}=1.375; M_{de}=2.516; P＜.00). During the EFT process, both Chinese participants and

German participants complained it was too hard to find satisfied answers. But the results told us, Chinese and German participants do differ. Germans are more analytic thinking persons, and Chinese are more holistic thinking persons.

Comparison of the whole package quality evaluation

To test for cultural differently in quality evaluation, separate ANOVAs were performed for each new combined bottle from orthogonal table, with culture (western, eastern) as independent variable and quality scores as the dependent variable. One-way ANOVA operated for 18 groups of data, N=126. As expected, a significant main effect of culture merged for each analysis. In most cases, German participants and Chinese participants have significant differences in quality evaluation. Only No.8, No.11 and No.15 bottles didn't significant. See the following results of the whole package evaluation.

Table 7: Results of the whole package quality evaluation in implicit condition

Number	df	F	Sig.	Number	df	F	Sig.
No. 1	1	18.98	.00	No. 10	1	34.82	.00
No. 2	1	22.83	.00	No. 11	1	2.16	.15
No. 3	1	25.68	.00	No. 12	1	3.86	.05
No. 4	1	31.13	.00	No. 13	1	11.31	.01
No. 5	1	12.94	.00	No. 14	1	3.93	.05
No. 6	1	10.81	.01	No. 15	1	1.25	.27
No. 7	1	10.61	.01	No. 16	1	3.13	.08
No. 8	1	0.01	.95	No. 17	1	15.67	.00
No. 9	1	16.25	.00	No. 18	1	19.92	.00

For the three insignificant bottles (No.8, No.11 and No.15), it was easy to find that they had some characteristics through the orthogonal table. No.15 bottle was the standard bottle without any changes; both German and Chinese participants gave high scores. So here it is not effective to test it. No. 11 bottle is very close to the standard bottle with three standard elements and two small changed elements. No.8 bottle has two large changed elements and two small changed elements. So we thought about that different degrees of changed bottle might have some different influence

on consumer's judgments of quality. In total, 15 bottles have significant differences between German participants and Chinese participants in testing 18 bottles. Hence, this can certify that consumers from Eastern cultures evaluate quality from the whole package perspective differently than consumers from Western cultures in this analysis.

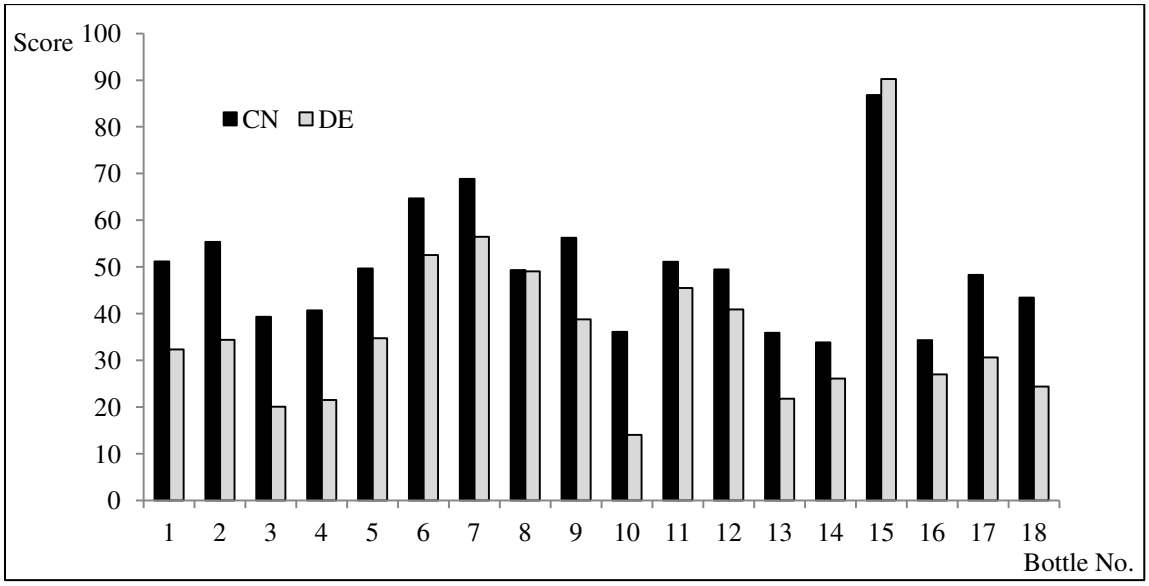
Next step was to get more details of the quality evaluation for each bottle. Following table 8 shows the Means of each bottle.

Table 8: Means of the whole package quality evaluation in implicit condition (1)

Number		**M**	**Number**		**M**
No. 1	CN	50.2	No. 10	CN	36.1
	DE	32.3		DE	14.0
No. 2	CN	55.5	No. 11	CN	51.1
	DE	34.4		DE	45.5
No. 3	CN	39.3	No. 12	CN	49.5
	DE	20.0		DE	40.9
No. 4	CN	40.7	No. 13	CN	35.9
	DE	21.5		DE	21.8
No. 5	CN	49.7	No. 14	CN	33.8
	DE	34.7		DE	26.0
No. 6	CN	64.7	No. 15	CN	86.8
	DE	52.5		DE	90.3
No. 7	CN	68.9	No. 16	CN	34.3
	DE	56.4		DE	27.0
No. 8	CN	49.3	No. 17	CN	48.3
	DE	49.1		DE	30.6
No. 9	CN	56.2	No. 18	CN	43.4
	DE	38.8		DE	24.4

There was a bar chart showed below. From this bar chart it clearly indicated that Chinese participants gave higher scores of quality evaluation than German participants did. From the whole of packages perspective, consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures.

Figure 10: Means of the whole packaging quality evaluation in implicit condition (2)



Mediation Analyses

Above results finding showed cultural differences in perceived product quality, with Easterners perceiving a higher score than Westerners did. In developing the predictions, cultural styles of thinking were identified as the reason responsible for differences in perceived quality between Eastern and Western consumers. Holistic thinking was viewed as being more conducive to the discovery of relationships among design elements, resulting in greater perception of higher quality among Easterners. Analytic thinking was viewed as being more constrained in providing a basis for relationships among elements, especially design elements, resulting in lower perceptions of quality among Westerns.

A mediation analysis was conducted to test whether styles of thinking (holistic and analytic thinking) are mediator of cultural differences in perceptions of quality evaluation. The data was then used to test whether analytic and holistic thinking mediated cultural differences in product evaluation following method (Baron and Kenny 1986, 1991; Monga 2007), it needed to perform three regression analyses. Evidence for mediation is obtained when regression indicated that (1) the independent variable (culture) predicts the dependent variable (quality evaluation), (2) the independent variable (culture) predicts the mediator (type of thinking), and (3) when the dependent variable is regressed on the independent variable and the mediator, the mediator's

effect remains significant, while that of independent variable reduces in significant (partial mediation) or drops to non-significance (perfect mediation). A formal test of mediation like the Sobel's test also provides evidence for mediation (Barn and Kenney 1991; Monga, 2007). Following data presents the results indicating that type of thinking is a mediator for culture's influence on quality judgment.

Table 9: Mediation analyses result (1)

Condition	Regression equations
1	Culture (0.417***) influences type of thinking
2	Culture (-0.233***) influences type of perceived quality
3	Type of thinking influences(-0.206**) quality evaluation and decrease the influence of culture (-0.063**) on quality evaluation Sobel' Z= 2.80, p=0.005**

*p＜.05; p＜.01** p＜.001***

The result shows that type of thinking is a mediator for culture's influence on quality evaluation. It significantly influences on quality scores in the equation 3, while culture (-0.063) influences on quality score, and culture (-0.063) in equation 3 is much less than culture (-0.233) influences on quality evaluation in regression equation 2. So it can confidently say that type of thinking is mediation between culture and quality evaluation.

From above results, it can be said that **H1a** was confirmed. Consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures. And Consumers from Eastern culture evaluate quality more favorably than consumers from Western culture.

Comparison of the design elements in quality evaluation

In the stimuli part, it described the advantages of the Orthogonal array (OA). It referred that OA could help us to estimate the contribution of individual influencing factors in the product design stage. Also the Analysis of Variance (ANOVA) is used to analyze the results of the orthogonal array experiment in product design, and to determine how much variation each result influencing

factor has contributed. So ANOVA ran to analyze the data. Table 10 and table 11 below showed these six elements affected on quality evaluation, N_{de} =378, N_{cn}=384.

Table 10: German sample in design elements perspective in implicit condition

Source	df	F	Sig.
Image	2	26.634	.000
Shape	2	175.367	.000
Logo	2	39.299	.000
Label position	2	31.293	.000
Cap	2	56.029	.000
Brand font	2	43.278	.000

Table 11: Chinese sample in design elements perspective in implicit condition

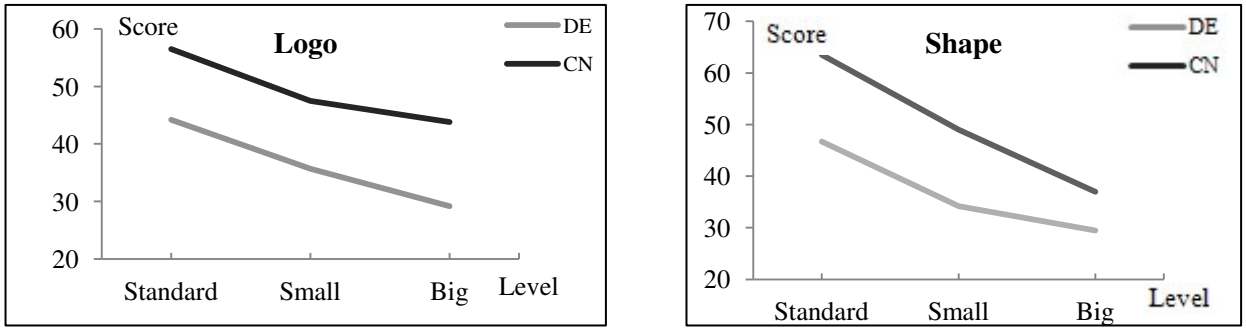
Source	df	F	Sig.
Shape	2	118.12	.000
cap	2	20.93	.000
Logo	2	10.98	.000
Image	2	7.50	.001
Brand font	2	7.17	.001
Label position	2	0.46	.634

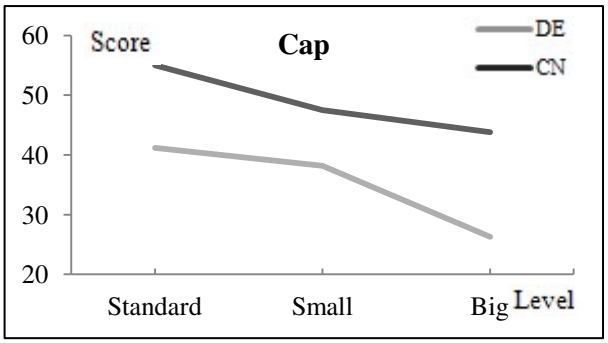
From above results, in German sample six elements all effected on the quality evaluation, but in Chinese sample five of six elements significantly influenced on the quality results. The label position elements didn't appear significant to quality evaluation. One of reason to explain this is that holistic and analytic thinking (culture matter) influence on this. Because label position was significant influencing on German but it was not significant influencing Chinese and both of the two group participants were learned the elements in the same way; the other reason could be

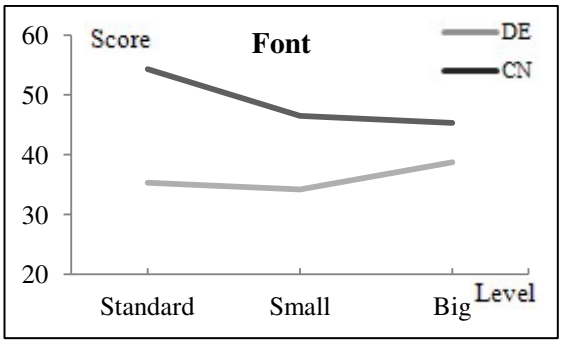
Chinese didn't remember this element because it was the an easy ignored element, but Rettie and Brewer (2000) studied that labels provide important extrinsic cues to be used by consumers to assess quality (Verdú Jover et al., 2004; Rocchi & Stefani, 2005). So the second reason was not established. The label position was not obvious significant should be due to the samples' cultures matters.

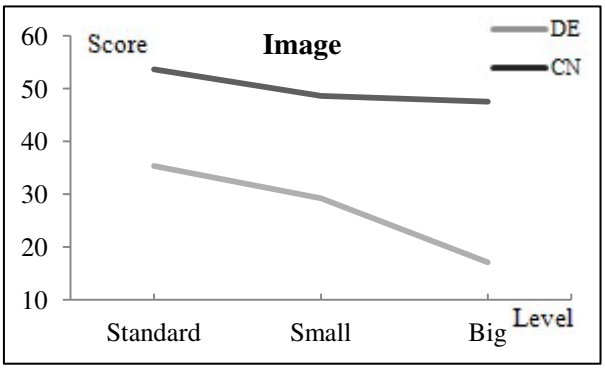
According to the orthogonal experimental array, the eighteen bottles were analyzed together by ANOVA. The means of all elements of their 3 levels can be seen in figure 11. Three points can get from the figures. In total, both German and Chinese gave the highest scores to the standard elements and the least scores to the big changed elements mostly. Secondly, totally speaking, Chinese gave higher scores of every element level; while the scores from Germans were lower than the scores from Chinese. Thirdly, Chinese and German participants had different sensitivities to the changes of elements. In some elements, the scores of German sharply decreased, like the big changes of label position from small changed level to big changed level, but Chinese were less sensitive to the changes of the levels of elements compared with Germans. Overall, **H1b** was certified.

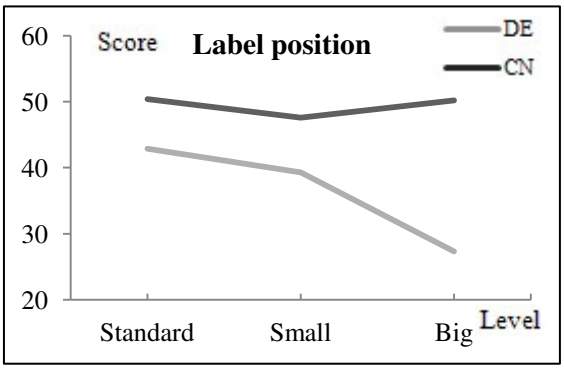
Figure 11: Six elements Means in implicit condition











3.2.1.6 Discussion

In the first part of this study, the German Mean of EFT was higher than did Chinese, so it confirmed that people from Western were more analytic in perception by EFT while Easterners were more holistic in perception. In the comparison of the whole package quality, 15 new wine bottles had significant different among the judgments of perceived quality in Chinese (Eastern) versus Germany (Western) consumers. Results indicated the existence of cultural differences in quality evaluation. In order to make sure that thinking style was mediator of culture, mediation analyses helped to confirm this. In comparison of the design elements in quality evaluation, Germans perceived higher scores than Chinese perceived in three levels of each element. Overall, these results support the general hypotheses. Quality evaluations are influenced by culture. However, less clear is about how culture influences on the various levels of changes. So the second sub study, it seeks to strengthen the body of evidence by dividing these bottles into several changing levels. The purpose is to see whether the different levels of changing bottle had different reactions of consumers.

3.2.2 Study 1b

3.2.2.1 Purpose of this study

The study 1a discussed that consumers from East and West have perceived differently from whole package. Easterners were more favorable towards element changes; Westerners were less favorable. Study 1a only can get the overall view about consumer perceive to product evaluation. Study 1b tried to analysis more in details, because different combines of bottles can give consumers different perceptions from changes. Are there some differences in consumers if the package changes slightly? Or are there some differences in consumers if they face big changes of package? These questions are needed to explore in this study. As the study 1a consumers couldn't get any tips from original standard package when evaluate these new bottles. They can only recall the memory in their minds. Under this situation, author wants to test the following hypotheses:

- ***H1c:*** *From the changes levels perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers.*
- ***H1d:*** *Westerners are more sensitive to the changes than Easterners to the changes.*

3.2.2.2 Sample

Sixty-two subjects were recruited for the Germany sample from students enrolled in a cross-cultural marketing course at University of Kiel, who could receive shopping coupons for their participation by lottery, the same as the participant in study 1a, these students got a piece of paper printed the links of questionnaire on. Most of them answered the questionnaire at home or in multiply media lab in front of computer. 64 subjects were recruited for the Chinese sample from author's friends by sending the links of the questionnaires and then author's friends introduced this survey to other friends, like rolling snowball.

Germany people represent the western culture, and Chinese people represent the Eastern culture. German and Chinese subjects were selected to minimize the differences between German and China. Their ages and academic degrees were very close in order to avoid the differences from age and education. Their ages (M_{CN}=23.7, M_{DE}=26) were around 25, they are the existed or potential consumers in the wine market.

3.2.2.3 Procedure and measures

In this study it needs to categorize the new package into different changes groups. Here still use the eighteen bottles dividing them into 5 levels according to the similarity from the standard bottle. The 5 levels are extreme high similar, high similar, moderate similar, low similar and extreme low similar. Hypothetical similarity test were tested with a sample of 15 Germany students and 15 Chinese students in University of Kiel. They had to categorize the bottles with seeing the original standard bottle. They were asked how you felt the bottle to the standard bottle. They gave scores of each. After this, author collected the answers, and made a comparison. According to the scores scale bottles were divided into five categories. Extreme high similar bottles are the scores between 80 and 101; high similar bottles are the scores between 61 and 80; moderate similar bottles are the scores between 41 and 60; low similar bottles are the scores between 21 and 40; and extreme low similar bottles are the scores between 1 and 20. The ambiguous bottles which were very close to the boundary were deleted, and left all significant answers. Author calculated the scores' SD of the left bottles. Selected the smallest SD bottle of each level as target bottles, five bottles was selected to represent their levels respectively. Extreme high similar bottle is No.10; high similar bottle is No.12; moderate similar bottle is No.4; low similar bottle is No.3; and extreme low similar bottle is No.7.

Table 12: Scores of changed levels

Similar level	Bottle No.	Scores
Extreme low similar	**No.10**	80-101
Low similar	**No.12**	61-80
Moderate similar	**No.4**	41-60
High similar	**No.3**	21-40
Extreme similar	**No.7**	0-20

As the study 1a, participants were given an online survey. Chinese answered in Chinese version questionnaire, while Germany answered in German version. All the outline and layout of the questionnaires are the same, only the language were different. The process were also the same as the study 1a, three parts were in the survey. In the first part of the survey, it was the learning process learning standard bottle. In the second part of the online survey, it was the evaluation

process. This time there were 5 bottles evaluated. Participants gave their evaluation on a 1 to 101 scale scores (1=extremely bad, and 101= extremely good). The details of the survey were the same as the study 1a, so it didn't describe much here. In the last phase, it was also EFT (embedded figures test).

3.2.2.4 Result

Analytic-holistic of thinking

Differences between the Chinese and German samples were examined for the presence of anticipated cultural differences in thinking style. The Chinese and German samples were compared by the embedded figures test (EFT), which reflect the ability to find more embedded objects in a figure, are indicative of analytic thinking. A one-way ANOVA with culture as the independent variable indicated that, as anticipated, the result showed that German participants were significantly more oriented toward analytical processing than were Chinese participants (M_{cn}=1.52; M_{de}=2.72; P＜.01). So Germans are more analytic, and Chinese are more holistic.

A 2 (culture) × 5 (similarity level) ANOVA was performed, wine familiarity as a covariate. As expected, a significant main effect of culture (F (1, 125) = 89.3, p＜0.00). Similarity levels also emerged (F (4,125) = 63.4, p＜0.00). In all levels of bottles, Chinese perceived higher scores of quality than did Germans. The quality scores rose as the familiarity levels from extreme not similar to extreme similar. There was no interactive effect among levels and cultures. Levels*cultures were not significant.

Table 13: Results of changed levels in quality evaluation implicit condition

Similar level	N	Df	F	P
Extreme low similar	125	1	34.8	＜.00
Low similar	125	1	3.86	＜.05
Moderate similar	125	1	31.1	＜.00
High similar	125	1	25.7	＜.00
Extreme similar	125	1	10.6	＜.01

The Means of the different levels of change have shown that Chinese perceived higher scores of quality evaluation than Germans. In extreme low similar level, M_{cn} = 35.9; M_{de} = 14.5; in low similar level, M_{cn} = 49.2; M_{de} = 40.7; in moderate similar level, M_{cn} = 40.9; M_{de} = 22.5; in high similar level, M_{cn} = 45.9; M_{de} = 20.8; in extreme high similar level, M_{cn} = 75.9; M_{de} = 52.5. **H1c** From the changes levels perspective, Eastern consumers perceived higher degrees of elements changes than Western consumers was confirmed.

Comparison of sensitivity to changes

The sensitivity to changes was compared from whole design perspective. As known, there were five levels of bottles (extreme low similar No.10; low similar No.12; moderate similar No.4; high similar No.3 and extreme high similar No.7). The scores gap was defined as $\triangle_{Score1}$ = Score $_{No.10}$-Socre $_{No.12}$; $\triangle_{Score2}$ = Score $_{No.12}$-Socre $_{No.4}$; $\triangle_{Score3}$ = Score $_{No.4}$-Socre $_{No.3}$; $\triangle_{Score4}$ = Score $_{No.3}$-Socre $_{No.7}$. $\triangle_{Score}$ was a group of new data which represented the score gap between levels. Hence, $\triangle_{Score1de}$, $\triangle_{Score2de}$, $\triangle_{Score3de}$, and $\triangle_{Score4de}$ represent the score gaps of German participants between levels, and $\triangle_{Score1cn}$, $\triangle_{Score2cn}$, $\triangle_{Score3cn}$, and $\triangle_{Score4cn}$ represent the scores gaps of Chinese participants between levels.

Next step was to compare these gaps. They were paired as $\triangle_{Score1de}$ vs. $\triangle_{Score1cn}$, $\triangle_{Score2de}$ vs. $\triangle_{Score2cn}$, $\triangle_{Score3de}$ vs. $\triangle_{Score3cn}$, $\triangle_{Score4de}$ vs. $\triangle_{Score4cn}$.

Table 14: Comparison of sensitivity in implicit condition

Sensitivity	**N**	**df**	**F**	**p**
$\triangle_{Score1de}$ vs. $\triangle_{Score1cn}$	125	1	10.21	.002
$\triangle_{Score2de}$ vs. $\triangle_{Score2cn}$	125	1	7.33	.008
$\triangle_{Score3de}$ vs. $\triangle_{Score3cn}$	125	1	0.11	.979
$\triangle_{Score4de}$ vs. $\triangle_{Score4cn}$	125	1	1.89	.171

Means of the gap were Germans were higher than Chinese. M$\triangle_{Score1de}$ = 10.3, M$\triangle_{Score1cn}$ =7.1; $\triangle_{Score2de}$ =7.6, $\triangle_{Score2cn}$ =5.8. From the results of sensitivity to the changes, Chinese and Germans

were partly differences. From extreme low similarity to low similarity and from low similarity to moderate similarity, in this two paired levels the sensitivity of German and Chinese were distinct. $\triangle_{Score1de}$ and $\triangle_{Score1cn}$, $\triangle_{Score2de}$ and $\triangle_{Score2cn}$ were the large changed levels, so it could conclude that the sensitivities of German and Chinese perceived differently when met big changed package, German were more sensitive than Chinese. But in **H1d** Westerners are more sensitive than Easterners was partly confirmed.

3.2.2.5 Discussion

The holistic and analytic thinking test results told us, Chinese were more holistic thinkers and Germans were more analytic thinkers. This result continued to support Easterners and Westerners have distinct thinking styles---holistic and analytic. When comparing the scores of Germans and Chinese evaluation in the same level changes of package, Consumers from Eastern culture evaluated quality more favorably than consumers from Western culture from the whole package change perspective. Chinese and Germans had significant difference in all the levels. In the last part, it compared the sensitivity of Germans and Chinese towards changes. It can be said that how consumers alter their evaluation when new package changed. The result told us that consumers from Western and Eastern cultures don't have identical results in the perception of different changed package. For Westerners and Easterners, when they face to large changed packages, their perceptions alterations of changes have significant difference. The scores from Germans changed more than the scores from Chinese. But if the new packages didn't change a lot from the standard package, there weren't significant differences between the two groups of people.

3.3 Study 2 --- Explicit Condition

In study 1, it showed that cultural differences caused the different views from package under the implicit condition. According to the theories in chapter 2, a number of facts have been identified that consumers evaluated the quality of products from its package design, and also showed that in different conditions or environments the process of psychological perception was various. So outside conditions becomes important to judge a psychological process. This study was under a new condition --- explicit condition. It explored that how the result would be if they meet the explicit condition. Is it also consumers associative learning involves to converting cues to

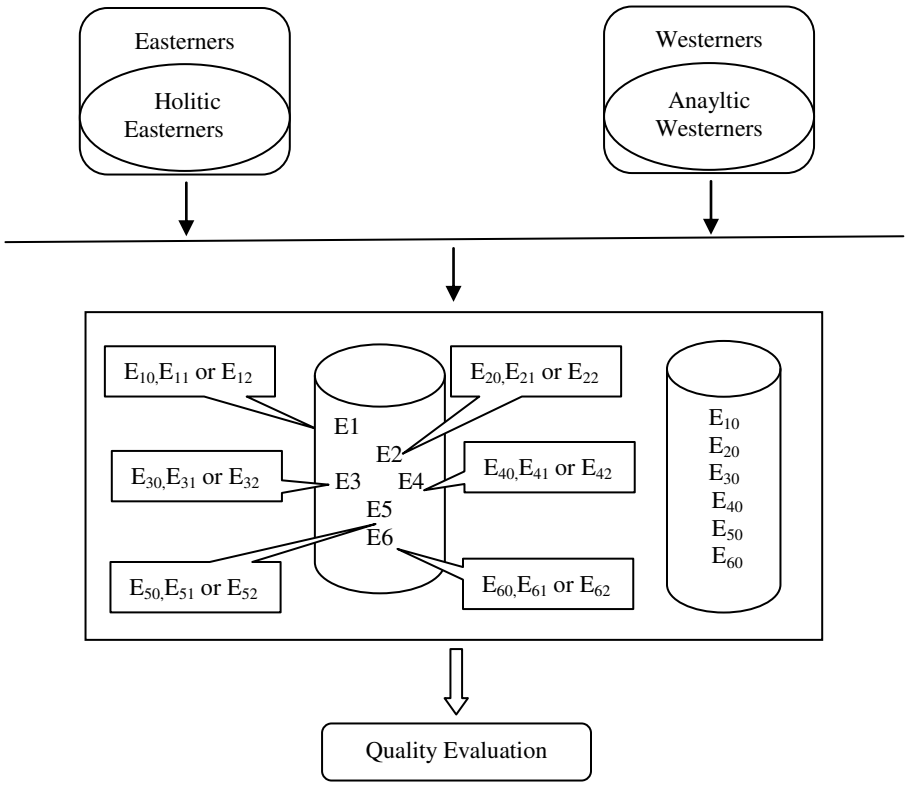
probabilities of consumer responses? Do consumers evaluate products with the degree to which package designs "fit" with the design? So with these questions study 2 continued.

3.3.1 Purpose of This Study

In study 2, it has also three directions. The first one is that whether holistic easterners and analytic westerns exactly have distinguished view of new package when people in the explicit condition; the second direction is to analyze the different changed package how are they influence on consumers' evaluation under this condition; the third direction is to test whether two conditions have differences in evaluation.

The following figure12 presents the main structure of this study. In this figure, E is short for elements. Eij represents which element and level it is. 'i' (i=1,2,3…6) is six elements, 'j' is the three levels of change (j=0 standard level; j=1 small changed level; j=2 big changed level). The E10, E20… E60 represent standard elements. E11, E12, E21, E22…E62 represent changed elements. The six elements each have 3 levels: standard level, small changed level, and big changed level. Each element selects one level and six elements can form a new bottle. The new formed bottles are the objects showed to participants. From the figure 12, a clear process of this study was shown. In study 2, participants can see the standard bottles when evaluating new bottles, so called explicit condition. This means participants can see the original standard bottle when they evaluate the quality of the new bottles. This situation can be found in real life, consumers can see the existed products which consider being high quality and new package products which are just exploring new market at the same time or on the same shopping shelves. From the figure below, it told us that it wasn't to say all the westerners were Analytic westerns and all the eastern were Holistic easterners, it told us that most westerners were analytic and most eastern were holistic. These existed holistic thinkers and analytic thinkers make various evaluations.

Figure 12: Frame of study 2



In this study, in the explicit condition participants can get tip from original standard bottle when evaluate these new bottles. They can not only recall the memory which they learn in the first step of questionnaire but also can compare the new bottle from standard bottle directly. Under this situation, we want to test the following hypotheses:

H2*: Consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures in explicit condition.*

- ***H2a****: From the whole package perspective, consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures.*
- ***H2b****: From the design elements perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers.*
- ***H2c****: From the changes levels perspective, Eastern consumers perceive higher degrees of changes than Western consumers.*
- ***H2d:*** *Westerners are more sensitive to the changes than Easterners to the changes.*

H3**: Consumers from Eastern and Western cultures both have the same evaluations toward design - based package **in the implicit and explicit condition.

- ***H3a**: Consumers from Eastern or Western cultures have the same evaluations toward design - based package under the two conditions.*
- ***H3b**: Consumers from Eastern or Western cultures have the same sensitivities toward design - based package changes under the two conditions.*

3.3.2 Stimuli

Study 1 has already found the bottles which found by orthogonal experimental design. According to Orthogonal Array table, eighteen new bottles were selected. Every single level of the elements was appeared 6 times. This study continued to use these bottles. On one hand it is an efficient way to reduce testing hundreds of bottles, on the other hand it can help use to compare the same products in implicit and explicit conditions. In order to test thinking styles, EFT also did in this study.

3.3.3 Sample

Eighty-two persons were recruited for the Germany sample from students enrolled in a marketing research course at University of Kiel, who could receive shopping coupons for their participation by lottery, these students got a piece of paper which was printed the link of questionnaire. Most of them answered the questionnaire at home in front of computer. Other participants were the students who had computer classes at multimedia lab. They answered the questionnaire in the multimedia lab. They got chocolate bars as rewards. 72 subjects were recruited for the Chinese sample from two parts. One part was author's friends by sending the links of the questionnaire and then author's friends answered these questions. They could introduce this survey to other friends. The second parts were university students from Renmin university of China and China university of Geosciences.

Germans represent the western cultural persons, and Chinese represent the Eastern cultural persons. In order to reduce German and Chinese participants' differences from their background and social experience, their ages and academic degrees were very close. Their ages (M_{CN}=25.9, M_{DE}=24.8) were around 25, they were the existed or potential consumers in the wine market.

3.3.4 Procedure and Measures

The procedure in study 2 was almost the same as the study 1. Participants did an online survey. Chinese answered the Chinese version questionnaire, while Germany answered the German version. All the online content and layout of the questionnaires were the same, only the language was distinct.

In the first phase of the survey, people were forced to learn the standard bottle which was formed from six elements (shape, logo, cap, brand, image and its position). In this period, they could see the whole standard bottle as long as they wanted. They were asked to learn the six elements one by one by choosing what they saw just now. Each question asked an element what they saw just now. There were six questions in this part. In every question, two wrong choices also appeared in order to disturb and enhance participants' memory about standard elements and standard bottle. They needed to choose what the standard element was from 3 choices (stand, small changed and big changed elements). In case participants chose the wrong answer, computer system would tip participants that you chose the wrong answer and they were not allowed to go on next page to next question. Participants had to choose again until they found the right answer and then they could turn to next page. In this part, the purpose was to let subjects remember the elements of the standard bottle, meanwhile they knew what the other two levels of elements changes were.

In the second part, there were some differences compared with study 1. Participant needn't to see the standard bottle again; because they could see it during they evaluated the quality of wine. They also saw a paragraph of sentences, participant was told that the standard bottle contained the greatest wine in it, marked 101 scores wine. And also, in this survey, participants were taught that the quality of wine only depended on the package (bottle). That is to say the more similar to standard bottle, the higher quality would be in the bottle and vice versa. The bottle which was similar to standard bottle had high quality of wine in, while the bottle didn't look like the standard one contained low quality of wine in it. Participants were asked the question: "how do you think about the quality of wine in this bottle" and answered the questions in a limited time, 10 seconds for each. Participants gave their evaluation scores from 1 to 101 scale (1=extremely bad, and 101= extremely good).They needed to evaluate 18 bottles of wine which was selected by

orthogonal design method. The standard bottle was shown on the left side of the new bottle in every question. 18 bottles appeared on the participants' screen randomly.

3.3.5 Result

Analytic-Holistic Thinking

Differences between the Chinese and German samples were examined for the presence of anticipated cultural differences in thinking style. Embedded figures test (EFT) helped to compare the Chinese and German, which reflected the ability to find more embedded objects in a figure, were indicative of analytic thinking. A one-way ANOVA with culture as the independent variable indicated that, as anticipated, the result showed that German subjects were significantly more oriented toward analytical processing than were Chinese subjects (M_{cn}=0.97; M_{de}=1.59; P ＜.01). The results told us that Chinese and German participants were different in styles of thinking. Germans are more analytic, and Chinese are more holistic.

Comparison of the whole package quality evaluation

To test cultural difference in quality evaluation under explicit condition, separate ANOVAs were performed for each combined bottle from orthogonal table, with culture (western, eastern) as independent variable and quality scores as the dependent variable. One-way ANOVA operated for 18 groups of data, N=154. As expected, a significant main effect of culture merged for each analysis, no other effect for test emerged. In most cases, German participants and Chinese participants had significant differences in quality evaluation. Only No.1, No.8, No.11 and No.15 bottles didn't significant among 18 combined bottles. See the following results of the whole package evaluation.

Table 15: Results of the whole package quality evaluation in explicit condition

Number	df	F	Sig.	Number	df	F	Sig.
No. 1	1	2.62	.11	No. 10	1	4.33	.04
No. 2	1	3.15	.07	No. 11	1	0.12	.73
No. 3	1	11.74	.00	No. 12	1	4.44	.04

No. 4	1	9.79	.00	No. 13	1	4.82	.03
No. 5	1	6.93	.01	No. 14	1	5.30	.02
No. 6	1	9.43	.00	No. 15	1	0.87	.35
No. 7	1	4.01	.05	No. 16	1	4.62	.04
No. 8	1	.55	.46	No. 17	1	19.31	.00
No. 9	1	4.77	.03	No. 18	1	11.88	.00

For the four insignificant bottles, No.15 bottle was the standard bottle without any changes; No.1 bottle was a bottle with 4 elements small changed. No.8 bottle was with 2 small changed elements and 2 big changed elements. No.11 bottle was the bottle with 2 small changed elements and 1 big changed element. In total, 14 bottles have significant differences between German participants and Chinese participants among 18 bottles.

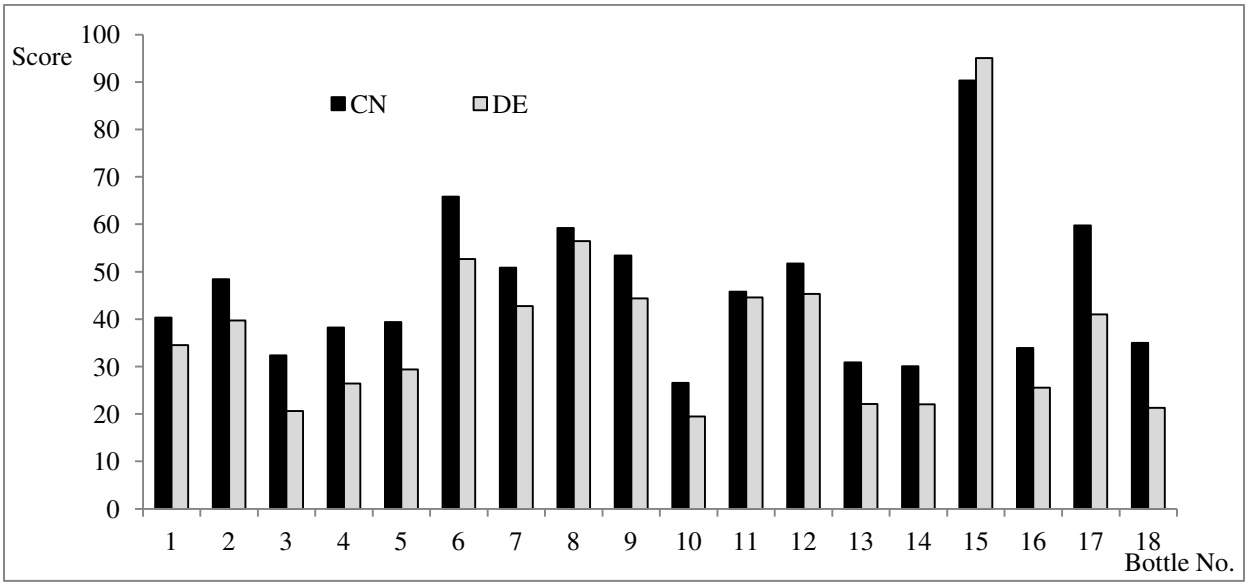
Next step, the result showed more details of the quality evaluation for each bottle. Following table 16 shows the Means of each quality evaluation in explicit condition.

Table 16: Means of the whole package quality evaluation in explicit condition (1)

Number		**M**	**Number**		**M**
No. 1	CN	40.3	No. 10	CN	26.5
	DE	34.5		DE	19.5
No. 2	CN	48.4	No. 11	CN	45.8
	DE	39.7		DE	44.6
No. 3	CN	32.4	No. 12	CN	51.7
	DE	20.6		DE	45.3
No. 4	CN	38.2	No. 13	CN	30.8
	DE	26.4		DE	22.1
No. 5	CN	31.9	No. 14	CN	30.0
	DE	29.4		DE	22.1
No. 6	CN	65.8	No. 15	CN	90.3
	DE	52.7		DE	95.0
No. 7	CN	50.8	No. 16	CN	33.9
	DE	56.5		DE	25.5
No. 8	CN	59.2	No. 17	CN	59.8
	DE	56.5		DE	41.0
No. 9	CN	27.1	No. 18	CN	35.0
	DE	24.4		DE	21.3

This bar chart below can help readers more clearly to see that Chinese participants gave higher scores of quality evaluation than German participants. For the whole of package, consumers from Eastern cultures evaluated quality more favorably than consumers from Western cultures.

Figure 13: Means of the whole package quality evaluation in explicit condition (2)



Mediation Analyses

After comparing, above findings showed cultural differences in perceiving product quality, with Easterners perceiving a higher score than Westerners did in explicit condition. In developing hypothesis, cultural styles of thinking were identified as the mechanism responsible for differences in perceived quality between Eastern and Western consumers. Holistic thinking was viewed as being more conducive to the discovery of relationships among design elements, resulting in greater perception of higher quality among Easterners. Analytic thinking was viewed as being more constrained in attributes of stuffs, especially the elements, resulting in poorer perceptions of quality among Westerns. A mediation analysis was conducted to test whether styles of thinking are mediator of cultural differences in perceptions of quality evaluation. The detailed introduction can be seen in section 3.2.1.5

Table 17: Mediation analyses result (2)

Condition	Regression equations
1	Culture (-0.210**) influences type of thinking
2	Culture (-0.141***) influences type of perceived quality
3	Type of thinking influences(0.143**) quality evaluation and decrease the influence of culture (-0.013) on quality evaluation

*p＜.05; ** p＜.01; ***p＜.001

The result shows that type of thinking is a mediator for culture's influence on quality evaluation. It significantly influences on quality scores in the equation 3, while culture (0.141) influences on quality score, and culture (-0.013) in equation 3 is much less than culture (0.141) influences on quality evaluation in regression equation 2. So it can confidently say styles of thinking are mediator between culture and quality evaluation. From above results, **H2a** was confirmed. Consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures. And Consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures in explicit condition.

Comparison of the design elements in quality evaluation

In the prior section, we described the advantage of the Orthogonal array (OA). OA can help to estimate the contribution of individual influencing factors in the product design stage. Here analyzed the data by ANOVA. Table 18 below showed these six elements on quality evaluation in Chinese sample, N = 72; Table 19 below showed us these six elements on quality evaluation in Germany sample, N = 82.

Table 18: Chinese sample in design elements perspective in explicit condition

Source	df	F	Sig.
Shape	2	81.44	.000
Cap	2	12.76	.000
Label position	2	12.27	.000
Logo	2	7.09	.001
Image	2	6.14	.002

Brand font	2	2.93	.054

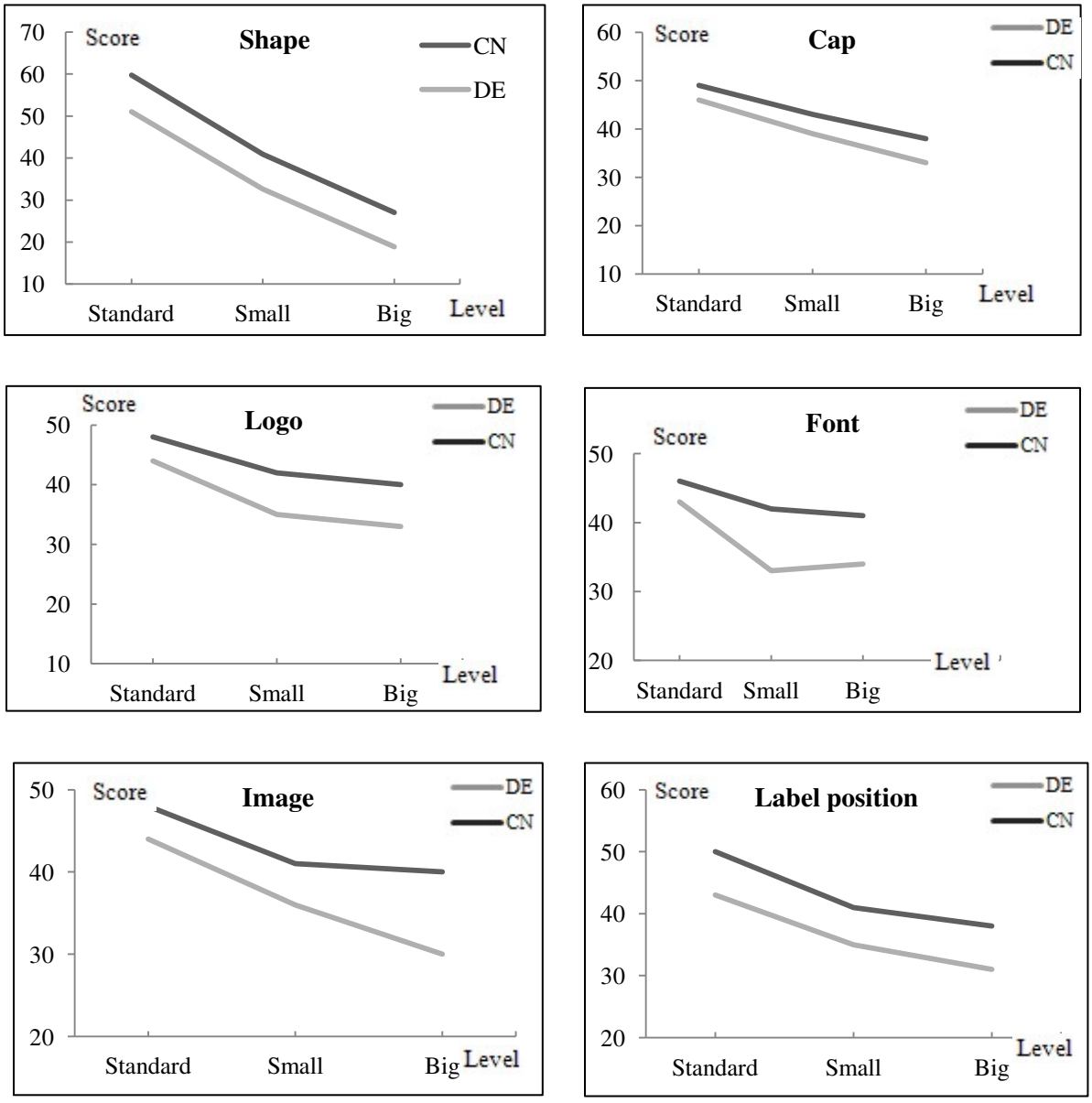
Table 19: Germans sample in design elements perspective in explicit condition

Source	df	F	Sig.
Shape	2	150.47	.000
Image	2	27.45	.000
Cap	2	24.01	.000
Logo	2	23.73	.000
Label position	2	19.81	.000
Brand font	2	16.81	.000

In explicit condition every element worked on the quality evaluation. This certified that in explicit condition, participant can noticed all the elements. Chinese and Germans have no differences in judging the quality from package. Label position was also significant for Chinese in this condition.

In this dissertation, it also analyzed the means of the three changed levels (the standard level, the small changed level and the big changed level). Following figures compared the means of both Chinese and German. Three levels of Means can be seen in the following figure 14. Germans and Chinese still gave higher scores to the standard elements and least scores to the big changed elements mostly. Chinese gave higher scores of quality; while Germans were lower than Chinese in the same changed level. Chinese and German participants this time became more sensitive to the changes of elements, because the gap between the levels much bigger than that in implicit condition. So these confirmed that **H2b** was established.

Figure 14: Six elements Means in explicit condition



Next step was turned to consider the changed level perception. In this part, the selected five changed levels of bottles in study 1 still used here as research subjects. A 2 (culture) × 5 (similarity levels) ANCOVA was performed, wine familiarity as a covariates. As expected, a significant main effect of culture ($F(1, 153) = 23.2$, $p < 0.00$). Similarity levels also emerged ($F(4, 153) = 65.9$, $p < 0.00$). The interaction culture * similarity level was not significant ($F(4, 153) = 1.2$, $p = .31$). The wine familiarity was also not significant influenced on the result. So this

confirmed that there were some differences between Chinese and Germans in similarity levels evaluation in explicit condition. Following table 20 showed the results that in five levels there were all existed differences, this was not difficult to understand. Because in most cases of the evaluation Chinese perceived higher scores of quality, so in the changed levels the same result could happen.

Table 20: Results of changed levels in explicit condition

Similar level	N	Df	F	P
Extreme low similar	154	1	34.8	＜.00
Low similar	154	1	3.86	＜.05
Moderate similar	154	1	31.1	＜.00
High similar	154	1	25.7	＜.00
Extreme similar	154	1	10.6	＜.01

The Means of the different levels of change have shown that Chinese percept higher scores of quality evaluation than Germans. In extreme low similar level, M_{cn} = 37.6; M_{de} = 18.5; in low similar level, M_{cn} = 39.2; M_{de} = 30.7; in moderate similar level, M_{cn} = 45.9; M_{de} = 31.5; in high similar level, M_{cn} = 49.9; M_{de} = 40.8; in extreme high similar level, M_{cn} = 73.9; M_{de} = 60.4. In all levels of bottles, Chinese perceived higher scores of quality than did Germans. The quality scores rose as the familiarity levels from extreme not similar to extreme similar. Levels*cultures are not significant. **H2c**: From the changes levels perspective, Eastern consumers perceive higher degrees of elements changes than Western consumers were confirmed.

Comparison of sensitivities to changes

This study compared the sensitivity to changes from whole design perspective. As known, we had five levels of bottles (extreme high similar, high similar, moderate similar, low similar and extreme low similar). This study used these five bottles represented the five levels (extreme high similar No.10, high similar No.12, moderate similar No.4, low similar No.3 and extreme low similar No.7). The sensitivities were from the score gaps between levels. The purpose was to see whether they were significant differences between Chinese and Germans facing changes.

$\triangle_{Score1}$ = Score $_{No.\ 10}$-Socre $_{No.12}$; $\triangle_{Score2}$ = Score $_{No.\ 12}$-Socre $_{No.14}$; $\triangle_{Score3}$ = Score $_{No.\ 4}$-Socre $_{No.3}$; $\triangle_{Score4}$ = Score $_{No.\ 3}$-Socre $_{No.7}$. $\triangle_{Score}$ was a group of new data which represented the score gap between levels. Hence, $\triangle_{Score1de}$, $\triangle_{Score2de}$, $\triangle_{Score3de}$, and $\triangle_{Score4de}$ represent the score gaps of German participants between levels, and $\triangle_{Score1cn}$, $\triangle_{Score2cn}$, $\triangle_{Score3cn}$, and $\triangle_{Score4cn}$ represent the scores gaps of Chinese participants between levels. We compared these gaps. There were paired as $\triangle_{Score1de}$ vs. $\triangle_{Score1cn}$, $\triangle_{Score2de}$ vs. $\triangle_{Score2cn}$, $\triangle_{Score3de}$ vs. $\triangle_{Score3cn}$, $\triangle_{Score4de}$ vs. $\triangle_{Score4cn}$ in explicit condition.

Table 21: Comparison of sensitivity in explicit condition

Sensitivity	**df**	**F**	**p**
$\triangle_{Score1de}$ **vs.** $\triangle_{Score1cn}$	1	.033	.86
$\triangle_{Score2de}$ **vs.** $\triangle_{Score2cn}$	1	2.1	.15
$\triangle_{Score3de}$ **vs.** $\triangle_{Score3cn}$	1	12.6	.00
$\triangle_{Score4de}$ **vs.** $\triangle_{Score4cn}$	1	4.34	.04

In explicit condition, the result is not the same as in the implicit condition. Two paired comparisons $\triangle_{Score3de}$ vs. $\triangle_{Score3cn}$ and $\triangle_{Score4de}$ vs. $\triangle_{Score4cn}$ has significant differences. From these results, it means Chinese and Germans differed in high similarities level of changes. Germans meet the low changed package are more sensitive to the change (M$\triangle_{Score3de}$ = 5.5, M $\triangle_{Score3cn}$= 3.9; M$\triangle_{Score4de}$ = 4.9, M $\triangle_{Score4cn}$= 3.7). Their evaluations changed more than Chinese did. So, in **H2d** Westerners are more sensitive to changes than Easterners to changes in explicit condition was only partly confirmed.

Comparison under implicit and explicit conditions

Above analyses compared all possible differences of culture and quality evaluation in implicit and explicit condition respectively. This part turned to analyze the differences between implicit and explicit conditions. The main purpose focused on the conditions--- the implicit and explicit conditions. Comparisons weren't not between cultures any more but between the same cultural people in two conditions in order to see whether conditions can affect people perception differently.

1. Comparison whole package evaluation in two conditions

To test the implicit and explicit conditions whether influence on the relationship between culture and quality evaluation, separate ANOVAs were performed in Germans and Chinese, with conditions (implicit, explicit) as independent variable and quality scores as the dependent variable. In following table 22, it was the result of German and Chinese samples in comparing evaluations in implicit and explicit conditions. In Germans sample, there were two bottles evaluations (No.10 and No.17) were significant different in implicit and explicit conditions among 18 bottles. In Chinese sample, there were five bottles (No.1, No.5, No.7, No 10, No.17) evaluations were significant different in implicit and explicit conditions among 18 bottles. So it can conclude that conditions didn't change people's perception of evaluation. So **H3**a was confirmed.

Table 22: Comparison German and Chinese sample in two conditions

German				Chinese			
Number	**df**	**F**	**Sig.**	**Number**	**df**	**F**	**Sig.**
No. 1	1	0.37	0.54	No. 1	1	4.89	0.03
No. 2	1	1.55	0.22	No. 2	1	1.84	0.18
No. 3	1	0.05	0.84	No. 3	1	2.39	0.13
No. 4	1	3.23	0.08	No. 4	1	0.31	0.58
No. 5	1	2.28	0.13	No. 5	1	5.37	0.02
No. 6	1	0.01	0.97	No. 6	1	0.09	0.77
No. 7	1	0.02	0.99	No. 7	1	7.55	0.01
No. 8	1	2.38	0.12	No. 8	1	0.14	0.71
No. 9	1	1.84	0.18	No. 9	1	0.40	0.53
No. 10	1	5.08	0.03	No. 10	1	4.53	0.04
No. 11	1	0.06	0.81	No. 11	1	1.99	0.16
No. 12	1	1.13	0.29	No. 12	1	0.29	0.60
No. 13	1	0.01	0.92	No. 13	1	1.13	0.29
No. 14	1	1.80	0.18	No. 14	1	0.76	0.39
No. 15	1	3.69	0.06	No. 15	1	1.34	0.25

No. 16	1	0.17	0.68	No. 16	1	0.00	0.93
No. 17	1	5.99	0.02	No. 17	1	6.35	0.01
No. 18	1	0.73	0.40	No. 18	1	3.32	0.07

2. Comparison sensitivity in two conditions

Now it was time to analyze whether the sensitivities change in the two conditions. As defining, $\triangle_{Score1}$ = Score $_{No.\ 10}$-Socre $_{No.12}$; $\triangle_{Score2}$ = Score $_{No.\ 12}$-Socre $_{No.14}$; $\triangle_{Score3}$ = Score $_{No.\ 4}$-Socre $_{No.3}$; $\triangle_{Score4}$ = Score $_{No.\ 3}$-Socre $_{No.7}$. In $\triangle_{Score1ij}$, i stands for the nationality of sample, i = Germans or Chinese; j stands for conditions, j=explicit or implicit conditions. So we can know that $\triangle_{Score1cex}$ means $\triangle_{Score1}$ of Chinese under explicit condition; $\triangle_{Score2cex}$ means $\triangle_{Score2}$ of Chinese under explicit condition; $\triangle_{Score3cex}$ means $\triangle_{Score3}$ of Chinese under explicit condition; $\triangle_{Score4cex}$ means $\triangle_{Score4}$ of Chinese under explicit condition; $\triangle_{Score1cim}$ means $\triangle_{Score1}$ of Chinese under implicit condition; $\triangle_{Score2cim}$ means $\triangle_{Score2}$ of Chinese under implicit condition; $\triangle_{Score3cim}$ means $\triangle_{Score3}$ of Chinese under implicit condition; $\triangle_{Score4cim}$ means $\triangle_{Score4}$ of Chinese under implicit condition.

Table 23: Comparison sensitivities of Chinese sample in two conditions

Sensitivity	**df**	**F**	**Sig.**
$\triangle_{Score1cex}$ **vs.** $\triangle_{Score1cim}$	1	11.81	.001
$\triangle_{Score2cex}$ **vs.** $\triangle_{Score2cim}$	1	2.53	.114
$\triangle_{Score3cex}$ **vs.** $\triangle_{Score3cim}$	1	2.72	.102
$\triangle_{Score4cex}$ **vs.** $\triangle_{Score4cim}$	1	.31	.579

In the same way, we compared Germans' sensitivities in two conditions. In $\triangle_{Score1ij}$, i stands for the nationality of sample, i = Germans or Chinese; j stands for conditions, j=explicit or implicit conditions. So $\triangle_{Score1dex}$ means $\triangle_{Score1}$ of Germans under explicit condition; $\triangle_{Score2dex}$ means $\triangle_{Score2}$ of Germans under explicit condition; $\triangle_{Score3dex}$ means $\triangle_{Score3}$ of Germans under explicit condition; $\triangle_{Score4dex}$ means $\triangle_{Score4}$ of Germans under explicit condition; $\triangle_{Score1dim}$ means $\triangle_{Score1}$ of Germans under implicit condition; $\triangle_{Score2dim}$ means $\triangle_{Score2}$ of Germans under implicit

condition; $\triangle_{Score3dim}$ means $\triangle_{Score3}$ of Germans under implicit condition; $\triangle_{Score4dim}$ means $\triangle_{Score4}$ of Germans under implicit condition.

Table 24: Comparison sensitivities of German sample in two conditions

Sensitivity	df	F	Sig.
$\triangle_{Score1dex}$ **vs.** $\triangle_{Score1dim}$	1	.068	.795
$\triangle_{Score2dex}$ **vs.** $\triangle_{Score2dim}$	1	.013	.910
$\triangle_{Score3dex}$ **vs.** $\triangle_{Score3dim}$	1	2.27	.134
$\triangle_{Score4dex}$ **vs.** $\triangle_{Score4dim}$	1	.014	.904

From the two tables, we can know that Chinese had only significant different sensitivities in extremely low similarity level. Germans also had the same result when compare sensitivities of their own in two conditions. In most comparisons, the sensitivities of changes in implicit and explicit conditions had no significant difference. So **H3b** was not confirmed

3.3.6 Discussion

From the results of study 2, it showed that consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures in explicit condition. From the whole package perspective, fourteen of eighteen bottles have significant differences between Chinese and Germans. Seventeen of eighteen Means Chinese perceived higher than Germans did. Meanwhile the data passed the mediation analyses. So consumers from Eastern cultures evaluated quality more favorably than consumers from Western cultures. All elements affected on the quality evaluation under explicit condition from the design elements perspective. And the Means of every changed levels showed that Eastern consumers perceive higher degrees of elements changes than Western consumers in most cases. From the changes levels perspective, Eastern consumers perceived higher degrees of package changes than Western consumers did. The next comparison was about sensitivities towards changes of package. When Chinese and Germans faced to the different changing levels of package, there were the significant differences between Chinese and Germans only from moderate similar to high similar level and from high similar to extreme high similar level. In other changes there were no differences.

Next was to separate comparisons of Chinese and Germans in implicit and explicit conditions. Consumers from Eastern and Western cultures had the same evaluations toward design - based package in the implicit and explicit condition. In German samples only two bottles of quality evaluation were significant different among 18 bottles, while in Chinese samples only five bottles of quality evaluation were significant different among 18 bottles. Otherwise, Consumers from Western cultures didn't have the same sensitivities toward design - based package changes under the two conditions, but consumers from Eastern were significant different when package changing from extreme low similar to low similar level.

Chapter 4 General Discussion

This chapter contains research findings, the contributions of these findings to theory and practical application. Research limitations and future directions also include in this chapter.

4.1 Summary of Findings

Product evaluation research has long tradition of referring to examine how consumer evaluate product from product itself in an attempt to understand why certain products are high perceived or poor perceived. Through elaborating prior literatures this research found that consumers also judged product in terms of the degree to which fitted with the standard and high evaluative package in their minds. Usually when consumers make buying decision, they always recall the memory of the standard and high evaluation products in their minds. The better fitting perception would be more favorably than the poor fitting ones. From this point, this dissertation begins to explore more about how it works on cultures. Are there differences between cultures in evaluation? If there were, what differences are? In this dissertation, product evaluation was based on the quality evaluation. During judging the quality from product package, there was no other verbal or price information to the participants. Package design was the only way to percept.

The key finding of this dissertation indicates that culture is an important reason that influences on consumer response to product evaluations. Cultures vary in the way which design-based package fit is judged. Westerners evaluate products differently than Easterners due to cross-cultural differences in styles of thinking. Two cultures of people have differences in design-based product evaluation. In most cases, Easterners provided more favorable evaluations of a new product package design than Westerners did.

This section summarizes all the findings from the two studies that support the view of cultural differences in design-based evaluation under the role of holistic and analytic thinking.

4.1.1 Summary of study 1

The primary purpose of study 1 was to explore consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures under the implicit condition. Three dimensions were certified this issue, the three dimensions were: from the whole package evaluations perspective; from the design elements perspective; and from the whole package change degree/level perspective. The second purpose was to identify samples of consumers that would suitably represent a Western and an Eastern culture. The last purpose was to find whether Western consumers and Eastern consumers had the same sensitivities to the changes of design.

In study 1a, it was conducted to test the styles of thinking. Author investigated cultural differences using sample of German and Chinese students with the same background. EFT result provided evidences that German and Chinese samples had different thinking styles due to the scores of EFT. The German sample found more embedded figures from complicated graphs than did Chinese. The Germany sample represented an analytic style of thinking associated with Westerns, whereas the Chinese sample represented a holistic style of thinking associated with Easterners. This conclusion was not special because prior authors had used this test efficiently certify: the more one can find, the more analytical the person would be. In this research, EFT just borrows to use.

In study 1a, author compared the whole package quality evaluation. Participants were asked to evaluate the quality of new wine bottles in a limited time after learning what standard wine package elements and best wine package were. After analyzing the data, it provided evidence that in most cases from the whole package perspective consumers from Eastern cultures evaluated quality more favorably than consumers from Western cultures. Although still four of eighteen bottles didn't have the significant differences in quality evaluation, culture became to be an important reason of explaining the differences. One of the four insignificant bottles was the standard bottle, so it should be normal that was not significant. In the other three bottles, two of them referred to the changes of label position element. In the following element comparison, label position was not significant elements in quality evaluation for Chinese. This may be the reason of insignificant differences between Chinese and Germans. In order to confirm culture was the core reason causes the differences, author introduced the mediation analysis of the

holistic and analytic thinking. Thinking as a mediator of the cultures passed the mediation test. This was coincided analysis in theoretic part. Holistic thought involves an orientation to the context or field as a whole, including attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships. Analytic thought involves detachment of the object from its context, a tendency to focus on attributes of the object in order to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior (Nisbett, 2000). These findings support the view that cultural differences in styles of thinking lead to differences in the way that Eastern versus Western consumers respond to product evaluation. H1a was proved.

In study 1a, it also analyzed consumers' product evaluation from the design elements perspective. The results showed that among six design elements for Easterners 5 elements were significant in the process of evaluation and for Westerners 6 elements were significant in the process of evaluation. The label position element was not significant in Chinese quality evaluation. On one hand this result was to say learning standard elements and standard bottle process was efficient, on the other hand that was to say one element was not significant may be because of culture differences or thinking differences. For westerners, six elements were together influence on quality evaluation; for Easterners label position was not significant. Both Chinese and Germans learned the elements in the same way; the result should be the same. But Chinese had one left. In theories label location was high ranged in cues which influenced on consumers' attention. Holistic thinking involved an orientation to field as a whole that may cause the result. In this study also you could see the Means of every element in three levels (standard level, small changed level and big changed level). The Means showed us that German samples perceived lower scores in 3 levels. Chinese were more favorable to the changes in design elements. They gave higher scores of quality evaluation and also higher scores of 3 levels changes. H1b was proved.

It can't deny that package's changes can be different; some package can change slightly, while others may change a lot. The degree of changes can be various. The degree of change is also a perception for human. In study 1b, the purpose of this study was to test whether cultural different could influence on the different degrees of changed bottles. In order to find the different levels of changed bottles, it tested all eighteen new bottles which selected. Five levels of change degree

were defined and marked: extremely high changed, high changed, moderate changed, low changed and extremely low changed. After different levels of changed bottle were selected, the next step was to find how Westerners and Easterners reacted to the different levels of changes. The result told us Germans and Chinese had different evaluations in the different changed level of bottles. Different levels of changes were a significant reason for evaluation scores. H1c was proved. This was not enough; author wanted to know how their sensitivity towards changes was. Next author made a comparison of sensitivity between every paired changed level. The result showed that the sensitivities between Eastern and Western consumers existed differences. Westerners were more sensitive to the changes when package in extremely changed condition (from extremely low similar to low similar levels and from low similar to moderate similar levels). H1d was partly proved.

So in total in study 1, H1a, H1b and H1c were certified; H1d was partly proved.

4.1.2 Summary of study 2

The primary purpose of study 1 was to explore consumers from Eastern cultures evaluate quality from package differently than consumers from Western cultures under the implicit condition. But in study 2 the experiments was run in implicit condition. The primary purpose of study 2 was to explore consumers from Eastern cultures evaluated quality from package differently than consumers from Western cultures under the explicit condition. Also three dimensions needed to explore: from the whole package evaluations perspective; from the design elements perspective; and from change degree perspective. Except this hypothesis, there was one more hypothesis about this study: the condition comparison. The condition comparisons were run by Chinese and Germans self-comparison. Author needed to test that consumers from Eastern or Western cultures both had the same evaluations toward design-based package in the implicit and explicit condition. This hypothesis contained two directions: Consumers from Eastern or Western cultures had the same evaluations toward design - based package under the two conditions. And consumers from Eastern or Western cultures had the same sensitivities toward design - based package changes under the two conditions.

Firstly, author investigated cultural differences using sample of German and Chinese students with the same background. As anticipated, The German sample found more embedded figures than did Chinese in complicated graphs. EFT provided evidences of German and Chinese samples have different thinking styles. This result coincided with study 1a.

In study 2, author did the same comparison of the whole package quality evaluation. Participants were asked to evaluate the quality of new bottle in a limited time after learning what highest wine package and elements were. The Means from Chinese for new bottles were higher than Germans most times. It provided evidences that in most cases from the whole package perspective consumers from Eastern cultures evaluate quality more favorably than consumers from Western cultures. But there were still four of eighteen bottles had no significant differences in two cultures. One of the four insignificant bottles was the standard bottle, so it should be normal that was not significant. In the other three bottles, two of them referred to the changes of label position element. In the above element comparison, label position was not significant elements in quality evaluation for Chinese. This may be the reason of insignificant differences between Chinese and Germans. In explicit conditions, consumers could see the standard bottle when they evaluated. In order to confirm culture was the core reasons cause the differences, author introduced the mediation analysis of the holistic and analytic thinking. Thinking as a mediator of the cultures passed the mediation analysis test. Thinking as a mediator help two cultural people have different views of the same new bottle. So H2a was proved.

In study 2, product evaluation was analyzed by participants from the design elements perspective. The results showed that among six design elements all the six elements were significant in the process of evaluation. This was to say in explicit condition, participant can notice all the elements. In the implicit condition label position was not significant for Chinese, but it was significant under explicit condition. This was the only different point. In the result part it also provided the Means of every element in three levels. The data showed that German sample perceived lower scores in 3 levels. Chinese were more favorable to the changes of design elements. They give higher scores of quality evaluation and also higher scores of 3 levels changes. H2b was proved. This result also coincided with H1b.

In study 2, author also used the five different levels of changed bottles. Author hoped to know that how Westerners and Easterners react to the different levels of changes in explicit condition. After analyzed the data, found that Germans and Chinese have different evaluations in the different changed level of bottles. Different levels of changes were a significant reason for evaluation scores. But this was not enough; author wants to know more about their sensitivity to changes. Next a comparison of sensitivity between two changed levels was made. The result told us that the sensitivity of Eastern and Western consumers existed differences. Results showed that Westerners were more sensitive to the changes when package in slightly changed condition (from moderate similar to high similar level and from high similar level to extremely high similar level). H2c was only partly proved. When compared with study 1, significant differences in Chinese and German were extremely low similar level, but here is extremely high similarity level. The results didn't coincide.

In the last part of study 2, Comparisons were between implicit and explicit conditions. Author analyzed the Chinese and Germans were in implicit and explicit conditions respectively. They compared with themselves in implicit and explicit conditions. The purpose of this research was to see under the two conditions whether the same cultural group of people had the same view of product perception. In most cases, there were no significant differences between the two conditions. Both of Chinese and Germans have the same results. So H3a was proved. Next we wanted to test Chinese or Germans have different sensitivities in two conditions. Author made comparisons of Chinese and Germans respectively. Results showed that Germans had no significant different sensitivities toward changes in implicit and explicit conditions. But Chinese had significant different sensitivities in extremely low similar level. In other levels there were no significant differences. So H3b was not confirmed.

4.2 Research Contribution

4.2.1 Advancement of Theory

For cross-cultural research, this research explores literature of consumer behavior in cultural differences. And it also adds the growing body of research that suggests culture is dynamic. First, this research shows that culture operates by making certain forms of thinking more accessible

than others. These findings suggest that the usefulness of the styles of thinking framework to understand consumer behavior. This represents a new way of priming cultural types of thinking. Holistic and analytic thinking are as a new vehicle to explore culture areas, especially cross-cultural marketing. Second, this research supports an analytic and holistic thinking framework in a practical visual. This research not only supports the visual research but also the research supports about the combination research. Past research was only on a single element, aspect or perspective. This research provides a new way of combine elements together to study. When looking back the prior studies of this framework, most of prior studies referred to pictures, context and other objects as stimuli. In this research, author used design-based package, which deal with the application of existing package evaluation knowledge to a new package. Thirdly, this research links the analytic-holistic thinking with physical property mapping-relational linking; this research reaches an important step. Thinking style explores a new direction in this research. The analytic-holistic thinking has been broadly used in many different domains; it is able to make specific process-related prediction only because the conceptual combination literature. Meantime this research adds to literature with consumer behavior that culture has an important influence on consumer behavior related issues (Monga 2007, Aaker 2000). This makes that styles of thinking in marketing research, especially cross cultural marketing research. Although most of prior studies relied upon the independent-interdependent self and the individualism-collectivism literatures (Monga, 2007), this is the one of researches that referd the analytic-holistic thinking literatures in a consumer psychology. So from this point, styles of thinking can have a wide practical in future.

For evaluation research, this research suggests that culture is a certain variable in understanding how consumers respond to changed package product. Quality evaluation represents of the consumers' product impress expression. This research also describes and supports that Easterners tend to have more holistic styles of thinking, whereas Westerners have a more analytic style of thinking. Easterners are often able to see relationships for package elements, but Westerners consider poor fitting. These differences in styles of thinking lead to differences in the way in which changes package product evaluation. So Easterners lead to more favorable evaluations. This finding was replicated across a number of studies with different types of brand extension (Mango 2007, 2010). These findings supported the importance that the existed memory of high

evaluated package can influence on the new package evaluation. Visual stimuli with relational links can influence on final evaluation. In cross-cultural comparison, Easterners and Westerners are able to connect the visual stimuli and final evaluations using associative learning. This research provides to categorize the different bases of fit that may exist between visual stimuli and product evaluation. By the combines of visual elements, it was able to distinguish bases of fit based on physical property mapping and relational links. Basing on this a theoretical framework allowed researchers to make more specific predictions regarding cultural differences in evaluation perception.

For conception, this research also contributions to the conceptual combination literature, which has not examined in the role of culture before by showing that Eastern and Western cultures vary in using relational linking versus physical property mapping. In prior model, relational linking is the primary process by which conceptual combinations are understood and property mapping are rare. From this study in visual cues of evaluation, physical property mapping is the more common process. Culture, thinking, and consumer behaviors collect together. Their conceptions also collect together making research to do more further research.

4.2.2 Managerial implications

The general consensus in visual evaluation research solves the problem that how new product can fit local consumers and how can they accept this new product. The question whether package should or should not change too much from the original package when explore a new market especially in oversea marking make managers headache. They are always helpless to solve the problem how their product can conquer local marketing as quickly as possible in promoting a new product to consumers. What rules they should follow to reduce the risk of extending their new product to a market where has had high evaluation products.

In this research, the findings offer the following directions: First, package can influence consumers' buying behaviors variously. Consumers evaluate the new product from visual stimuli. These points of view has been accepted by most managers. Package perception is the first perception of a new product. The perception of product evaluation can be various for consumers who think holistically than those who think analytically. Analytic thinkers have a lower

perception of the changed package, whereas holistic thinkers are able to perceive higher evaluation with the same changed package. When a new package product begin to sell in a new marketing, they need to investigate their potential consumers are more holistic or analytic. This is very important. Although holistic or analytic thinkers may be difficult to satisfy individually, there are certain ethnic groups and geographic areas that tend to have higher concentrations of holistic or analytic consumers. For example, consumers from Eastern cultures, such as China, India, and Japan, tend to think more holistically (Monga & John 2007). Managers need to do marketing research before a company promotes their product.

Second, this research also provides the two consuming environmental conditions: implicit condition and implicit condition. From the research results, both of the two conditions had the same results of product perception. That means no matter consumer in implicit condition which has no contrast or in explicit condition which has a contrast, consumers has the same attitude toward new package. Analytic thinkers have a lower perception of the changed package, whereas holistic thinkers are able to perceive higher evaluation with the same changed package. So managers needn't spend much time on thinking about the buying environments, but the structure of consumers is becoming important when exploring a new marketing, that is safer to find and open a potential market.

Thirdly, this research also shows that the elements in package have some different influences on perception. For holistic thinkers, shape, cap, and logo are most important elements to them. This conclusion isn't confirmed in this research, but from this research it could get that visual cues catch consumers' attention are different due to holistic and analytic thinking. Managers need to do an investigation to confirm. Also holistic thinkers and analytic thinkers have different reactions to the different levels of changed packages. Consumes have a degree of accepting the package changes. The challenges of new package product can be overcome with proper marketing strategies from managers.

Finally, this research illustrates the importance of consumers' sensitivity toward to changes in product evaluation when promoting and exploring markets. From this research, there are different sensitivities towards changes. Westerners or analytic thinkers are more sensitive to the changes when package in extremely changed conditions (from extremely low similar to low similar levels

and from low similar to moderate similar levels). Easterners or holistic thinkers are more sensitive to the changes when package in extremely changed condition (from extremely high similar to high similar levels and from high similar to moderate similar levels). But when considering the environments to consumers, there is not a significant different influence consumer because of conditions. So when an extremely changed package products promote in a new market, managers need to find some analytic thinker to do pre-text asking their ideas of a new product to see if they are acceptable or not.

4.3 Limitation and Future Research

4.3.1 Limitation

Author tried to insure that this research avoiding alternative explanation, but there are still some limitations in this research. In this section it would like to discuss some imperfect places.

First, weakness may exist in the online questionnaires. Although at beginning it talked about the advantages of the online questionnaires, but there were some disadvantages of the online questionnaires. According to this research, participants may meet the problem with the speed of internet. In this research, questionnaires were as online. All questions were in limit time to be answered, because this research wants to get consumers' the first impressions of the product. If they meet the trouble of low speed internet, it would be a vital problem. Another uncertain limitation of the online questionnaire is the answer environments. If a person in a crowd and noise environment or if participant were listening music, these may cause the bias of the answers. Because it couldn't control the environments which the participants were in, this becomes a potential problem of this dissertation.

Second, this research has only chosen wine bottles as subjects. It hasn't tested on other products. Because products can be divided into many categories, they have different values to the consumers. This result hasn't tested that other products whether could get the same results. In other aspects, Only Chinese and German participated in this research. No other nationality participants came into this research. This research didn't consider other participants from other countries, for example, Indian, Korean and so on from Eastern countries; Americans, Canadians

from Western countries, although it is widely accept that Eastern culture rooted from China and Germany has important position in Europe. These are the limitations of the experiments. Also in this research only one group of different levels of subjects were found. In the future, it is better to choose more groups of subjects to study, that can guarantee the validity of the results.

Thirdly, cultural psychology is that cultural practices influence on psychological processes, which in turn transform cultural practices (Shwelder 1991). Given these mutual influences, while this research has explored culture as leading to differences in quality evaluations, it is possible that over enough long time, the nature of consumer styles of thinking lead to cultural practices.

4.3.2 Future research

Several new directions can continue to study. A further experimental design could include more elements added in this research, for example colors. Suggested areas for future research include a more analysis into the relationship between product attributes and total product assessment – how exactly does the research process influence overall opinions, what is the best way to gain insight into evaluation without biasing the results? Is this possible? More research into the elements of package design and how it influences on consumer perceptions; are there universal rules or do they differ by product category?

Cultural influences on evaluation of new product categories could be explored. Many new product categories can be thought of as conceptual combinations. Given that culture has an influence on thinking style, future could explore ways that in different products like functional products or prestige products. Not only products which can be seen, but also any other things can be felt such as prior authors (Monga, 2010) explored ways in which culture impacts on branding issue. Analytic and holistic thinking might also influence the non-visual element too. The element can be verbal, haptic and so on. Easterners and Westerners may existed some different in this area. Research can find some rules in this direction.

Another related topic for the future research is the influences on non-quality evaluation. Researcher can explore to other evaluations. In this research, it only tested quality evaluation, but in real life there are some other evaluations.

Summary

Product evaluation research has long tradition of referring to examine how consumers evaluate product from product itself in an attempt to understand why certain products are high perceived or poor perceived. The key finding from this literature suggested that consumer judged product in terms of the degree to which the extension fitted with the standard and high evaluative package in their minds. Usually when consumers make buying decision, they always recall the memory of the standard and high evaluation products in their minds. The better fitting perceptions would be more favorable than the poor fitting ones.

These findings indicate that culture is an important reason that influences on consumers' responses to product evaluations. Cultures vary in the way which design-based package fits. Westerners evaluate products differently than Easterners due to cross-cultural differences in styles of thinking. Two cultures of people have differences in design-based product evaluation. In most cases, Easterners provide more favorable evaluations of a new product package design than Westerners do.

The primary purpose of study 1 was to explore consumers from Eastern cultures evaluated quality from package differently than consumers from Western cultures under the implicit condition. It needed to certify this issue in three dimensions: from the whole package evaluations perspective; from the design elements perspective; and from change degree perspective. The second purpose was to identify samples of consumers that would suitably represent a Western and an Eastern culture. The last purpose was to find whether Western consumers and Eastern consumers were the same sensitivities to the changes of design.

In study 1a, it was conducted to test the styles of thinking. Author investigated cultural differences using samples of German and Chinese students with the same background. EFT provided evidences of German and Chinese samples had different thinking styles. The German

sample found more embedded figures than Chinese did in complicated graphs. The Germany sample represented an analytic style of thinking associated with Westerns, whereas the Chinese sample represented a holistic style of thinking associated with Easterners. This conclusion was not special because prior authors had used this test efficiently certify: the more one can find, the more analytical the person would be.

In study 1a, author compared the whole package quality evaluation. Participants were asked to evaluate the qualities of new bottles in a limited time after learning what highest wine package was. It provided evidence that in most cases from the whole package perspective consumers from Eastern cultures evaluated quality more favorably than consumers from Western cultures. Culture became to be an important reason of explaining the differences. In order to confirm culture was the core reason caused the differences, author introduced the mediation analysis of the holistic and analytic thinking. Thinking as a mediator of the cultures passed the mediation analysis test. This coincided with analysis in theoretic part. Holistic thought involved an orientation to the context or field as a whole, including attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships. Analytic thought involved detachment of the object from its context, a tendency to focus on attributes of the object in order to assign it to categories, and a preference for using rules about the categories to explain and predict the object's behavior. These findings supported the view that cultural differences in styles of thinking led to differences in the way that Eastern versus Western consumers responded to product evaluation.

Author also analyzed consumers' product evaluations from the design elements perspective. The findings showed that among six design elements, for Easterners 5 elements were significant in the process of evaluations. Label position was not significant. The result part provided the Mean of every element in three changed levels. The data showed that German samples perceived lower scores in three levels. Chinese were more favorable to the changes in design elements. They gave higher scores of quality evaluation and also higher scores of 3 levels changes.

In study 1b, author tried to find how consumers evaluated the different levels of change bottles. So in study 1b, it first tested the all the new bottles which selected. A series of changed bottles marked extremely high changed, high changed, moderate changed, low changed and extremely

low changed respectively. Author wanted to know how Westerners and Easterners reacted to the different levels of changes. After analyzed the data, author found that Germans and Chinese had different evaluations in the same changed level of bottles. But this was not enough; it made us want to know more about their sensitivity towards changes. Next author made a comparison of sensitivity between two changed levels. Author found that the sensitivity of Eastern and Western consumers existed differences. Author found that Westerners were more sensitive to the changes when package in extremely changed condition.

In study 2 the experiments was run in explicit condition. The primary purpose of study 2 was to explore consumers from Eastern cultures evaluated quality from package differently than consumers from Western cultures under the explicit condition. Research certified this issue in three dimensions as study 1 did: from the whole package evaluations perspective; from the design elements perspective; and from change degree perspective. Except this, one more hypothesis was about the condition comparison. It tested that consumers from Eastern and Western cultures both had the same evaluations toward design-based package in the implicit and explicit condition. This hypothesis contained two directions: Consumers from Eastern or Western cultures have the same evaluations toward design - based package under the two conditions and consumers from Eastern or Western cultures have the same sensitivities toward design - based package changes under the two conditions.

As anticipated, The German sample found more embedded figures than did Chinese in complicated graphs. In study 2, the same comparison of the whole package quality evaluation did. It provided evidences that in most cases from the whole package perspective consumers from Eastern cultures evaluated quality more favorably than consumers from Western cultures. In explicit conditions, consumers could see the standard bottle when they evaluated. In order to confirm culture was the core reason causes the differences, author introduced the mediation analysis of the holistic and analytic thinking. Thinking as a mediator of the cultures passed the mediation analysis test.

In study 2, author analyzed consumers' product evaluation from the design elements perspective. This time all the six elements were significant in the process of evaluation. This is to say in explicit condition, participant can notice all the elements. In the result part author also provided

the Means of every element in three changed levels. The data showed that German samples perceived lower scores in 3 levels. Chinese were more favorable to the changes of design elements. They gave higher scores of quality evaluation and also higher scores of 3 levels of changes. In study 2, author wanted to know how Westerners and Easterners reacted to the different levels of changes in explicit condition. Results showed that Germans and Chinese had different evaluations in the same changed level of bottles. Next a comparison of sensitivity between two changed levels was made. It showed that the sensitivity differences of Eastern and Western consumers existed. Westerners were more sensitive to the changes when package in extremely changed condition.

In the last part of study 2, Comparisons were under implicit and explicit conditions. The purpose was to see under the two conditions whether the same group of people had the same view of product perception. In most cases, there were no significant different between the two conditions. Both of Chinese and Germans had the same results.

Zusammenfassung

Das Forschungsgebiet der Produktbeurteilung hat eine lange Tradition in Bezug auf die Thematik, wie der Konsument auf der Basis des Produktes an sich, dessen Beurteilung vornimmt. Ziel dieser Untersuchungen ist es zu verstehen warum einige Produkte besser und andere Produkte schlechter bewertet werden. Das Schlüsselergebnis der diesbezüglichen Literatur weist darauf hin, dass Konsumenten ein Produkt auf Grund des Grades der Übereinstimmung der neuen Verpackung mit einem Standard oder mit einem bereits als positiv bewerteten Produkts bewerten. Im Allgemeinen greifen Konsumenten während ihrer Kaufentscheidung immer auf Erinnerungen an einen Standard oder an ein bereits als positiv bewertetes Produktes aus ihrem Gedächtnis zurück. Eine als höher wahrgenommene Übereistimmung wird als positiver bewertet als die als niedriger wahrgenommenen.

Unsere Ergebnisse deuten darauf hin, dass die Kultur ein bedeutender Faktor ist, der das Konsumentenverhalten hinsichtlich der Produktbeurteilung beeinflusst. Die Kultur variiert die Art und Weise, wie eine Design basierende Verpackung als passend bewertet wird. Menschen westlich orientierter Kulturen bewerten Produkte anders als Menschen östlich orientierter Kulturen, auf Grund von interkulturellen Unterschieden hinsichtlich ihrer Denkweisen. Menschen zweier Kulturen weisen Abweichungen bei der Produktbeurteilung basierend auf dem Design auf. Zum größten Teil bewerten Personen östlicher Kulturen ein neues Verpackungsdesign positiver als Menschen westlicher Kulturen.

Das Hauptziel der Studie 1 war es zu erforschen, ob sich die Qualitätsbeurteilungen eines Produktes basierend auf seiner Verpackung durch Konsumenten aus östlichen Kulturen von der Beurteilung durch Konsumenten aus westlichen Kulturen unter impliziten Bedingungen unterscheiden. Es ist erforderlich diesen Sachverhalt hinsichtlich drei Dimensionen zu verifizieren: Aus der Perspektive der Beurteilung des Gesamtbildes der Verpackung, aus der Perspektive der Designelemente und aus der Perspektive des Grades der Veränderung. Das zweite Ziel war es Konsumentengruppen für die Stichprobe zu finden, die eine westliche oder

eine östliche Kultur angemessen repräsentieren. Das letzte Ziel war es herauszufinden, ob westlich orientierte Konsumenten und östlich orientierte Konsumenten gleichermaßen empfindlich gegenüber Veränderungen des Designs sind.

Die Studie 1a wurde genutzt um eingangs die unterschiedlichen Denkweisen zu überprüfen. Ich habe die kulturellen Unterschiede mittels einer Stichprobe bestehend aus deutschen und chinesischen Studenten überprüft. Der EFT lieferte den Beleg dafür, dass deutsche und chinesische Probanden unterschiedliche Denkweisen haben. Deutsche Probanden fanden mehr eingebettete Figuren in komplexen Schaubildern als chinesische Probanden. Die deutschen Testpersonen repräsentieren eine analytische Denkweise, die mit westlichen Kulturen assoziiert wird, während chinesischen Probanden eine holistische Denkweise repräsentieren, die mit östlichen Kulturen verbunden ist. Dies ist keine besondere Erkenntnis, da in vorangegangenen Forschungsarbeiten dieser Test bereits effizient zur Überprüfung genutzt wurde: umso mehr Figuren gefunden werden, umso analytischer ist die Person.

In der Studie 1a habe ich die gesamte Beurteilung der Produktqualität verglichen. Die Teilnehmer wurden gebeten die Qualität einer neuen Weinflasche, innerhalb einer begrenzten Zeitspanne nach dem Erlernen der höchsten Qualität einer Weinverpackung, zu beurteilen. Dies lieferte den Beleg dafür, dass aus der Perspektive des Gesamtbildes der Verpackung in den meisten Fällen die Konsumenten östlicher Kulturen die Qualität höher bewerten als Konsumenten westlicher Kulturen. Die Kultur wurde zu einem bedeutenden Erklärungsfaktor dieser Unterschiede. Um zu bestätigen, dass die Kultur der Kerngrund für die Unterschiede war, führte ich eine Mediation Analyse durch. Der Mediation Analyse Test bestätigt, dass die Denkweise als Mediator der Kulturen anzusehen ist. Das holistische Denken umfasst eine Ausrichtung auf den Kontext oder auf einen Gesamtbereich und beinhaltet die Kenntnisnahmen von Verbindungen zwischen einem Objekt im Fokus und dem Umfeld. Das analytische Denken umfasst die Trennung eines Objektes aus seinem Kontext und die Tendenz Attribute eines Objektes zu fokussieren um diese Kategorien zuzuordnen. Diese Ergebnisse stützen die Auffassung, dass die kulturellen Unterschiede der Denkweisen zu Gegensätzen bei der Art und Weise des westlichen und östlichen Konsumentenverhaltens bezüglich der Produktbeurteilung führen.

Weiterhin habe ich die Produktbeurteilung des Konsumenten aus der Perspektive der Designelemente analysiert. Die Ergebnisse belegen, dass sich von sechs Designelementen fünf Elemente signifikant auf den Bewertungsprozess auswirken. Auf Personen östlicher Kulturen hatte die Position des Labels keinen signifikanten Effekt. Aus der Teilung der Daten resultiert, dass deutsche Probanden innerhalb der drei Stufen der Veränderungen die Qualität als geringer bewerteten. Chinesen waren positiver gegenüber Veränderungen. Sie bewerteten die Produktqualität allgemein und ebenfalls innerhalb der drei Stufen der Veränderungen mit höheren Werten.

In der Studie 1b habe ich versucht festzustellen wie Konsumenten die unterschiedlichen Stufen der Veränderungen der Weinflaschen bewerten. Infolgedessen wurde in der Studie 1b eingangs alle neu ausgewählten Flaschen geprüft. Eine Reihe veränderter Flaschen wurden entsprechend als extrem stark verändert, stark verändert, moderat verändert, wenig verändert und extrem wenig verändert gekennzeichnet. Ich wollte herausfinden wie Personen westlicher und östlicher Kulturen auf die unterschiedlichen Grade der Veränderung reagieren. Nach der Datenanalyse habe ich entdeckt, dass Deutsche und Chinesen denselben Grad der Veränderung der Weinflaschen unterschiedlich bewerten. Aber dies war nicht genug. Wir wollten mehr über ihre Sensibilität gegenüber Veränderungen erfahren. Anschließend führten wir einen Vergleich der Sensibilität zwischen zwei Graden durch. Wir fanden heraus, dass Personen westlicher Kulturen sensitiver gegenüber Veränderungen sind, wenn die Verpackung in einem extremen Grad verändert wird.

In Studie 2 wurden die Experimente unter expliziten Konditionen durchgeführt. Das primäre Ziel der Studie 2 war es die Unterschiede bei der Qualitätsbeurteilung basierend auf der Verpackung zwischen Konsumenten östlicher Kulturen und Konsumenten westlicher Kulturen unter expliziten Bedingungen zu untersuchen. Die Untersuchung dieser Thematik wird analog zur Studie 1 in drei Dimensionen verifiziert: Aus der Perspektive des Gesamtbildes der Verpackung, aus der Perspektive der Designelemente und aus der Perspektive des Grades der Veränderung. Außerdem hatten wir eine Hypothese bezüglich des Vergleiches der Bedingungen. Diese Hypothese beinhaltete zwei Richtungen: Konsumenten aus östlichen oder westlichen Kulturen weisen die gleichen Beurteilungen bezüglich Design basierten Veränderungen unter den beiden Bedingungen auf und Konsumenten östlicher und westlicher Kulturen weisen die identische

Sensitivität gegenüber Design basierten Änderungen der Verpackungen unter den beiden Bedingungen auf.

Wie erwartet fanden die deutschen Probanden mehr eingebettete Figuren als die chinesischen Testpersonen in den komplexen Schaubildern. In der Studie 2 wurde der identische Vergleich hinsichtlich der Qualitätsbewertung des Gesamtbildes der Verpackung durchgeführt. Dies liefert den Nachweis, dass in dem meisten Fällen aus der Perspektive des Gesamtbildes der Verpackung Konsumenten aus östlichen Kulturen die Qualität positiver bewerten als Konsumenten aus westlichen Kulturen. Unter expliziten Bedingungen konnten die Konsumenten eine Flasche die als Standard dient, während der Beurteilung sehen. Um zu bestätigen, dass die Kultur der Kerngrund für die Unterschiede war, führten wir eine Mediaation Analyse durch. Der Mediaation Analyse Test bestätigt, dass die Denkweise als Mediator der Kulturen anzusehen ist.

In der Studie 2 wird die Produktbeurteilung der Konsumenten aus der Perspektive der Designelemente analysiert. Dieses Mal beeinflussten alle sechs Elemente den Prozess der Bewertung signifikant. Es ist zu betonen, dass unter expliziten Bedingungen Probanden alle Elemente wahrnehmen können. In unserem Teilergebnis haben wir weiterhin die Mittelwerte jedes Elementes in drei Veränderungsgraden erhoben. Die Daten weisen darauf hin, dass deutsche Probanden eine geringere Produktqualität innerhalb der drei Veränderungsgraden wahrnehmen. Chinesische Personen waren positiver gegenüber Veränderungen der Designelemente. Sie vergeben höhere Bewertungen bei der Qualitätsbeurteilung und ebenfalls höhere Bewertungen bei den drei Graden der Veränderung. In der Studie 2 wollte ich herausfinden wie Personen westlicher und östlicher Kulturen auf die unterschiedlichen Grade der Veränderungen unter expliziten Bedingungen reagieren. Die Ergebnisse belegen, dass Deutsche und Chinesen bei demselben Grad der Veränderung der Weinflaschen unterschiedliche Bewertungen aufweisen. Anschließend wurde ein Vergleich der Sensitivität zwischen zwei Graden der Veränderung durchgeführt. Der Vergleich zeigt, dass Unterschiede zwischen östlichen und westlichen Konsumenten bei der Sensitivität bestanden. Personen westlicher Kulturen waren sensitiver hinsichtlich der Veränderungen, wenn die Verpackung extrem verändert wurde.

In dem letzten Teil der Studie 2 fanden die Vergleiche unter impliziten und expliziten Bedingungen statt. Ziel war es unter diesen zwei Bedingungen herauszufinden, ob identische Personengruppen eine einheitliche Auffassung der Produktperzeption hat. Meistens konnten keine signifikanten Unterschiede auf Grund der zwei Bedingungen festgestellt werden.

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Appendix

18 new bottles

Questionnaire (German version): implicit condition

3%

Auf der folgenden Seite sehen Sie eine Standardweinflasche, welche sechs Verpackungselemente enthält: Flaschenform,Kapsel,Logo,Name,Bild,Bildposition.

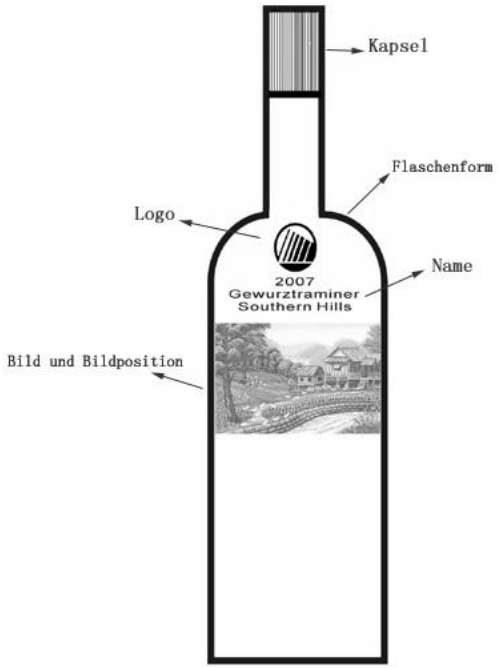
Diese sechs Elemente werden in den folgenden Abschnitten des Fragebogens verändert – manchmal nur geringfügig, manchmal stark. Ich hoffe, Sie finden diese kleinen oder großen Veränderungen und beurteilen die folgenden 18 Weinflaschen.

Die Befragung setzt sich aus drei Teilen zusammen, welche insgesamt 12 bis 15 Minuten in Anspruch nehmen.

Ich möchte Sie bitten, sich bei der Beurteilung nicht von Ihren persönlichen Präferenzen leiten zu lassen, sondern sich nur an der Standardweinflasche zu orientieren.

Continue

5%



Oben sehen Sie die Standardweinflasche. Schauen Sie sich die sechs Elemente bitte genau an. Betrachten Sie die Flasche solange Sie möchten.

Continue

8%

Teil 1:

In diesem Teil sehen Sie nacheinander die sechs Elemente der Weinflasche. Von jedem Element werden drei Versionen gezeigt – das Standardelement, eines, das kleine, und eines, das große Veränderungen aufweist. Markieren Sie bitte jeweils das Element der Standardweinflasche. Sollten Sie das falsche Element gewählt haben, werden Sie aufgefordert, Ihre Wahl zu korrigieren.
Sobald Sie das richtige Element markiert haben, gelangen Sie zur nächsten Frage.

Continue

10%

Markieren Sie bitte das Standardlogo.

Continue

13%

Markieren Sie bitte das Standardbild.

Continue

15%

Markieren Sie bitte die Standardschriftart des Namens.

2007
Gewurztraminer
Southern Hills

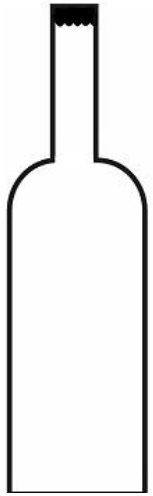
2007
GEWURZTRAMINER
SOUTHERN HILLS

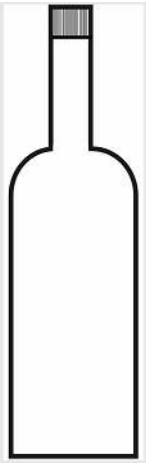
2007
Gewurztraminer
Southern hills

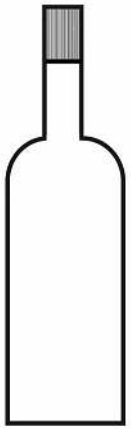
Continue

18%

Markieren Sie bitte die Standardkapsel.



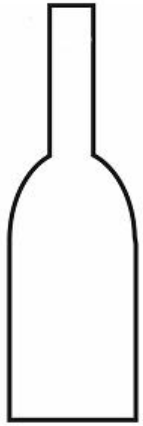


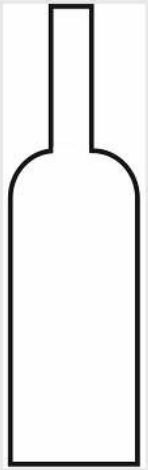


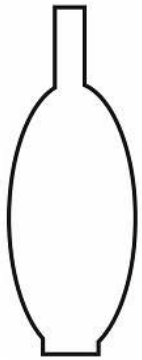
Continue

20%

Markieren Sie bitte die Standardform der Flasche.



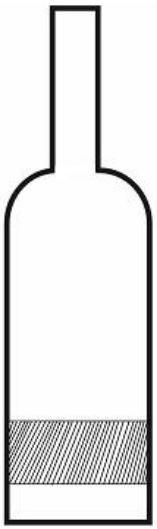


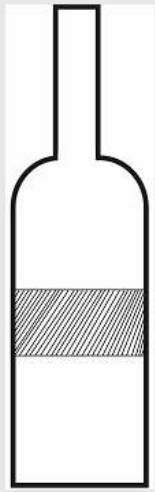


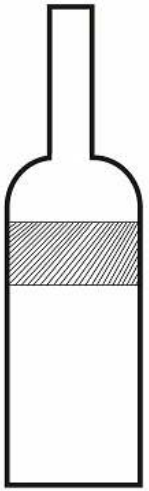
Continue

23%

Markieren Sie bitte die Standardposition des Bildes.







Continue

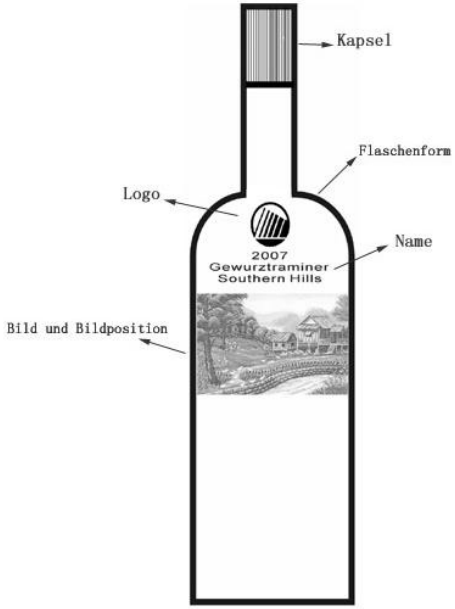
25%

Teil 2:

In diesem Teil bewerten Sie bitte 18 Weinflaschen.
Die Standardweinflasche bekommt 101 Punkte, da sie einen qualitativ hochwertigen Wein enthält. Die neuen Flaschen, die Sie sehen werden, weisen Veränderungen zu der Standardweinflasche auf; die Qualität des Weines in der neuen Flasche ändert sich mit den Veränderungen der Flasche.
Je ähnlicher eine Flasche der Standardflasche ist, umso höher ist die Qualität des Weines. In anderen Worten: Je mehr Unterschiede eine Flasche zur Standardflasche aufweist, desto geringer ist die Qualität des Weines. Bewerten Sie anhand der Veränderungen, die die Flasche aufweist, die Qualität des Weines. Hohe Werte bedeuten hohe Qualität des Weines, niedrige Werte geringe Qualität.

Continue

28%



Oben sehen Sie die Standardweinflasche. Schauen Sie sich die sechs Elemente bitte genau an. Betrachten Sie die Flasche solange Sie möchten.

Continue

30%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

33%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

35%

38%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

40%

Qualitätsbewertung des Weines in dieser Flasche

Continue

43%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

45%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

48%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

50%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

53%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

55%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

58%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

60%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad — extremely good

1

Continue

63%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad — extremely good

1

Continue

65%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

68%

Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

70%

Qualitätsbewertung des Weines in dieser Flasche

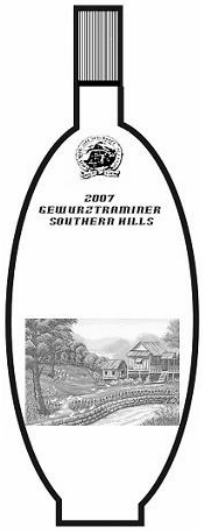
extremely bad

extremely good

1

Continue

73%



Qualitätsbewertung des Weines in dieser Flasche

extremely bad

extremely good

1

Continue

75%

I have strong interest in wine?

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

4

I value wine as an important part of my current lifestyle.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

4

How much do you feel you know about wine?

Very little 1 2 3 4 5 6 7 Very much

4

Continue

78%

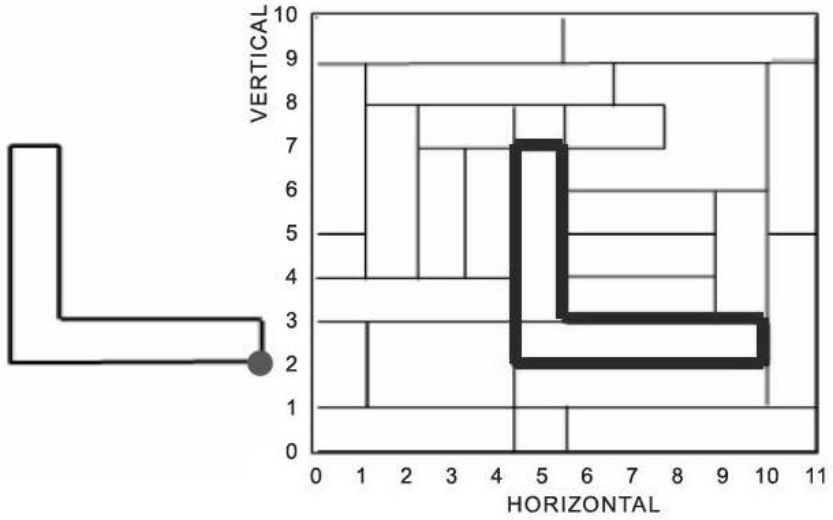
Teil 4

Einleitung

Die folgende Aufgabe testet Ihre Fähigkeit einfache Formen in komplexen Mustern zu erkennen.

Sie haben nur **1 Minute** for **jede Figur.**

Beispiel: Die einfache L-Figur (linke Seite) ist in dem rechten Muster versteckt. Bitte geben Sie die Position der Figur in dem komplexen Muster an, indem Sie die Koordinaten der Ecke mit dem markierten Punkt mit Hilfe der Koordinaten neben dem Muster bestimmen.



Vertikale Position (↑): 2

Horizontale Position (→): 10

Achtung:

1. Die einfache Form (links) besitzt im komplexen Muster immer:
-die selbe Größe
-die selben Proportionen
-die selbe Ausrichtung
2. Innerhalb des komplexen Musters ist die simple Form immer nur ein Mal enthalten

Bitte geben sie die ungefähre Position (vertikal von unten nach oben; horizontal von oben nach unten) an.

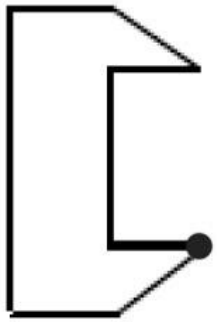
Für jede Figur haben Sie genau **1 Minute (60 Sekunden)**. Sie werden nach dieser Zeit automatisch weitergeleitet.

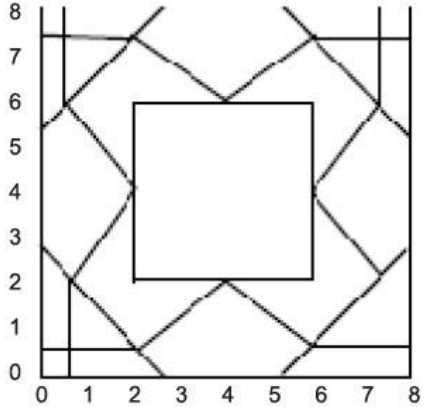
Continue

Der Test beginnt – die Zeit läuft

Continue

83%





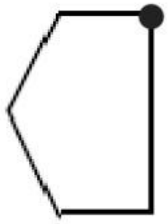
Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

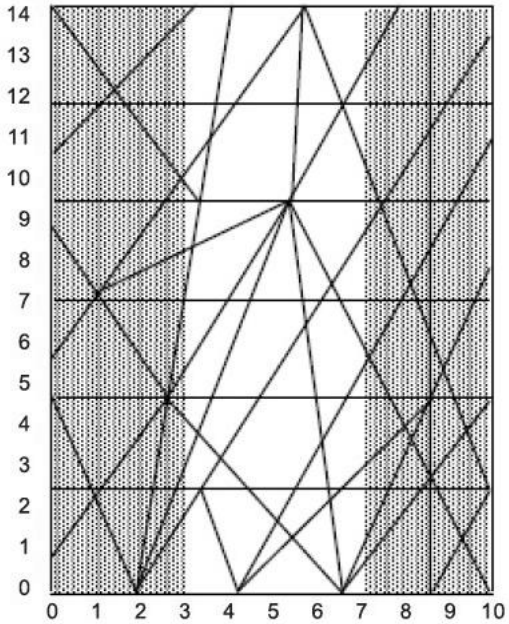
VertiKale Position (↑) 0

Horizontale Position (→): 0

Continue

85%





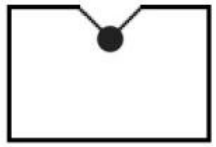
Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

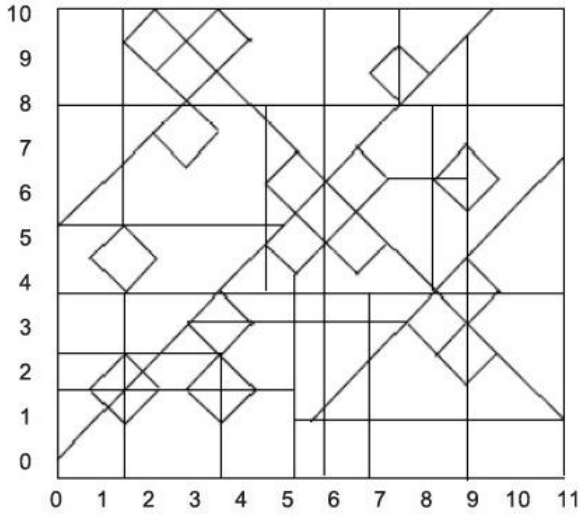
Vertikale Position (↑): 0

Horizontale Position (→): 0

Continue

88%





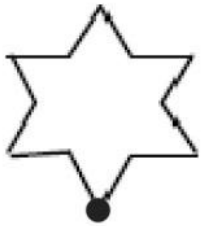
Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

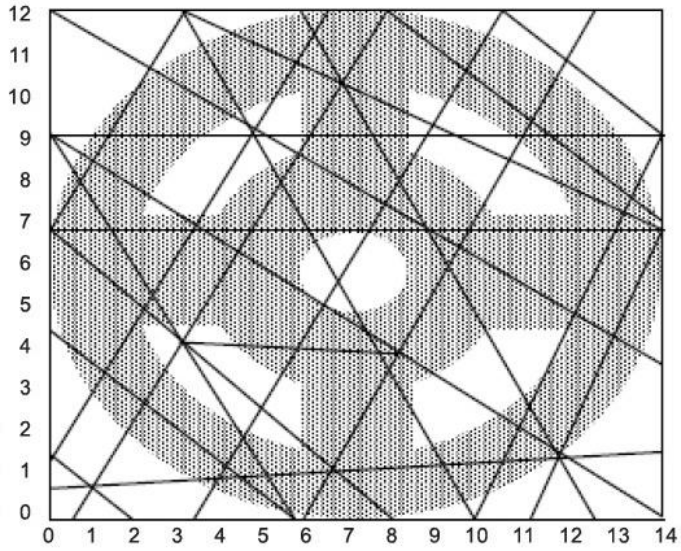
Vertikale Position (↑): 0

Horizontale Position (→): 0

Continue

90%





Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

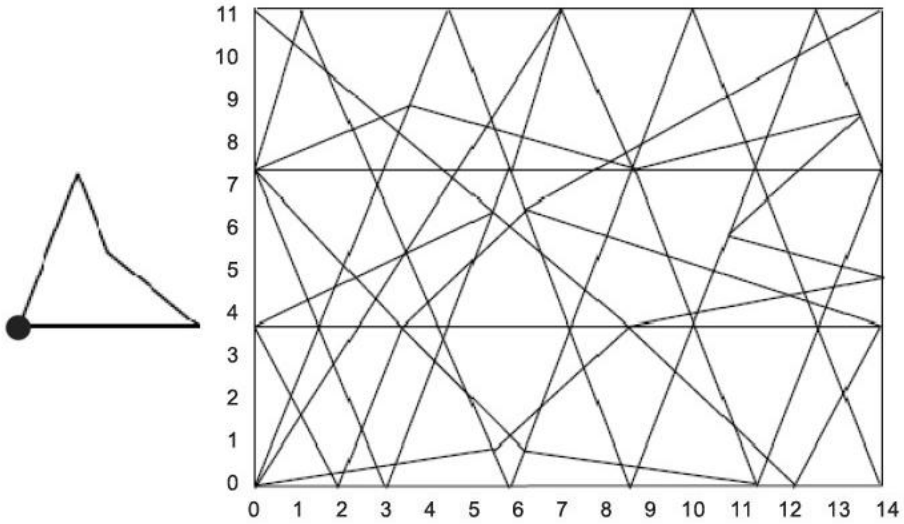
Vertikal Position (↑): 0

Horizontale Position (→): 0

Continue

93%

95%



Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

Vertikale Position (↑) 0

Horizontale Position (→): 0

Continue

Bitte geben Sie zum Abschluss Ihr Alter und Geschlecht an:

Alter:

Geschlecht:

- ○ männlich
- ○ weiblich

Bitte machen Sie sich bereit zur nächsten Seite. Sie können gewinnen Gutscheine.

Continue

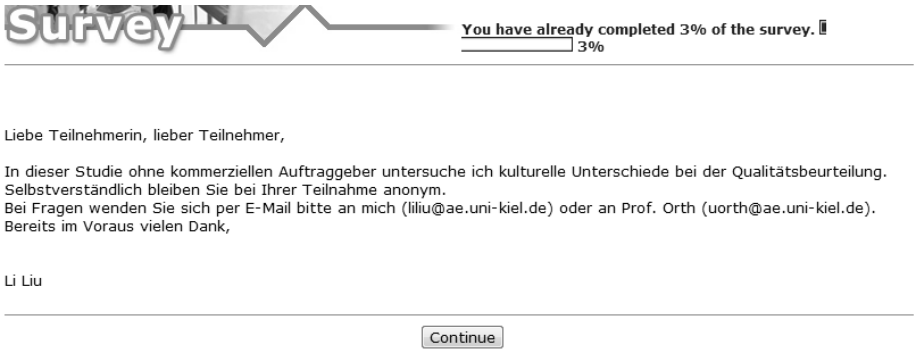
UNIPARK THE ACADEMIC ONLINE-RESEARCH NETWORK

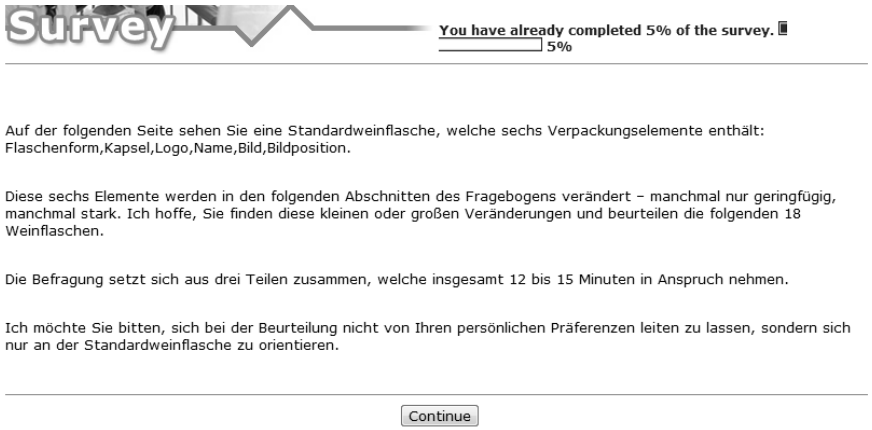
100%

Herzlichen Dank für Ihre Hilfe!

Sollten Sie zum Experiment Fragen haben, wenden Sie sich gerne an mich: lliu@ae.uni-kiel.de

Questionnaire (German version): explicit condition





Survey

You have already completed 10% of the survey.
10%

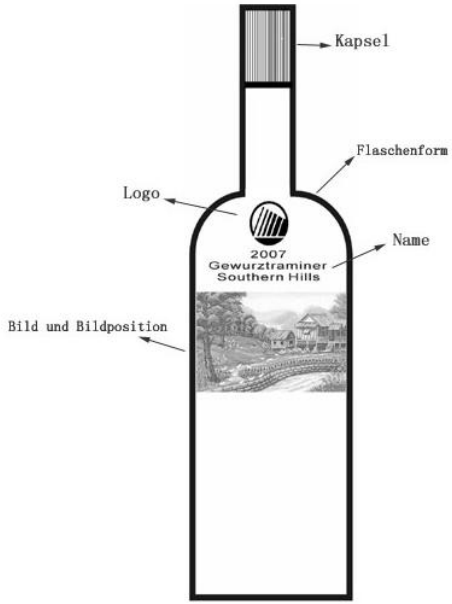
Teil 1:

In diesem Teil sehen Sie nacheinander die sechs Elemente der Weinflasche. Von jedem Element werden drei Versionen gezeigt – das Standardelement, eines, das kleine, und eines, das große Veränderungen aufweist. Markieren Sie bitte jeweils das Element der Standardweinflasche.
Sollten Sie das falsche Element gewählt haben, werden Sie aufgefordert, Ihre Wahl zu korrigieren.
Sobald Sie das richtige Element markiert haben, gelangen Sie zur nächsten Frage.

Continue

Survey

You have already completed 8% of the survey.
8%



Oben sehen Sie die Standardweinflasche. Schauen Sie sich die sechs Elemente bitte genau an. Betrachten Sie die Flasche solange Sie möchten.

Continue

Survey

You have already completed 13% of the survey.
13%

Markieren Sie bitte das Standardlogo.

Continue

Survey

You have already completed 15% of the survey.
15%

Markieren Sie bitte das Standardbild.

Continue

Survey

You have already completed 18% of the survey.
18%

Markieren Sie bitte die Standardschriftart des Namens.

2007
Gewurztraminer
Southern Hills

2007
GEWURZTRAMINER
SOUTHERN HILLS

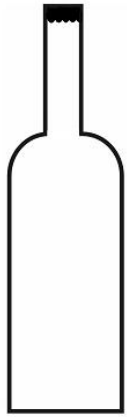
2007
Gewurztraminer
Southern hills

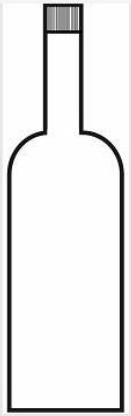
Continue

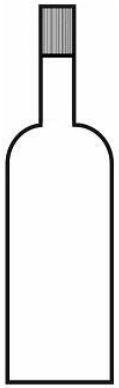
Survey

You have already completed 20% of the survey.
20%

Markieren Sie bitte die Standardkapsel.





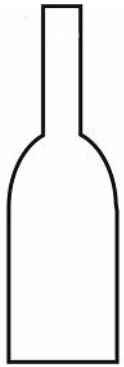


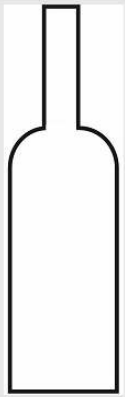
Continue

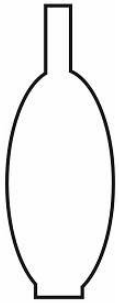
Survey

You have already completed 23% of the survey.
23%

Markieren Sie bitte die Standardform der Flasche.





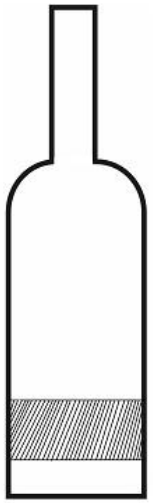


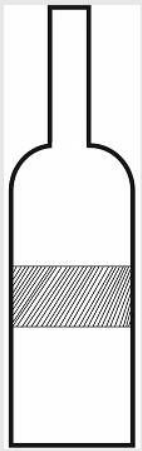
Continue

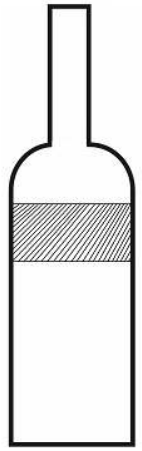
Survey

You have already completed 25% of the survey.
25%

Markieren Sie bitte die Standardposition des Bildes.







Continue

Survey

You have already completed 28% of the survey.
28%

Teil 3:

In diesem Teil sehen Sie nacheinander Bildpaare, bestehend aus der Standardweinflasche und je einer der 18 veränderten Weinflaschen. Vergleichen Sie bitte die linke mit der rechten Flasche genau und bewerten Sie dann die Qualität der auf der rechten Seite dargestellten Flasche. Dabei gelten die gleichen Regeln wie im vorangestellten Teil des Fragebogens. Je mehr die rechts abgebildete Flasche der Standardflasche ähnelt, desto höher ist die Qualität des Weines.

Continue

Survey

You have already completed 30% of the survey.

30%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 33% of the survey.

33%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 35% of the survey.
35%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 38% of the survey.
38%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 40% of the survey.
40%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 43% of the survey.
43%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 45% of the survey.
45%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 48% of the survey.
48%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 50% of the survey.
50%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 53% of the survey.
53%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 55% of the survey.
55%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 58% of the survey.
58%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 60% of the survey.

60%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

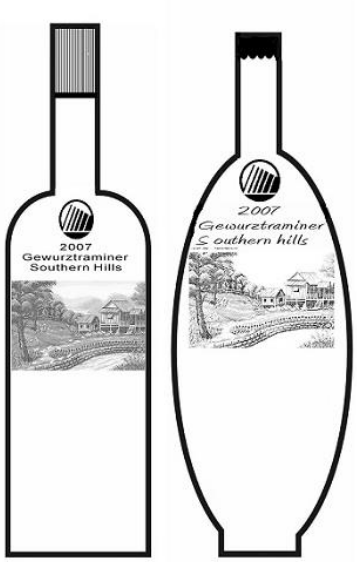
1

Continue

Survey

You have already completed 63% of the survey.

63%



Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 65% of the survey.

65%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 68% of the survey.

68%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 70% of the survey.
70%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 73% of the survey.
73%

Qualitätsbewertung des sich in der rechten Flasche befindlichen Weines

extremely bad — extremely good

1

Continue

Survey

You have already completed 75% of the survey. [75%

I have strong interest in wine?

Strongly disagree 1 2 3 4 5 6 Strongly agree 7 — 4

I value wine as an important part of my current lifestyle.

Strongly disagree 1 2 3 4 5 6 Strongly agree 7 — 4

How much do you feel you know about wine?

Very little 1 2 3 4 5 6 Very much 7 — 4

Continue

Survey

You have already completed 78% of the survey. [78%

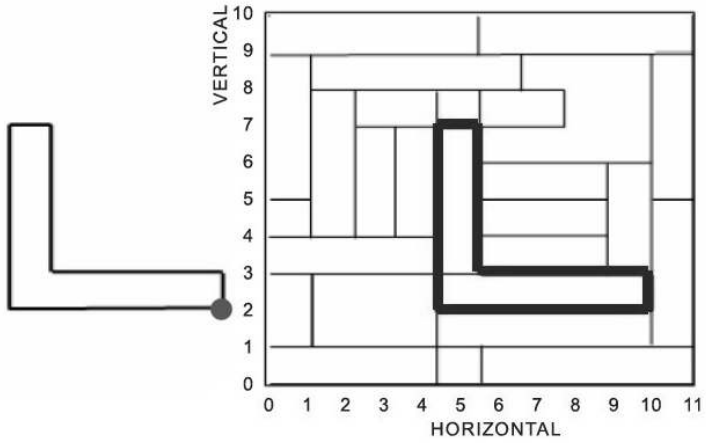
Teil 4

Einleitung

Die folgende Aufgabe testet Ihre Fähigkeit einfache Formen in komplexen Mustern zu erkennen.

Sie haben nur **1 Minute** for **jede Figur.**

Beispiel: Die einfache L-Figur (linke Seite) ist in dem rechten Muster versteckt. Bitte geben Sie die Position der Figur in dem komplexen Muster an, indem Sie die Koordinaten der Ecke mit dem markierten Punkt mit Hilfe der Koordinaten neben dem Muster bestimmen.



Vertikale Position (↑): 2

Horizontale Position (→): 10

Achtung:

1. Die einfache Form (links) besitzt im komplexen Muster immer:
-die selbe Größe
-die selben Proportionen
-die selbe Ausrichtung
2. Innerhalb des komplexen Musters ist die simple Form immer nur ein Mal enthalten

Bitte geben sie die ungefähre Position (vertikal von unten nach oben; horizontal von oben nach unten) an.

Für jede Figur haben Sie genau **1 Minute (60 Sekunden)**. Sie werden nach dieser Zeit automatisch weitergeleitet.

Continue

Survey

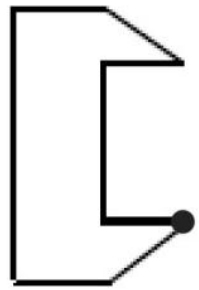
You have already completed 80% of the survey. [
80%

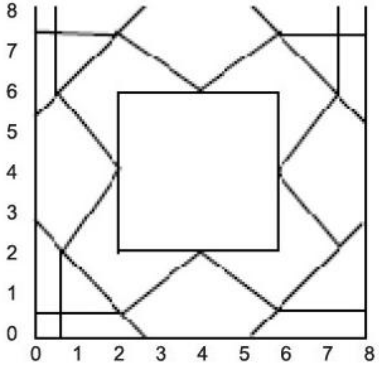
Der Test beginnt – die Zeit läuft

Continue

Survey

You have already completed 83% of the survey. [83%





Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

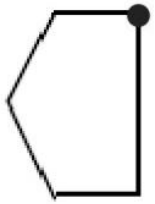
VertiKale Position (↑) 0

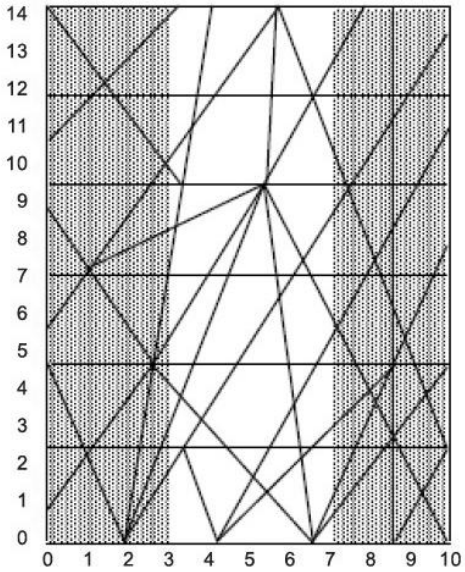
Horizontale Position (→): 0

Continue

Survey

You have already completed 85% of the survey. [85%





Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

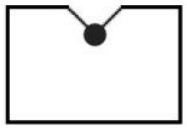
Vertikale Position (↑): 0

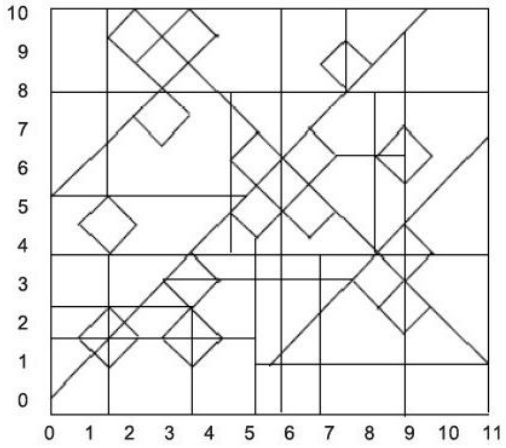
Horizontale Position (→): 0

Continue

Survey

You have already completed 88% of the survey. [88%





Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

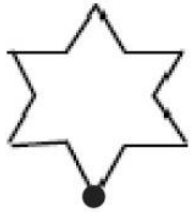
Vertikale Position (↑): 0

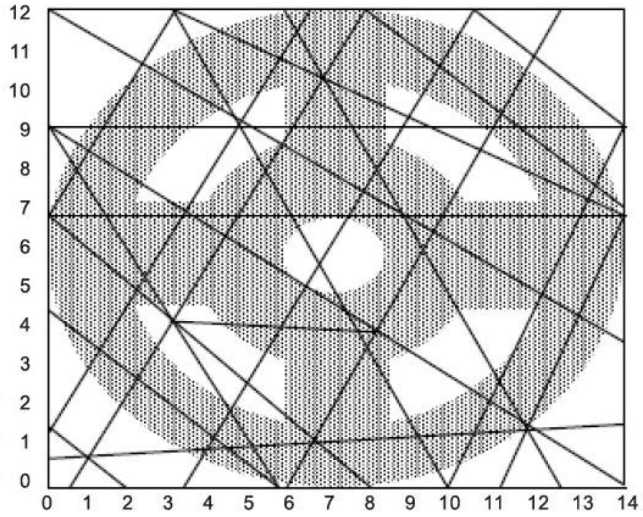
Horizontale Position (→): 0

Continue

Survey

You have already completed 90% of the survey. [90%





Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

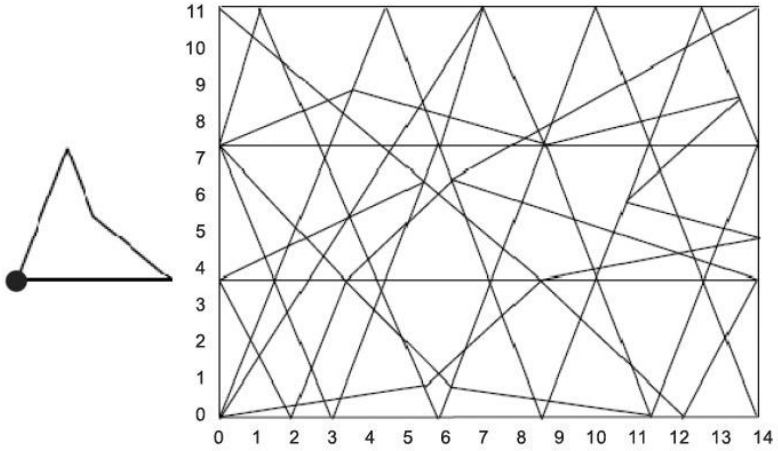
Vertikal Position (↑): 0

Horizontale Position (→): 0

Continue

Survey

You have already completed 93% of the survey. [93%



Bitte geben Sie die Position der einfachen Figur durch die Bestimmung des blauen Punktes an:

Vertikale Position (↑) 0

Horizontale Position (→): 0

Continue

Survey

You have already completed 95% of the survey. [95%

Bitte geben Sie zum Abschluss Ihr Alter und Geschlecht an:

Alter:

Geschlecht:

- männlich
- weiblich

Bitte machen Sie sich bereit zur nächsten Seite. Sie können gewinnen Gutscheine.

Continue

You have already completed 100% of the survey.[
100%

Herzlichen Dank für Ihre Hilfe!

Sollten Sie zum Experiment Fragen haben, wenden Sie sich gerne an mich: lliu@ae.uni-kiel.de

Curriculum Vitae

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Li Liu was born in June26th 1983, and lived Mianyang, Sichuan Province Southeast of China.

Education

Ph.D. student in A&F Marketing Christian-Albrechts-Universitäte Kiel)	February 2009- Present Kiel, Germany
M.S. in Regional Economics Northwest A&F University	September 2006 - January 2009 Xi'an, China
B.S. in Rural Development China Agricultural University	September 2001- July 2005 Beijing, China

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Research Interest:

Consumer behavior Research,
Consumer Psychology,
Cross-cultural Marketing