The effects of artwork in a boutique hotel

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The effects of artwork in a boutique hotel

by

Weicheng Chen

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF FINE ARTS

Major: Interior Design

Program of Study Committee:
Lee Cagley, Major Professor
Frederic Malven
Emily Morgan

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this thesis. The Graduate College will ensure this thesis is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University
Ames, Iowa
2019

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Art may play a significant role in boutique hotel design projects. The goal of this thesis is to analyze the role and effects that art could have in boutique hotel design process. This paper also explores several published articles that relate to this topic. According to these articles, the artistic features used as decorative elements in boutique hotels may affect customers’ behavior and psychology especially for some hotels with specific themes. Considering these factors, to research the value of art in boutique hotels, I finalized 3 research questions:

1. How could artworks enhance unique living/dining experience in a boutique hotel;

2. How art reinforce one’s behavioral intention in boutique hotels? This includes way-finding intention, path selecting habit and the formality of one’s activities.

3. What properties of art have the greatest effects on people’s behavior and impression forming system?
CHAPTER 1
INTRODUCTION

In any boutique hotel design projects, artwork plays a very significant role. No matter today’s design theory or future design trends, art may have predictable and unpredictable influences on both the customer and the hotel itself. This thesis argues that it is possible to enhance boutique hotels’ environment and improve customers’ experience by strategic use of artworks. People will also have different reactions to the artistic environment. This thesis considers the relationship between decorative arts and the spatial cognition of a boutique hotel. In order to help people better understand the importance of artwork, this chapter will generally introduce the reason why this topic is selected as a research subject and the feasibility of using artistic methods to change people’s behavior in daily life.

In modern society, aesthetic experience has been discussed as “sensual knowledge” (Baumgarten, 1758) or as “embodied phenomenology” (Merleau-Ponty, 1966), or along the lines of the concept of the “Aisthetik” [“Aesthetics”] (Böhme, 2001). Wilson (2002) said: “Art is, like emotion, a very complicated concept. In most cases, art can be characterized by the following features: it has a non-utilitarian purpose; is provocative (esthetically, intellectually, and spiritually); and values individual perspectives” (Wilson, 2002). When people talk about a boutique hotel’s environment, no matter they like or dislikes the space, the rationale behind the use of artwork is one of the most important standards to judge a hotel’s success. Experienced designers should know
how to use different artworks in all kinds of spaces to influence visitors’ emotional and behavioral reactions.

Artistic expressions, such as traditional and modern paintings, sculptures and photographs, etc. These different artworks are helpful on enhancing spatial cognition at the very beginning of the impression forming process. Artworks should be a tool to effectively re-emphasize a hotel theme and the hotel identity as well.

It is a designer’s responsibility to know how to select and use artworks in order to fit any type of hotel design project. Suitable works of art can help determine visitors initial impressions of a hotel and their overall experiences. Carefully selected and thoughtfully placed artworks also produce a strong visual impact to people and great first impressions. This is an overlooked function of artistic features in the boutique hotel design process.

However, most designers still confuse the role of art’s behavioral-changing theory, such as, what is the role aesthetic features play in boutique hotels? In fact, art is a concept that mix many aspects. Aesthetic perception elicited by works of fine art constitutes a complex response with cognitive, emotional, behavioral and physiological ingredients (Wolfgang; Volker; Trondle, 2011). Aesthetic features have many manifestations and potential possibilities to change a hotel’s environment and identity, but how to use them more cleverly, efficiently or even creatively is the core research subject of this thesis.

Aesthetic features relate to human psychology. They independently influence emotions (Kuppens, Realo, & Diener, 2008; Tamir & Robinson, 2007), thoughts (Krumhansl, 2002; Nisbett, Peng, Choi, & Norenzayan, 2001), and behavior (Anderson, Carnagey, & Eubanks, 2003; Yamagishi, Hashimoto, & Schug, 2008). In other words,
works of art can really contribute to some changes on both people and space. They affect not only the physical (behavior, kinesthetic, tactile) aspect, but also the psychological (emotional, mental, spatial cognition) aspect. A purpose of this thesis is to resolve and improve aesthetic problems that exist in current boutique hotel projects then analyze the feasibility to make a kind of “artistic behavior guide methodology” for future design theory. This thesis will analyze the data from literature reviews and two case studies, then answer “how artistic expressions change people’s behavioral reactions and spatial cognitions”. This thesis expects to help the reader gain inspiration and creativity to create harmonious living/dining environments in future boutique hotel design projects.

Significance of the Study

Today, hotels have become a very important part of our daily life. Travelers need a temporary place to live, so living and dining is the fundamental function of traditional hotel. But, the traditional hotel is becoming less popular due to people’s increasing higher social taste and needs. As a result, themed boutique hotels have become more and more popular. Boutique hotels satisfy both functional and psychological requirements. In many current boutique hotel design projects, decorative arts are significant especially for many unique themed hotels. Because of this, to research the potential possibility about art is pretty important for future boutique hotel design. Designers should know how to creatively use artistic expressions to enhance hotel identity and customers’ living/dining experiences.

This study focuses on the effects of art in future boutique hotel design trends and artistic behavioral guide methods. Based on all collected data and analysis from
literatures and case studies, this thesis tries to prove that the role of artwork in any boutique hotel is not only a simple functional decoration, but also a perfect tool to affect mood and behavioral habits of customers. Understanding the value of the works of art is always very important to both the customer or to the hotel owner. If a designer can effectively use different kinds of artworks and is able to achieve specific spatial goals, this interior design method will greatly enhance the efficiency of the hotel and its reputation. This thesis contends that it is feasible to improve customer's impression and behaviors through effective use of different artistic styles in the boutique hotel. In addition, this study is concerned with human psychology, through changing peoples’ emotions and mental statuses in boutique hotel, thus affecting customers' behavior and general satisfaction. This thesis argues interior designers to treat aesthetic features from only a “decorative object” to a kind of “behavioral guide method”. All research will prove that works of art have great feasibility to influence boutique hotel design trends in the future.

**Statement of Questions**

Art is a mysterious aspect of human life. Although its direct utility is still the object of recent debates, art is universal and exists in all cultures, and various explanations about its existence have been posited (Dissanayake, 2007). Today, many themed hotels have been built all over the world. They satisfy increasing needs of travel, commercial purposes, and educational purposes. More and more people have noticed that art is an interesting concept in the daily life, especially for the people who are looking for a high-taste life style. In any boutique hotel design project, works of art are unique features of human experience. They involve the complex interplay among stimuli,
persons, and contexts (Helmut, 2011). For most people, no matter what kind of style or environment a hotel has, artworks such as paintings, sculpture and decorative architectural details continuously affect every customer’s mental status ultimately influencing behaviors.

This thesis also explains the relationship between art and boutique hotel identity. Based on a hypothesis that creative artworks and aesthetic features can promote living/dining experience and affect people’s general impressions of a hotel, this thesis contends that art is able to influence people’s habits and activities in boutique hotels. And some physical or psychological differences will be produced after a person has contacted with an artwork. Based on this hypothesis, here are several research questions around this topic:

1. Can artwork really affect behavior and mental status of visitors to boutique hotels?
2. How does the composition of arts (location, arrangement, order of artworks) affect people’s behaviors?
3. How is artwork able to reinforce hotel identity and people’s experiences?
4. What is art’s role in the impression forming system?
5. How do artistic expressions affect the general spatial cognition of a hotel?

Goals, Objectives and Expectations

A purpose of this thesis is to prove that some overlooked functions of artworks should be re-emphasized in the spatial cognition forming process. In fact, art is a very complex concept in design theory, people’s aesthetic judgments is determined by an artwork’s content. Both anecdotally and experimentally, that aesthetics is influenced by
context. Behavioral studies have shown that presenting artworks accompanied with titles, text, and other forms of cognitive information can significantly influence an observer's reported evaluation of the artwork (Cupchik et al., 1994; Leder et al., 2006; Russell, 2003). Based on this view, it is possible to achieve some specific goals by using different kinds of artistic expression.

There are several hypotheses concerned with this topic. This thesis will consider the feasibility of those hypotheses through literature reviews, case studies and methodologies, then collect all data and make conclusions at last. These hypotheses will focus on the following elements:

1. The Composition of single/group works of art
2. Customers’ appreciation/reaction habits to a piece of artwork
3. Aesthetic feature and hotel’s identity
4. Art and the formality of people’s activities
5. Art and spatial cognition
6. The relationship between artwork and people’s behaviors

Definition of Terms and Key Words

Boutique Hotel: is a term used initially in the USA and the United Kingdom to describe a small hotel that typically has between 10 and 100 rooms in unique settings with upscale accommodations. (Karen, 2013)

Aesthetic experience: a philosophical study of certain states of mind—responses, attitudes, emotions—that are held to be involved in aesthetic experience. (The Critique of Judgment, 1790)
**Art appreciation:** a cognitive processing of art produces affective, often positive and self-rewarding aesthetic experiences. (A Model of Aesthetic Appreciation and Aesthetic Judgments, 2004)

**Psychology:** the study of behavior and mind, embracing all aspects of conscious and unconscious experience as well as thought. It is an academic discipline and a social science that seeks to understand individuals and groups by establishing general principles and researching specific cases. (Fernald LD (2008). *Psychology: Six perspectives* (pp. 12–15). Thousand Oaks, CA: Sage Publications.)

**Art movement:** is a tendency or style in art with a specific common philosophy or goal, followed by a group of artists during a restricted period of time, (usually a few months, years or decades) or, at least, with the heyday of the movement defined within a number of years.

**Interactive art:** a form of art that involves the spectator in a way that allows the art to achieve its purpose. Some interactive art installations achieve this by letting the observer or visitor "walk" in, on, and around them; some others ask the artist or the spectators to become part of the artwork. (Soler-Adillon, Joan (2015-12-21). "The intangible material of interactive art: agency, behavior and emergence")

**Abstract art:** Abstract art uses a visual language of shape, form, color and line to create a composition which may exist with a degree of independence from visual references in the world. (Rudolph Arnheim, *Visual Thinking*, 1969)
**Visual language:** a system of communication using visual elements. Speech as a means of communication cannot strictly be separated from the whole of human communicative activity which includes the visual (Colin Cherry, On Human Communication, MIT, 1968) and the term 'language' in relation to vision is an extension of its use to describe the perception, comprehension and production of visible signs.

**Art therapy:** Current art therapy includes a vast number of other approaches such as: person-centered, cognitive, behavior, Gestalt, narrative, Adlerian, family (systems) and more. The tenets of art therapy involve humanism, creativity, reconciling emotional conflicts, fostering self-awareness, and personal growth. (Wadeson, H., Durkin, J., & Perach, D. 1989. Advances in art therapy. New York: John Wiley & Sons). It is a creative method of expression used as a therapeutic technique. Art therapy originated in the fields of art and psychotherapy and may vary in definition.

**Environmental psychology:** an interdisciplinary field that focuses on the interplay between individuals and their surroundings. The field defines the term environment broadly, encompassing natural environments, social settings, built environments, learning environments, and informational environments.
CHAPTER 2
REVIEW OF LITERATURE

Reviewing literature is a very important step to help readers understand the meaning and importance of artwork in the research process; his step is also able to provide design inspirations and a theoretical basis for boutique hotel design projects. This chapter will try to elaborate on the relationship between human behavioral reactions and various properties of artwork. To achieve this goal, this chapter will focus on explaining what art is and how it works in daily hotel. There are three sub-topics that will be discussed in this chapter:
1. The relationship of art, aesthetics features, and boutique hotel
2. How art affects boutique hotel identity
3. Feasibility of using artistic expression to affect peoples’ behaviors

Relationship of Art, Aesthetic Features and Boutique Hotel

In this section, the three terms, “art”, “aesthetic”, and “boutique hotel” are defined to understand how they are related to each other

What is art?

According to Oxford dictionaries (“Art: definition”, Oxford Dictionaries): “Art is a diverse range of human activities in creating visual, auditory or performing artifacts (artworks), expressing the author's imaginative or technical skill, intended to be appreciated for their beauty or emotional power”. Today, though the definition of what
constitutes as art is disputed and has changed over time (Stephen Davies, 1991; Robert Stecker, 1997; Noël Carroll 2000), general descriptions mention an idea of imaginative or technical skill stemming from human agency and creation (Dr. Robert J. Belton, 2012). Art is an abstract concept that is more than a decorative object; it gives people an “emotional momentum” which influences human psychology, and changed participants’ behaviors. Art is a concept that not only has aesthetic characteristics itself, but also a bridge to connect humans’ mental world and reality.

![Figure 2.1 The traditional and new art models](source: Aesthetics of Revolution, Alexander Aston, 2013)

The book “WHAT IS ART?” explained the deeper meaning of art: “In general, art is not the expression of man’s emotions by external signs, but it is a means of union among men, joining them together in the same feelings, and indispensable for the life and progress toward well-being of individuals and of humanity” (Leo Tolstoy, 1897). Art is a
desire to convey meaning; is the giving of meaning to life; is the product of conscious intention; is an indulgence in sensuousness (Dr. Robert J. Belton, 1996).

An investigation from “Exploring Art in Early Childhood Education”, indicated that art is able to affect our behavior and psychology from a young age (Danielle Twigg; Susanne Garvis, 2010). The ability to feel art is distinctive, which is why artistic education is considered more and more significant in today’s early childhood education. For most people, our mental state can be easily influenced by various artworks, and we produce different emotions and reactions to different artworks.

A recent research report, “The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies,” indicated that in several small-group studies, children and teenagers who participated in arts education programs showed more positive academic and social outcomes in comparison to students who did not participate in those programs (James S. Catterall; Susan A. Dumais; Gillian Hampden, 2012, p.8). This is evidence shows that being artistically involved influence our social behaviors, even in early social interactive activities.

![Figure 2.2 How arts participation influences our social behaviors](Source: How art works, by NEA’s Office of Research & Analysis, 2012)
According to the investigation from NEA’s Office of Research & Analysis (2012), art is affecting us every day. Researchers illustrated how art influences the lives of individuals and their communities. Figure 2.2 presents the relationship between art and our society. This model shows art is a thing that originated from our life, and it is able to let participants get involved with it, while constantly affecting social behaviors.

Today, the meaning of art has changed. In general definition, artwork must be a physical object, it is a thing that allows people touch it or feel it. But in the psychological field, artwork is not only a physical “item”, but also a tool to refine our psychological and mental status, in other words, art has some invisible characteristics. It does not have to be an object, some sort of artistic sensations such as spatial cognition and atmosphere can be considered art as well. They exert their functions on the process of forming our emotional and behavioral impression.

For example, therapeutic art has been used in many spa boutique hotels all over the world (Figure 2.3). The tenets of art therapy involve humanism, creativity, reconciling emotional conflicts, fostering self-awareness, and personal growth (Wadeson, H., Durkin, J., & Perach, D, 1989, Advances in art therapy).

Therapeutic artworks are able to create a harmonious atmosphere in order to help people relax, then change their mental state. Therapeutic arts provide a meditative atmosphere. They are able to continuously influence people’s mental state and produce predictable behavioral changes after people have contacted with a specific artwork. This is an example of how artwork changes people’s behavior and psychology.
Aesthetic features

Aesthetic features are the reflection of aesthetic value. Bjarne Sode Funch (1997) in his book “The Psychology of Art Appreciation” (Bjarne Sode Funch, 1997) mentioned how aesthetic features work to change one’s psychology. In chapter one, “Formal Beauty and Aesthetic Pleasure” (Bjarne Sode Funch, 1997, p.32), the author thought people’s psychology and behaviors can be influenced by following aesthetic features:

- Reproduction of the appearance of objects or people.
- Composition or arrangement of elements.
- The artist’s feelings or emotions.
- The artist’s individual way of perceiving objects or the world as a whole.
• The artist’s beliefs or thoughts
• The artist’s imagination or fantasies
• Aesthetic norms or stylistic conventions characterizing the society or age in which the artist lived
• Surface qualities or textures
• Lines
• Colors
• Shapes

When someone is appreciating a piece of artwork, if this person cannot understand the meaning of it, the effect of this artwork is limited. In this case, aesthetic value becomes to the most direct way to let people judge if it is good or not. Aesthetic features provide a possibility to let people ignore the barrier of culture, language, country and religion. When people appreciate a piece of artwork, no matter if this person can totally understand the deeper meaning of this artwork, they may feel a sense of satisfaction, demonstrating the role that aesthetic features - play in spatial judgment.

Usually, the value of artistic feature is evaluated by aesthetic judgment ability. Aesthetic judgment happens whenever a person is appreciating a piece of artwork. Aesthetic judgments, like most judgments, depend on context. Whether an object or image is seen in daily life or in an art gallery can significantly modulate the aesthetic value humans attach to it (Ulrich Kirk, Martin, Oliver, Mark S. Semir, 2008).

Artistic features of an artwork can be defined as a composite or an aggregation of its aesthetic, cognitive, and, possibly, historical values. On this view, artistic features of a
work of art are thus influenced, but not entirely determined, by its aesthetic value. In fact, according to the research, “Brain correlates of aesthetic judgment of beauty” (Thomas Jacobsen, Ricarda I., Lea Hofel, D. Yves, 2005), in a chapter of comparison between “Beautiful versus not-beautiful judgment”, a picture of human brain’s activities showed that brain can produce obvious reactions especially to artwork with higher aesthetic value.

![Brain correlates of experimental tasks](image-url)

**Figure 2.4** Brain correlates of experimental tasks, (Source: Brain correlates of aesthetic judgment of beauty, 2005)

According to the record of brain activities, bar charts (Figure 2.4) depict maximal signal changes (% sc) for the two areas in which beautiful judgments (B) caused a higher signal than Non-beautiful (NB) judgments. It is evidence to prove that aesthetic features
can stimulate our brain. This kind of stimulation directly controls further behavior and overall impression. At the same time, it shows that humans’ behavioral changes to any art expression with high aesthetic value are instinctive, because this kind of aesthetic stimulation directly acts on our brain; it is instant, unavoidable stimulation.

Holmes Rolston (2002) in his book *Environment and the Arts: Perspectives on Environmental Aesthetics* explained the relationship between aesthetic value and nature. In chapter 10, he wrote:

Any aesthetic value is some kind of a construct, set up on human interaction with nature. It seems, must be anthropogenic (generated by humans), though perhaps not anthropocentric (centered on humans), in contrast to more biocentric or ecosystemic values. (Holmes Rolston, 2002)

This is the reason why aesthetic values affect people’s satisfaction whether or not they can totally understand meaning of each artwork. If a gorgeous, well designed artwork has extremely high aesthetic value, then it gives a strong visual and spiritual impact when people appreciate it. We gain satisfaction from artworks and naturally produce different reactions. As mentioned above, aesthetic stimulation that works on our brain is an instinctive, unavoidable process. This is why aesthetic features are important to the boutique hotel design project, because aesthetic features have the potential to affect our further behavioral guiding system.

**How Art Affects Boutique Hotel Identity**

The boutique hotel is a term used initially in the United States and the United Kingdom to describe a small hotel that typically has between 10 and 100 rooms in unique settings with upscale accommodations (Karen Tina Harrison, 2013). Today, boutique
hotels have become increasingly popular due to excess supply of homogenous chains and changing consumer expectations (Lara Özarslan, 2014). Boutique hotels are a preferred choice for people who are looking for higher taste and unique living/dining experiences. Arts are able to directly or indirectly affect a boutique hotel’s identity.

**About Boutique Hotel Identity**

Lucienne Anhar (2001) listed 3 primary features of boutique hotels: 1. architecture and design; 2. Service; 3. target market. Nine characteristics of boutique hotel were indicated: size, individuality, design, character (theme), location, culture, service, gastronomy and clientele.

Good experience is a very important standard to judge a hotel’s success. Artwork can be used as a tool to enhance customers’ impression and experience in the boutique hotel. Artwork provides a unique aesthetic experience and is able to create a harmonious or luxurious hotel environment, thus, having an effect on a boutique hotel’s identity. For example, symbolic arts are used in many hotels; sufficient and well-designed signs arts reduce stress and obstructed circulation in the service facility. For that reason, customer’s satisfaction may be influenced. (Zeithaml et al. 2006, p.336).

Artwork can affect both customers and the hotel itself. It is a tool for indirect communication to the customers and employees (Kasper et al. 2006, p.393). Implicit signals (symbols and artifacts), such as quality construction materials, artwork, photographs, floor coverings, or colors enhance a hotel’s identity and people’s impressions (Zeithaml et al. 2006, p.336).
Artwork is also important for a boutique hotel’s marketing strategy. Guests’ satisfaction, intent to return, and likelihood to recommend the hotel are important factors for success in the hospitality industry. Therefore, in developing a new hotel, the design team generally focuses on areas known to be strongly linked to these factors, namely the lobby, the guestrooms, the bathrooms, food and beverages, spas, the outside environment, and the artwork displayed around the hotel (Heide & Gronhaug 2009).

In hotels, style and comfort are two key factors that contribute to a luxury experience (Talbott, 2004). The design, style, and comfort of a hotel’s built-environment affect guest selection of their hotel, their satisfaction, and their likelihood to revisit or recommend a hotel (Heide & Gronhaug, 2009; Kasim, 2004; Ramsaran-Fowdar, 2007; Skogland & Siguaw, 2004). In fact, artwork indirectly determines a hotel’s identity, because art decides a hotel’s overall impression, style and theme. As the result, in many boutique hotel design projects, artwork is an important design element that is being incorporated into hotels more carefully (Curtis, 2001). For example, the Bellagio Hotel is a typical boutique hotel in Las Vegas. It has an exhibition gallery and displays various famous artworks in order to let customers get satisfaction from appreciating them.

Figure 2.5 The relationship of artwork, hotel and customer
Artwork is a multifunctional medium that connects both hotel identity and customers (figure 2.5). Well-designed artwork is a perfect tool to express a hotel’s style, theme and philosophy. Art can even affect guests’ mental satisfaction, and guide or misguide their future emotions and behaviors.

**Boutique hotel’s attributes that can be affected by artwork**

It is understood that art is able to affects customers’ satisfaction, but how is this theory use to enhance hotel identity in the design process? For example, service quality has been increasingly recognized as a critical factor in the success of any business (Grönroos, 1990; Parasuraman et al., 1988). Other factors, too, play a role: room size, site of building, variety of food, and friendliness of staffs are all important to hotel identity. Table 2.1 shows various boutique hotel attributes from literature since 1997.

**Table 2.1 Attributes of boutique hotel identity in literature from 1997**

(Source: Why Tourists are attracted to Boutique Hotels: Case of Penang Island, Malaysia, 2014)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th><strong>Boutique hotel attributes</strong></th>
</tr>
</thead>
</table>
| Callan & Fearon (1997)           | Size  
|                                  | Ownership  
|                                  | Service  
|                                  | Decoration  
|                                  | Provision of restaurant or leisure facilities  
|                                  | Design feature  
|                                  | High skilled and friendly staff  |
| Teo et al. (1998)                | Mutual characters  
|                                  | Small size  
|                                  | Low staff  
|                                  | High level of personalizes services  |
| Nobles & Thompson (2001)         | Size  
|                                  | Design  
<p>|                                  | Service  |</p>
<table>
<thead>
<tr>
<th>Year</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhar (2001)</td>
<td>Size&lt;br&gt;Ownership&lt;br&gt;Service&lt;br&gt;Decoration&lt;br&gt;Provision of restaurant or leisure&lt;br&gt;Facilities&lt;br&gt;Design feature&lt;br&gt;Quirky&lt;br&gt;Cozy place</td>
</tr>
<tr>
<td>Sangster (2002)</td>
<td>Great locations&lt;br&gt;Unique architectural designs&lt;br&gt;Abounding amenities&lt;br&gt;Personalized service&lt;br&gt;High-tech development&lt;br&gt;Stress-free/ relaxing environment&lt;br&gt;Well-known luxury brand</td>
</tr>
<tr>
<td>Rowe (2003)</td>
<td>Design&lt;br&gt;Location&lt;br&gt;History&lt;br&gt;Size&lt;br&gt;Old modernization buildings&lt;br&gt;Places of historical importance</td>
</tr>
<tr>
<td>Albazzaz et al. (2003)</td>
<td>Distinctive architecture and design&lt;br&gt;Offering warmth and intimacy</td>
</tr>
<tr>
<td>Victorino et al. (2005)</td>
<td>Offering different lifestyle amenities&lt;br&gt;Contemporary or very simple furnishing</td>
</tr>
<tr>
<td>Caterer Search (2005)</td>
<td>Size&lt;br&gt;Design&lt;br&gt;Location&lt;br&gt;Stylish</td>
</tr>
<tr>
<td>McDonnell (2005)</td>
<td>Old modernization buildings&lt;br&gt;Places of historical importance&lt;br&gt;Style&lt;br&gt;Distinction warmth and intimacy</td>
</tr>
<tr>
<td>Onstott (2006)</td>
<td>History of the building</td>
</tr>
<tr>
<td>Price water house Coopers (2006)</td>
<td>Size&lt;br&gt;Location&lt;br&gt;Contemporary and specialized decor&lt;br&gt;Being able to make the guest feel special</td>
</tr>
<tr>
<td>Aggett (2007)</td>
<td>Distinctiveness of buildings&lt;br&gt;Design feature&lt;br&gt;Personalized service&lt;br&gt;Uniqueness and design elements</td>
</tr>
</tbody>
</table>
Table 2.1 shows that many artistic elements have a relationship to hotel identity. They can potentially adjust hotel identity such as changing the interior environment, creating different themes, enhancing first impressions and reinforcing living experience. In addition, hotel identity significantly affects customer’s original intention.

According to analysis from Mannell (1989) and Oliver (1993), art is able to affect two related but distinct elements to enhance a hotel’s identity: overall satisfaction and attribute satisfaction. Overall satisfaction includes the overall impression of the hotel; basic satisfaction of the room, staffs and environment.

Attribute satisfaction is concerned with particular facts or attributes of tourism services (Tian-Cole & Cromption, 2003). Unlike regular hotels, boutique hotels should appeal to higher-taste customers.

Judging the identity of a boutique hotel is more complicated. Ryan (2004) pointed out that the type of artwork is a significant determinant when guests chose a hotel. According to investigations from literature, table 2.2 explains that a hotels identity might be changed by following elements, includes the site, architectural, interior space, service and marketing aspect:
<table>
<thead>
<tr>
<th>Table 2.2 Elements that relate to hotel identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elements which are concerned with hotel identity</td>
</tr>
<tr>
<td>The Site:</td>
</tr>
<tr>
<td>• Location</td>
</tr>
<tr>
<td>• View of the site</td>
</tr>
<tr>
<td>• Area of the site</td>
</tr>
<tr>
<td>• Climate and temperature</td>
</tr>
<tr>
<td>• Surrounding environment</td>
</tr>
<tr>
<td>Architectural:</td>
</tr>
<tr>
<td>• Building style</td>
</tr>
<tr>
<td>• History</td>
</tr>
<tr>
<td>• Building scale</td>
</tr>
<tr>
<td>• Facade</td>
</tr>
<tr>
<td>• Material</td>
</tr>
<tr>
<td>• Construction</td>
</tr>
<tr>
<td>• Function(s)</td>
</tr>
<tr>
<td>• Designer</td>
</tr>
<tr>
<td>Interior Space:</td>
</tr>
<tr>
<td>• Size of room</td>
</tr>
<tr>
<td>• Theme</td>
</tr>
<tr>
<td>• Luxury</td>
</tr>
<tr>
<td>• Population (capacity)</td>
</tr>
<tr>
<td>• Popularity</td>
</tr>
<tr>
<td>• Interior environment</td>
</tr>
<tr>
<td>• Design rationality</td>
</tr>
<tr>
<td>• Completeness of facilities</td>
</tr>
<tr>
<td>• Function variety</td>
</tr>
<tr>
<td>Service:</td>
</tr>
<tr>
<td>• High skilled and friendly staff</td>
</tr>
<tr>
<td>• Maintenance</td>
</tr>
<tr>
<td>• Parking</td>
</tr>
<tr>
<td>• Sufficient backup person</td>
</tr>
<tr>
<td>• Indoor and outdoor cleaning</td>
</tr>
<tr>
<td>• Systemic pre-service train</td>
</tr>
<tr>
<td>Marketing:</td>
</tr>
<tr>
<td>• Price</td>
</tr>
<tr>
<td>• Brand design</td>
</tr>
<tr>
<td>• Advertising</td>
</tr>
<tr>
<td>• Customer targeting</td>
</tr>
<tr>
<td>• Cooperative partner</td>
</tr>
<tr>
<td>• Own brand products</td>
</tr>
</tbody>
</table>
As table 2.2 shows above, those elements that are concerned with artwork can be used to enhance customers’ experience of the hotel environment. For example, artwork enhances the theme of a hotel. Artistic decorations can be used in many interior spaces and represent different themes and styles. They change customers’ impression, and thus indirectly affect customers’ psychology and behavior. Table 2.3 summarizes all hotel factors that are associated with art.

<table>
<thead>
<tr>
<th>Category</th>
<th>Factor</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>The site</td>
<td>View of the site</td>
<td>Natural exterior decoration</td>
</tr>
<tr>
<td></td>
<td>Surrounding environment</td>
<td>Artistic landscape</td>
</tr>
<tr>
<td>Architectural</td>
<td>Building style</td>
<td>Constructive arts</td>
</tr>
<tr>
<td></td>
<td>Facade</td>
<td>Graphic art</td>
</tr>
<tr>
<td>Interior space</td>
<td>Theme</td>
<td>Thematic art</td>
</tr>
<tr>
<td></td>
<td>Luxury</td>
<td>Quality of artwork</td>
</tr>
<tr>
<td></td>
<td>Interior environment</td>
<td>Variety of artwork</td>
</tr>
<tr>
<td>Marketing</td>
<td>Brand</td>
<td>Aesthetic logo design</td>
</tr>
<tr>
<td></td>
<td>Advertising</td>
<td>Artistic advertisement</td>
</tr>
</tbody>
</table>

An example of courtyard design is Fenglin Mansion, Datong City, China. It shows how artwork collaborates with hotel identity. In order to express a very high level of Chinese traditional art value, the whole building was decorated with thousands of artworks, especially artworks in the courtyard. Designer Yihao Zhao (2011) describes this space:
The courtyard behind the banquet hall is the most important part of the interior space in Fenglin Mansion. It is surrounded by a two-storied veranda with the boxes inside. At its due south there is a golden dragon fountain whose water flows to a pool in the middle of the courtyard, which connotes the source of revenue converging on Fenglin Mansion. A stone altar of square exterior and round interior stands at the center of the pool. The large seal named “Jade Seal of Emperor Zhengde” carved by Qingtian Stone Carving stands high on four-layered bronze with plum pattern on the stone altar. This invaluable seal is the heaviest one in China weighing 1,000 kg. It is the stabilizer of Fenglin Mansion.

On the two-storied veranda lay range upon range of the ornaments. Its hanging fascias and eaves boards are carved fully the patterns of dragons, phoenixes, clouds, lotuses and other plans. A niche is designed between the first and second floor of the veranda. It is carved with 36 sets of stories about the historic catering culture in Datong by the technique of round relief. The design of the courtyard highlights the dignity and classic quality of the seal, the combination of concision and sophistication of the decoration, and the application of history and culture. It appears dignified and well-proportioned. (Yihao Zhao, 2011, A Works of Design by Zhao Yihao: Fenglin Mansion in Datong, Shanxi Province, p. 111)

Figure 2.6 Stone carving and wood carving artworks in Fenglin Mansion courtyard

Fenglin Mansion’s courtyard is a typical example to show how traditional arts affects hotel identity. Designers considered both quality and variety of artwork, using them to create a unique first impression and visual impact.
Artwork can be used as a decorative object, and people can get satisfaction from the process of appreciating it. Those satisfactions from interacting with artistic expressions are the key to affect visitors’ overall impressions. A boutique hotel identity is concerned with luxury, taste and style, and its interior identity can be affected by both variety and quality of the artworks.

Artwork can be treated as a combination of culture, aesthetic value and social psychology. It affects people’s attitudes toward a hotel through letting people get satisfaction from appreciating art. It changes the general experience of the whole space thus enhancing hotel identity. The role of artwork in boutique hotel design is not only the external performance of the hotel, but also an expression of hotel culture.

In fact, artwork reflects many aspects in hotel, it affects hotel identity through multiple methods such as producing visual impact, enhancing overall impression and creating high-taste living environment. Bowie and Buttle (2004) thought that this change of hotel identity is a result of socio-cultural changes, technological advancements, economic and political situations, and environmental factors. Those elements create the macro-environment of a hospitality business and strongly influence the customers’ demands, wishes, and desires (Bowie and Buttle, 2004, p.16-20).

Feasibility of using artistic methods to affect people’s behavior

In the field of interior design, artwork is usually used as an object that creates harmonious or luxurious atmosphere. People often only focus on its
decorative function; they think art can only provide aesthetic satisfaction, but more functional influences are ignored. In fact, artwork can affect both people’s overall satisfaction and future behaviors.

**Art and environmental adaptation**

Artwork is a concept that inspires human’s instinctive adaptation. It stimulates people to produce emotional changes, then lets them fit to the environment. It indirectly affects humans’ ability to adapt the environment. According to Darwin’s (1859) theory of natural selection, human’s adaptation plays a very important role in human evolution. Tooby and Cosmides (1992) thought that adaptation is a mechanism or system of properties crafted by natural selection. They thought that adaptation solves the environments encountered by ancestral populations during the course of a species’ or population’s evolution (Tooby & Cosmides, 1992, p. 62). For all human beings, adapting to the environment is an instinctive ability, this process is unavoidable. It is known that art can affect our environmental adapting ability because it is a bridge to connect the unreal world to reality. Does art really change social behaviors in real life?

Experienced designers know how to use different artistic expressions effectively to guide people’s behaviors and help people adapt to different environments. For example, one of the most famous palaces in the world, the palace of Versailles has used a lot of gorgeous arts to decorate the whole interior space. The hall of mirrors (Figure 2.7) is famous for seventeen huge scale mirrors and other beautiful artworks. The whole space full of artistic atmosphere, it gives people’s a
strong visual impact, thus affecting their first impressions and overall spatial cognitions. This kind of artistic influence leads to subtle psychological changes to both present-tourists and the king, Louis the 14th. It indirectly affecting the formality of visitors’ activities and other behavioral intentions (e.g. volume of speaking, path selecting habit, frequency of body languages, etc).

Not only in western countries, but also eastern cultures have used arts to affect public’s social behavior and morality. Symbolic Chinese dragon art has affected Chinese interior design history for thousands of years. The dragon is a symbol of power, strength, and good luck for people who are worthy of it. Traditionally, only the royals were allowed to use symbolic dragon arts because of the traditional hierarchy. These dragon arts represented the highest level of social
activities, emperors used dragon arts to express supreme imperial authority and theocracy.

Figure 2.8 Imperial dragon arts and dragon hall (Source: Dennis Jarvis, 2006)

Today, designers can use dragon art in any design projects, but well-decorated dragon arts in any of the boutique hotels or restaurants are still impressive and valuable. Decorative dragon art provides a royal high-taste environment, which continuously affects Chinese customers’ attitudes and behaviors. As a result, the environment influences customers’ psychology and emotions. Well-designed dragon arts make the whole atmosphere of a hotel much more “formal” and “serious”. The customers notice their activity and formalize their future behavior in such an elegant environment, especially for people who take part in official occasions. Today, many Chinese style boutique hotels and restaurants still retain imperial rooms that are decorated by many luxury dragon arts, which are called the “dragon halls”.
Artistic Reception Theory and Impression Forming System

Reception theory is the key to answer the question “Why can customers’ experiences be affected by artworks?” For most boutique hotels, customers are from all over the world. People differ in the type of art that they prefer. Some people dislike contemporary art, and to some it elicits very strong negative emotions (Silvia & Brown, 2007). Reception theory is a version of reader response literary theory that emphasizes each particular reader's reception or interpretation in making meaning from a literary text.

In any boutique hotel, the role of customers is “to be a receptor”, they receive all information from a hotel’s environment and mix information in their brain, thus, producing various reactions and impressions. In this case, artistic reception theory is an expression of our impression making system. Kemp (1992) stated a term of this phenomenon, which he calls “Rezeptionsästhetik” [“Reception Aesthetics”].

According to reception theory, people receive all information from the environment around them. After information is received, the brain begins to collect data and analyze. But, considering the relationship between art impression and reception theory, there is an obvious problem existing in the process of art appreciating: sometimes people cannot totally understand the meaning of a piece of artwork. Because of different cultures, nations and religious backgrounds, content cannot be correctly analyzed, so the brain doesn’t even know how to deal with collected information. As the result, artwork cannot play its role well in hotels because the brain’s informative analyzing ability doesn’t work at the beginning of the early data receiving process. This situation causes cultural misunderstanding and artistic biases. To solve this problem, designers must understand the “commonness”
of artworks and reasons about how reception theory works in the art appreciating process.

A recent research *Neuroaesthetics: The Cognitive Neuroscience of Aesthetic Experience* (Marcus, T, Dahlia, W, Oshin Vartanian, Martin Skov, 2016) explained the relationship between human and arts:

Humans, are drawn to the aesthetic features of objects and the environment around them. Such features are not mere inconsequential adornments; they influence people’s affective responses, decisions, and behavior. In fact, aesthetics plays a central role in consumers’ choice of products (e.g., Reimann, Zaichkowsky, Neuhaus, Bender, & Weber, 2010; Van der Laan, De Ridder, Viergever, & Smeets, 2012), in judgments of built environments (e.g., Kirk, Skov, Christensen, & Nygaard, 2009; Vartanian, Navarrete, et al., 2013) and natural environments (e.g., Balling & Falk, 1982; Kaplan, 1987), and in attitudes, judgments, and behavior toward other people. (Marcus, T, Dahlia, W, Oshin Vartanian, Martin Skov, 2016, p. 265)

The authors of “The psychology of judgment and decision making” (Plous, S., 1993) mentioned that consistent first impressions can be formed very quickly, based on whatever information is available within the first 39 milliseconds. First impressions do often influence mid- and long-term human behavior (e.g. Plous, 1993; Rabin and Schrag, 1999). Leder (2004) summarized five steps of artistic reception theory, which is concerned with impression forming systems. He wrote:
As illustrated in Figure 2.9, the model proposes five different processing stages targeted towards different cognitive analyses. The first two stages (1) perceptual analyses and (2) implicit memory integration, can be seen as intuitive and basic cognitive processes, which do not have to become conscious in order to affect perceiver’s aesthetic processing (“gut feeling”). In contrast, stages three and four are higher cognitive processes that are affected by the expertise and knowledge of the perceiver, something especially relevant in the context of art perception and therefore not relevant for the topic of this paper. At the fifth stage (evaluation) the processed information are evaluated.

In the art appreciating process, the first two stages (Perceptual Analyses and Implicit Information Integration) are two of the most important steps in forming an individual’s impressions because they are the first two steps to form the first impression (impression formed in very short period of time). They determine individual long-term impression and continuously affect people’s cognition for very long periods.
It is obvious that our response, decisions and behaviors can be affected by arts under particular situations. If aesthetic value is the most direct way to show content of art, first impressions will be the easiest method to shock one’s mind. In any boutique hotel design projects, if an artwork has great visual impact, it will enhance people’s first impression of the whole hotel. It changes a visitor’s impression from “ordinary” to “impressive”, even “unique”. People’s first impressions also indirectly enhance boutique hotel’s identity at the same time.

Figure 2.10 High value gothic Rose Window and details can effectively enhance general impressions to customers

A space that gives a strong visual impact can always give people impressive first impressions. For example, a gothic rose window is a typical artwork that is used as decorative arts in boutique hotels. People will be shocked by these exquisite, gorgeous colored windows, their overall spatial cognition will be changed by these beautiful arts as well, this influence happens in the impression forming system. Bjarne Sode Funch(1997) wrote:
“The great experience is not just a moment of transcendent wholeness and fulfillment, but a psychological process that influences the entire personality” (Bjarne Sode Funch, 1997, p. 175).

This is how the impression forming system works on the information receiving process and how it affects people’s general experiences and the identity of a boutique hotel.

Artistic Behavioral Guide Methods

Recent research by Nanda (2011) examined how visible/invisible art affects visitors’ activities in waiting rooms in two prominent Houston hospitals. In that study, the independent variable—art intervention—was designed based on specific criteria developed from the literature review. To analyze the differences in behaviors pre- and post-intervention, while accounting for other related factors, observational variables were grouped into the following categories (Nanda, et al., In Press):

- Distraction activity: These included the activities that people were engaged in using a particular environmental or non-environmental instrument, including appreciating artworks, viewing TV, reading, using laptops, and looking out of the window.

- Non-distraction activity: These included activities where an environmental or instrumental distraction was not being used, such as eating or drinking, looking at other people, talking to other people, dozing, and laying down.

- Restless/anxious behavior: These were behaviors that were hypothesized to be indicative of restlessness and anxiety. These included the number of front-desk
queries, getting out of seat, changing seat, pacing, fidgeting, stretching, and aggressive behavior (Upail Nanda, 2011, p.4).

This observation focused on the impact of different arts on waiting behavior in the emergency department of a hospital. Considering the universality of this thesis’s research subject, the effects of artwork related to these categories can be summarized as follows:

<table>
<thead>
<tr>
<th>Table 2.4 Three artistic behavioral guiding methods based on observation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Artistic Behavior Guide</strong></td>
</tr>
<tr>
<td>Activities that people are willing to do or have a very high chance to do after contacting with a specific artwork. Such as: walking forward to an interesting artwork, expressing emotional changes (could be positive or negative), walking away from uncomfortable artwork.</td>
</tr>
<tr>
<td><strong>Subconscious Artistic Behavior Guide</strong></td>
</tr>
<tr>
<td>Some predictable behaviors will be done after contacting with artwork, but this person cannot feel or control it. Such as: the sense of suffocating when walking into an extremely small space (claustrophobia), walking slower in a dark environment, changing original impression after contact with a special artwork etc.</td>
</tr>
</tbody>
</table>
Table 2.4 (continued)

| Concomitant Artistic Behavior Guide | Concomitant behavioral influence always happens especially because one behavior is related to or cause other activities. Such as: watching a painting then speaking out the signature of the author’s name on the painting, listening to background music and chanting out the rhythm involuntarily and touching a specific part of artwork with special meaning then getting satisfaction. |

Usually, artwork directly affects participant’s psychology when they contact with the artwork. A predictable influence leads to some sorts of particular behaviors. This kind of behavioral guide is called “direct artistic behavior guide”.

The direct artistic behavior guide is always effective in the moment when someone is contacting or has contacted with an artwork. For example, when a visitor is appreciating a painting, his/her emotion will be influenced by that artwork, his/her emotional changes can be clearly seen on the face, and other people will know if this person likes or dislikes the painting. It is an obvious emotional influence that was given by the artwork. But in some situations, artwork subconsciously affects a visitor’s behavior and emotion in a very long term. People cannot even notice that they are controlled by art. This kind of guide method is called “subconscious guide”. It leads to a series of subconscious, involuntary and uncontrollable consequences. The theory of the subconscious guide is more complex than the direct guide method,
it is concerned with different cultural backgrounds and personalities, instinctive reactions and passive conditional reflexes. It is a concept that relates to our inner world and soul because most subconscious reactions are involuntary. In abstract terms, soul is an instinctive conditional reflex of human sense organ, such as starvation, sleepiness, hunger, tiredness, pain, ache, itch, etc. Artwork is the “key” to connect people’s psychology, because most artworks are accompanied with some sort of spiritual power. If an artwork can affect our “soul” (feeling and experience), our brain will produce various reactions based on different environments. In the art appreciating process, we collect information and respond to all stimulations from five senses. At last, arts are able to affect our brain then change behaviors through imperceptible way. This series of behavioral guide systems is called the “subconscious behavior guide”.

For example, if a person has visited a hotel with an impressive artwork and this person had an extremely good experience in there but hasn’t been there in a very long time, his/her brain might memorize this feeling then keep producing a signal like “I want to go there again”. At last, this signal leads to that person visiting that hotel again and recommending it to friends. This is an example to show how a hotel’s artistic atmosphere might change our future behaviors. This phenomenon also explains how the subconscious behavior guide works on affecting people’s long-term behavior.

The concomitant behavior guide system represents a behavioral guide method happens at the same time as or in connection with another guide method. The concomitant guide always occurs when another guide method is happening or
has happened. It is a result of another behavioral guide method. For example, imagine if a person yells out “Hot!” after touching the surface of an artwork, our attitude to that artwork will be immediately changed from “touchable” to “untouchable”. As the result, our behavior is misguided and people won’t touch it any more. If a visitor come close to the surface of that piece of artwork, other people will remind that person “it is dangerous and don’t touch it”, that person will also keep distance from the surface of that artwork.

Another example of concomitant behavioral guide system is the traditional Tibetan elements that are used as decorative arts in many Tibetan theme hotel. Tibetan culture reflects many local social elements. Usually, visitors’ behavior can be affected by local Tibetans (local) and pilgrims (outsider). Tibetans decorate their rooms through using typical local aesthetic features because of their own beliefs and cultural background. But Tibetan styles also influence foreigners’ appreciating habit in the hotel. Many
beautiful artworks were used to decorate Tibetan themed hotel. Artistic and cultural elements are shown in both private rooms and public space in order to affect customer’s perception. The purpose of those decorations is to let visitors involve into the culture, and finally affect customer’s emotions and behaviors fit to local environment. Local people can be easily affected by these interior arts because of their own culture, religion and belief, at the same time, tourists’ behaviors are affected by Tibetan activities, this concomitant sequence is called “concomitant behavioral guide”.

Today, researchers have developed many feasible methods about how to affect people’s psychology and behavior through using artistic guiding systems. This theory is being used in many fields such as art therapy. Djurichkovic (2011) in his research “Arts in Prisons: A Literature Review of the Philosophies and Impacts of Visual Arts Programs for Correctional Populations” explained several methods to use therapeutic arts to affect young criminals’ psychology. He wrote:

Arts programs for at-risk, justice-involved, and traumatized or victimized youths can generally be separated into 1) arts-based programs (“art is therapy”), including arts education programming; and 2) arts therapies (“art in therapy”) that focus on healing processes.

Arts-based programs (including arts education programming) and arts therapies represent two approaches to incorporating the arts into treatments for at-risk, traumatized, and justice-involved youths. Although the two approaches are similar in terms of the various programmatic elements that are implemented, each uses a different method for working with youths and resolving problem behaviors. Arts therapies focus on the therapeutic relationship between the therapist and the youth, whereas arts-based programming focuses on the process of creating art as a way to address youths’ issues. (Djurichkovic, Alexandra. 2011)
This example proves how therapeutic art can affect one’s behaviors and psychology. At least in the psychological field, therapeutic art is able to address some sorts of particular issues in prison.

In conclusion, all the studies show that it is feasible to achieve the goals of changing people’s behavior and psychology by using different artistic behavioral guide methods. Artwork can affect our social behavioral habits and impressions. An experienced designer should know about how to use artistic features to achieve a particular goal in future hotel design projects.
In order to investigate the effects of artworks in different boutique hotels, it is necessary to use multi-method case studies to collect useful data. The purpose of this methodology is to ensure the complexity of the topic is investigated thoroughly. In this chapter, two case studies will be done: 1. Des Lux hotel in Des Moines, Iowa; 2. Loya’s Little House Bed & Breakfast in Ames, Iowa.

**Case Study 1: Des Lux Hotel**

This case study uses observation and behavioral mapping as its primary research methods. Each was specifically chosen as a way of increasing the depth of data collected. Here are the reasons why they were selected as methodologies:

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>To do observation is very important for the research. It records people’s different behavioral changes and reactions after they have contacted with any piece of artwork. Then it performs analysis through their behaviors.</td>
</tr>
<tr>
<td>Behavioral Mapping</td>
<td>Behavioral mapping indicates the relationship between people and the space. It records people’s behaviors and reactions in different places. Behavioral</td>
</tr>
</tbody>
</table>
mapping explains how artwork’s
attributes (location, size, composition)
affected people’s behaviors.

The purpose of this methodology is trying to figure out how artistic features affect people’s behavior and activity tendencies. The methods chosen were ultimately selected as a means of addressing the following research questions:

1. What kinds of artistic elements can help enhance customers’ impressions of the space and to what degree?

2. How could composition (location, order, etc.) of artworks affect customers’ behaviors? Such as way-finding habits, distance to the artwork when appreciating, etc.

3. What is the feasibility that artworks can affect people by using artistic elements? What attributes of artwork (color, size, etc.) influence customers’ behaviors the most?

Name:
DES LUX Hotel

Location:
800 Locust Street, Des Moines, IA
Des Lux hotel is a typical boutique hotel which is full of artworks and aesthetic decorations, the whole interior space provides an elegant and classical theme. People may find many reproductions of famous global arts in the hotel, their activities and reactions to those artistic elements can be easily observed. The following figure contains images from this hotel and gives a general feeling of the interior atmosphere and layout.

The purpose of observation in Des Lux hotel is to observe public behavior and reactions to artworks. As a special boutique hotel, Des Lux mixed both hotels basic function (living & dining facilities) and aesthetic features (art gallery), it is a perfect research subject to complete the research about finding the effect between artwork and customers’ behaviors. The focal point of this observation includes where those artworks
were located, how frequently people were affected, and the importance of the artwork’s composition.

During the observation was conducted, there were several different locations that were mainly observed in the whole Des Lux hotel: lobby, entrance, dining area and corridor. The length of observation time for each space was around half hour. This provided an opportunity to carefully record customers’ different behavioral changes after having contacted with any artwork in detail.

According to three artistic behavioral guide systems (direct, subconscious and concomitant) which were discussed in chapter II, people’s activities that involved the following actions will be noticed.

Direct behavioral guiding method:
- Appreciating artworks
- Siting on chairs, sofa
- Touching the surface of any artwork
- Taking photos
- Approaching any artwork

Subconscious behavioral guiding method:
- Stay away from a specific artwork
- Changing walking path
- Affecting original intention
- Changing Way-finding & speaking habit
- Psychological and emotional effects
Concomitant behavioral guiding method:

- Artwork’s position affects both customers’ intention and their interaction.
- People’s select preference and first impression are changed by artwork.

**The Observation**

*Figure 3.2 Floor Plan and location of impressive artworks in Des Lux hotel’s lobby*

The observation was took place in the afternoon on December 14th, 2018. The variety of arts in Des Lux hotel lobby includes paintings, sculptures and decorative artworks. According to the floor plan showing all artworks’ location, the whole lobby is divided by four areas (Figure 3.3).
A. The Fireplace Area

This is the most impressive area to customers the first time they visit Des Lux hotel. A huge exquisite fireplace is placed at the south wall in this area and many decorative artworks are placed around fireplace. This area also has two high sculptures (golden peacock & David) which are placed against the eastern wall.

There are lots of small but interesting artworks placed on the fireplace as well. Those decorative arts are extremely suitable for the huge fireplace and they were arrayed in symmetric order. Customers liked to walk close to them and appreciate them.
Figure 3.5 Decorative artworks were placed on the fireplace

B. The Reading Area

Area B can be considered as the reading area. It is located in between two big bookcases. Unlike the fireplace area, one of the most important characteristics of area B is that the whole space is full of small artworks. Several interesting sculptures and paintings can be seen on both table and bookcases.

In this area, a huge black piano and a beautiful chandelier are placed, and they are both impressive. In the observation, this area is the place that attracted the most people to
come and interact with artworks. Customers’ behaviors included: appreciating artworks, sitting on the chair near the table, taking photos and playing the black piano.

C. The Waiting Area

There were lots of beautiful artworks placed in this area, the most impressive artistic expression is the mirror wall. There were many well-designed mirrors hung on the wall, all these mirrors become a whole wall. Visitors came and appreciated the wall throughout the observation.

Figure 3.7 Well-designed mirrors were placed on the wall

Besides mirrors, two beautiful bird-shaped table lamps were placed on a side table. They attracted visitors’ attention because of their interesting shape. Some customers walked close to appreciate the lamps, they were all curious about the lamps and expressed high interest.
Sculptures such as metallic bottoms, the sculpture of David and stone carvings of Gryphon can also be seen in this area. These beautiful, elegant artworks make the whole space become an area which is full of a classical and harmonious feeling.
D. Corridor

This area includes the corridor, reception desk and entrance zone. Even though the total number of artworks is a bit less than other areas, most of them leave a great first impression on customers.

One of the most impressive artworks in this area is a visual-combined artwork: a wooden throne and an oil painting of Napoleon Bonaparte (reproduction). The throne is 2 meters long and 2.8 meters high, and its body was carefully carved from wood with a huge mirror inlaid into the seat’s back. The throne and the painting perfectly cooperate with each other. They create a very classical and elegant atmosphere in the whole area D. Visitors were all attracted by such a beautiful throne and huge oil painting while walking through the corridor.
Before going into the lobby, people will see two copper carvings of Kylin in front of the elevator. The function of Kylins is to provide a strong visual impact to people while coming into the building. These well-modeled sculptures are able to enhance first visual impact when people come into the lobby, they are helpful to let customers memorize hotel’s theme.

![Figure 3.11 Copper carvings (Kylins) at the entrance](image)

**Behaviors Mapping**

In this section, people’s actions and activities were recorded and shown on the floor plan. The purpose of this part is to record customers’ actions and explain how artworks change people’s behaviors. All activities that relate to artworks will be categorized under three behavioral guiding methods, direct, subconscious and concomitant, and will be indicated on the map. This methodology is based on the observation of customers’ habits which was recorded in the afternoon on December 14th, 2018. IRB approval (given on November 28th, 2018) can be found in Appendix B.
Way-finding Mapping

Researching people’s walking intention and their path trace measure is the first step of analyzing a behavioral guide system. The purpose of way-finding mapping is to figure out the feasibility of changing people’s walking intention with artworks. For example, illustrating the relationship between size of each artwork and customers’ walking path, or the feasibility of artwork’s composition to affect way-find selection.

Figure 3.12 Way-finding diagram VS footprint trace measure
These two diagrams show people’s walking footprints and preference of selecting path. According to the footprint trace measure map, it clearly recorded the density of all activities in each area and explains how they connect to each other.

In this observation, found that customers’ way-finding preferences were more or less affected by different art expressions. The reason for this phenomenon is that artworks are able to change people’s original way-finding intention. People would like to select a path that is more suitable to them. An artwork’s composition can changes people’s attitude to the whole space. At the same time, aesthetic features contribute to a high degree of curiosity. Therefore, people’s walking intention was passively changed.

![Figure 3.13 Corridor & way-finding intention](image)

The observation in Des Lux hotel’s corridor recorded general walking intention while customers were passing through the corridor. The collected data showed that people would like to keep a certain distance away from artworks on the wall. The width of safe distance depends on the size of each artwork.
Appreciating/Interacting Mapping

The purpose of this map is to help the reader understand where people appreciated arts and which location they prefer to choose. This map is trying to figure out the relationship between location of each artwork and the customers’ behaviors.

![Appreciating/interacting location and facing direction diagram](image)

This diagram shows the locations where people were standing and their facing direction when appreciating or interacting with any artwork. An interesting phenomenon in this observation is that people prefer to stand directly in front of any artwork rather than to the sides.

In the observation, there was an interesting phenomenon observed. That is, the size of artwork is one of the most important elements to affect appreciate/interact
distance from artwork. Table 3.1 recorded all customers’ appreciating locations and the
distance from artwork they interact with.

**Table 3.1. The relationship of artwork’s scale and interactive distance**

<table>
<thead>
<tr>
<th>Artwork</th>
<th>Size and scale</th>
<th>Minimum appreciating/interacting distance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mirrors on the wall (the whole wall)</strong></td>
<td>Big (4m long x 3m tall)</td>
<td>Far (&gt;0.7m)</td>
</tr>
<tr>
<td><strong>Mirrors on the wall (mirrors)</strong></td>
<td>Small (from 0.1m x 0.1m to 0.5m x 0.5m)</td>
<td>Close (≈0.2m-0.3m)</td>
</tr>
<tr>
<td><strong>David (reproduction)</strong></td>
<td>Medium (0.5m wide x 2m tall)</td>
<td>Medium (≈0.7m)</td>
</tr>
<tr>
<td><strong>Bird-shaped lamps</strong></td>
<td>Small (0.1m wide x 0.4m tall)</td>
<td>Close (≈0.2m-0.3m)</td>
</tr>
<tr>
<td><strong>Golden peacock</strong></td>
<td>Medium (0.6m wide x 1.8m tall)</td>
<td>Medium (≈0.4m)</td>
</tr>
<tr>
<td><strong>Fireplace (body)</strong></td>
<td>Big (3.5m wide x 3m tall)</td>
<td>Far (&gt;0.9m)</td>
</tr>
<tr>
<td><strong>Fireplace (decorative artworks on fireplace)</strong></td>
<td>Small (0.1m wide x 0.3m tall)</td>
<td>Close (&lt;0.3m)</td>
</tr>
<tr>
<td><strong>Wooden throne</strong></td>
<td>Big (2m wide x 2.8m tall)</td>
<td>Interacting: close (0.0m)</td>
</tr>
<tr>
<td><strong>Painting of Napoleon (reproduction)</strong></td>
<td>Big (1.2m wide x 1.6m tall)</td>
<td>Appreciating: Far (&gt;0.7m)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Far (&gt;0.8m)</td>
</tr>
</tbody>
</table>

According to the statistics above, it is shown that people’s walking intention and ideal appreciate location is concerned with the size of an artwork. In most situations, the bigger an artwork is, the farther the appreciate/interact distance people tend to stand at.
As Figure 3.15 shows, customers’ appreciating/interacting behaviors can be affected by an artwork’s size. This kind of effect of artwork is a subconscious behavior guide method. More analysis will be discussed in Chapter IV: the results.

**Composition and Density Mapping**

The purpose of analyzing composition mapping is to help the reader understand how composition and density of artworks (location, order and arrangement status) works to influence people’s behaviors and psychology.

A hypothesis of this chapter is that different amounts of artwork in a single area would lead to different behavioral influence degree for people; these changes were based on the total number and density of all artworks. In the observation of Des Lux hotel, this hypothesis was proved. The result of analysis shows that the composition of all artworks play a very important role on affecting people’s original behavioral trends.
Figure 3.16 Statistic: density of artworks in Des Lux hotel’s lobby

According to the result of observation, an interesting phenomenon was shown: People prefer to approach a position with multiple smaller artistic expressions (no matter if those artworks are set on the floor or on a surface of any object) rather than the position that has only one artwork (even though it is big). This phenomenon proves a fact that combined artworks, or artistic “combo” expressions, have a much stronger ability to attract customers’ attention than a single piece of art does. Artwork’s properties such as size and scale affect appreciate distance as well, people would like to get close to it to see the detail especially for smaller scale artworks. In contrast with the appreciate/interact diagram, we figure out that the results of Figure 3.14. and Figure. 3.16. are generally matched to one another. Most interactive actions occurred within the spaces that have at least two artworks (fireplace area, throne and Napoleon, bookcases and waiting area). This is evidence to prove the fact: independent artwork has less power on affecting people’s behaviors.
In conclusion, an artwork’s order and position are effective methods to affect people’s behaviors in most boutique hotel design projects. Figure 3.17 illustrates several compositions of artworks that are used in the Des Lux hotel. It is noteworthy that any individual artwork or even groups, might be arranged in multi-formed compositions. For example, the artworks on the fireplace were placed in linear order, but they also visually bounded with the huge fireplace. These two kinds of compositions strongly stimulate visitors’ eyes then produce stronger visual impact. It is good for forming good first impressions with customers.

*Figure 3.17 Arrangement methods for artwork*
Case Study 2: Loya’s Little House Bed & Breakfast

This case study uses spatial cognition analysis and questionnaire survey as research methods. The purpose of this case study is to figure out the relationship between artwork’s properties and spatial cognition. All analyses are based on the content of artworks, literature reviews and customers’ responses of Loya’s Little House.

Name:

Loya’s Little House B&B

Location:

56676 160TH Street, Ames, IA

Spatial Cognition Analysis

Loya’s Little House is a typical countryside themed hotel with an artistic atmosphere and aesthetic elements. The site is on a large farm overlooking a river.
The spatial analysis in Loya’s Little House involves the relationship between art and space. It includes:

1. The effects of artistic expressions on the enhancing atmosphere
2. Aesthetic themes and impression emphasizing
3. The collaborative function between art and environment
4. The effects of visual composition on vertical direction

The effect of artwork on vertical direction is as important as its influence on horizontal direction. In fact, people accept stimulations from vertical arts much more easily than from horizontal arts. Therefore, vertical art composition is able to greatly change spatial experiences in any boutique hotel space.

For example, “Natalie’s room” is a typical research subject in this case study. The whole room is themed by two paintings and well collaborated with the flower shaped symbols on the bed and the rug. Those separated aesthetic features work together and
enhance the countryside style theme. This is a very obvious effect of how arts enhance environment (Figure 3.19).

![Figure 3.19 Function of collaborated artworks on enhancing spatial experience aspect in Natalie’s room of Loya’s little house B&B](image)

Well collaborated artistic expressions can better emphasize a hotel room’s theme and atmosphere, then produce positive signals to stimulate people’s impression forming system. This is so called comfortable sensations; this kind of feeling is always produced in a harmonious environment.

The theme is another one of the most significant characteristics of art. In this case study, many different themed artistic expressions can be found in the hotel rooms in order to present specific spatial experiences. An interesting phenomenon was observed during the site observation: same or similar themed artworks can re-emphasize the sense of spatial resonance. This phenomenon is expressed by several groups of paintings in similar styles in Loya’s Little House.
Figure 3.20 Similar themed paintings in Loya’s little house: Sky, Clouds and Storm of countryside

All these paintings give the whole space a very wild, natural feeling. They perfectly collaborate with each other and produce a comfortable atmosphere to all visitors. Based on previous literature reviews, repeated same or similar themed artworks could be used as a tool in order to better emphasize the spatial cognition of the whole space. More results of this hypothesis will be discussed in Chapter 4: Results and Analysis of the Hypothesis.
Decorative elements, such as paintings, sculptures and other arts, are very helpful to emphasize a space’s theme, this is an effective method to help designers achieve a specific goal such as spatial resonation, first impression forming and general experience enhancing.

Spatial cognition is affected by paintings’ vertical composition as well, because it is controlled by human’s visual balance. People produce different involuntary reactions (such as willingness to interact with artwork) to each piece of art in different size, scale,
location and order. This kind of visual influence is able to change one’s final impression and behavior.

For example, different locations of each piece of art on vertical direction may contribute to different spatial experiences. At the same time, the majority of first impressions are determined by visual influence. This visual effect directly reflected as
our instinctive intentional selection (ability of visual balance controlling). This theory is very useful in most boutique hotel design projects. The effects include: way-finding preference, forming general impression of a space, intentional guiding, enhancing visual composition and other functional purposes.

As Figure 3.23 shows below, even though the composition of two paintings are similar to each other, they contribute to totally different spatial influences on people.

**Figure 3.23** Visual balance VS behavioral balance. Different vertical compositions of artistic expressions lead to opposite results of spatial cognition, the composition of artworks determines people’s behavioral intentions such as path selection, forming original impression and overall spatial experience.
A predictable function of art is to let people produce behavioral balance through accommodating visual composition. In other words, the composition of artworks might contribute to different kinds of spatial experiences and visual focal points. This involuntary visual cognition will lead to intentional changes and selectable differences. Therefore, the composition of artwork, especially in vertical direction, is one of the most important influencing elements on one’s spatial cognition forming system.

According to literature reviews and site analyses, this case study trying to explain how artistic composition affects the ability of spatial cognitions. To solve the research questions of this thesis, more analyses will be discussed in next part, Chapter V: Results and Analysis of the Hypothesis. It includes the differences of visual and behavioral changes. This factor is concerned with one’s visual balancing ability, so different order and positions may produce different overall spatial experiences for customers.

**Questionnaires and Survey**

In order to understand the effects of artworks in Loya’s Little House B&B, it is important to directly collect initial thoughts from customers. Ten questionnaires were given to the house owner. The survey had house owner’s permission, all questionnaires were voluntary and guests receiving them were randomly selected. The questionnaires were given to house owner on January 23rd 2019. IRB approval for this survey was given on January 18th 2019, which could be found in appendix.

The questionnaires contained twelve easy yes or no questions. The questions are attached as an appendix. This chapter focuses on collecting and analyzing the statistics of the survey, and the results for each question.
Question 1:

This question involves the relationship between impression forming systems and aesthetic features. According to reception theory, artistic visual impacts may lead to impression differences. The purpose of this question is to figure out whether or not an artwork is able to enhance customer’s first impression.

Table 3.2. Response of question 1

<table>
<thead>
<tr>
<th>1. Are the artworks in Loya’s Little House able to enhance your first impression of this place?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>NO</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Question 2:

This question emphasizes the effect of an artwork’s size. It is concerned with artistic composition and behavioral guide intention. Such as willingness to interact with a piece of artwork, the distance of appreciating, etc.

Table 3.3. Response of question 2

<table>
<thead>
<tr>
<th>2. Does the size of each piece of art affect how you interact with them (e.g. willingness to interact with a piece of artwork, the distance of appreciating, etc.)?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>NO</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Question 3:

It is important to understand whether or not the theme of artistic expressions is able to affect customers’ impressions and memories of the hotel. This question is trying to figure out this opinion.

Table 3.4. Response of question 3

<table>
<thead>
<tr>
<th>3. Do different themes of art help you memorize the space?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>7</td>
<td>70%</td>
</tr>
<tr>
<td>NO</td>
<td>3</td>
<td>30%</td>
</tr>
</tbody>
</table>

Question 4:

This question is about how artworks influence visual cognitions, such as selecting visual focal points, spatial cognition, etc. This kind of visual influence may lead to some behavioral changes in the process of interacting with a piece of art.

Table 3.5. Response of question 4

<table>
<thead>
<tr>
<th>4. Do any of artistic expressions in Loya’s little house affect your visual balancing ability (e.g. your visual focal points, spatial cognition, etc)?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>8</td>
<td>80%</td>
</tr>
<tr>
<td>NO</td>
<td>2</td>
<td>20%</td>
</tr>
</tbody>
</table>
Question 5:

Composition is one of the most significant properties for each piece of artwork. This question gives customer a chance to choose whether or not the location, order and arrangement of artworks are able to affect their habits.

Table 3.6. Response of question 5

<table>
<thead>
<tr>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>7</td>
</tr>
<tr>
<td>NO</td>
<td>3</td>
</tr>
</tbody>
</table>

Question 6:

A hypothesis of this thesis is to prove that customers’ formality of activities in boutique hotel can be influenced by aesthetic features. This question allows participants to answer if any piece of artwork is able to affect the formality of his/her own behaviors in Loya’s Little House.

Table 3.7. Response of question 6

<table>
<thead>
<tr>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>7</td>
</tr>
<tr>
<td>NO</td>
<td>3</td>
</tr>
</tbody>
</table>
Question 7:

This question is concerned with the quantity of artistic themes and elements. Are repeated aesthetic features important for customers to enhance their experience in a hotel?

Table 3.8. Response of question 7

<table>
<thead>
<tr>
<th>7. Are similar artistic themes or repeated aesthetic features helpful to enhance your spatial impressions?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>6</td>
<td>60%</td>
</tr>
<tr>
<td>NO</td>
<td>4</td>
<td>40%</td>
</tr>
</tbody>
</table>

Question 8:

This question gives a chance to let participants select whether or not if they thought the variety of artwork affect their psychological satisfaction. Is that true the more diversity of art, the more satisfaction one will gain from appreciating arts?

Table 3.9. Response of question 8

<table>
<thead>
<tr>
<th>8. Do different themes of art help you memorize the space?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>NO</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Question 9:

The scale of artistic expressions directly affects customers’ sensation of vision. Scale differences lead to different visual stress as well. This property may influence many
aspects of spatial cognition such as path selecting preference, distance of interacting or appreciating etc.

Table 3.10. Response of question 9

<table>
<thead>
<tr>
<th>9. Do larger scale artistic expressions give you a stronger visual stress?</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>6</td>
<td>60%</td>
</tr>
<tr>
<td>NO</td>
<td>4</td>
<td>40%</td>
</tr>
</tbody>
</table>

Question 10:

It is important to understand the differences of artistic influences between single piece of art and arts in groups. Which one has stronger influence on affecting customers’ behaviors?

Table 3.11. Response of question 10

<table>
<thead>
<tr>
<th>10. Do you agree that artworks in groups have stronger influence than a single artwork? (e.g. visual impact, spatial cognitions, etc)</th>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>8</td>
<td>80%</td>
</tr>
<tr>
<td>NO</td>
<td>2</td>
<td>20%</td>
</tr>
</tbody>
</table>

Question 11:

This question proves the feasibility that the composition of art is able to affect customers’ way-finding habits.
Table 3.12. Response of question 11

**11. Do you think that the composition of artwork changed your way-finding preferences in Loya’s little house?**

<table>
<thead>
<tr>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>6</td>
</tr>
<tr>
<td>NO</td>
<td>4</td>
</tr>
</tbody>
</table>

Question 12:

One important function of art is to affect customers’ living/dining experience in hotel. This question gives an opportunity to let participants choose their own opinion to support this hypothesis.

Table 3.13. Response of question 3

**12. Are the artistic expressions able to more or less change your living/dining experience?**

<table>
<thead>
<tr>
<th>Amount of selection</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>10</td>
</tr>
<tr>
<td>NO</td>
<td>0</td>
</tr>
</tbody>
</table>
CHAPTER 4
RESULTS AND ANALYSIS OF THE HYPOTHESIS

This chapter will present the results of all collected data, then analyze all hypotheses from noteworthy statistics. With the multi-method, this chapter will provide evidence to support each contention. At the same time, all hypotheses will discuss the feasibility of using artistic methods to affect people in any future boutique hotel design project.

Result of hypothesis I

The size of artwork has influence on affecting people’s behaviors

This hypothesis is based on the observation in Des Lux hotel. That is, there always exists an “ideal psychological interact/appreciate distance” when interacting with any artwork. This distance continuously affects a participant’s psychological status then finally changes this person’s behavioral intention.

The reason to present this view is because the differences of people’s path selecting preference was obviously recorded during observing way-finding habits in Des Lux hotel. These kinds of psychological changes were clearly recorded in the observation.

According to collected data and field notes from the case study, customers’ ideal interactive distance between people and artwork relates to the work’s properties, which includes: size, height, density and composition. As a result, in most situations, the bigger an artwork is, the further people will stand from it.
Usually, the width of ideal interact distance is compressed by artworks in a specific space (Figure 4.1.). Any available activity area is sandwiched in between of two or more pieces of artwork. An artwork’s properties determine the total number of selectable way-finding paths. In general, the greater number of artworks in a space, the less (narrow) activity area it has. This phenomenon may lead to behavioral changes in the future, it also affect people’s spatial cognition and memory to this place.

*Figure 4.1 Different size and position of artworks contribute to different kinds of activity areas’ arrangements. Interactive area (A) and available activity area (B) are both affected by artworks. It compresses available zone of activity as well (B: yellow zone).*
If several artworks are placed in an asymmetrical layout, the barycenter (visual balance point) of the space will deviate from the central line. People tend to select their walking paths on the side which has shorter interactive distance because a bigger scale artwork might potentially lead to some sort of visual stress or negative influence on that person.

![Figure 4.2](image)

*Figure 4.2 Negative effect of big scale oil paintings: influencing customers’ final decision of seat selection in Des Lux hotel’s dining area. People were hardly seen to sit on the seat under paintings.*

For example, during observing Des Lux hotel’s dining area, very few guests chose the tables which were placed under two large oil paintings. There are two reasons to explain why seat selecting intention was affected by the size of artistic expressions:

1. Large-scale artwork contributes to higher visual stress than smaller artworks. If someone sits down on the seat that is very close to a huge artwork, this person cannot see the complete object. Therefore, this kind of psychological uncertainty leads to a mental feeling like “unsafe” or “uncomfortable”. As a result, the person will lose interest to have any reaction with the artwork. A
large-scale artwork may also visually constrict people especially when sitting close to it.

2. It is predictable that potential inconvenience affects original seat selection. Generally, larger-scale artwork, such as big paintings, and huge sculptures occupy more area than smaller artwork. Some decorative elements (e.g., the frame of a paintings or pedestal of a sculpture) may hinder people from doing other activities. This kind of potential inconvenience would passively change participants’ behaviors.

**Result of hypothesis II**

**The value of artworks determines the formality of participants’ behaviors.**

It is well known that our emotions and behaviors can be easily influenced by the surrounding environment. The property of artwork, such as value of artwork and its aesthetic features, is very significant in the process of forming first impressions of a hotel. When a participant interacts with any piece of artwork, the art that has a higher aesthetic value (price, popularity and beauty) is more able to formalize peoples’ activities.

An experienced interior designer will never ignore the significance of artwork on behavioral guide aspect. According to the observation, the formality of one’s actions is concerned with the value of all surrounding artworks. This element leads to many differences in the impression forming process.

There is an interesting phenomenon existing in many boutique hotel projects. That is, a fully decorated (or themed) space affects peoples’ behaviors and emotions more effectively than a simply decorated space. In most boutique hotel design projects, the
budget of artworks and decorations determines the hotel’s market positioning. This factor is relating to the customer group targeting strategy. Therefore, the variety of artworks indirectly decides customer groups’ income levels and social classes. In this case, the amount and value of artwork is able to potentially change the marketing strategy of hotel and the formality of customers’ activities.

**Figure 4.3** Artwork is a key to successfully create a “formal” environment. It is also very helpful to formalizes people’s behaviors through creating a “formal” atmosphere. For example, effective use of artworks helps to make a high taste atmosphere in ball room and meeting rooms.

For example, if a person is going to a noble looking room, his/her actions will automatically fit the environment and his/her behaviors and languages will look more “formal” than in other informal atmospheres. This is the reason why a well-designed ballroom and meeting room is very important parts of any high taste boutique hotel designs. In fact, this kind of psychological influences help interior designer enhance spatial function of a specific space, no matter in a private or public space.
One of the most important properties to formalize peoples’ actions is the value of artwork. It includes both value of cost (price) and value of beauty (aesthetic value). According to environmental reception theory, human being will react differently in order to fit a specific environment. This kind of instinctive adaptability is the reason why the value of art is able to affect activities’ formalities (Figure 4.4).

In order to achieve the goal of creating high taste atmospheres by using artworks, correctly evaluating the value of each work is very important. Once artworks form an expected atmosphere, the works themselves let people be more involved with the surrounding environment. Participants gain satisfaction from this process. At the same time, artworks formalize this person’s actions, thus affecting people’s behavior and psychology.
Result III

Larger scale artwork has higher range of fluctuation on affecting ideal interactive distance.

According to collected data from case studies, statistics showed a fact that larger scale artwork can trigger stronger impacts on affecting behavioral reaction than smaller works of art can. For example, comparing with different artwork appreciate distance between Fireplace and David, it is obviously showed that a larger artwork (fireplace) has a higher range of fluctuation than a smaller artwork (David). According to the collected date from Figure 3.15., we can easily calculate the fluctuation range of minimum and maximum interact distance.

<table>
<thead>
<tr>
<th>Artwork</th>
<th>Maximum Appreciate/Interact Distance</th>
<th>Minimum Appreciate/Interact Distance</th>
<th>Range of Fluctuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fireplace (larger artwork)</td>
<td>2 m</td>
<td>1 m</td>
<td>≈ 1 m</td>
</tr>
<tr>
<td>David (smaller artwork)</td>
<td>0.7 m</td>
<td>0.6 m</td>
<td>≈ 0.1 m</td>
</tr>
</tbody>
</table>

*Figure 4.5 Range of fluctuation (distance of appreciating): Fireplace and David*
The reason that contributes to this phenomenon is the sense of completeness of our field of vision. This factor determines minimum and maximum observational position and an ideal interactive distance to any piece of art. This factor is decided by human’s view range.

Figure 4.6. explains the relationship between an artwork’s scale and a human’s view range. Letter “A” represents the minimum appreciate distance and “B” shows the maximum range of performing activity. It is obvious that the scale of artwork (blue dot) determines A and B because of the differences of participants’ view ranges (yellow triangle). The larger scale an artwork it is, the further minimum distance (A) and maximum distance (B) it has.

![Figure 4.6 Comparison of minimum interact distance (A1 & A2) VS maximum interact distance (B1 & B2)](image)

As Figure 4.6. shows, the fluctuation of each interact distance is different (A2>A1, B2>B1). Generally, in order to make sure an object we are observing is under a controllable situation, we involuntarily choose the interact/appreciate position that has better view distance. As a result, people tend to stand close to a smaller object and keep a
larger distance from bigger objects. If people choose a position that is very close to a big object, their eyes’ view range will be limited by the object. This situation leads to a visual incompleteness and produces an extremely uncomfortable feeling.

Another factor that contributes to fluctuation differences is a participant’s psychology. This theory affects many fields. For example, in economic and commercial fields, if someone wants to invest $1 on a project, his expected earned income might be $2 which is double to the original investment. But if this person wants to invest $1,000, his expected income would be $2,000 which is still double to the original investment. He may have the same ROI (return on investment), but the range of fluctuation is absolutely different from $1 ($2 - $1) to $1,000 ($2,000 - $1,000). Therefore, whether the amount of income is $1,999 or $2,001, it is not a big deal on affecting his investing intention.

This theory can be used in the interior design field, too. When the scale of an artwork has reached a specific size, people’s original interactive intentions will be subconsciously affected by this artwork. At the same time, its size determines the range of fluctuation. When people stand very far away from an artwork, 1 meter closer or 1 meter further will not determine this person’s overall interactive actions.

As a result, the further people stand from an artwork, the larger fluctuation this artwork has. Therefore, this kind of fluctuation affects everyone’s path selecting habit and other behavioral preferences. It has very high influence on controlling the density of people in a specific space, efficiency of using emergency exits and way-finding methods.
Result of hypothesis IV

Artwork’s composition is one of the most important properties on affecting people’s spatial cognition.

Artwork’s composition, in other words, the location, order and position of each piece of artwork, plays a very significant role in enhancing hotel environment. It is able to influence people’s spatial impressions, visual impacts, path selecting tendencies and behavioral control methods.

There are two key terms concerned with the composition of artwork: visual balance and arrangement. These two aspects are very helpful on the general impression forming process and overall satisfaction producing systems.

![Figure 4.7 Symmetric composition of artworks. Visual focal line separates the whole space into two symmetrical sections.](image)

There was a commonness observed in the case studies: When people walk close to a group of artworks, they tend to select visual barycenters (the focal point/line) as their interactive position. If it is a single symmetrical structure artwork, people tend to stand
closer to the visual central line (Figure 4.7), this kind of spatial change is able to affect participants’ original path selecting intentions. This visual balance changes spatial status of the whole hotel space; in some cases, it determines how strong a visual impact could be.

The differences of layouts lead to different spatial impressions. The position of arts determines the sense of a hotel’s general spatial cognition. People’s reactions to the surrounding environment will be affected by these artistic visual impacts. This kind of visual impact potentially affects everyone’s sensory cognitions, then changes their future behaviors. This is how the composition of artworks control human behaviors.

For example (Figure 4.9), classical colonnade is a typical expression of art to enhance spatial cognition through arranging all columns’ compositions in circular order. This classical art expression can be found in many traditional themed boutique hotels.
Well organized columns strongly stimulate visitors’ visual focal points of space. This kind of visual impact has the potential ability to affect a person’s impression of the whole space. At the same time, different patterns of colonnade layouts contribute to customers’ psychological changes. This influence involves both vertical direction and horizontal direction.

Figure 4.9 Corinthian colonnade of The Westin Colonnade in Coral Gables, Florida. The colonnade’s circular composition enhances the hotel’s theme and creates a unique spatial experience.

In conclusion, reasonable thinking about the position of all artwork is a very important step before systematically designing a space. Changing position is one of the most effective ways to guide people’s spatial experience. Enhanced spatial experience greatly influences visitors’ first impressions of a hotel and can gain satisfaction from the space. This illustrates how artwork affects a hotel’s spatial cognition.
Result of hypothesis V

Well-coordinated artworks (or repeated artistic elements) have stronger influence than a single artwork

Collaborated artworks can be treated as an artistic “combo”, or a kind of experience enhancing method. Visually united objects can contribute to more powerful visual impacts on people. In this case, a hotel’s theme can also be expressed through using similar artistic sensory stimulations. Through this method, the brain repeatedly produces signals and combine different sensory stimulations together to produce final general impressions of the space. Therefore, comparing with a single piece of art, combined artworks are much easier to change one’s impression forming system through repeatedly emphasizing a kind of unique spatial experience. This experience could be reflected as either a visual stimulation or psychological stimulation.

According to the analysis from the case study of Loya’s Little House B&B, artistic combos are very helpful to enhance a person’s ability of spatial cognition. This phenomenon was explained as the relationship between visual balance and behavior balance. As the result, similar themes, or well collaborated artworks, can effectively stimulate eyes and brain then contribute to stronger impact. For example, countryside theme and storm theme paintings can be seen in Loya’s Little House’s lobby. Those two groups of paintings collaborate with each other and create a peaceful but wild atmosphere to enhance spatial experience. At the same time, all artistic expressions are similar with the outside view of Loya’s Little House. At last, customers will produce their own unique spatial memory about that space.
Here is another example to explain how collaborated artistic expressions enhance spatial experiences and impressions:

**Figure 4.10** The Colonnade of light. The artwork is an archway given shape by a series of 14 columns of light that are met by a fresnel lens refracting the rays of light that travel through its focal point. On exiting the lens, the rays do not just change direction but bend hyperbolically to form the arches of gothic architecture – an immaterial structure. (source: troika: bent light archway arcades project at interior 2012)

This artistic lighting system is a good example to explain how a group of well collaborated artworks repeatedly enhance spatial experiences and impression forming systems. Unlike traditional gothic colonnade, the whole artistic expression is trying to create a very holy and spiritual archway. Those repeatedly located lights stimulate people’s visual sensation and affect the whole space. They let visitors gain a spiritual satisfaction when visitors pass by or through them. At the same time, people deeply memorize this kind of holy feeling because of repeated light columns. As a result,
people’s impressions and cognitions will be greatly enhanced after coming into contact with a series of artistic expressions, each lighting system simultaneously produces spatial signals to let a person remember the place.

Figure 4.11 David Dunlop – Columns of light (Source: The Lily Pad Gallery) This abstract painting illustrates how a kind of “feeling” was memorized. It reflects our memory on a 2D painting. Artistic expressions is an important design method to achieve the goal of “moment design”.

According to the spatial analysis in Loya’s Little House B&B and previous literature reviews, there was an interesting phenomenon that artworks in similar themes are helpful to allow people to memorize general spatial experiences in a specific place. People will memorize the feeling of the “theme” instead of the “space”.
For example, it is easy to recall a piece of impressive moment from the brain, because people clearly remember what was happening then and can even create several abstract screenshots to describe that moment (Figure 4.11). In other words, if a designer enhances a boutique hotel’s spatial experience by using repeated themes, this space is successful and meaningful. This is a creative function artwork plays in modern boutique hotel design projects.

**Conclusion**

By collecting information from literature reviews, case studies and statistics of survey, this thesis has proved that artworks and aesthetic features are able to affect both boutique hotel’s environment and customers’ behaviors. In order to achieve the best results, interior designers need to notice the following aspects in any boutique hotel design project:

1. Strong visual impacts from aesthetic features greatly affect impression forming systems, especially the first impression. In this case, interior arts at the entrance or in the lobby are very important to present boutique hotel’s theme and philosophy,

2. An artwork’s scale affects customers’ path selecting preferences and way-finding habits. The larger scale, the further interactive distance it has.

3. Artworks influence the formality of customers’ activities. It depends on both its aesthetic value and its price.

4. The composition of works of art affects customers’ spatial cognitions. Artworks’ locations, orders and arrangements determine a hotel’s overall atmosphere and functions.
5. The theme of artistic expressions helps customers remember a hotel’s characteristics. This is a typical element to judge whether a hotel is impressive or not.

6. The quantity of artwork is very important. Repeated aesthetic features are helpful to enhance customers’ spatial memories.
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APPENDIX A. VERBAL CONSENT FORM

Title of Study: The effects of artworks in boutique hotel

Investigator: Weicheng Chen (weicheng@iastate.edu)
Supervising investigator: Lee Cagley (lcagley@iastate.edu)

Introduction and Purpose of the Study

Introduction:
My name is Weicheng Chen. I am a graduate student of Iowa State University interior design program. You are invited to participate in this research study about the effect of art and boutique hotel.

The purpose of this study:
The purpose of this study is to help people understand the effects of artwork in boutique hotel, such as how artistic expressions influence people’s behaviors, how do they affect people’s path selections and activities.

Time commitment:
Around 5 to 10 minutes, while you are in the lobby.

Eligibility to Participate

This study welcomes all adult (age>18) participants!
You are being invited to participate in this study because you might interact or appreciate with any piece of arts.
You should not participate if you have any uncomfortable feeling with arts or have personal reasons cannot participate in the research study involving artworks.

Procedures of study
1. Please read through the introduction and requirements of this study.
2. Please ask any questions about this study before observation begins.
3. If you agree to participate, your behaviors and activities related to artworks will be observed while you are in the lobby. The researcher will make notes, and will not take photographs, or collect any audio or video recording that include participants.
4. Participants can do anything during the observation. Participant’s behaviors, such as walking habits, sitting location, appreciative and reactive activities to any piece of artwork might be noted by the researcher.

Risks or Discomforts
There is no foreseeable discomfort or risk to participants. If you feel any discomfort, you can stop this study at ANYTIME during the study.
<table>
<thead>
<tr>
<th><strong>Benefits to You and to Others</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>It is hoped that the information gained in this study will benefit society by helping more interior designers correctly and creatively use artworks in their projects in the future.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Your Rights as a Research Participant</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences.</td>
</tr>
<tr>
<td>If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, <a href="mailto:IRB@iastate.edu">IRB@iastate.edu</a>, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th><strong>Confidentiality</strong></th>
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<tbody>
<tr>
<td><strong>About the confidentiality of participants:</strong></td>
</tr>
<tr>
<td>Participant’s personal information is not very important for this study. In this case, personal or private information (name, age, gender, income, contact information, etc.) will NOT be requested or recorded at any time.</td>
</tr>
<tr>
<td><strong>About the confidentiality of this study:</strong></td>
</tr>
<tr>
<td>All collected data from this observation will NOT be used in other studies or shared with other researchers. The research content will only be available to the researcher: Weicheng Chen (<a href="mailto:weicheng@iastate.edu">weicheng@iastate.edu</a>) and his major professor: Lee Cagley(<a href="mailto:leagley@iastate.edu">leagley@iastate.edu</a>).</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th><strong>Questions</strong></th>
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<tbody>
<tr>
<td>You are encouraged to ask questions at any time during the study.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Your Consent</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you agree to participate in this study?</td>
</tr>
</tbody>
</table>

Your experiences are extremely important for the future interior design trends! Again, thank you to take part in this research! 

You are encouraged to ask questions at any time during this study. For further information about the study, please contact Weicheng Chen (weicheng@iastate.edu)
APPENDIX B. IRB SURVEY APPROVAL FOR DES LUX HOTEL

Date: 11/28/2018
To: Weicheng Chen  Lee Cagley
From: Office for Responsible Research
Title: The effects of artwork in boutique hotel
IRB ID: 18-369
Submission Type: Initial Submission  Review Type: Expedited
Approval Date: 11/28/2018  Date for Continuing Review: 11/27/2020

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- Use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.
- Retain signed informed consent documents for 3 years after the close of the study, when documented consent is required.
- Obtain IRB approval prior to implementing any changes to the study.
- Inform the IRB if the Principal Investigator and/or Supervising Investigator end their role or involvement with the project with sufficient time to allow an alternate PI/Supervising Investigator to assume oversight responsibility. Projects must have an eligible PI to remain open.
- Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.
• **Stop all human subjects research activity if IRB approval lapses**, unless continuation is necessary to prevent harm to research participants. Human subjects research activity can resume once IRB approval is re-established.

• **Submit an application for Continuing Review** at least three to four weeks prior to the date for continuing review as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

• Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. **Approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **IRB approval in no way implies or guarantees that permission from these other entities will be granted.**

• Please be advised that your research study may be subject to **post-approval monitoring** by Iowa State University’s Office for Responsible Research. In some cases, it may also be subject to formal audit or inspection by federal agencies and study sponsors.

• Upon completion of the project, transfer of IRB oversight to another IRB, or departure of the PI and/or Supervising Investigator, please initiate a Project Closure to officially close the project. For information on instances when a study may be closed, please refer to the IRB Study Closure Policy.

Please don’t hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.
APPENDIX C. QUESTIONNAIRE

INTRODUCTION

The purpose of this study:
The purpose of this study is to help investigator understand the effects of artwork in boutique hotel, such as how artistic expressions influence customers’ experience, how do they affect people’s impressions, etc.

Description of the study:
This questionnaire survey focuses on how arts are able to affect people’s living/dining experience in boutique hotel. Your answers are very helpful for investigator.

The questionnaire involves twelve easy Yes or No questions. You can skip any question if you feel uncomfortable to answer. Please feel free to add any comment for each question!

This study welcomes all kinds of adult participants (age > 18)! To protect your privacy, your personal information (e.g. name, age, gender, income, etc.) will NOT be asked in anytime.

Your experiences are extremely important for the future interior design trends! Again, thank you to take part in this questionnaire survey!

You are encouraged to ask questions at any time during this study. For further information about the study, please contact Weicheng Chen (weicheng@iastate.edu)

Thanks for your patience!
Questionnaire

1. Are the artworks in Loya’s little house able to enhance your first impression of this place?
   
   Yes.
   
   No.

2. Does the size of each piece of art affect how you interact with them (e.g. willingness to interact with a piece of artwork, the distance of appreciating, etc.)?
   
   Yes.
   
   No.

3. Do different themes of art help you memorize the space?
   
   Yes.
   
   No.

4. Do any of artistic expressions in Loya’s little house affect your visual balancing ability (e.g. your visual focal points, spatial cognition, etc.)?
   
   Yes.
   
   No.

5. Do the composition of artwork (location, order and arrangement) more or less change your behavioral tendencies and habits?
   
   Yes.
6. Any piece of artistic expressions are able to potentially make your behaviors more formal?
   
   Yes.
   
   No.

7. Are similar artistic themes or repeated aesthetic features helpful to enhance your spatial impressions?
   
   Yes.
   
   No.

8. Is it true that the more different kinds of artistic varieties, the more psychological satisfaction you will gain from the interacting or appreciating process?
   
   Yes.
   
   No.

9. Do larger scale artistic expressions give you stronger visual stress?
   
   Yes.
   
   No.

10. Do you agree that artworks in groups have stronger influence than a single artwork?
    (e.g. visual impact, spatial cognitions)
    
    Yes.
11. Do you think that the composition of artwork changed your way-finding preferences in Loya’s little house?
   Yes.
   No.

12. Are the artistic expressions able to more or less change your living/dining experience?
   Yes.
   No.
APPENDIX D. IRB EXEMPTION LETTER FOR LOYA’S LITTLE HOUSE

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

2: Research involving use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observations of public behavior, unless (i) Information obtained is recorded in such a manner that human subjects can be identified, and (ii) Any disclosure of the human subjects’ responses outside the research could reasonably place the subject at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

The determination of exemption means that:

- You do not need to submit an application for annual continuing review.
- You must carry out the research as described in the IRB application. Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. The purpose of review is to determine if the project still meets the federal criteria for exemption.

In addition, changes to key personnel must receive prior approval.

Detailed information about requirements for submission of modifications can be found on our website. For modifications that require prior approval, an amendment to the most recent IRB application must be submitted in IRBManger. A determination of exemption or approval from the IRB must be granted before implementing the proposed changes.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

IRB 03/2019
Please note that you must submit all research involving human participants for review. Only the IRB or its designees may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

Please be aware that approval from other entities may also be needed. For example, access to data from private records (e.g., student, medical, or employment records, etc.) that are protected by FERPA, HIPAA or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.

Please be advised that your research study may be subject to post-approval monitoring by Iowa State University's Office for Responsible Research. In some cases, it may also be subject to formal audit or inspection by federal agencies and study sponsors.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.