

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
KYIV NATIONAL UNIVERSITY OF TECHNOLOGIES AND DESIGN

Faculty of Design  
Department of Graphic Design

**BACHELOR'S THESIS**  
on the topic:

Development of visual design for an urban exploration application utilizing the Proust effect

Performed by: a student of the BED-20 group

Xiao LU

Supervisors Lecturer Xupeng YAO, PhD, As. Prof.

Tetiana BULHAKOVA

Reviewer Ph.D Danylo KOSENKO

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## **Abstract**

The Proust effect mainly reveals the connection between odor and memory. This paper selects Jinan City Park as the main body of odor information research to explore the transformation and formation of the visual structure of smell in the city sensory experience. The research adopts literature research, case analysis, questionnaire survey, visual design -- SmellWalk and other methods to sort out the odor classification in the city, divide the urban odor area, and collect the preferences and suggestions of urban residents on the odor scene. The design of odor map, odor visual transformation device, poster design and cultural and creative design were completed, in order to provide help and suggestions for urban odor landscape design and odor control.

*Key words: The Proust effect, Urban exploration, Visual design, Odor information visualization, Olfactory landscape*

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## **Introduction**

With the continuous progress of the times, modern cities are flourishing at an unprecedented speed, while people's living standards are also steadily improving. In this context, the livability of the living environment has also received widespread and profound attention from people. When we focus on the construction and development of cities, we will find that significant achievements and progress have been made in the construction and continuous expansion of visual aspects, with various beautiful buildings and colorful landscapes constantly emerging. However, in stark contrast, the sense of smell, which is an inevitable and crucial sensory experience in daily life, appears to lack expressiveness to a large extent. It has not received the necessary attention and full exploration, as if it has been forgotten in a corner and has not kept pace with the development of the visual aspect. This cannot be said to be a regret. It is necessary to complete visual design.

In the process of graduation design and thesis, I used literature research, case analysis, questionnaire survey, visual design -- SmellWalk and other methods to design and research.

The research and design results are presented in this paper. The structured content of this paper includes the following parts: Chapter one, introduces the research background and research status of this topic. The second chapter summarizes the case analysis and research results data analysis. The third chapter

describes the design process and design ideas. Finally, the perception and prospect of the design are summarized, and the results of the design communication and the final physical display effect of the odor visualization are determined.

## Chapter I

### Sources of selection

#### 1.1 Background of the selected topic

With the rapid development of urbanization in our country, many environmental problems appear one after another. The key pursuit of urban planning and construction in the new era is to solve the problem of people's living environment, and the improvement of the quality of urban built environment is one of the important aspects. Facing the increasing pressure from work and life, people increasingly need to relax and comfortable rest environment and living atmosphere, but there are many problems such as the encroachment of the natural environment inside the city and the distance between citizens and nature. Because traditional urban construction pays attention to the form and function of space, to a certain extent, citizens lack the perception and experience of landscape in urban parks, which is difficult to meet People's spiritual perception needs(崔雨桐, 2023).

The Proust effect<sup>①</sup>is the idea that when people smell something they've smelled before, it opens up memories of that time. This phenomenon not only allows people to recall the event, but also to reconstruct details of the time, even

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<sup>①</sup> The Proust effect was first described in French author Marcel Proust's novel *A la recherche du temps perdu*

details they thought had been forgotten. In this paper, a new idea of urban odor landscape design is sought by applying the characteristic of odor connection memory proposed in Proust effect.

In the 1950s, Stan Ehler Rasmussen, a leading figure in Danish architecture, proposed that it was not enough to just see architecture, but also to experience it (高子斌, 2018). In urban design, it emphasizes the addition of sensory assistance, so that people can better understand and remember the characteristics and memory points of each city, protect the physical and mental health of urban residents, and create a characteristic business card for urban tourism routes.

## **1.2 Reasons for choosing the topic**

### **(1) Purpose:**

This topic is based on Proust effect to study urban odor. Taking the area around the city Park in Jinan as the research object, it explores the existence and utilization of odor in urban construction, as well as the influence of odor on residents' life, and carries out visual creative design on the theme of urban exploration. With the development of design in modern construction, visual communication design occupies a more and more important position in various fields. By applying odor memory to visual communication design, we can explore the odor of the city, enrich the connotation and form of design works, deepen the impression of the city, understand the new ideas of odor in urban design, and finally form a unique memory space.

### **(2) Meaning**

In the theoretical sense, the theory of sensory design aims to go beyond vision and explore the richness of the built environment through materials,

smells and sounds to make the construction of cities more three-dimensional. For urban authorities and planners, their attention is generally focused on the look and sound of the city, whereas when it comes to smell, the management focus is mainly on litter or cleaning unsanitary places. This design focuses on the description of the sense of smell, focusing on the connection between the sense of smell and emotional memory, which can help us understand the world; It reveals previously hidden cultural practices and makes the environmental experience more complete.

In a practical sense, the city gift scent treasure hunt is a cultural business card of the city, which can reflect the cultural confidence and charm of the city. For visitors, the exclusive design encapsulates the camaraderie of the city, creating interesting memory points for the short journey, adding more fun and aftertaste. This topic hopes to design a city's unique "odor business card" through cultural and creative industries, create a unique urban atmosphere, and actively promote the city to enhance its visibility and reputation. In the visual creative design of urban exploration theme, this design extracts differentiated elements according to urban cultural genes, builds exclusive urban memory space, and establishes unique urban cognition through the creative design of urban scent treasure hunting.

### **1.3The current situation of domestic and foreign research**

#### **(1) Domestic research**

According to the search, there are 523 articles related to the keywords "smell", "city" and "smell map"; There are 516 articles on "smell" and "city". According to the data published in previous years, in recent years, scholars' research on the dimensions of smell has been increasing. and the application of odor in urban construction has become more and more important and forward-looking.



The significance of smell lies in that the application of smell in public space can be used as an element to strengthen the scene, enhance the atmosphere creation of public space, and realize perceptual experience and image projection through memory production, spatial-temporal narrative and metaphorical symbols (林舒原, 2024). As a cross-space sense of smell, odor landscape has a huge impact on human behavior, attitude and health(Jihong, He et al., 2022) . As the most accessible natural green environment for residents in the city, urban green space has the effect of alleviating residents' pressure and promoting their physical and mental health. Urban green space construction is the key link of urban sustainable development. The multi-sensory experience in urban parks is an organic whole. By recognizing the critical role of smell in shaping perception, urban planners and designers can now incorporate olfactory considerations into their work, thereby improving the overall quality and sustainability of urban green Spaces(Wang, Chen et al., 2023) .

Tsinghua University School of Architecture scholars published "smell landscape. "A Dimension of Street Spatial Quality" pilot test combined the urban odor tracking experiment with social media data to classify the odor of Beijing Old City, analyze the urban odor landscape within the scope of the old city, draw the old city street odor map, and preliminatively test the reliability of the odor landscape map through social data and semantic analysis. Finally, combined with the research results, the possibility of the application of urban odor landscape research in urban planning and design is discussed (封蓉 et al., 2017).

Similar to sound and light, odor is easily dissipated and intangible. Compared with visual-centered design, odor perception evaluation is more difficult to be applied and controlled. However, because of its intangible and changeable characteristics, odor is coveted by traditional cultural consciousness and has great research and potential utilization value(陈妍琦, 2020) .

## (2) Foreign research

According to the search results, there are 283 articles related to the keywords "smell" and "city", and 146 articles related to "smell map". There are 15 articles on "Smell of cities". Odor maps have been studied in many foreign disciplines, and many foreign artists have produced visual odor maps, which provide a lot of reference experience for this topic.

In Lin Cuiyun's "Olfactory Landscape and Memory: Rethinking Proust's" *In Search of Lost Time* ", the first analysis of the connection between smell and memory is proposed: The olfactory map of the protagonist in the novel is constructed according to the "olfactory - memory" model. Through the stimulation, intertwine and fusion of various odors and olfactory organs in the novel, the subconscious memory is triggered by smell, and the personal sense of time and space is experienced by smell, and a personal olfactory map is woven .

In her book *The Visual Language of Smell*, Kate MacLean argues that smell is a strange existence. As "hitchhikers" floating in the air, they are not limited by the site; But the subtle perception of the human sense of smell is often closely related to the site. My work looks at odors as entities and tries to speculate on their patterns of movement and interaction. The Western world has not paid enough attention to smell, so this study aims to find a strategy to enable people to share and explore everyday smells, whether in the "smell landscape" of local or foreign cities, and to realize the importance of understanding smell. This article explores cities around the world through the olfactory experiences of local residents and the way they map them, and explains why I did this research. As a graphic designer, I see the whole design process as a research method - each new piece is a continuation of the previous one. Odor landscape maps utilize "implicit information" as a means of communication design, transforming what appears to be "known" information into "unknown" information, to facilitate discussion around the issue of "the possibility of reproducing odors in

the form of maps ", and to encourage perceptive learning based on field experience: smelling is learning (凯特·麦克莱恩, 2016).

Architect Maria-Cristina Florian in her article "How to 'smell' the city?" From odor interference control to olfactory landscapes, they give us the opportunity to appreciate the benefits of smell in human experience and well-being. As part of a more comprehensive understanding of the world, smells, whether negative or positive, should be considered as an important component of the design and planning framework of public Spaces, along with other sensory elements. If nothing else, thinking about a city's smell can help preserve its uniqueness and deepen our experience of community<sup>②</sup>.

## 1.4 Research Methods

### (1) Literature research

Read a large amount of literature related to this topic, understand and master how to express odor visualization design and regional characteristics, and search for relevant design works. By studying existing literature, we aim to understand the current situation of urban odor design, collect images and videos related to odor map design, and summarize, organize, classify, and analyze the data.

### (2) Case analysis method

Collect practical cases of exploring urban odors, analyze their design concepts and methods, expand their knowledge reserves, and collect diverse visual communication methods for odors, providing design ideas and assistance for this theme design.

### (3) Survey and research method

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<sup>②</sup>Florian, Maria-Cristina. "如何用'嗅觉'探索城市?" [Sensory Maps: What the Sense of Smell Can Reveal about Urban Environments] [M/OL]. 27 8月 2022. ArchDaily. (Trans. Shao, July ) Accesed 11 5月 2024. <<https://www.archdaily.cn/cn/987116/gan-guan-di-tu-xiu-jue-ke-yi-jie-shi-cheng-shi-huan-jing-de-na-xie-te-dian>>

By designing a survey questionnaire, a questionnaire survey was conducted on the distribution and intensity of odors in the city, the preference of residents for odors, the expression of odors, and the interested odorous landscapes. Statistical analysis was conducted to understand the public's impression of urban odors and their needs for odorous landscape construction, providing a theoretical basis for this article.

#### (4) Visual Design - Smell Walk

Referring to McClane's odor tracking method, odor walkers walk through the streets to manually identify and mark the specific location of the odor along the way. At the same time, they record the odor type, possible source, duration, and intensity of the street, and record their preference for the odor, forming an odor type record map and preference level analysis(陈妍琦, 2020)

### **Summary of the chapter I**

1. Clearly elaborated on the core issues and themes discussed in the paper, and provided a general discussion on odor visualization.
2. Introduce the knowledge background, current situation, and previous research results related to the topic, laying the foundation for subsequent research.
3. Explain the value of the study, both in terms of theoretical and practical significance.
4. Define the research boundaries and scope to avoid overly broad or vague research scope.
5. Overview of research methods: literature review, case analysis, survey research, visual design --SmellWalk.

## **Chapter II**

### **Research for the selected topic**

#### **2.1. Preliminary Research**

##### **2.1.1 The effects of Proustian effects on memory**

Arousal of emotional memory: The Proust effect proposes that odors are usually associated with strong memories, and when people smell familiar smells, they will awaken the past memory, causing people to return to the situation and re-experience the feelings and mood at that time.

Concreteness and vividness of memory: In the memories brought out by smell, the scenes and emotions mapped will be more specific and vivid, and the details of the places, characters, and dialogues in the memory will be more deeply felt, as if they can experience that moment in person again.

Unexpected triggering of memories: The Proust effect, in which odors are often inadvertently smelled, makes memories more unpredictable and uncontrollable, such as a sudden smell while walking in the street and an instant return to the scene.

##### **2.1.2 Proust effect and the triggering of memory**

The Proustian Effect is the idea that when people smell something they've smelled before, it opens up memories of that time. This phenomenon not only allows people to recall the event, but also to reconstruct details of the time, even details they thought had been forgotten.

Behavioral evidence indicates that odor evoked autobiographical memories (OEAMs) are older, more emotional, less thought of and induce stronger time traveling characteristics than autobiographical memories (AMs) evoked by other modalities.

### **2.1.3 Differences in odor expression in different cultural and social contexts**

Smell is ubiquitous in our daily life, though it is colorless, odorless, and quietly affects our emotions and cognition. However, smell has completely different expressions and meanings in different cultural and social environments. This chapter will discuss the influence of different cultural differences on interpersonal communication. It also emphasizes the importance of respecting and understanding these differences in cross-cultural communication.

#### **(1) Differences in cultural background**

From the aversion to odor in ancient Greece, to the tolerance of odor in the Renaissance, to the emerging bourgeoisie after the Enlightenment, which regards fragrance as a sign of identity, people's perception of "fragrance" and "odor" has always changed with the changes of social life. More intriguingly, smell is also moralized, and when the religious atmosphere is strong, odor is always associated with women and misogyny, and fragrance is often associated with sensory pleasure. It was not until the secularization of modern Europe that the concept of odor was transformed. The history of the sense of smell is actually the history of Western society and ideological changes.

#### **(2) Differences in social conventions**

In different social environments, people's love and acceptance of smell will also have certain differences. For example, in Western countries, the use of perfume or perfume products is regarded as a polite and respectful behavior. In some Eastern cultures, too strong an odor may be seen as inappropriate or disrespectful.

### (3) Cross-cultural communication and adaptation

Nowadays, with the development of globalization, partners from all over the world meet, under different cultural backgrounds, people should first respect and understand each other's attitudes, expressions and behaviors toward odor. Improve cultural sensitivity, keep an open mind and try to understand and accept the attitudes and expressions of different cultures toward odor, find the common ground of odor, and realize the innovation and practicality of cross-cultural odor communication, so as to promote the development of globalization.

## **2.1.4 How is smell translated and conveyed in visual design**

### (1) The smell on the paper:

Smell, in book design, mostly refers to the use of special paper materials to trigger people's feelings. Lu Jingren once said that when people open the book, they can smell the smell of ink, the smell of paper. For example, in the domestic children's olfactory cognition book "The Smell of Nature, Do you smell?" Different tastes of fruits, vegetables, plants and trees are added to help children recognize things(任怡雯, 2023).

### (2) In packaging design

Leaving a scent on the packaging can make users more aware of the product, while multiple memories deepen the memory of the product. For

example, "Multi-sensory" packaging integration of sight, hearing, touch, smell, taste and other senses, seize the most easily perceived part of the product packaging - color, shape, graphics, text, sound, smell, texture and other elements to stimulate, entice, attract consumers' attention, deepen consumers' memory of the product and its brand, so as to achieve the purpose of improving market share.

### (3) Symbolic design or color

Designers can use specific patterns or colors to symbolize or imply a certain smell, so that consumers can have associations, better remember the product and stimulate the desire to buy, for example, the poster of a cake shop displays freshly baked bread, and the aroma of baked bread breaks out from the bottom of your heart. For example, yellow symbolizes warmth, and red represents hot, and the publicity of Chongqing hot pot restaurants is mostly based on red tones.

## **2.1.5 Scientific research results on the Proust effect:**

### (1) The association between smell and memory:

Studies have shown that smells can evoke nostalgic memories in people and are stronger than other sensory memories. This is because the olfactory pathway communicates directly with the hippocampus, which is an important area for memory formation and storage.

### (2) The temporal characteristics of odor memory:

Experiments have found that autobiographical memory triggered by olfactory information is older than memory related to verbal and visual information. Most odor cues are located in the first decade of life, which is childhood.



(3) The intensity of odor memory:

Studies have shown that odors cause memories with stronger emotional colors and are associated with strong feelings of time reversal. When memory is presented in olfactory form, it becomes more emotional than language, visual, or auditory forms.

(4) The relationship between odor and sleep:

Combining odor with sleep can improve expressive memory. For example, injecting a rose scent into the experimental group after falling asleep resulted in higher accuracy in recalling card positions in memory card games after waking up.

(5) The impact of odor on consumer behavior:

Appropriate odor can affect consumer emotions and behavior, thereby affecting sales. For example, the scent of vanilla in the women's clothing department and Moroccan rose in the men's clothing department will significantly increase sales.

These research findings reveal some characteristics and mechanisms of the Proust effect, providing important scientific basis for our understanding of the relationship between smell, memory, and emotion.

## **2.2 Smells that are good for humans**

In the colorful picture of human life, smell plays a crucial role. It is not just a sensory experience, but a key factor that can deeply touch our emotional perception and have a potentially profound impact on our physical health. Odors that are beneficial to human beings are widely and diversified in nature and in

every corner of daily life. To carry out in-depth and systematic research on these odors is undoubtedly of great significance for significantly improving the quality of human life and comprehensively promoting the level of health.

### **2.2.1 the classification and characteristics of beneficial odors**

#### **(1) Flowers**

As a common and favored beneficial odor type, floral fragrance presents rich and diverse characteristics. For example, the fragrance of roses emits a strong and intoxicating romantic atmosphere, which can quietly soothe people's hearts; Jasmine fragrance is praised for its fresh and elegant, quiet and peaceful characteristics, which can create a peaceful and beautiful atmosphere for people.

#### **(2) Fruit flavor**

The fruit also has a unique charm. Like lemon fragrance, the fresh and refreshing smell has a significant refreshing effect; Orange fragrance is filled with a feeling of vitality and pleasure, as if it can inject sunshine and happiness into people's body and mind.

#### **(3) Grass and wood fragrance**

Among them, peppermint fragrance is favored for its unique cooling and awakening effect, which can restore people's mental vitality in an instant; Pine wood fragrance contains the power of calmness and tranquility, which makes people feel like being in a quiet forest and obtaining deep peace and calm in their heart.

### **2.2.2 Physiological effects of beneficial odors**

#### **(1) Regulate the nervous system**

Certain beneficial odors can produce precise stimulation of the nervous system, so as to achieve effective regulation of physical and mental states. Some odors can stimulate the nervous system, so that people quickly get rid of fatigue, restore the full spirit and vitality; And some odors can promote the nervous system into a relaxed and soothing state, helping people release pressure and relieve tension.

## (2) Affect the endocrine system

Some beneficial odors may also have a certain degree of influence on hormone secretion through complex mechanisms, and then indirectly regulate various physiological functions of the body, and maintain the stability and balance of the human internal environment.

### **2.2.3 Psychological effects of beneficial odors**

#### (1) Improve mood

Beneficial scents have powerful emotion-regulating powers. They can subtly relieve anxiety, depression and other bad emotions, as if a magic key for people to open the door to joy and happiness. In the fragrance of flowers, under the infiltration of fruit, surrounded by grass and trees, people's mood to stretch, negative emotions gradually dissipated.

Smells that help you sleep:

- Lavender: Lavender has a calming and relaxing effect, can relieve stress and anxiety, make it easier to fall asleep, and help improve sleep quality. It can be used by lavender essential oil and dried flower bundling.

- Jasmine: Jasmine emits a light and sweet aroma, which can relax the nervous system, reduce stress and fatigue, and help improve sleep quality. It can be used by jasmine essential oil and dried flower bundling.

- Orange blossom: The fragrant smell of orange blossom has a calming effect, helping to ease sleep, promote deep sleep, and relieve fatigue and stress. It can be used by neroli essential oil, aromatherapy candle, dried flower bundling, etc.

- Sandalwood: Sandalwood has a calming and calming effect, which can calm the mind, help improve the quality of sleep and relieve mood. It can be used by sandalwood essential oil, aromatherapy candle, etc.

- Verbena: Verbena has a deep sedative effect that helps treat insomnia and anxiety. It can be used by verbena essential oil and dried flower bundling.

## (2) Enhance cognitive function

To a certain extent, it can also have a positive impact on cognitive function, such as improving attention and enhancing memory. In the company of beneficial smells, people's thinking seems to be more agile, and the efficiency of learning and work can be significantly improved.

Scents that help improve memory:

- Rosemary: Its aroma is thought to enhance memory and concentration.
- Peppermint: The fresh peppermint smell can play a certain role in waking the brain, helping to improve memory efficiency.
- Lemon: The fruit aroma of lemon can be invigorating and may have a positive effect on memory.
- Cinnamon: Its distinctive smell may help improve cognition and memory to some extent.

## 2.2.4 The application of beneficial smells

### (1) Applications in the medical field

These beneficial odors have wide application prospects in the medical field. They can be used as auxiliary means to relieve patients' stress, promote sleep

quality, etc. and provide additional support and help for patients' rehabilitation and treatment.

### (2) Application in daily life

In daily life, aromatherapy, perfume and other products containing beneficial smells can be found everywhere. They can not only improve the atmosphere of the living environment, so that people's living and working Spaces are full of pleasant atmosphere, but also have a positive impact on personal emotions and psychological states, adding fun and quality of life.

### (3) Application in the workplace

Through the rational use of beneficial odor, a good working atmosphere can be created in the workplace, and the work satisfaction and efficiency of employees can be improved. For example, the appropriate release of some refreshing smells in the office area can help employees maintain clear thinking and positive work attitude.

## **2.3 Investigation and research**

### **2.2.1 Case study and analysis of odor design**

#### (1) Scent map created by researcher Dr Kate McLean (Figure2. 1)

Dr. Kate McClain organized scent walks in each of the cities surveyed, and many participants were asked to provide objective descriptions, such as the aroma of coffee near a coffee shop, during their first walk. However, some of the answers highlighted the emotional connection people had with the smell: some unusual descriptors included "The smell of broken dreams," "Broccoli/Deep dark Secrets," and "hard life." These all prove that complex

smells combine multiple elements at every moment. These multi-element adjectives also confirm the close connection between smell and memory.

### (2) Shanghai Xinhuanlu Pocket Park/Waterstone design (Figure2. 2)

When designers designed the plant system of the garden, the combination of plants and plants, which is composed of sage, full of starry sky, dwarf pampas, and Farinella, presented a plant atmosphere full of natural wild interest, and became a precious natural landscape in the city, vividly presenting the change of time.

### (3) Scent Library Cold White Perfume Regional Edition (Figure2. 3)

Smell library "Liangbaikai" new regional limited edition, in the "Liangbaikai" perfume on the basis of the real taste, added the unique "four taste" complex of four cities, the launch of the "Liangbaikai" regional limited edition, is the smell library of the Chinese people's smell preferences again in-depth exploration. Using the localization characteristics that are different from traditional perfumes, the "Liangbaikai" regional limited edition deeply cultivates urban culture and memory, which not only fits the young people's consumer psychology of pursuing novelty and personality expression, but also fully arouses empathy with home dialect, hometown flavor and regional complex, which is expected to become another dark horse in the scent library's "breaking circle" in the perfume market.

## 2.2.2 Questionnaire survey

The directions of this questionnaire mainly include: types of odors most commonly felt, degrees of liking and dislike of odors, color expressions of odors, and interesting odors. There are 213 participants in this questionnaire survey, and 213 valid questionnaires have been obtained, accounting for 47.42% of male

students and 52.58% of female students. The following is a breakdown of the data:

(1) Analysis of the types of odors most commonly felt

According to the data analysis, the smell most commonly felt is the smell of nature (54.46%), followed by the smell of life emission (52.58%), and the most representative area in the park is Furong Street - Baihua Zhou block (22.07%). (As shown in Figure2. 4)

(2) the degree of odor like and dislike analysis

According to the data analysis, the most favorite smell: nature's smell (58.22%); Least favorite smell: life emission smell (20.66%), most people will be affected by the smell of the city impression (38.5%). (As shown in Figure2. 5)

(3) Analysis of color expression of odor

According to the data analysis, the representative color of automobile exhaust is gray (12.68%); Grass and flowers: green (17.37%); Food color: yellow (16.9%); Representative color of garbage and sewage: black (17.37%). (As shown in Figure2. 6)

(4) Interesting odor landscape analysis

According to the analysis and conclusion, urban green space construction is more popular among people (84.51%), followed by urban fragrance (69.48%) and odor museum (53.03%). (As shown in Figure2. 7)

### **2.2.3 Field Research**

In order to ensure the authenticity and accuracy of the information, the author organized an odor walk in Jinan Ring Park. Through the planned route, the members were organized to distribute odor record cards and record the

smell, degree, spread range and liking or disliking of the smell along the way.  
After the conclusion of the unified summary:

Sources of odor in cities -- A case study of Jinan Ring City Park (As shown In Figure2. 8)

(1) Urban green landscape

Natural smells: trees, flowers, plants, spring water, fresh air, soil

(2) Food and drink

Food: Pork, bakery, stinky tofu, sugar gourd, food stall, wet market

Drinks: Coffee shop, fresh juice, beer

(3) Waste and emissions

Waste: garbage cans, public places, animal feces, urine, dust

Emissions: car, bus, motorcycle, sewer, tobacco odor, synthetic materials

Building materials and construction: dust, stone, steel pipe, brick debris

(4) Humans and animals

Human: Body odor, perfume, sweat

Animals: animal odor, animal feces

## **2.4 The application of urban olfactory landscape**

The application of urban olfactory landscape has the following aspects:

(1) In the field of horticulture and health preservation, fully tap into the positive effects of the aroma of aromatic plants on human health. For example, Professor Li Shuhua from the School of Architecture at Tsinghua University mentioned that the aromatic extract of Yuling flower, benzoin, not only has significant effects on opening the orifices, removing phlegm, promoting qi and blood circulation, and relieving pain, but also has a significant effect in dealing with comatose conditions caused by cardiovascular and cerebrovascular diseases.



It can also alleviate people's mental stress to a certain extent and promote physical and mental relaxation.

(2) In terms of urban construction, cleverly utilizing various aromatic plants to carefully create olfactory landscapes can bring people extreme pleasure in mood and a sense of sensory fulfillment. For example, planting fragrant plants in areas such as parks and streets can immerse people in a pleasant atmosphere while strolling.

(3) In terms of cultural heritage protection, it is crucial to conduct in-depth research and make every effort to protect the unique smells in the city, which is crucial for preserving and inheriting the city's long-standing historical and cultural heritage. Some ancient neighborhoods or traditional buildings may emit unique smells that carry memories and stories of the past.

(4) At the level of enhancing tourism experience, shaping the unique scent of the city as a prominent highlight of tourism can greatly increase the tourism interest and unique feelings of tourists. For example, the fragrance of flowers or food with local characteristics can leave a deep impression on tourists about the city's sense of smell.

(5) In environmental monitoring and management, comprehensive monitoring and detailed analysis of odors in cities can accurately assess the environmental quality status. For example, the appearance of abnormal odors may indicate the existence of environmental problems and provide strong basis for environmental management decisions.

(6) In the business field, businesses can use specific olfactory elements to create a unique consumption atmosphere, attract customers, and enhance their

consumption experience. For example, releasing specific fragrances in shopping malls or stores can stimulate customers' desire to consume.

(7) In terms of psychological regulation, a suitable olfactory landscape can help people regulate emotions, alleviate negative emotions such as anxiety and stress, and create a more harmonious and comfortable psychological environment.

(8) In urban planning and design, combining olfactory landscapes with other landscape elements can create a more three-dimensional and rich urban space, enhancing the overall charm and attractiveness of the city.

## **Summary of chapter II**

1.Urban memory:It is a unique spiritual and cultural symbol of a city, carrying the development context, emotional sustenance, and residents' sense of identity and belonging to the city.

2.Sensory experience:The direct feelings and cognition obtained through smell can deeply touch the human heart, triggering rich emotions and associations. The article aims to enhance the memory impression of urban smells on people.

3.Cultural exploration:Different regions have different cultures and understandings of odors, which can promote regional exchange and cooperation through cultural exchange.

4.Olfactory tourism and scent art:A unique form of tourism, where tourists can sense and experience the unique atmosphere and atmosphere of different regions through their sense of smell.

5.Scent walk:Clarify the theme and create a rich and colorful visual experience and emotional resonance for people.

## Chapter III

### The design process and content of "Scent treasure Hunt" -- taking Jinan Ring City Park as an example

#### 3.1 Odor mapping

##### (1) Design concept

Odor map is a unique tool that can clearly display the distribution status and dynamic changes of odors within a specific spatial range in an intuitive and visual map form.

When studying odor maps, the method mainly adopts three important steps, namely odor walking, data collection, and map representation. In order to maximize the user friendly experience, the design of maps must be concise and clear, with features that are easy to understand and easy to use. In addition, special attention must also be paid to the authenticity and accuracy of the presented odor, only in this way can we truly ensure that it can truthfully reflect the actual specific situation.

The scent map has extraordinary significance. With its unique scent elements, it can present us with a new perspective on observing a city, fully showcasing its unique value and enormous potential. It is like opening a new window for us to understand the city, allowing us to re perceive and examine the unique charm and potential mysteries of the city from an unprecedented perspective.

##### (2) Collect information

Before starting, it is necessary to carefully plan the specific route that will be taken. At the same time, it is necessary to prepare paper and pen in advance

so that you can carefully record the various odors you smell along the way, mark the intensity of each odor in detail, accurately describe the range of its spread, and truthfully record the specific degree of your liking or dislike for the odor.

After completing the entire walking process, a unified and detailed summary and organization can be carried out to roughly determine the specific types of odors and their respective coverage areas. Through this approach, a comprehensive and systematic understanding and cognition of the odor characteristics of the experienced area can be obtained, laying the foundation for further exploration of the mysteries of odor and its relationship with the environment, humans, and other aspects.

### (3) Odor map drawing

Accurately represent the intensity of odors on the map:

- Use colors: By selecting different colors to represent the intensity of the odor. For example, darker colors can indicate stronger odors, while lighter colors can indicate weaker odors. Color gradients can be used to more intuitively display changes in odor intensity.

- Use symbols: Select different symbols or icons to indicate the intensity of the odor. For example, circles or squares of different sizes can be used, with larger symbols indicating stronger odors and smaller symbols indicating weaker odors.

- Use numbers or text: Directly label numbers or text on the map to indicate the intensity of the odor. For example, the numbers 1-10 can be used to indicate the intensity level of an odor, or written descriptions such as "strong", "medium", "weak", etc.

- Use contour lines: Similar to terrain contour lines, contour lines for odor intensity can be drawn. The denser the contour lines, the stronger the odor intensity, while the sparser the contour lines, the lower the odor intensity.

- Combining other information: In addition to representing odor intensity separately, other relevant information can also be combined to more accurately convey the situation of odor. For example, the source, duration, and propagation direction of odors can be marked on the map.

After obtaining odor types, color expression, odor intensity, and preference degree, Figure 4-1 is drawn. First of all, different colors representing different smells are displayed in the map of Jinan Ring Park, pink represents plants, blue represents nature, yellow represents food, coffee represents industry, lavender represents synthesis... Secondly, the outer contour circle shows the intensity of the smell, which more intuitively shows the spread and diffusion range of the smell. (As shown in Figure3. 1)

### 3.2 logo design

Logo (Figure3. 2) design concept:

(1) Name: Proust effect

This name is related to smell and can easily evoke concepts related to smell and memory.

(2) Graphic elements: Side nose

Choose the side nose as the main graphic element, directly associated with odor and smell. The shape of the nose can be concise and expressive, clearly conveying the core concept of the brand.

Consider using a simple and modern nose pattern to enhance the fashion and uniqueness of the logo.

(3) Expression: Seal style

Adopting a seal style can add a traditional and artistic feel to the logo. Seals are often used in Chinese culture to indicate recognition, verification, and importance, echoing the phrase "forgotten and never visited, the scent will take you there."

The shape, edges, and details of the seal can be designed to match the brand's personality and style.

#### (4) Color selection:

Choose colors related to odor and emotion. For example, warm tones such as pink, orange, or yellow can convey a sense of comfort, pleasure, and vitality; Soft tones such as light blue or light purple can convey a sense of tranquility, dreaminess, and elegance.

Ensure the coordination of color combinations, which can attract people's attention and convey the emotional characteristics of the brand.

#### (5) Butterfly element:

Adding butterfly elements can add a sense of freedom, dreaminess, and agility to the logo. Butterflies are often seen in culture as symbols of beauty, change, and freedom, echoing the magical journey of scent.

Butterflies can be designed in a simple shape, combined with nose patterns, or subtly integrated into the overall design of the logo.

#### (6) Font selection:

Choose a concise and clear font that matches the graphic elements of the logo. The style of the font can be modern, elegant, or personalized to ensure consistency with the brand's image.

Consider applying special treatments to the font, such as bolding, tilting, or deforming, to enhance the uniqueness and visual appeal of the logo.

(7) Overall effect:

Ensure that the various elements of the logo are coordinated and consistent in proportion, size, and position, forming a cohesive visual effect.

Consider the presentation effect of the logo in different application scenarios, such as business cards, websites, packaging, etc., to ensure its clarity and readability in various sizes and media.

(8) Brand concept communication:

The logo design should be able to convey the core values and concepts of the brand. In this example, the phrase "forgotten and never visited, the scent will take you to it" can be reflected through the selection of graphics and elements, allowing people to feel the emotions and experiences conveyed by the brand when seeing the logo.

The final logo design should be unique, easy to identify and remember, able to resonate with the target audience, and effectively convey the brand's personality and values. During the design process, multiple sketches and modifications can be made, and discussions can be held with team members or clients to ensure that the design direction and effect meet expectations.

### **3.3 Odor transmitter**

(1) Olfactory apparatus

When thinking about how to successfully convey odors to everyone, I came up with the idea of using gypsum as a base material, making it an important medium for carrying odors.

The specific method is to fully and carefully mix essence and gypsum powder, so that gypsum can be transformed into an expanding stone, thus



effectively locking some odor. Then, the unique patterns associated with odor were meticulously drawn on the plaster mixed with essence with dyes, which seemed to be a concrete presentation of odor. Finally, carefully seal it with drip glue. Through such a series of operating procedures, a sophisticated device that integrates visual effects and olfactory experience can be successfully created.

This device is like a charming work of art, which can provide people with both visual enjoyment and impact of beauty, as well as unique and unforgettable feelings in smell, allowing people to deeply immerse themselves in the unique atmosphere brought by this wonderful fusion during the process of appreciation and experience.(As shown in Figure3. 3 Figure3. 4).

## (2)Visual device

Using a square silicone mold, the rich and diverse odor emitters collected from various corners of the city are stored one by one. Then, using a series of professional and meticulous methods such as drying and dehydration, these precious odors are properly placed in the mold.

At the same time, cleverly combining the careful configuration of color pigments, the prepared colors are integrated into it, and finally, drip glue is added to slowly solidify it. Through this approach, a unique landscape that is both realistic and simulated, capable of highly summarizing the overall urban landscape, can ultimately be formed.

This landscape seems to have a magical power that can greatly stimulate the audience's endless imagination, immerse them in it, and experience the feeling full of fantastic colors and unique charm to the fullest. It seems to lead the audience on a unique journey of urban scent, allowing them to perceive and appreciate the unique charm of the city from a new perspective.(As shown in Figure3. 5).

### (3) Gustatory apparatus(Figure3. 6)

Extract the odor factors in the city and make them into food flavoring agents, and make them into taste experience devices such as cookies and drinks to add interaction and deepen odor impression.

## 3.4 Poster design

Design idea: We selected Daming Lake scenic spot, Kuanhouli and Furong Street, Baotu Spring Scenic spot and Quancheng Square as the main body of the poster design. After analyzing the smell of each spot, we used representative colors to superimpose color blocks on the black, white and gray background board to make the picture more layered and the color more clean. At the same time, the original color of the main object was eliminated and only the color of smell was reflected. It can make the viewer have a more definite odor association and sensory experience. It can create clearer odor associations for viewers and provide a more direct and profound sensory experience. It seems that viewers can truly smell the unique odors emitted by various scenic spots through these colors, constructing a vivid and charming world of odors in their minds, and then experiencing the unique charm and atmosphere of these scenic spots more deeply.(Figure3. 7)

## 3.5 Cultural and creative derivatives

### (1) Product packaging design (Figure3. 8)

The product packaging design adopts a square cardboard box with a size of 9\*9\*2.5 as the exquisite packaging of the product. In the middle of the cardboard box, the brand's unique logo and attractive words "Smell Treasure

Hunt" are prominently printed. On the side of the cardboard box, detailed product introductions have been carefully added, presented in clear and concise text, allowing consumers to quickly and accurately understand important information such as product characteristics, efficacy, and usage methods. This design not only highlights the brand's image and theme, but also allows consumers to fully understand the relevant information of the product, making the entire packaging not only aesthetically pleasing but also highly practical and informative. The entire square cardboard box packaging is simple, elegant, and exquisite, which can stand out among many products and attract the attention and favor of consumers.

## (2) Label design (Figure3. 9)

In order to facilitate product introduction and registration information, a delicate label card has been specially designed. This label card is divided into two sides: front and back. One side is printed with the brand logo, while the other side records product related information. Here, various information about the product is detailed, especially highlighting the type of odor.

These clear labels provide consumers with clear guidance, allowing them to quickly and accurately select based on their preferences and needs, thereby better meeting their needs and expectations during the purchasing process. The design of the entire label card is both concise and clear, and has complete functions, becoming an important bridge for communication between products and consumers.

## (3) T-shirt design (Figure3. 10)

In order to facilitate the identification of team members during the odor stroll event, a unified T-shirt has been specially designed. This T-shirt will be distributed during the organization of the event. Its existence gives team members a unified dress code, making the entire team appear more organized.

Wearing the same T-shirt, everyone seems to form a close connection and bond, which can greatly enhance the unity and cohesion of the team. When the team members appeared at the event wearing uniform T-shirts, the neat and uniform scene not only displayed good organization, but also made each team member feel that they were an indispensable part of the team, and thus more actively participated in the scent walking activity, creating a more harmonious, orderly, and vibrant atmosphere together.

#### (4) Sleep pillow

Most of the contemporary young people worry about sleep, staying up late has become a common phenomenon, studies have shown that there are many plant smell help sleep effect. The author believes that it can be placed in the pillow to help sleep sachets to relieve fatigue, calm the mind and relieve depression. Throw pillow design cold, warm two tones, different tones with different effects of the use of perfume bags. (Figure3. 11)

#### (5) Badge design

In the shape of the use of circular, giving a simple and generous visual feeling, color using contrast color design, add a sense of liveliness and layer. The badge center pattern is the product logo, which is the core element of the badge design and conveys the theme of the design. (Figure3. 12)

#### (6) Handbag design

The design of this tote bag is designed to blend practical function with the unique charm and character of the city. The use of high-quality and environmentally friendly materials not only reflects the importance of urban sustainable development, but also ensures the durability of the handbag. On the front, important landmarks are selected to be displayed with colors, which can

directly show the city style, and also play a certain role in publicity for this research design. (Figure3. 13)

#### (7) Business card

Business card is one of the important carriers of foreign communication for employees, and the unified form of business card helps to enhance the standardized quality of company image. The business card adopts a simple design, using the corporate logo and auxiliary graphics as decoration. The layout highlights the main body. The standard specification is 54\*90mm printed on 300g coated paper with four-color printing process.

#### (8) Envelope

The specifications of the envelope should be in accordance with the national implementation standards, so the brand standard color blue is used in the design, and only the corporate logo is applied to the design, which is simple and recognizable. The standard specification is 120\*230mm, and the material is 120g coated paper. The same four-color printing is used.

#### (9) Notepad

The notepad records some daily work of the store, and is an important item for the enterprise to convey information to the inside and outside, and through the unified design principle, it can strengthen the visual effect and reflect the enterprise culture. Considering the convenience of the record, the overall notepad is white, with the brand logo as a simple decoration.

#### (10) Tape

Tape is mainly used to paste packing products, sealing packing tape and other roles, in the remote have mailing process tape is also essential, the details of the unity is easy to make people feel good about the brand. The tape uses two

designs, one is the auxiliary graphics full print bottom plus the brand logo, Chinese and English fonts. The other is a white background with emoji design. The simple tape can make the brand more detailed and gain consumers' goodwill.

#### (11) Billboard

As an important medium for outdoor display, billboards play a crucial role. It attracts the attention of passersby with its striking presence.

When displaying promotional products for a store, the billboard will feature bright colors and prominent text to highlight the strength of discounts and attractive selling points, allowing people to instantly capture key promotional information and stimulate their purchasing desire.

In terms of new product display, billboards will carefully select images that best showcase the characteristics and charm of the new product, paired with concise and clear introduction text, allowing people to have a clear and intuitive understanding of the new product, arousing their interest and curiosity.

It is usually placed in a prominent position outside the store, standing out among numerous messages with its large size and unique design, becoming an important bridge for communication between the store and customers, and effectively driving the store's marketing and promotion activities.

#### (12) Odor plant sticker design

This series of scented plant sticker designs seem like small magical worlds of plants. Each sticker meticulously depicts different scented plants, each with a unique and lifelike form.

For example, mint stickers display emerald green and plump leaves, as if they can make people feel a refreshing atmosphere rushing towards them; Lavender stickers showcase elegant purple flowers, seemingly emitting a subtle and serene fragrance. The whiteness of jasmine, the splendor of roses, and the freshness of lemongrass are all delicately depicted on the stickers.

The background of the sticker or soft color gradient to highlight the main body of the plant; Or it may have some plant related patterns and textures, such as faint leaf vein patterns, faint floral tracks, etc., making the entire sticker full of artistic and atmospheric feeling. These scented plant stickers are like mini gardens that can be carried around, adding a natural touch and wonderful feeling to life at any time.

### **Summary of chapter III**

1. Odor analysis: We searched for cases related to urban odor design, analyzed and studied them, and explored methods for urban odor construction.

2. Smell visualization: Drawing a visual map of urban odors can help viewers intuitively understand the city's landscape and characteristics.

3. Odor display device: Design odor expression from three aspects: visual, olfactory, and gustatory, extract and summarize urban odors, and create urban landscape odor blocks.

4. Brand logo, packaging, poster design.

5. Cultural and creative derivatives.

## Conclusion

This topic applies Proust effect to the olfactory experience and odor association around Jinan City Park. Through literature research, case analysis, questionnaire survey, visual design-Smellwalk and other methods, the author determined the creative ideas of transforming the sense and formation of smell in urban sensory experience into visual design products by means of design and how to set up olfactory landscapes in cities to enhance happiness. Completed the scent map design, scent visual transformation device design, logo design, poster design, cultural and creative design. In addition, the author thought and studied the factors affecting odor expression, the source of urban odor, and the construction of odor landscape. In this process, it was found that visual expression through pictures, posters, etc., is more intuitive, and abstract conceptual things can be easily disseminated and introduced to others, which increases the feasibility of publicity. Using Proust effect to explore the city can enhance the image and cultural identity of the city. At the same time, increasing the attention of odor is also conducive to noticing the pollution in the air more quickly and adjusting air quality conveniently and timely.

At present, this study has not considered the application of odor products comprehensively, and more comprehensive and in-depth research is still needed. The professional knowledge learned at the current stage is still general, and the research methods used are relatively simple, so the analysis and interpretation of viewpoints may not be in-depth enough. Therefore, I hope that I can have a more comprehensive and profound exploration and continuous improvement on the application of odor in my subsequent study and work. At the same time, urban olfactory landscape also plays a certain role in the rehabilitation of human mental health, but relevant studies are still very limited. Strengthening the research on odor gain and making use of it will be a good choice to provide positive emotions. The exploration of green space is worth waiting and seeing.



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# 你的凉白开叫啥???

## L.B.K 2021 地域限定版



Figure2. 3

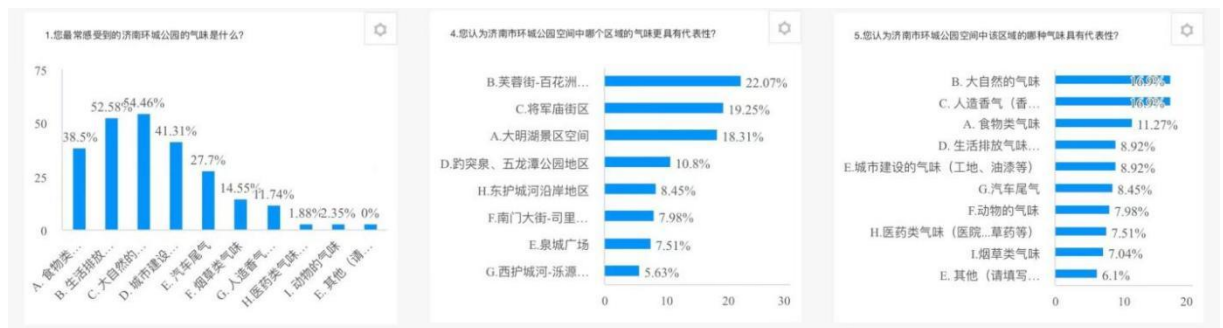


Figure2. 4

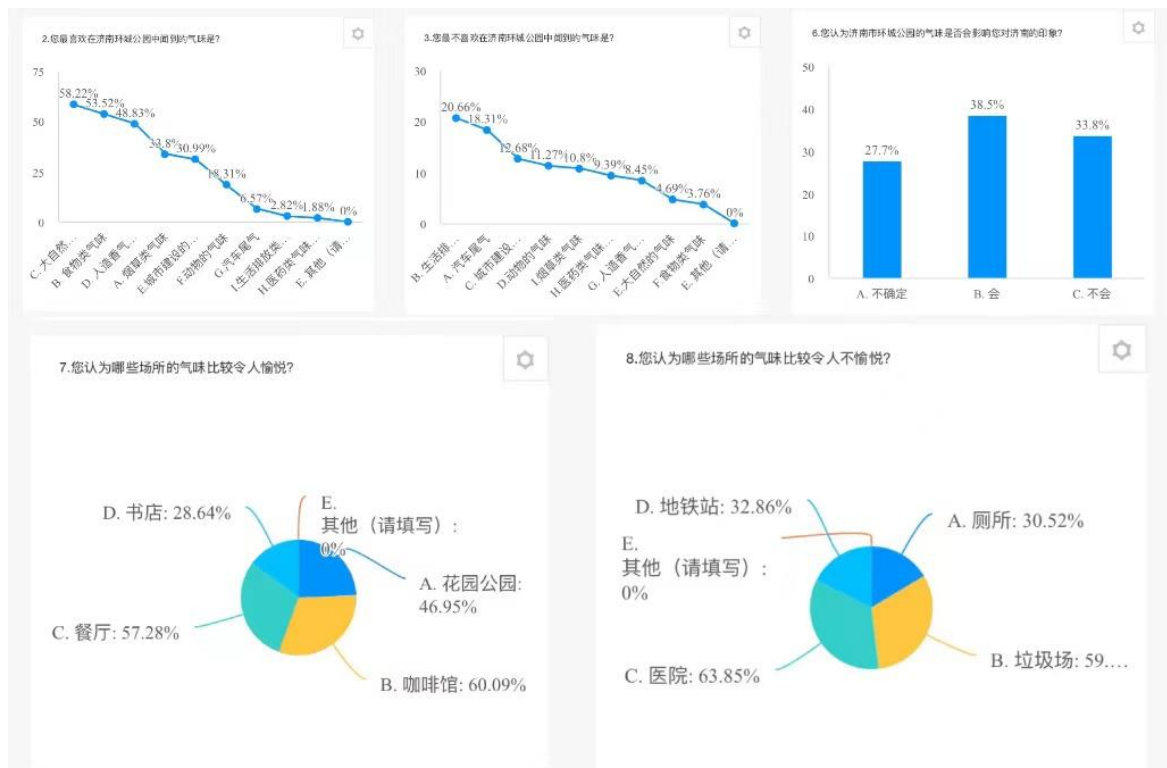


Figure2. 5

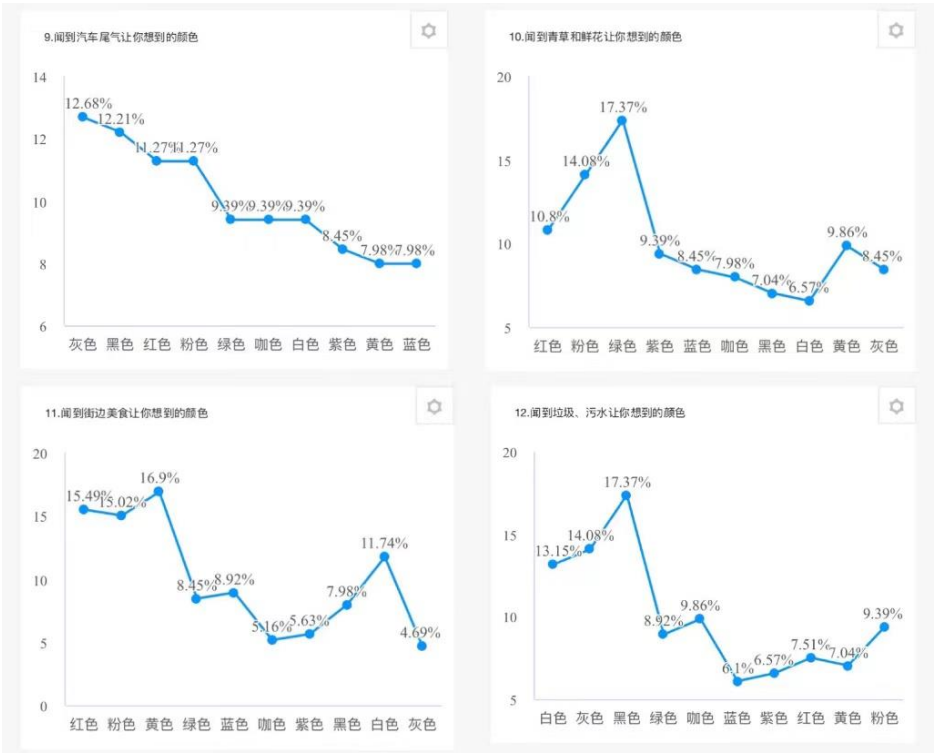


Figure2. 6

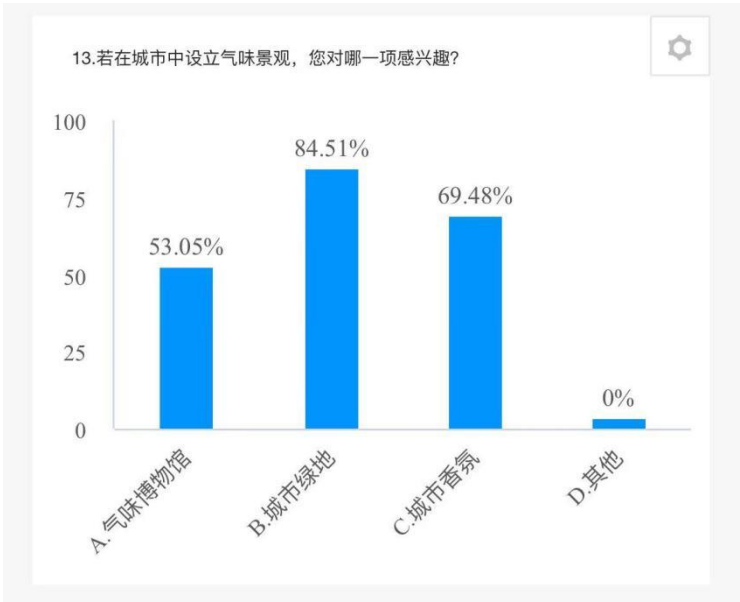


Figure2. 7



城市绿化景观



食物和饮品



垃圾和排放物



人类和动物



Figure2. 8

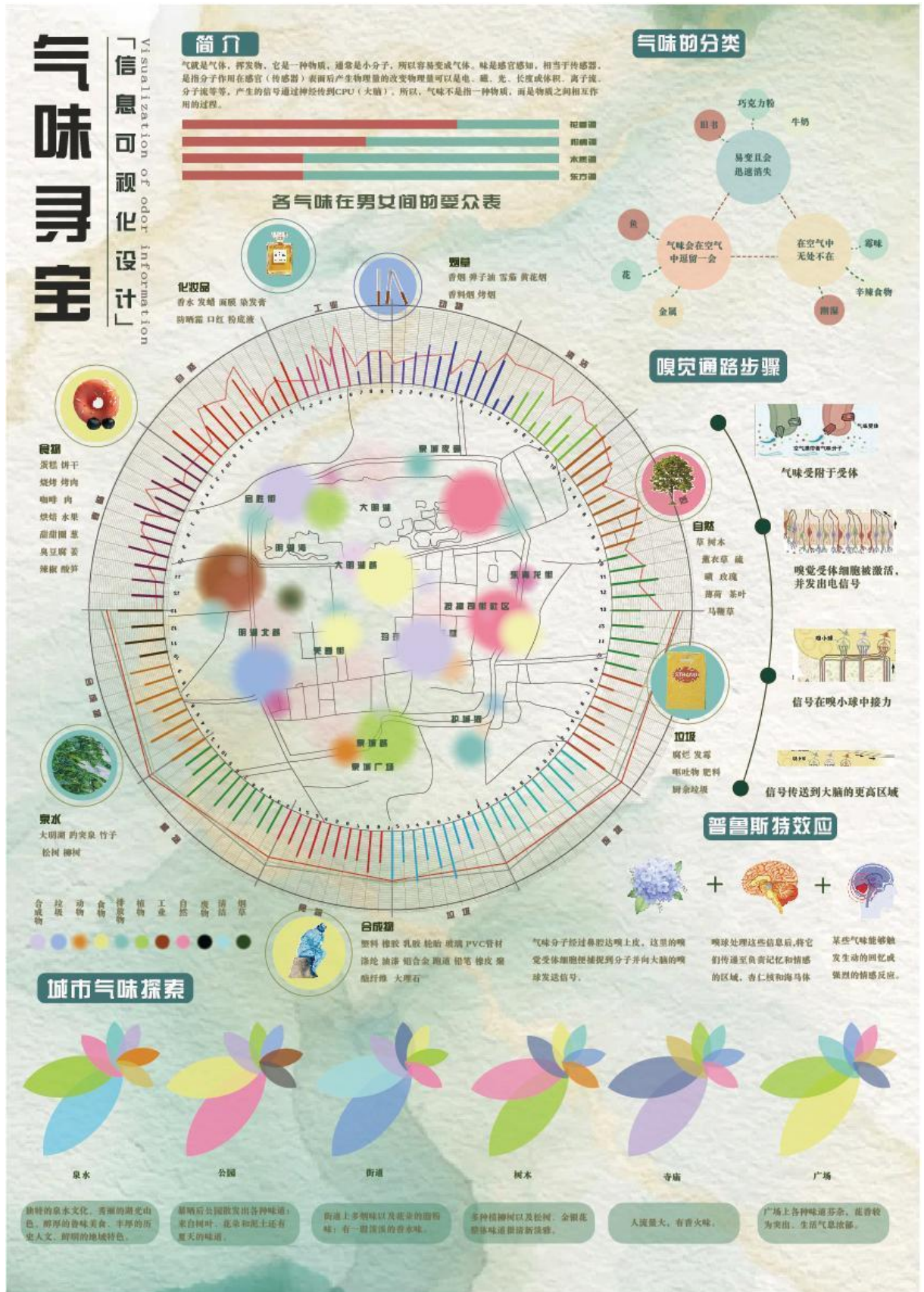


Figure3. 1





Figure3. 2



Figure3. 3

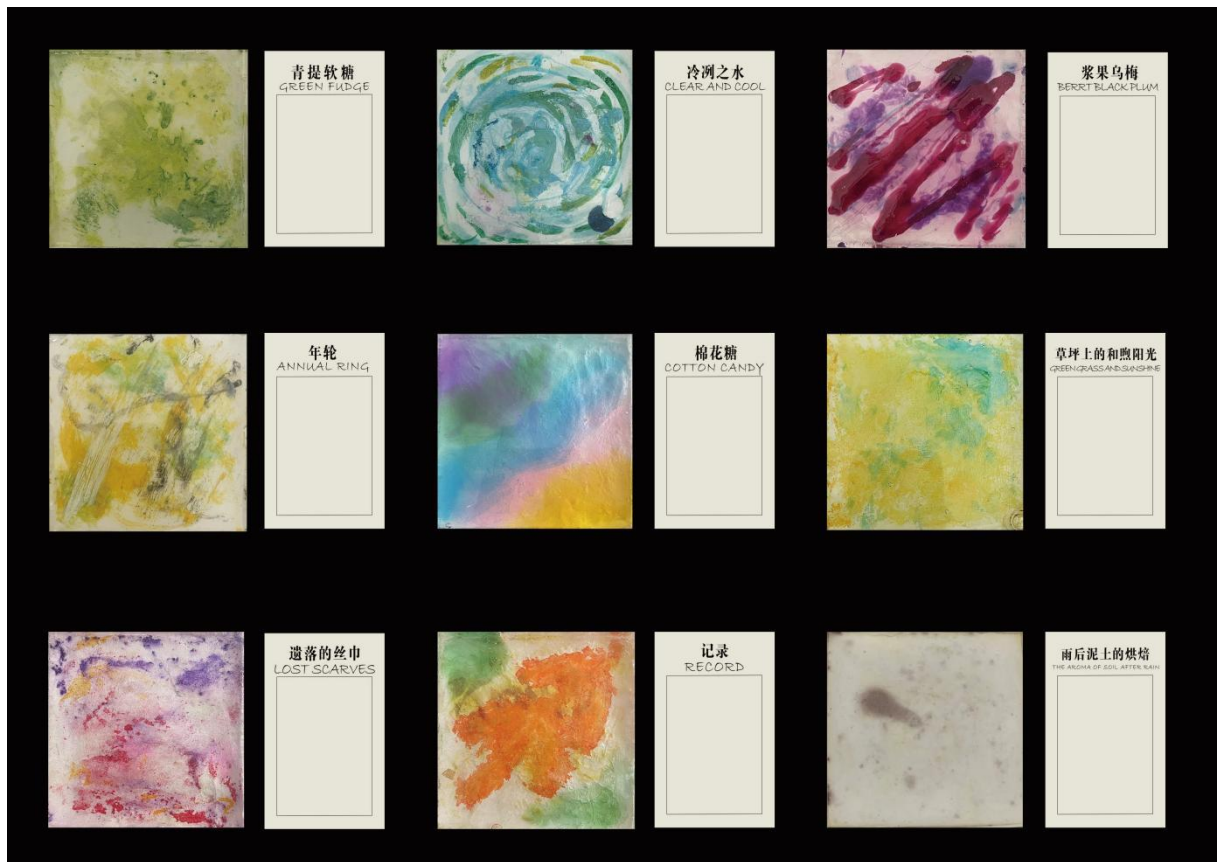


Figure3. 4



Figure3. 5





Figure3. 6



Figure3. 7



Figure3. 8



Figure3. 9



Figure3. 10



Figure3. 11



Figure3. 12





Figure3. 13

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