

An Emotional Study for Urbancage from the View of Experience Design

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Abstract: In nowadays, urban living gradually can't live without technologies and automobiles, which accompany people for 24 hours just like two soul mates or pets. People hope to interact with others closer via Internet; however, the convenience of technology condenses the genuineness and cares from humans. In the past, there are two purpose of having The Cage, one is for admiring-use, to show the elegant movements and the sound of birds; the other is the symbol of society, representing the social level by having a delicate Cage. Deep inside their mind is their reliable consistency. This research was presented a design project "Urbancage" that was tries to aroused an experience from peoples innocent imagination. Compare with the social phenomenon in nowadays that over-using mobile phone and the behavior of raising birds in the past. Those unite the cage and the mobile phone by penetrating the action of holding and placing the cage, so we can metaphor the automobiles to the birds in cage. Therefore, user would connect the icon of electronically bird with human being via the technology of the application, creating a new life style and habit by that. Finally, this paper would discuss its discover for record of "Urbancage" that presented at exhibition of Tokyo Designer Week and exhibition of PRODUCT DESIGN MADRID2. Those were analysis the act of interaction between audients and product, and make suggestions for regarding the social interaction design.

Keywords: experience, emotion, readymade, communication, product design.

1. Introduction

Ideas of people constitute of memories and experiences, and are the drive for people to look for the experience of happiness; and if we examine carefully, we will find that happiness comes from true feelings. Probably, through interactive design, the true feelings hidden in the deep heart can be awakened. Pratt & Nunes (2012) indicated that from the Internet to cell phones, the interactive design in various forms including structures and services is used to attract the public for further communication when some life experiences are implanted to users; they are also encouraged to use skills and strategies to respond and interact. Their study guided us to understand the importance of design for "people". We need to understand who they are, what they want, and finally, what their unsatisfied needs are. It requires the designers, however, to look for the potential needs and product affordance to present the levels of interactive media and experiences. Desmet (2010) pointed out that product emotion is constructed by "stimulation" and "concern." In recent years, information products launched have changed the public cognition and provided high convenience and progress, but they also cause some social concerns. Traditional values are left behind for the pursuit of new changes and fewer interactions among people occur. We are less

familiar with the natural environment and new stress issues are triggered. Hence, the industrial design field also responds to the environmental change thereby reflecting the focus shift from functional development to humanitarian consideration or the restoration of traditional cultures with the aim to convey trans-functional meanings behind products via the interaction details between users and objects. It is also through a pure emotional connection between people and nature, that people are able to find a sincere living attitude in the confusing environment and feel touched again. The link to the fun brought by toys and fairy tales probably can be applied to products with emotional traits. Innocence experiences can be presented via the form of toys or can be linked to past cultural behavior with the inclusion of use experience of information products. As a result, this study uses bird café-bird-cell phone (radio) connection to examine how “innocence experience” can be guided into creation procedure to present the thinking process that create the interaction with products.

2. Thinking Points of the Application of Innocence Experience to Product Design

“Innocence” means pureness, truth, sincerity, and beauty; and in Chinese, innocence associates with pureness, the simple, direct, and joyful response from the deep heart. Innocence is hidden in the past and present experiences and the direct innocence experience transcends ethnicity and ages and impresses us deeply and affects our perceptions. As we get older, we will find the world to be more complicated and on the contrary, innocence is proven to be more valuable.

Demirblik (2003) used to discuss the pleasurable elements in product design from the perspective of human factors engineering. The research believed that products shall transmit positive emotions from their specific characteristics. Also, through these characteristics the corresponding emotions will be aroused. Toys are made to enable people to generate positive and joyful perceptions. Johnson and Yawkey (1992) argued that toys are the miniature objects designed according to psychological and social environment of children to make gaming experience more joyful. Hsu (2005) classified function features of toys into three types: (1) basic function, (2) dependent function, and (3) object format. In terms of fairy tales, Li (2002) mentioned that “story, justice, and aesthetics functions of fairy tales can please children and make them feel happy, and bring them spiritual entertainment and enjoyment.” The fun to link toys and fairy tales can be applied to products that focus on emotional features. But innocence experience can be presented in the format of toys and associate with past cultural behaviors. Teng, C.K. & Chuang, M.C. (2011) proposed a design method by having the designer observe local characteristics before integrating cultural background and emotional characteristics into conceiving design. It mention that "simile" and "metaphor" were used as differential methods to convert the analyzed cultural emotions into product. Gorp & Adams(2012) proposed the attract, converse, and transact (A.C.T.) Model based on the perspective of emotional design. In the model, attraction is aesthetics-oriented that triggers the desire; conversing is interaction oriented with the core of usable features; and transacting is function oriented with the focus of usefulness. Thus, this study based on “innocence experience” of creation examines the association between characteristics of experiential elements and modern life behaviors. The attempt is to preserve valuable emotional memories via creation to present emotional and life characteristics of people in modern time with the in-depth discussion on the association between product design and users as well as the effectiveness brought by the final application to high-tech product design. Hence, the comparative transfer of source elements of experience and comparative behaviors will be redefined.

In order to clarify the impacts of product design on the innocence experience as well as the guidance by emotional memories to the interaction between users and objects, this section focuses on the correlation among innocence experience, products, and users.

2.1 The Influence of Innocence Experience on Products and Users

Innocence experience refers to the true feelings that are generated from past joyful experiences and the interaction with environmental objects that will enhance the emotional depth behind stories and the value of overall design concept. The inclusion of good experience in product design gives more human touches to the objects. In addition to the provision of external display, the emotions of users are better satisfied. For users, elements of innocence experience are opportunities to activate past memory experience of users that have been lost in the environmental society and even for users that are not familiar with the elements; at various age groups and with different

backgrounds they are able to feel the fantasy like children brought by innocence experience elements.

2.2 The Influence of Products on Innocence Experience and Users

Products themselves contain multiple meanings such as functions, shapes, materials, and cultural contents and for innocence experience. If the relevant innocence experience according to different product contents is re-constructed, then the past emotional experiences can be represented. Through comparative transfer of experiential elements with design method, the whole new feelings based on old memories are developed. For users, products are objects that satisfy the needs and solve problems. Through the mechanism or hint provided by products, users operate. The satisfaction levels can be divided into functional and psychological ones and the methods to satisfy involve the transmission and receiving of information of sub-consciousness and the results also differ according to social environment of users.

2.3 The Influence of Users on Innocence Experience and Products

For innocence experience, users are the containers that help to keep memories and the completeness and depth of memories also differ according to users. As a result, different users will perceive with different strength towards experiential elements but experiential characteristics of memories are in common and with more common memories, users can be felt by users with various cultural backgrounds. For products, users are containers that accept information and respond and products according to semantics cues of various shapes, colors, and house requirement, users are guided to operation. The interaction between the middleman and the object is full of interpretation and response to information. This study classifies interaction into two types: interaction of external function that aims to produce information receiving and response based on functional demands as well as interaction of internal memory that focuses on the production of information receiving and response due to emotional memories.

Thus, three types of correlations from different perspectives are shown as in Fig. 1.

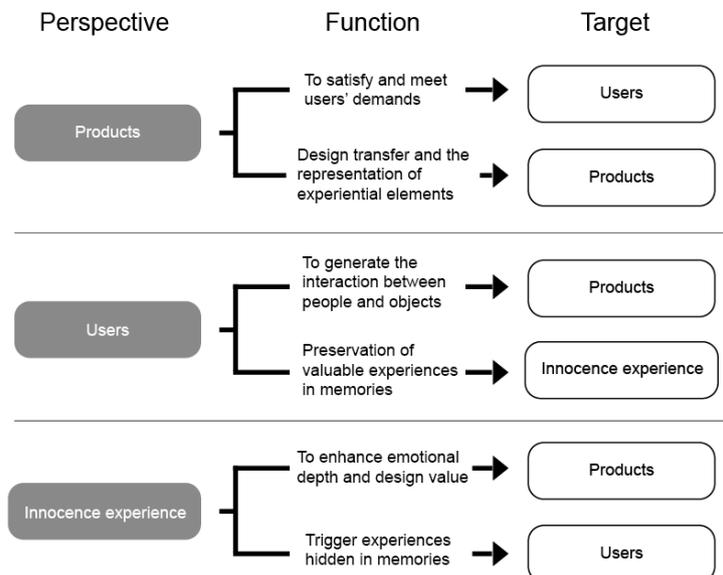


Figure 1: Three types of correlation from different perspectives

3. Creation Process and Method

3.1 Phase 1: Design Observation and Analysis

(1) Observation of life behavior: Scattered observations are conducted on surrounding objects, human behaviors, social environment, and small and big events.

(2) Analysis of innocence experience: The causes and effects of the theme targets are examined to link up with innocence experience and analyzed for more design details.

3.2 Phase 2: Integration of Innocence Experience and Design

(1) Initiation of theme concept: Objects observed or causes and effects of behavioral model and innocence experience are understood through initial analysis to transfer analytical elements to design concept to inspire the thoughts of design theme.

(2) Comparative transfer of product details and innocence experience: Deep design transfer is conducted for conceptual theme for comparative and design transfer of detail product elements and corresponding innocence experience. A three-layer axis design based on innocence experience is discussed.

3.3 Phase 3: Design Practice Phase (the implementation of design details)

When the design process enters the practice phase, we make decision on appearance image design, manufacturing process, functional material and details, scenarios and styles. Through tests and adjustment such as 3D, draft simulation, and functional assumption, we actually transfer the concept into a complete object.

3.4 Phase 4: Result Presentation and Feedback Phase:

Products are launched externally through different ways and according to product features and items, presentations and contests are organized to acquire opinion feedbacks from people in and out design field to explore for more possibilities about the theme. The whole process is shown as in Fig. 2.

Phase 1 Design Observation and Analysis		Phase 2 Innocence Experience and Design Integration		Phase 3 Design Practice	Phase 4 Presentation Feedback
1-1 Observation of life behaviors	1-2 Analysis of innocence experience	2-1 Initiation of theme concept	2-2 Comparative transfer of product and experience	Implementation of details	Results and Presentations
Objects, individuals, environment, events, society	Memory, perception, experience	Search for proper product type and emotional perception	<ul style="list-style-type: none"> ● Preservation of innocence memories Releasing emotion -triggering ● Satisfying users' demands Assumption of mentality changes of users ● Discussion of behavioral and environmental background Punctuate individual and social values 	<ol style="list-style-type: none"> 1. Outlook image design 2. Manufacturing Process 3. Functional material and details 4. Scenarios and styles 5. DO- Creation of products 	Promotion/display/contest Discussion of users' feedbacks

Figure 2: Creation Process and Method (by the authors)

4. Creation Discussion - Urbancage

4.1 Phase 1: Design Observation and Analysis

4.1.1 Observation of Life Behaviors – The Overwhelming number of Cell Phones and Tablet Computers

Opinions and spiritual communication are critical reasons for human civilization and smart phones and tablet computers have gradually changed the traditional communication habits in society. The quick and convenient communication way enables people to quickly communicate without barriers but technologies, at the same time, shorten the distance of the heart although the caring behaviors are lost the warmth during the process of message and digital symbol communication. The intangible technology barriers, thus, appear in our surrounding environment and sometimes, misunderstandings and stress occur.

4.1.2 Analysis of Innocence Experience- Cultural Experience of Birdcages

Birdcages house birds from the wild nature in a limited and small space; people, through the narrow gaps of a birdcage, are able to view the vivid life and enjoy the bird. Birdcages can be found in every culture around the world. From the up the River During Qingming painted by the artist Chang Tse-Tuan in the North Song Dynasty, we are able to see people in the ancient time often talked their walk with birdcages. The rich Bannermen in the Qing Dynasty collected designers' birdcages that have been viewed as the presentation of social status. The owners of birds cared about everything of the birdcages from materials, sculpture details, to feeding devices and different types of birdcages were designed for different types of birds (as in Fig. 3). Nowadays, due to the concern of infection diseases (for example, avian flu), bird raising is not encouraged and the number of shops that sell birds in Taiwan has decreased quickly. The new generation has gradually become less familiar with this traditional culture.



Figure 3: Taiwan's Traditional Birdcage (photographed by author)

4.2 Phase 2: Integration of Innocence Experience and Design

4.2.1 Initiation of Theme Concept

In the past, people raised birds to live with the wild life, and through birdcages, birds were housed but with the care, special emotional connection had been created. Now, people live with cell phones and tablet computers and are dominated by them, too. And in the distant urban environment, the public contacts the outside world with cell phones. At the same time, they are limited in the frame to look for the special dependence and emotional sustenance. What birdcages to bird is like what charging stereos of cell phones and tablet computers to us and with this link, the thought of product design examines the association between past innocence experience and urban life of people as shown in Fig. 4.

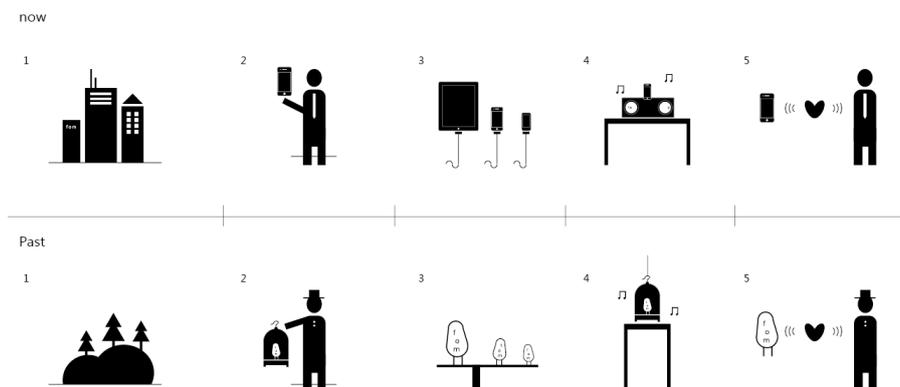


Figure 4: Design elements (by author)

4.2.2 Comparative Transfer of Product Details and Innocence Experience

(1) Preservation of the Experience of Innocence Memories

A. Comparison of Three Elements of Products and Innocence Experience

a. Object elements: This study compares different models of tablet computers and cell phones of Apple to various sizes of birds; the cell phones are equipped with amplifiers that can have vivid sound like the birds do. Birdcages for birds are safe shelters that provide warmth and safety like the houses of people, while we are in the house, we will place our cell phones on charging stereos to amplify music effects. For cell phones, the charging stereos are similar to sheltering objects. Inside traditional birdcages, there are food slots and fruit holders to supply birds' food; the charging stereos provide cell phones the electricity power that can prolong the use of cell phones, a similar function provided by birdcages.

b. Emotional elements: Birds are small in size and easy to be frightened, and during bird raising, the owners need to maintain good living conditions for birds. During the process, special emotions and connection are created like what we have for families and good friends. In the past, beautifully sculptured birdcages and special bird species presented the fantasy of freedom as well as social status. Sometimes, they are the objects to show off one's wealth. People in modern times use cell phones excessively and smart tablet computers, like our families and good friends, often stay with us around the clock. People via cell phones and the Internet look for communication channel to contact with the outside world and gradually become dependency in smart tablets.

c. Environmental elements: Birdcages can be found in most of the parts of the world. For Chinese culture, they present long historical culture and memories. Traditionally, birdcages were handmade but in Taiwan, the birdcage tradition has gradually lost. For the new generation, it is a gradually lost cultural memory. The cell phone market in the world has been led by the launching of new models and the purchase of expensive cell phones now has been the symbol of fashion in society. The life experience of the new generation is all about smart tablets, the new generation memories that replace the traditional ones.

B. Releasing Emotions and Triggering Imagination

It is the use process that integrates the impression experience of the wildlife and cultural tradition in modern products. With the traditional image of birdcages including the hanging and holding method, bamboo material, standing position of bird, attraction to viewers or the imaginary space during use, new experience is introduced to the product to re-awake good ecological environmental experience and to promote emotional interaction between users and the product.

(2) To satisfy the internal and external demands of users

A. Assumption of demand satisfaction

External demands: At the bottom of the birdcage, there is stereo speaker with the equipment of bamboo made power and sound source buttons in the front end. With the built-in charging batteries, the connector is placed in the middle of the birdcage. At the right bottom, there is a USB slot that allows one to connect it with an external power source.

Potential demands: As the feeling of hanging the birdcages, three types of stereo system with the shape of birdcage are designed and the hook on the top allows people to hang the system as the position of birds standing on the top of tree. The charging port presents the standing position of a bird inside the birdcage.

B. Assumption of Users' Mentality Change

b-1 Experience of innocence experience triggered by product appearance: The smaller size matches with the dimension of birdcage where the user can place the cell phone at the center that gives the traditional impression of birdcage to the majority of people. The rectangular model punctuates the interaction of two birds living in the same birdcage; on the top, the arch implies the activeness and lightness of a swing. The large size model presents the traditional birdcage for large size bird; IPAD can be viewed as the birdcage stereo system designed based on large size birds.

b-2 Link to innocence experience triggered by operating process: Compared to traditional models, the small stereo system is lighter, so it is more suitable to be hung in the air or carried indoors like birdcages in the air, and it is a joy to walk with a birdcage. The long model of the stereo system can accommodate two birdcages and the top gives the space for a new cell phone where the sound source is only supplied. At the bottom, the old cell phone can be placed in the opposite direction that allows the user to feel the interaction of two birds during placement. The

new cell phone is placed on the top while the lower part, the old cell phone is placed in an opposite direction implying the pursuit of novelty in the cell phone market. The large size model punctuates the weight of big bird and the placement of tablet is designed directly on the speaker representing that the bird is too heavy to stand on the top.

b-3 The link to innocence experience with the reflection on product semantics: Through the product use, the users will feel the use of traditional birdcages. When the Urbancage is placed in the same living space with a user, the scenario is like those who collect antique and raise birds. The overlapping imaginary and reality scenarios creates unique link to the new experience and further trigger the user to think the behavioral model that relies on technologies and the impacts on the biological environment.

(3) Discussion on Human Behavior and Environmental Background

A. Innocent Experience that Punctuates Individual and Social Behaviors

Starting from the reliance of people on smart tablets in the technology life of people, this study examines the environmental phenomena via the user behavior of birdcage stereo system. The Urbancage is not only the positive comparison of a birdcage and cell phone experience, but in some aspects, it criticizes the expansive connection between these two. For example, the placement arrangement of the long model birdcage that can have two cell phones, new and old, placed in opposition directions, showing the careful thought of this study. It is aimed to compile the analysis of innocence experiential elements into new design language and then transfer it into product semantics that punctuates the behavioral causes of people and the social environment behind.

B. Special Value of Design

The special value of design lies in the observation in different aspects and analyses of themes via various types of media. It is hoped that in this study, material approach distinct from other product designs can examine more deeply about the new interactive experience between users and products. Therefore, this series of “Urbancage” products are combined with interactive APP animation to discuss the interaction of products and innocence experience of reality and virtual imagination and how they impact the thought and emotional experience of users as shown in Fig. 5.

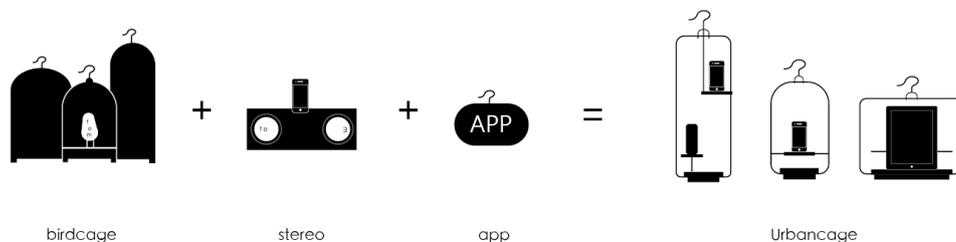


Figure 5: Design elements (by author)

4.3 Phase 3: Design Practice Phase

In appearance image, in order to trigger the imagination of innocence experience, the overall contour of the stereo is designed on the base of old birdcage in the design strategy by using modern and simple frame line to support the overall visual structure of products that incorporates with the edges of internal cell phones and tablets. The proportion is adjusted with 3D software and paper tests (as shown in Fig. 6) before manufacturing. In order to enhance structural strength of the Urbancage stereo, stainless steel is used. The old birdcages often use “bamboo” as the material and we preserve “emotional memories of birdcage” with the color, smell, and touch feeling of bamboo and therefore, power supply button, volume button, and the upper and lower covers of speaker use bamboo material. Stereo chip is placed at the bottom. A user can operate the stereo either by holding or hanging it to feel the joy of taking a walk by carrying a birdcage (Fig. 7).



Figure 6: From Contour Drawing to Model Making (photographed by the researchers)



Figure 7: Fun Operations of the Stereo (designed by Yi-Ting Chen)

4.3.1 Interactive APP Design of Urbancage

The combination of interactive APP with Urbancage stereo aims to bring users and viewers more in-depth memory triggers and responsive feedback with the overlapped virtual and reality memory elements in order to explore the potential possibility of the application of innocence experiential elements to product design. The overall interactive structure in this study consists of “physical products” and “virtual APP,” but virtual APP transcends the professional field of products and in order to look for the optimal effectiveness of creative study, we asked for the help of three partners. The bird illustrations are the work of Hsing-Wen Yeh, the animation was produced by Chao-Hau Yang, and APP was done by Hung-Chi Li.

(1) Frame of birdcage stereo: The Urbancage stereo allows users to place the cell phone at the center and the cell phone, like the bird housed in the cage, implies the public behavior in society controlled by high-tech products.

(2) Frame of virtual world: The cell phone has an electronic screen and visual sensing lens and after the smart tablet connects to the Internet and the cell phone is placed on the birdcage stereo after the interactive program is installed, the bird animation is shown on the cell phone in the cage when the music is played. When a person gets closer to the birdcage stereo, the sensing lens in the front of cell phone will receive the message. The virtual electronic bird on the screen will then react like a real frightened bird flying to another smart tablet via the Internet connection (Fig. 8). After a while, it automatically flies back to the original electronic tablet. The whole interactive process presents the innocence experience of people and birds. With the virtual presentation, the actual interactive behavior is shown to trigger emotional experience of people with the natural life.

(3) Innocence experience triggered by interaction: Users via the virtual interactive experience feel the desire and curiosity of the previous generation towards free lives. At the moment when the virtual bird flies away from the screen, there is some regret and expectation and when it appears on another tablet, users often feel surprised and joyful. Users can also feel the intangible frame when the virtual bird flies back to the original screen and it implies users as the cell phone, tablet, and the electronic bird in the cage are limited by the social system. Through the presentation of innocence experiential elements, behavior features and symbols of people in the modern time are shown (different proportion arrangement in Fig. 9). Thus user would feel an interaction experience from “Urbancage” that was combine two types feeling from real frame and virtual frame, it were integrated with links by App and transferred through Wi-fi. (The interactive scene was shown as Fig.10)

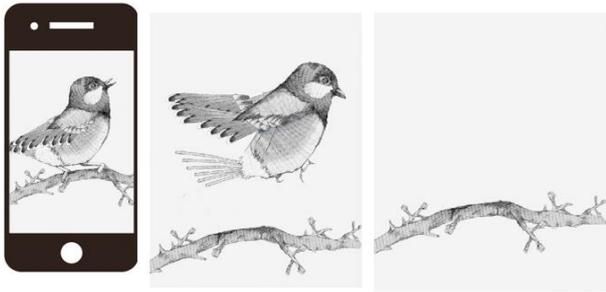


Figure 8: Flying of Virtual Bird that Transcends the Frame (photographed by the author)



Figure 9: Frame Scenario at Different Proportions (designed by Yi-Ting Chen)

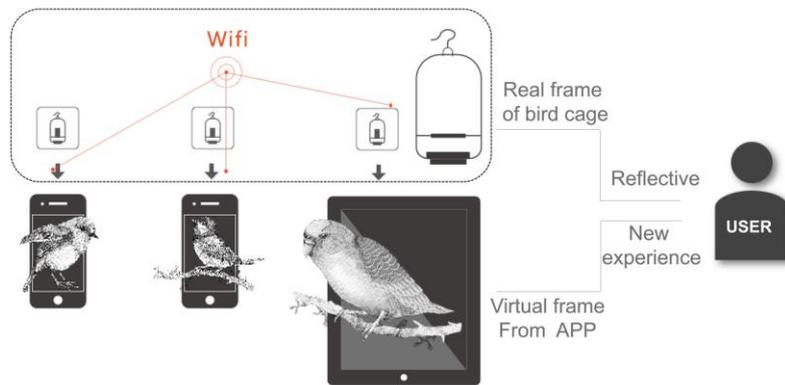


Figure 10: The experience combine from real frame and virtual frame by App & Wifi.

4.4 Phase 4: Presentation and Results

The creation Urbancage of this study has been presented in “2013 Taiwan Design X Taipei Design & City,” “Tokyo Designers Week 2013,” and “Product Design Exhibition Madrid 2013” (shown as Fig. 11 a-c) and it was also awarded as the excellence works in “2013 Taiwan Design & Taipei Design & City.”



Figure 11: Interactions at the Three Exhibitions of world (photographed by author)

5. Conclusion: The Circular Relationship between Innocence Experience, Products, and Users

This study combines interactive design and emotional design in observations and initially, the applications of innocence experience to products are analyzed to identify different effects generated from the different sources of cognitive experiences and the integration with product

types as well as the impacts on external and internal demand aspects of users. Next, after studying experiential elements and contents that need to pay attention to at different design levels, we introduced innocence experience for creation process and thinking points to product design. Then, according to creation process and thinking points, the past formats and user behaviors of birdcages are compiled to link to the association with the use and innocence experience of high-tech products such as cell phones and PAD to help people to know cell phones are birds that have been raised in the modern life. In the end, a discussion on details are conducted through the design transfer to innocence experience during creation and creation results are examined with the application of innocence experience as well as the potential effectiveness and possibility to apply innocence experience to product design and interactive design.

This study examines the correlation of innocence experience, products, and users and finds the bi-directional special circular chain. (a) In anti-clock direction, products provide functions to satisfy the demands of users and during the operating process of satisfaction, users generate innocence experience. Therefore, users become the intangible vehicle to preserve experiential elements and after the integration of innocence experience in products, new values can be created to satisfy external and internal demands of users through the operation of products. (b) In clockwise direction, the integration of innocence experience in products can preserve the tangible vehicle of experiential elements. When users view or use the products, the past memories are triggered to overlap with the imaginary space of existing experience and their stress is released and a joyful feeling is generated. At the same time, the interactive interdependent relationship between users and products is built to enhance attractiveness between people and the objects (as in Fig. 12).

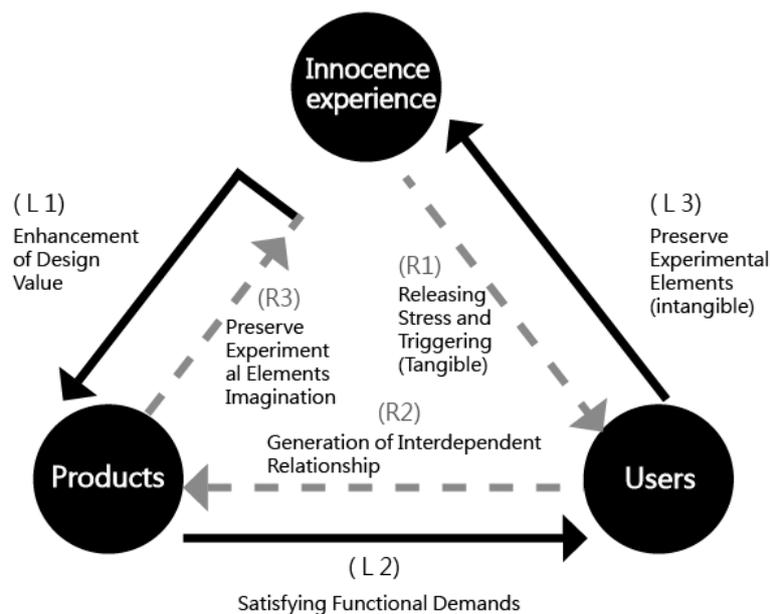


Figure 12: Bi-Directional Circular Relationship of Innocence Experience, Products, and Users (by the author)

This study initially proposes thinking points for “the transfer of innocence experience to product design” to explore the in-depth cognitive message hidden in the memories and convey the product messages to users. It is hoped that through this study, more designers are inspired to think of the incorporation features of interactive contents and their vehicles that will help users to see the more diversified world with appropriate emotions and rich product use experiences provided by the designers.

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