



THE DESIGN OF NARRATIVE JEWELRY AS A PERCEPTION IN ACTION PROCESS

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Abstract: The creation of jewelry involves processes, which are often very experimental and intuitive, encompassing both the creative process and production techniques. In this paper, which is based on a recently realized research project in narrative jewelry, we will reveal and reflect on the process of creating and producing a series of jewelry pieces, based on a narrative musical work - The Carnival of the Animals. Due to the nonlinear process of the project and the co-evolution of drawings, narrative illustrations and jewelry pieces, the project is part of the emergent paradigm of design methodology. Taking into account the dominant role of perception in the creative design process, we will explain and reflect on the jewelry project through the application of the Perception-in-Action Model, which is based on the emergence of design solutions in a co-evolutionary process guided by perception.

Keywords: *design cognition, design methodology, narrative jewelry, creative process, perception*

1. Introduction

Over the last thirty years, scientific interest in the creative thinking and working process of designers has grown rapidly. Research in design cognition started with the increasing criticism of the rational design methodology in the 1980s. Numerous researchers who studied the cognitive processes of designers have demonstrated, that the creative design process is too complex to be reducible to mere linear ‘problem-solving’ or ‘information-processing’ (Lawson 1986, Schön 1983, Cross, Dorst & Roozenburg 1992, Goldschmidt 2003, Oxman 2002). Designers decide what to do and when, on the basis of the personally perceived and reconstructed design problem or task. This perspective is confirmed by the theory of Radical Constructivism, which points out that perception and recognition is exclusively a reorganization of previous experiences (Schmidt 1992, 2000). Constructivist authors challenge the existence of an objective ontological reality and recognize the plurality of perception. According to authors such as Schmidt, Von Glasersfeld or Roth, our brain is a functionally closed system that operates on the basis of generic evolution, cultural patterns and earlier internal experiences (in Schmidt 2000). Therefore, these authors describe the brain as a ‘self-referential’ and ‘self-

explaining' system, which doesn't have direct access to the world but which constructs and presents 'reality' only for itself and within itself. Consequently, perception operates as a 'self-organizing-information-system', based on our own personal history, which explains the fact that designers interpret the same given design problem in quite different and subjective ways. According to constructivist theory, perception is always 'interest guided', based on our own personal history, and thus, perception is our interpretation and assignment of meaning (Roth 2000). All new design solutions emerge, grow and mature during the creative process in an interaction with the situational system of the project.

In this paper, we will reveal the creative design process of a series of jewelry pieces and reflect on the importance perception had in the evolution of the project and the emergence of the semantic and material solutions. In the field of jewelry, often the content of the creative process is as, or more interesting than the finished object. While some product and communication designers and design agencies publically expose their creative design processes and the tools they applied (see the example of IDEO in Kelley & Littmann 2001), in jewelry it is extremely difficult to find documented examples of the complete process of a project, either to protect the work from the danger of copies, or simply because many jewelers do not feel the need to explain or justify their work. The master project-thesis which the first author (Áurea Pereira) developed in 2011, oriented by the second author (Katja Tschimmel), is one of the first works in which the creative thinking process of a jewelry project is made public.

2. Narrative jewelry and the importance of perception

From the many approaches to jewelry, the narrative is the one that asks for a more profound understanding of its meanings and content, that leads observation to a process of interpretation (Besten, 2006). And, though we can find many examples sharing the same principles and intentions in the Middle Age and Victorian Era, according to Cunningham (2007) the term "narrative" has been associated to jewelry only since the XX century, since the jewelry maker manipulates meanings and contents in a conscious manner. In his PhD Thesis on European Narrative Jewelry, Cunningham defines the narrative jewel as a wearable object constructed by an author with a clear intention of communicating a message, through a wearer, to a viewer. Telling a story and transferring its narrative essence through different means implies the study of several elements related to the communication process. The same narrative source, when adapted to a different language, receives the perceptive and interpretative contribution, not only from the author or narrator, but also from the semantic language used in its representation.

What the designer perceives with all his senses while reflecting on a design task, has a profound impact on how a situation is interpreted and how design solutions are developed. To be innovative in design, to be able to think about new narrative and material possibilities, the designer needs to liberate himself from routines of perception. Only a non-stereotypical perception and the subsequent connection of two remote perceptions or mental patterns can lead to new, original solutions (Koestler 1964, De Bono 1996). An automatic, unconscious and uncontrolled perception generally blocks the creation of new ideas and products, since people tend to organize the stimuli of their environment to facilitate easy, fast and well-known solutions. For this reason, creative thought processes can only emerge in three kinds of perceptual phenomena: 1. by a confusion in sense perception (as in the case of the deafness of Beethoven), 2. by malfunctioning parts of the brain (in the case of schizophrenia or drug-induced hallucination) or 3. through a conscious, goal-driven and attentive perception (Tschimmel 2009). An intentional perceptual process, oriented toward the on-going project, can above

all prevent a stereotypical perception and thus be part of a creative thought process. Some cognitive researchers, who deal with the phenomenon of conscious perception and its disturbance, hold the opinion that "conscious awareness is a sort of focusing of the brain on its own internal processes, most important at a given moment" (Roth 2000: 252). Thus at the moment a jewelry designer is looking for new semantic and narrative possibilities, he has to recall relevant information from his memory to respond to the contextual conditions of the project. A creative perception of the situation depends mainly on the designers' previous experience and from his ability to handle his wealth of experience in a flexible and imaginative way, applying creative thinking operations, such as associative thinking, thinking in analogies, visual reasoning and perception with all of the senses.

3. The methodological approach: The perception-in-action model

Each time we, design researchers, observe, describe and visualize a creative design process, we have to choose in which design paradigm we are moving, because the understanding of design creativity is influenced by the dominant methodological paradigm of the moment. To expose the creative process of the first author's master jewelry project, we chose the Perception-in-Action Model, which was developed by the second author (Tschimmel 2005, 2009, 2011), considering the importance a deliberately oriented perception had in the development of the semantic and material solutions and expression of the jewelry pieces. The name of our model is homophonically based on the methodological design paradigm proposed by Schön (1983), the 'Reflective Practice' with its Reflection-in-Action Process. Doing this, we are not denying the importance of reflection, but shifting the focus from the reflection mode to the perception mode. With the concept of Perception-in-Action, we observe and describe the design process as a process of consciously challenging stereotypical thinking, searching for new perspectives and semantic solutions inside the tasks domain. The objective is the posterior establishment of connections between perceived impulses and elements of the project. Obviously none of this is possible without reflection. It is perceptual reflection that we consider the essence in the creation of new realities. The Perception-in-Action Model suggests the deliberate use of perception as a tool in the creative process, in order to promote originality by disengaging perceptive routines towards finding new perspectives. It is not only visual or verbal stimuli that intervene in the creative process. The designer can find new ideas by being alert to his perceptive capabilities. Texture, smell or sound can trigger creative mechanisms that will enrich solutions if brought as a strategy to the surface of consciousness. In fact, the designer's subjective perspective of reality and personal experiences play an important role in this process. This perceptive awareness extends to the appropriation of chance as another factor to promote new solutions. Even some mistakes, properly analysed, are potential paths towards originality, as we will show in our case study (4.4).

The procedures involved in the Perception-in-Action Model are defined in 5 stages: 1. the perception of the task, 2. the perception of new perspectives, 3. the perception of new semantic combinations, 4. the perception of new solutions in model constructing and 5. prototyping and the perception of the users' reaction (Tschimmel 2009, 2011). Each one of these procedures implies an advance in the design process, although each resulting solution space (S_x) interacts with the rest of them in a non-linear way, establishing new relationships between the different aspects of the design and helping to better define the problem/task (p/t). Design problems can't be defined, reformulated, developed and solved without thinking at the same time about possible solutions.

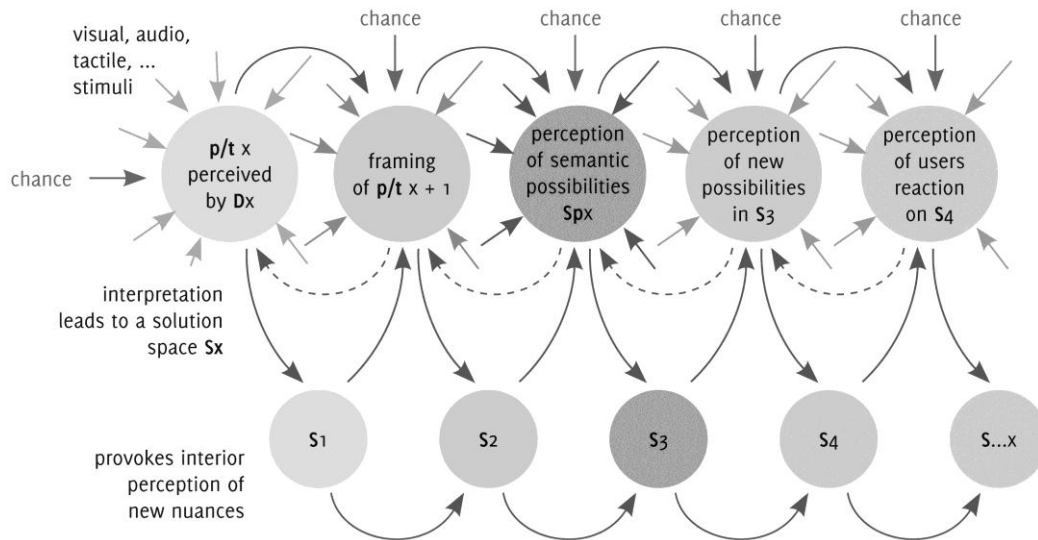


Figure 1. The 5 stages of the Perception-in-Action process where at any moment, chance can influence the perception of the problem/task and of the actual design situation.

4. The jewelry project

The design task of the jewelry project examined here, was the creation of a series of jewelry pieces with a narrative approach, using drawing and illustrations both as a tool and as a part of the final result.

4.1. The perception of the task

The first phase of the Perception-in-Action process is the perception of the problem/task (p/t). The designer (Dx) analyses and interprets the design task, on the base of his previous personal and professional experiences, his world vision and a recalling of relevant memorized information for the project (Tschimmel 2011). The first step to better define the task of our jewelry project was to choose a narrative source to interpret visually. As narrative texts, according to Bal (1997), can use different languages such as written words, visual means or sound to tell a story, as long as they're constructed by an agent who interconnects several elements with a clear intent to communicate a message, the source chosen as a starting point to this project was a musical suite - The Carnival of the Animals (original: Le carnaval des animaux). This musical suite, by the French Romantic composer Camille Saint-Saëns, is divided into fourteen movements and its narrative structure includes an introduction, a presentation of a variety of characters and a final theme. The choice of a musical narrative instead of a written text was for two main reasons: the difficulties in finding a written story interesting enough to illustrate, that had not already been over-explored, and the perceptive possibilities offered by a language with a higher level of abstraction.

After choosing the narrative source, we have structured the project in two main stages. First, we visualized the music and represented it through a series of illustrations. Second, based on visual and symbolic aspects explored in the illustrations, we created a series of jewelry pieces.

To help visualize the music, and after initiating research on this musical suite, we listened to each theme analyzing its content, in order to identify useful characteristics to interpret visually. The elements selected consisted of: characters involved, actions that took place and the general atmosphere of the theme. From this analysis Áurea Pereira, chose a couple of key words that summarized our first subjective perception and interpretation.

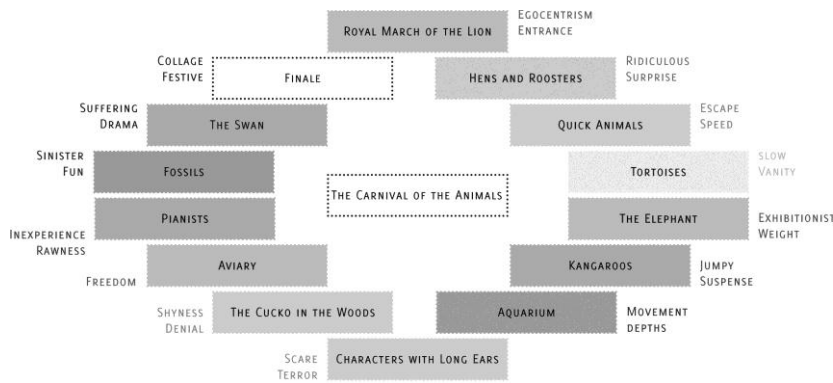


Figure 2. Diagram of key words that summarized the subjective perception of the musical expression of the 14 movements

4.2. The perception of new perspectives

In the second stage of the Perception-in-Action process the designer is consciously working on new perspectives of the design task, selecting various stimuli which will be integrated into the design process and which can help to produce original ideas. In our project, the reinterpretation of earlier aspects of the project is the result of the exploration of the music’s narrative through drawings and illustrations. The insertion of illustration, as an intermediate stage between the original narrative text and the creation of jewelry pieces, allowed a broader approach to the story, for it not only enables a different perspective, but also enriches the interpretation by exploring a different language in a first approach. Drawings and illustrations need a slow, intense and thorough perception, permitting the designer to appreciate the different relations between the music, the visual expression, the future artifact and the individuals and their characteristics. Graphic representations are both, a result of a mental process and a spur to further mental activity from the designer. While drawing, through the interaction of line, form, symbols and ideas, new characteristics, unconnected to the design task, appear which hadn’t been planned by the designer (Tschimmel 2011). In the jewelry field, drawing is mostly used to register and communicate ideas, an initial step, subordinated to the final object. And there are even jewelers that dispense with its use, starting the creative process along with the production in the final materials. But as drawing allows us to transcend the limits of reality, it can be used to stimulate imagination and not only to solve technical problems. In our project, the illustrations had a double function: Firstly as a part of the final result, they place the jewelry pieces in a context and secondly they are an impulse for ideas in the next stage of the process – the jewelry making. Other kinds of drawings were also used throughout this project to register ideas, visualize the solutions or present them to others. In order to frame the application of this tool in our project, we used Lawson’s taxonomy that divides drawing types by its function on the design process: Presentation Drawings, Instruction Drawings, Consult Drawings, Experiential Drawings, Diagrams, Fabulous Drawings, Proposal Drawings and Calculation Drawings (Lawson 2004). Most of the drawings included in our project relate to at least one of these drawing types, though we found no corresponding category for the illustrations as generators of ideas, which we called “Ideation Drawings”.

As the illustrations are meant to work as Ideation Drawings, the illustrated elements were chosen to create situations, narrative moments suggested by music, explore line and texture details, without previously intending to find solutions for the jewelry pieces. Through them, we searched for a visual translation for our interpretation of the situations described by the music and for a “tone” that could correspond to the broad musical suite atmosphere. For instance, we associated the Aviary to the idea of freedom (key-word), for this theme song’s melody suggests movement and birds singing. As the

title, Aviary, describes a place where birds are kept, we decided to present open cages on the illustration, suggesting the idea of freedom through the emptiness left in the place they were trapped before.



Figure 3. Illustration/Ideation Drawing for the “Aviary”

As this project involves a series of 14 moments to be illustrated, there was the need to alternate constantly between a visualization of each individual illustration, with its specific problems, and the global narrative formed by the whole set of drawings. To make it possible, we used a storyboard, where we placed copies of the illustrations that were being updated and where we could easily connect them to improve the results by establishing relations between them.

4.3. The perception of new semantic combinations

The second phase of the project consisted on the creation of a series of jewelry pieces based on the previous series of illustrations, whose main function, at this point, was to generate ideas for semantic and symbolic solutions. In the previous stage, the solutions found through the illustrations added a subjective perspective to the narrative which was continued onto the creation of the series of jewelry pieces. Searching for new semantic expressions, the perception of elements founded by chance led us to surprising solutions by analogical thinking. As we included references from childhood in the drawings, we decided to maintain a playful atmosphere for the jewels, using toys as inspiration and asking for an active participation in some of the pieces. Taking, as an example, the same musical moment presented previously, the Aviary, we started from the shape of the cages that are suspended in the drawing and seem to move with the wind. We noticed that the cage in the front is unfinished, like it appears from the bottom of the frame. So, the first idea was to explore the shape of a sectioned three-dimensional cage.

Through Proposition Drawings, we analyzed this shape and decided to turn it into a ring, using the hoop from which the cage is suspended to adapt this object to the human hand. Also through these drawings, we developed a few solutions to make this an interactive object. The final object consists of

a ring and a holder, where the ring fits. By taking the ring from its holder/cage, the wearer reveals a birds' beak, suggesting the song of a bird that has been set free. We called this ring “Somewhere Not Here”.

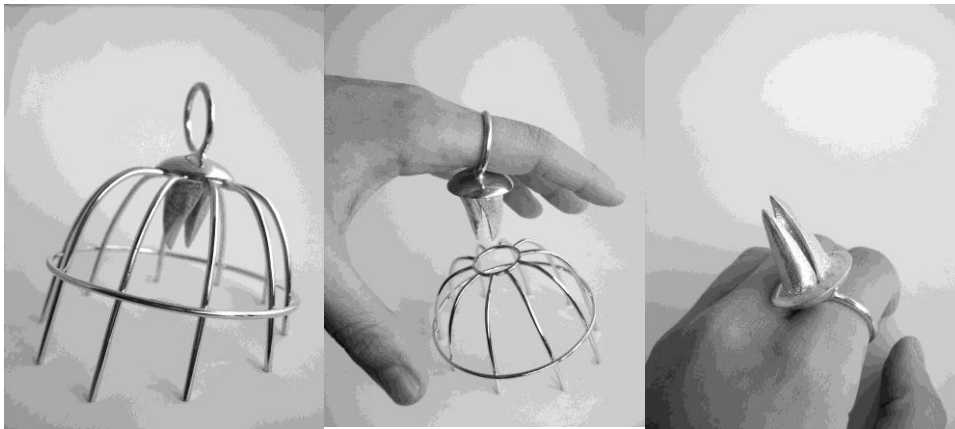


Figure 4. Ring and support piece “Somewhere Not Here”

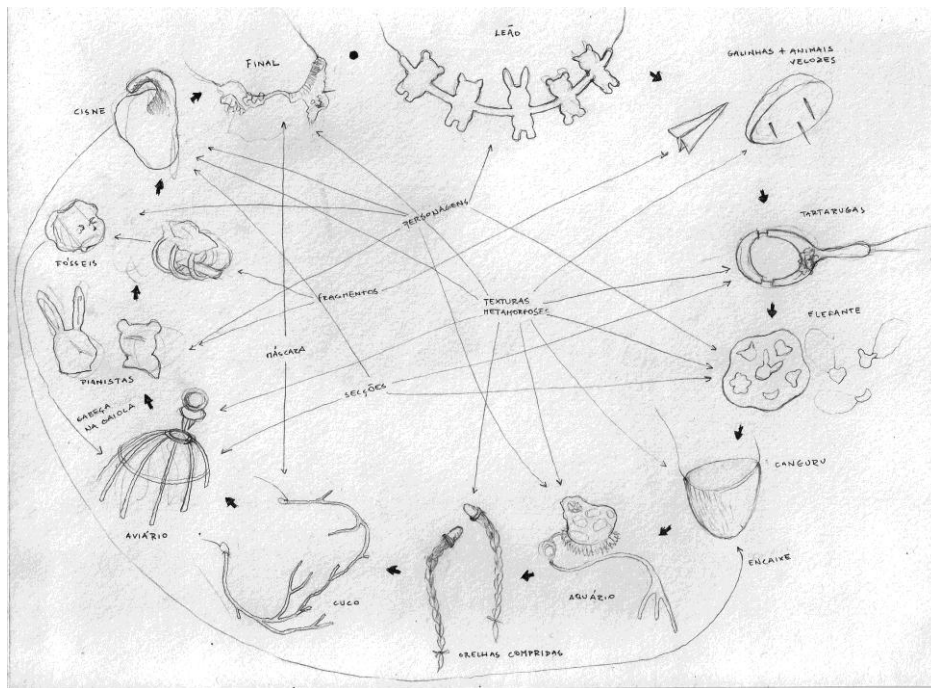


Figure 5. Storyboard of the series of jewelry

In this stage, there was also the need to use a storyboard with the jewelry pieces in progress, to create a similar visualization of the narrative as we did with the illustrations. Through drawings of the jewels, we analyzed their shape, meaning and relation with the complete series in an easier, practical way.

4.4. The perception of new solutions in model constructing and prototyping

The fourth stage of the Perception-in-Action model is characterized by the material development of the project. Although many of the materials were already chosen when we began the process of making the jewelry pieces, it is at this stage that the object is tested and may still undergo some improvements and major changes. In a narrative jewelry project, the focus is on the communication of messages, therefore even the materials should contribute to the story telling. Silver, the main material used for the pieces in this project, places them in the jewelry field, distinguishing them from the universe of real toys. Even links and other elements needed to fix the jewels to the body were carefully chosen to avoid polluting the message. So, we chose cotton cords to substitute chains and, since they are colored, we selected their color according to the palette used in each corresponding illustration. Besides the color, the cotton cord was used to add meaning to the jewels by using its length to place the piece in a particular area of the body. For instance, the pendant for the Kangaroos is attached to a brown cord whose length indicates it belongs over the belly region, relating it to the marsupial pouch. The experimental character of this stage led us to make some technical mistakes that we bore in mind and used later to create certain effects. In particular using lost wax, whose behavior when melted has a certain level of unpredictability, we analyzed rejected experiments and learned to use its “wrong” effects in other more appropriate solutions.

4.5. The perception of the users’ reaction

During any of the previous four phases or in the final phase of the Perception-in-Action process, the new product can be tested by target users. In our jewelry project which is still not completely finished, an exhibition is planned where the series of jewelry and illustrations will be presented simultaneously, along with photos of each jewel placed on the body. This exhibition will allow viewers to see the full story and to interpret it using their own subjective references and participating in the narrative process. We also plan to register some of the visitors reactions by asking them to choose one piece and, as Cunningham did with one of his brooches, to describe what they see and what the piece makes them think of. Apart from the interaction with the narrative artifacts, the appropriation of its meanings to a self-referenced story is as valuable as the translation of the maker’s intended message, for it enriches and continues the narrative itself. Still, the perception and reaction of the visitors to this exhibition will probably contribute to a rethink of parts of the jewelry pieces which may lead to some formal or material modification, since the main concerns in the creation of this jewelry were more related to meaning and content than to usability. The viewers’ perspective can be especially useful to change these jewels into more wearable pieces, to be reproduced in small handmade series, in the future.

5. Conclusions

Describing and reflecting on the creative process of our jewelry project, it has become clear that in the intuitive, reflective and emotional process of the project, perception played a very central role. In a perceptive dialogue between her imagination and her graphic representations, Pereira identified, altered, reinterpreted and improved situations and elements of the design task. Applying the Perception-in-Action model to our analysis, we want to emphasize that all original and innovative design is the result of an intentional liberation from the routine of perception - the routine of the designer’s perception, and also the routine of the users’ perception. The important role of drawings and illustrations in the evolution of the project showed that drawing is an extension of mental imagery in jewelry. By drawing, the designer expands the problem space of the project task, to the extent of including and even discovering, new aspects, which he/she considers relevant, as much as through a subsequent interpretation of the graphic representations. The activity of drawing in this jewelry

project, clearly served as a kind of modulation of the narrative problem space. Due to the amount of illustrations and jewelry pieces involved in this project, their progress and reevaluation required a constant perception of the narrative as a whole. The use of storyboards allowed Pereira to relate each artifact to its series, transferring characteristics from one to others and adjusting its individual features to the coherence of the group.

Our jewelry project proved also, that in the Perception-in Action process, the designers' models of reality and personal experience of all sorts, which he/she relates to the situational factors of the project, underlie every decision.

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