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# CREATION OF ARTIFACTS AS A VEHICLE FOR DESIGN RESEARCH

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Although material artifacts, with their forms and meanings, have manifested the significance of craft design practice, their role and the role of their creative productions in design research have rarely been discussed. This paper aims to uncover how the creation of artifacts can serve as a vehicle of design research. My doctoral research, which explores the relationship between a physical material and artistic expression in the creation of textile art and design, is given as the example. The research emphasizes the utilization of the researcher's design artifacts and their productions as a vehicle of theoretical inquiry. The study offers the conception of materialness, which is the potential of a physical material to express meanings through its physicality to the designer and audience.

## INTRODUCTION: CRAFT DESIGN AND DESIGN RESEARCH

Craft design disciplines (*e.g.*, textiles, ceramics, glass, *etc.*) have been understood as “medium-designated” practices whose values are connected with material artifacts and their creation productions (Rowley 1997). For a craft designer to be able to work with a material, the technical knowledge of how an artifact can be made from it (*i.e.*, skills or knowing the material, techniques, and tools) must be acquired. This knowledge is usually acquired through individual practice and observation, because it is not necessarily put in words or illustrations (*ibid.*). Correspondingly, Nigel Cross (1982; 1999) states that design knowledge exists in a designing activity, not only in designers, but also in artifacts they create and the processes used to create them. To gain this knowledge is to be involved in the activity. The production of design knowledge thus deals directly with the designer's production of material artifacts. However, the unarticulated nature of the knowledge seems to limit the dissemination of knowledge to a larger number of practitioners, students, and educators.

Today, however, the production of creative artifacts and that of knowledge have found their position in academic research. Several discussions on design research, as the cultivation of design knowledge, have demonstrated the possible assimilation of the researcher's production of

artifacts into academic research (Frayling 1993; Laurel 2003; Barrett & Bolt 2007). One of the first definitions of (art and) design research was perhaps that given by Christopher Frayling in 1993. Frayling categorizes design research and offers three key models: 1) research *into* design by which he means research that looks into design from various well-established approaches, such as the historical, cultural, social, and technical, 2) research *through* design which represents research that utilizes design as a means for conducting research and for communicating the results, which are also written up, and 3) research *for* design which characterizes a study whose goal or outcome is not verbally communicable knowledge but an artifact. This implies that design activities already involve in themselves a high degree of research through gathering reference materials. The last category of research is quite argumentative to the traditional notions of research, and is not necessarily considered academic. Frayling's models of art and design research have received widespread criticism (e.g., Newbury 1996; Durling, Friedman & Gutherson 2002). Darren Newbury (1996), for instance, argues against the separation of research into, through, and for art and design, because it suggests a romanticist view of artists/designers as lacking intellectual ability, which is no longer valid. In Newbury's view, art and design research should be stimulated by creative practice, and must enhance the knowledge of the field as well as art and design work.

The researcher's creation of artifacts appears to play diverse roles in the practice of design research – as a method, an argument, or as an answer to a research problem (Mäkelä & Routarinne 2006). Although the creation of artifacts seems to reveal its significance in design research, the artifacts or their creation as such can neither be standalone nor be called academic research (Scrivener & Chapman 2004). Scrivener & Chapman (*ibid.*) emphasize that the researcher cannot just produce satisfactory artifacts, but needs to demonstrate that he/she has investigated, reached, and conveyed the coherent themes and interests rationally and reflectively, and that he/she has related them to a broader context. Scholarly studies generally aim at generating or enhancing knowledge in a particular discipline and sharing the new or enhanced knowledge with other professionals working in the same field. Contributing to the discussion of the role of artifacts in art and design research, Michael Biggs (2002) maintains that for the production of artifacts to contribute to the

production of knowledge, the practitioner-researcher needs to communicate it using textual language. Written accounts can present the possibility for the creation of artifacts to both demonstrate its role in art and design research, and be disseminated and shared with other artists, designers, and researchers. Biggs (*ibid.*) however, highlights the importance of creative artifacts produced during the research process. He argues they can in fact embody the answer to the research questions, and should thus be presented together with a written thesis as the complement outcome of research.

The purpose of this paper is to clarify the role of the creation of artifacts as a vehicle of design research. This clarification is based on my doctoral research whose aim is to explore *the relationship between a physical material and artistic expression in textile creation*, i.e., how a material can incorporate artistic expression in a creative production. The research attempts to understand the influence of the expressive properties of a physical material on the experience and thoughts of the textile artist during the processes of creation, and on the viewers during the processes of interpreting finished artifacts. However, this paper will focus mainly on the issue of the designer's process of design with material as the focus, rather than that of the audience's process of apprehension.

## UTILIZING THE CREATION OF ARTIFACTS IN DESIGN RESEARCH

The creation of artifacts has been utilized in academic research not only in the field of design, but also in a number of creative fields, such as fine arts, music and performance. In Finland, the first completed doctoral dissertations into which the medium of the researcher's creative practice assimilates are Taneli Eskola (1997) in photography and Maarit Mäkelä (2003) in ceramics. Both created artifacts first and later set them in theoretical frameworks for interpretation. Their artifacts are therefore used as "objects of experience" (Scrivener & Chapman 2004) embodying the answers to the research questions which the researchers revisited after the completion of their creative processes to interpret the meaning of the working process and artifacts. In their written theses, both use a first person account to articulate, in a reasonable and reflective way, the researchers' own creative production processes and what they explored and concluded in their research.

## MY RESEARCH ON A MATERIAL AND THE PROCESS OF DESIGN

Although Eskola (1997) and Mäkelä (2003) examine their creative artifacts and processes, neither study focuses on how their material shapes their creation. The material aspects with regard to the process of design, in particular how materials play a role in forming the designer's creative process, have not been much studied. However, studies on the influence of artifacts on the process of design can be found. One example is the ethnographic study of the coordinative roles of artifacts in architectural practice by Kjeld Schmidt and Ina Wagner (2002) that discusses how complexly and manifoldly artifacts can shape both the work and the ideas of a team of architects while working on architectural design projects.

In order to investigate the research problem of the influence a physical material has on the creative processes of a professional, what is required is actual experience creating artifacts with a particular material. The creation of artifacts from a specific material was thus utilized as a vehicle of this research. *What would then be the physical material for textile creation?* As the creation was intended to facilitate the research, one point to consider is the skill of the maker. Although a craft artist/designer must practice to be skilled in using a material, the skillful practice forms a habit of manipulating the material that might cause the creator to be less aware of how she does the work (Rowley 1997). This could be called "knowing-in-action" to use Donald Schön's term (1983), which means a process in which an experienced practitioner can act spontaneously in a regular situation. Knowing-in-action is know-how a skilled practitioner can use and demonstrate in his/her action, but often cannot verbally describe in detail. Awareness of what one is doing in his/her creation production is crucial for it to be used as a vehicle of research. As a vehicle of research, the creation needs to be reflective. Reflection-in-action (*ibid.*) is a skill that the practitioner-researcher must acquire in order to utilize the creation of artifacts as a vehicle of research. Reflection-in-action occurs while an indeterminate problem is being addressed in professional practice. The problem encountered challenges the professional to think again about it in a new way and that makes him/her know and be able to reflect on what he/she is doing while he/she is doing it.

In order to be conscious of my own creation of an artifact whose role is to be used as a vehicle of research, I decided to select a material that I had not used before in my textile practice. Having no prior artistic experience with the material would mean that I could experience it as a new material. However, the material should be one that some other textile artists have used. As such, I would be able to compare my view of the material and my experience with it with another artist, which could enlarge or enhance understanding.

## PAPER STRING: PROPERTIES AND SIGNIFICANCE

Accordingly, this research commenced with a survey of literature about textiles in Finland (*e.g.*, Bálint 1991, pp. 202-216; Poutasuo 2001; Svinhufvud 1998, pp. 181-207) in order to discover what types of material have appeared in Finnish textiles since the 1980s. Unlike other art or design fields, the field of textiles has a strategy of creating artifacts using either expected forms of materials, traditional techniques, (such as weaving, printing, knitting, and embroidering) or both. From the survey, the material that attracted my interest most was paper string. It has been the major material used in the works of Ritva Puotila, the Finnish Textile Artist of the Year 2001. Except for the facts that I had never used paper string in my work and that a professional textile artist/designer had used it, this material particularly interested me because of its contradictory characteristics. On the one hand, it seems commonplace, as it is industrially produced in the expected form of yarn as other textile materials. On the other hand, it is special, because it is produced from wood, the raw material most widely available in Finnish nature.

Paper string is stiff and strong, yet exceptionally lightweight. Its strength varies according to its thickness and means of production. When employed in artifacts, its unique physical properties also introduce to the artifacts not only functional qualities such as dustlessness, but also visual qualities such as purity and clarity of form and structure (Leitner 2005, pp. 60). These unique qualities make paper string a prominent material compared to other fibers. However, regarding the stiffness of paper string, this characteristic might be considered the downside of the material, because it contributes to its lack of flexibility (Valtonen 1988, pp. 54). The inflexibility of paper string seems to prevent the bending that is necessary for textile techniques, *e.g.*, weaving, knitting, *etc.*

The significance of paper string can be clearly seen in the history of Finland and Finnish design. This material was widely used to manufacture items of everyday use (e.g., clothes, shoes, wallpaper, upholstery, etc.) during the Second World War when other materials were not available (Singleton 1986, pp. 62; Priha 1999, pp. 124-125). The scarcity of materials forced textile practitioners to try a variety of substitutes in their works and that afterwards contributed to the advancement of the field of industrial arts (*ibid.*; Kruskopf 1975, pp. 73). Finnish textile artists/designers, such as Dora Jung (1906-1980) and Greta Skogster-Lehtinen (1900-1994), expressed their creativity with paper string. While Jung used paper string instead of linen as the material in her damask textiles, Skogster-Lehtinen wove her curtains with paper string in combination with birch bark (*ibid.*).

#### CREATION OF ARTIFACTS FROM PAPER STRING AS AN APPROACH

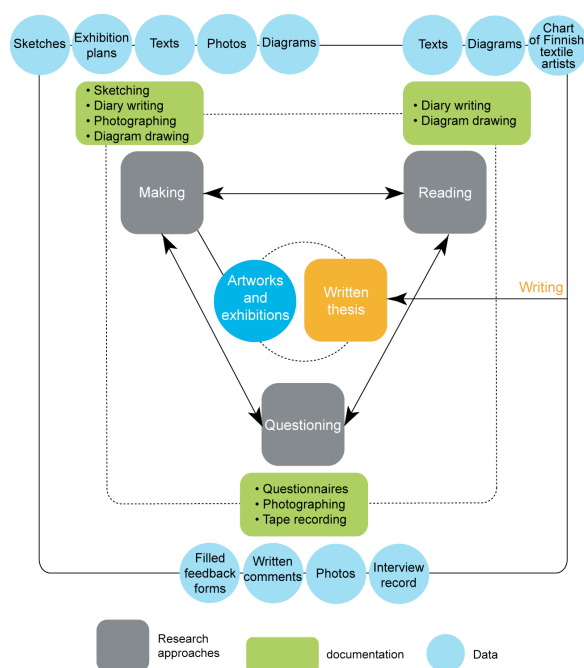


Figure 1. The dialogue between research approaches, means of documentation and data collection.

In my research, I employed my textile practice as the main vehicle for theoretical inquiry, through making art textiles from paper string and displaying them in two exhibitions: “Seeing Paper” (2005) and “Paper World” (2007). The creation of textile artifacts (*making*) as an approach was applied in dialog with other supportive approaches – *reading* literature and *questioning* the audience using questionnaires. These approaches

influenced one another with the support of various means of documentation, e.g., diary writing, diagram drawing, photographing, sketching, etc., all of which captured and reflected not only the process of creation but also the whole research process providing data for analysis (Figure 1). When designers undertake their creation as a vehicle for research, their creative productions need to be presented as evidence for argumentation (Nimkulrat 2007). To transform a making process into evidence, it needs to be represented in textual or visual forms. Documentation is thus the factor that differentiates a creative production performed as part of research from the general notion of design practice whose aim is to produce artifacts rather than to intentionally generate understanding.

#### THE FIRST CREATION: “SEEING PAPER”

Paper string is not a novel material, and nor is knotting. Nevertheless, when the two are combined, a new perspective toward the material and the technique emerges. While knotting is the technique I learnt in my childhood in Thailand, in handicraft classes and in scout camps, and which seems to be embedded in my memory, paper string is a material with which I have become familiar only recently, after relocating to Finland. When the early life experience (*i.e.*, knotting) and the recent one (*i.e.*, paper string) converge, the combination of the material and the technique becomes original. Moreover, the creation of artifacts with this combined medium has eventually become a new experience.

“Seeing Paper” intended to explore the expressive potential of different kinds of paper string. In order to do so, the creation production started with material selections. The criterion for selecting types of paper string rested on the sensory (visual and tactile) qualities of each type that should be noticeably distinct. Hence, a set of three different types of paper string was chosen for two series, each consisting of three creative artifacts. Although the three types of paper string differ tactually and visually from each other, they appear in a similar color – white. White seems to be a neutral color (Birren 1961, pp. 260-261). In the modernistic context, the neutrality of the white space of a gallery gives a sense of timelessness to artworks situated in it (O’Doherty 1999, pp. 79). Hence, if my creative artifacts were white, I thought they could possibly achieve this quality too. Moreover, as paper string is a thin material and

knotting is a meticulous technique, an artifact composed of this material and technique would be filled with substantial details. The details of the artifact would show up better when it appears in pale colors such as pale grey and white. Every artifact in each series of “Seeing Paper” was constructed using a specific technique and on the same mold. The three factors – color, technique, and mold – were fixed, whereas the material factor was variable. This allowed me to study the influence of dissimilar types of paper string on creative artifacts based on the same technique and composition.

The argument that a material is expressible, possessing specific expressive potential, gave rise to the concept of “Seeing Paper”. The concept showed that a material metaphorically lives in this world. I developed this concept into the idea of making my artifacts in a form of dresses, as a metaphor for female human beings. Although this concept was presented in both series, each series was created with a different intention. I intended to investigate the expressive characteristics of the three dissimilar types of paper string through my minimum control over them in the first series, and through my full manipulation of the same materials in the second.

Material culture emerges from the relationship between persons and things. In making a material artifact, although the maker conceives its form in his/her mind, the concrete form of the artifact does not come into being from the idea but progressively, through the active and sensuous engagement of the maker and the material (Ingold 2000, pp. 57). The skillful and rhythmic movements of the maker give rise to the precision of form. In accordance with the different intentions for creating the two series of “Seeing Paper”, each series showed a distinct formation of relationship between the three types of paper string and me through the creation of the artifacts.

For the first series, which investigated how each type of paper string could present its materiality, instead of preparing a sketch and following it, I started the first artifact by cutting a type of paper string into pieces of a certain length, and knotting them together by hand around the female figure mold. The level of my manipulation was low, as I did no twisting, strong pulling, or the like. Strings were knotted together repetitively and rhythmically, constructing a lacy structure. The rhythm of doing the same action over and

over gives the maker the ability to foresee the future situation (Sennett 2008, pp. 175-176). Moreover, skilled action has a narrative quality (Ingold 2000), *i.e.*, every movement grows rhythmically from the previous movement and grounds the next one.

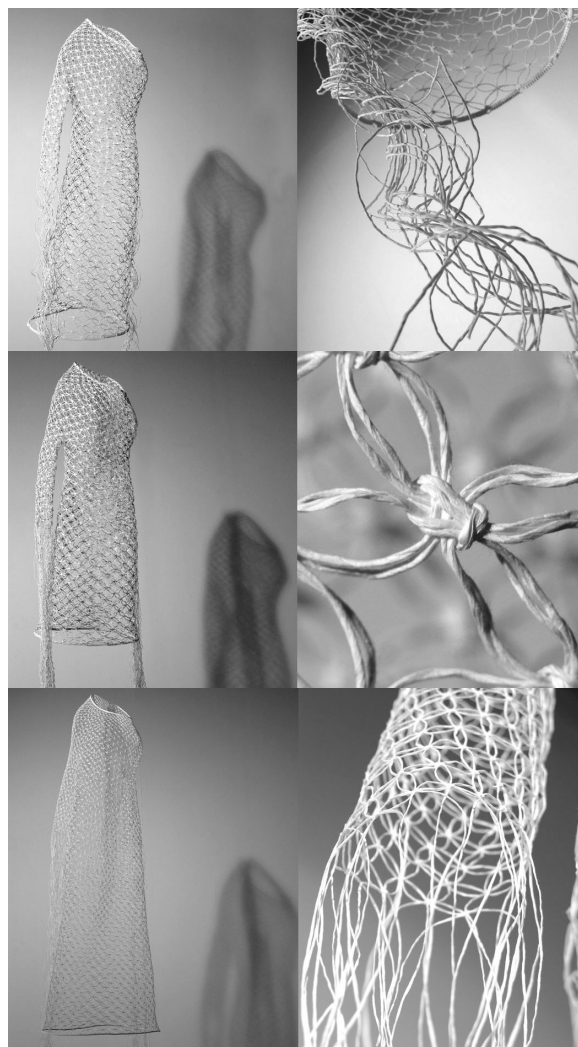


Figure 2. From top: “Let Go”, “Get Sorted”, and “Breathe Easily”.

Having knotted with the same rhythm repeatedly, my hand and eye know a variety of details for making a knot, *e.g.*, the strength required for pulling strings, the size of the loop, the swapped positions of the strings, *etc.* The rhythmic motions of the hand become a part of seeing ahead, *i.e.*, I know what the material would next become and how to control the material in order to sustain my concentration on the knotting hand. To be absorbed into the work, I became the work I was working on. Merleau-Ponty (1962) called this absorption of the self into the work “being as a thing”

whereas Polanyi (1958, pp. 55) called it “focal awareness”. While knotting, my only attentiveness was on the knots, so that I became a part of them. Each type of paper string expressed its characteristic through its physicality, being transformed into a metaphorical woman freely speaking to me in her own personality. I interpreted the characteristics of the three types of paper string from my artistic experience with them and named them accordingly: “Let Go”, “Get Sorted” and “Breathe Easily” (Figures 2).

In the second series, which attempted to explore how each kind of paper string potentially shows its materiality under my forceful manipulation, I sketched the outline of the sculptures and planned how the sketched structure could be constructed on the mold. Next, I made the wire structure of each piece on the same female body mould as that which was used in the first series. Two pieces of each type of paper string were knotted around the metal wire in the counter-direction to their twisting. The knotting rhythm created a continuous spiral line around the metal wire.

The creation of the first series eased the creation of the second series, because of the accumulation of skills and experience with the material. When touching the same materials again, I knew how hard I should pull them, and how their characteristics should be presented. The feel of each type of paper string also reminded me of some experiences in which I had earlier engaged, *i.e.*, I began to associate the current experience (material in hand) with the past experience. As Merleau-Ponty (1962, pp. 369) states, a tactile phenomenon is effective when it finds something similar within the person who touches. When touching a specific kind of paper string, the tactile experience gained through my hands sought connection with my consciousness and that brought in my memory of some prior experiences. Characteristics of the types of paper string, which I could capture from the creation of the first series, were apparent. For example, I knew during the creation of “Get Sorted” in the first series that its material is physically weak and easily broken by strong pulling. In the second series, I attempted to make this quality of the material visually noticeable in a creative artifact by forcefully pulling the strings to break them. Having been strongly manipulated, each type of paper string in a female dress form expressed its characteristic through its physicality more clearly to me. I interpreted the characteristics of the three kinds of paper string from my experience with

them in the creation productions of the artifacts and gave them the following titles: “Private Garden”, “Private Area” and “Personal Joy” (Figures 3).

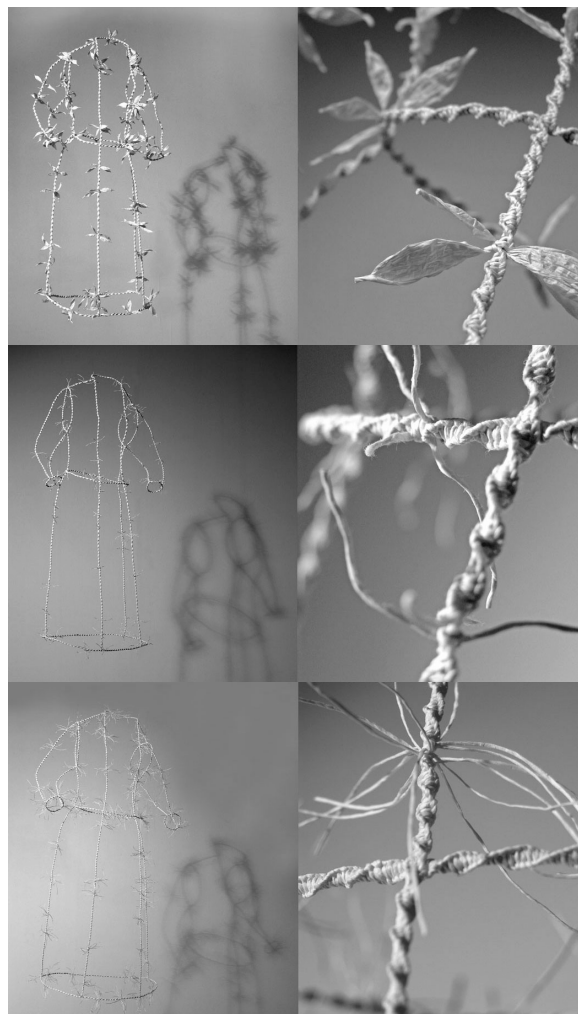


Figure 3. From top: “Private Garden”, “Private Area” and “Personal Joy”.

When “Seeing Paper” was exhibited in a modernistic gallery, the *questioning* approach by means of questionnaires showed that the differing materials seemed to have no influence on the audience experiencing and interpreting the exhibits. In fact, they rarely even recognized the materials. To understand this shortcoming is to understand the experience of the audience and take it into account in the next creation. The exhibits were the artifacts of an experience that was supposed to cause people to relive past experiences. Although I relived my previous experience while manipulating different types of paper string, I failed to communicate with my audience on the personal level as I had done in my individual interaction with the

materials. It is therefore important to design the experience of the audience already in the creative production, so that they can find the meaning in the artifacts by connecting them with their own values and lives (Shedroff 2001, pp. 122). By this means, the artifacts possibly touch some people on a personal level and have an impact on them. A designer does not just create artifacts but enables the audience to have an experience of the artifacts (Press & Cooper 2003, 69-70).

While looking at the making and displaying of “Seeing Paper” in retrospect, O’Doherty’s concept of “the white cube” (1999) shed light on the barely recognized materials in the artworks and exhibition. According to O’Doherty, the neutrality of the white space of a modernistic gallery is illusory. Its whiteness in fact has a power over people perceiving the work. Moreover, when a finished artifact was removed from the context of life-activity in which it was produced, the creative process disappeared or was hidden in the artifact (Ingold 2000, pp. 64). In the case of “Seeing Paper”, the dresses did not appear to the audience as metaphorically living, *i.e.*, the expressivity of differing types of paper strings and the theme of the series could not be recognized, when it was installed in the lifeless atmosphere of a modernistic gallery. This was because they could not find any connection with the contexts of life-activity. Both my rhythmic interaction with the material and my intended meaning or theme of the works were hidden. To make the material and the concept explicit and able to be understood by other people, “Paper World” brought the finished artworks to life by placing them in a context of life-activity. I thus modified the research problem to include the contextual elements in the research and to develop the subsequent creative production in a different fashion.

#### THE SECOND CREATION: “PAPER WORLD”

The creation of “Paper World” aimed to not only explore the expressivity of paper string as a physical material but also make its existence evident in the artifacts and exhibition as the expression of the maker. This creation began with the context, in particular the type of exhibition space and its contextual elements, for displaying the artworks, which was to be created based on the concept of paper string as metaphorical beings (the same concept as “Seeing Paper”). “Paper World” was thus created in the inverse direction to “Seeing Paper”, which hardly dealt with the contextual elements

during its creation (Figure 4). The overall exhibition was supposed to lead spectators to recognize the material composing the artworks.

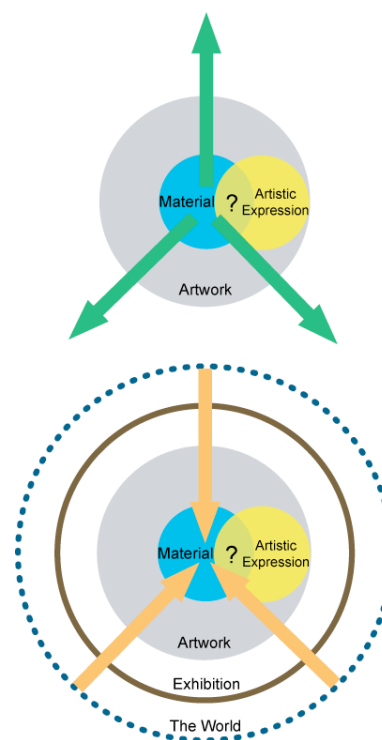


Figure 4. The creative production of “Seeing Paper” (upper) compared to the production of “Paper World” (lower).

Paper string was the focus of the creation of “Paper World”, not only in each artifact it constructed but also in the exhibition as a whole, *i.e.*, designing the whole experience. While conceptualizing this series, I tried to anticipate the experience of visitors to the exhibition in order to choose the theme of the exhibition and artworks, which could direct most people to experience them as I intended. Dewey (1934, pp. 48-56) suggested that to understand the audience a creator must embody the attitude of a viewer while making an artifact, so that the viewers in return would try to understand the artist’s stance and the artwork’s message. I accordingly adopted this attitude and imagined what would be the exhibition context in which I as a viewer and other viewers would similarly experience the artworks. Heidegger’s notion (1962) of “being-in-the-world” offers an understanding of how people experience things. He maintained that one construes the meanings of a thing as it is “in the world”, not by looking at it as a general thing but by looking to his/her own contextual connections to that specific thing. Similarly, Merleau-Ponty (1962, pp. 77-



83) asserted that one experiences a thing in relation to a spatial temporal context, and knows it from an embodied outlook. By being in the same world as the entity, one also senses other concomitant things in an act of experiencing, so that every entity reflects all others (*ibid.* pp. 206). The process of experiencing an object is hence a meeting a person has with the object as well as with other objects and people present at a particular place and time.

I then attempted to be an enabler of experiences by picturing myself as a viewer who would be in the same exhibition space as other viewers and artifacts, and making the artifacts from this standpoint. For the viewers and I to have quite a similar experience with the artworks and exhibition, the works would be in forms and in space recognizable and meaningful for both them and me. Only then could we establish our relationship to the artifacts similarly. The idea arose of everyday experiences of being in a familiar space and surrounded by ordinary things at a specific period. Having developed this idea further, I was able to decide on the context for the exhibition – a house in white winter. A house is recognizable and meaningful for most people; they know the appearance of a house and the kind of objects it might contain. Additionally, winter is the season when people feel most comfortable when at home, signifying that it could be an obliging contextual element. The context of a house in snowy wintertime was then associated with the concept of materials as metaphorical beings, generating a particular concept of “Paper World” – a material lives in this world as ordinary entities surrounding us in our everyday life at home. “Paper World” was thus to be composed of artworks representing everyday household artifacts, all of which would be seen as a whole, inseparable from its context and other artifacts in the context.

Only one type of paper string, which has the same physical qualities as a typed used in “Seeing Paper”, was chosen to create the entire exhibition. This was done in order to emphasize the distinctive characteristics of paper string. In other words, one chosen material may attract an audience to recognize paper string as the material of all the artworks, yet not demand the audience distinguish between the differing kinds of paper string. The two knotting techniques used to create the lacy and the spiral structures were combined in “Paper World”. My accumulating skills in using these techniques gave me of the ability to create

artworks of many forms. Objects surrounding me in my studio functioned as sources of inspiration for making artifacts for the imaginary home, and also as molds for constructing them into the shapes of household items. My interplay with the material developed into my visual and tactile experience of not only the emerging artifacts representing the functional entities surrounding me but also those entities represented. With the picture of the gallery house in mind, I started with one imaginary artifact and continued to the next, each being designed in relation to other artworks as well as other existing elements in the exhibition space. Having created a number of artworks representing domestic entities, I designed their positioning in the gallery by sketching the layout of the exhibition to realize the whole from the relationship of the parts. I then examined the layout and contemplated whether the exhibition space still called for more artifacts. A few site-specific artworks were then created to accompany some existing elements of the gallery space and also some artworks already created which still had no relationships to the other artworks. The whole series became complete when all artworks arranged on the layout appeared to be in dialog with one another and with the contextual elements.

The completed artworks were installed in the gallery according to the layout similarly to the way in which people and artifacts of daily use would be located in a dwelling in reality (Figure 5). However, some artworks appeared disturbed by the background when installed in their original positions in the layout, thus requiring repositioning until their appearance was unspoiled. In addition, the gallery was surrounded by snow during the exhibition, hence becoming the supportive contextual element as planned.



Figure 5. “Paper World” series displayed in a gallery converted from a wooden house.

The responses of the visitors received during the exhibition “Paper World” showed that the artworks in the forms of household items could serve as reminders of what they had experienced in their daily lives. Human beings know how they will interpret things before they actually view them, by linking what they are experiencing with the meaning of similar things they have previously experienced and identified (Heidegger 1962, pp. 191). In the “Paper World”, the audience knew not only the appearances of ordinary items and dwellings in their everyday lives, but also that a gallery is a place for displaying artworks. As the visitors had been knowledgeable about those functional forms, the unusual material led them to experience and interpret the objects differently. Thus, they understood that those forms of domestic artifacts were representational artifacts, not objects for practical use as such.

#### THE CONCEPTION OF MATERIALNESS IN TEXTILE ART AND DESIGN

When a craft designer experiences a tangible material through his/her senses, he/she not only feels its physical characteristics such as strength or weakness or lightness and heaviness but also makes inter-reference of the physicality of the material to the expressive capacity of his/her own. The materiality of a material is therefore not limited to the inanimate straightforward physical qualities but extended to the senses of bodily movement and animated modes of expression of the person experiencing the material. In other words, the materiality of a physical material indicates the relationship between that material’s physical characteristics and artistic expression in a creative process. By concentrating on a material bodily and expressively, a craft designer can not only create the form and content of a creative artifact but also bring to the creation the context and time elements necessary to establish a complete experience design. The tangible material creates not only the form but also the content, context, and time of the artifact. Together these elements manifest the ability of the author to convey the intended meaning to the audience. I call the totality of the creation rooted in a material and including the elements of form, content, context, and time, the concept of *materialness*. It is the ability of a specific material to express or to signify something to its creator or audience through its physical qualities, shaping the total experience of making and interpreting artifacts. Through bodily engagement with a new material, a craft

designer gradually and consciously learns how to manipulate it and is eventually able to improvise the manipulation technique, so that the artifacts created with this technique become inimitable and represent the maker. The awareness when encountering a new material facilitates the articulation of the knowledge of the material and creative process existing in a designing activity. An artifact becomes the physical embodiment of its maker’s expressive-artistic thought because the creative and transformative act of creation embeds meaning into the material artifact and the artifact in turn circumscribes and articulates its meaning through its physicality.

#### CONCLUSION: FROM CRAFT DESIGN PRACTICE TO DESIGN RESEARCH

This paper has shown how it is possible to utilize the creation of material artifacts as a vehicle of research, whose questions deal with the process of design. My research showed that understanding and experiencing how a material influences creation production, involves experiencing that material. Through my experience with paper string, I was able to observe how I as a textile designer formed an artifact from a material so that the material was gradually transformed into the finished artifact, *i.e.*, what actually took place in the process of design. Describing what one has seen and is seeing differs from the description of what one has done and is doing. This could be one advantage of utilizing one’s own creation in research.

A professional craft designer’s articulation of what he/she has done and is doing in a creative process and what happens as a result of the actions is a means to establish knowledge gained from within skilled practice which would otherwise only be known by the designer. This form of knowledge is practical and can be useful for other practitioners, students, and educators in creative fields.

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