

THE TEXTURE EFFECTS OF HANDWOVEN TEXTILE APPEARANCE OF SIMULATED AND SIMPLIFIED FORMS INSPIRED BY NATURE: EXPERIMENT ON THE USE OF SELECTED LOCAL THAI MATERIALS

Kesinee Srisongmuang, Veerawat Sirivesmas and Eakachart Joenurairatana*

Faculty of Decorative Arts, Silpakorn University, Thailand

ABSTRACT

***Corresponding author:**
Kesinee Srisongmuang
sm.kesinee@gmail.com

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Washing is a process in the life cycle of cloth that regularly produces effects that change the texture of the fabric's appearance, mostly wrinkled surfaces. Since the durable textures of fabrics are created for utilisation and aesthetics, numerous artists and designers make textures that stimulate our other senses. To create the texture of textiles, the textures appear on the fabrics and the concept and style that those textiles convey. This research aims to conduct experiments on and investigate the texture effects in the materials using the inevitable washing process in the life cycle of cloths, as the key to the relation between inevitable change and the texture effects' appearance, which were inspired by the constancy of change in nature's system. This paper experiments on uneven angles of yarn twist and weft direction that were inspired by simulating the shape and structure of a leaf that was itself shaped by the natural evaporating system in dry conditions. The experimental concept examines the effects of its relation to texture and formation using handwoven textiles. The experimental method starts from studying the leaf through the inevitable changes to its textural appearance during its lifetime. The changes of the leaf's form through its natural evaporation generates stimulating structures and simplified shapes that are mapped to textile weaving formats. Four types of local raw materials using local Thai handweaving were selected to be combined by twisting for the texture effect experiment. The materials consist of two fine silk and cotton combinations, two types of raw Eri silk, and handspun cotton that is bolder than the first group of yarn. The investigation shows that over and less than a ninety-degree weft angle of handwoven textiles in an oblique shape can be automatically performed by curving and rolling, especially with the material combination of handspun cotton yarns. The material characteristics of handspun cotton show remarkable texture effects when twisted with other materials. Furthermore, the shape of a leaf created by textile art is simulated in order to examine the data recorded for the hypothesis that follows the constancy of change in everything. As a result, the textile art shows its natural texture effects appearance.

Keywords: Texture effect; inevitable change; life cycle of things; yarn twist; weft direction

1. INTRODUCTION

Washing is a regularly affective process that is able to change the appearance of a fabric's texture. To extend the life of the fabric's use, many research studies propose numerous innovations to resolve this issue, such as wrinkle free or wrinkle resistance using many methods for the pleasant durable textures of the cloth for the users. The finishing can be temporary or permanent, in which the finishing changes the appearance or texture of the fabrics. Significant technological advances using new materials and procedures are being developed (Bough, 2011). The various alternative durable textures of fabrics have also been created for utilisation with several styles and moods on different surfaces. For example, pleats are an alternative textured fabric that have provided the timeless beauty from the Egyptian period until the twentieth century. In 1907, the work of fine hand-pleated silk was first created by Mariano Fortuny, the notable Spanish fashion designer, who invented the silk pleating technique to create the legendary Delphos gown, which defied the fashion trends of all time. This deceptively simple, yet highly sophisticated design broke through the constraints of women's fashion at the time and liberated the female form (Fortuny, un Espagnol à Venise, 2017). Later, the differentiated perspective of pleats in Issey Miyake's concept in 1960 were continuously developed and produced in high fashion. However, the utilisation is universal and reflects the character of freedom. This "Pleats Please" line of Issey Miyake showed the freedom and minimal style that can be made long-lasting in his brand (Miyake, 2012).

All genius has launched the monumental pleats to the earth that are pleasant to users. Beside pleats being popularly textured, there are the structural textured fabrics that make the looks of fabrics that are more casual, such as seersucker in which texturing and weaving are achieved by using the different tensions of warping yarns. These are normally formed as vertical stripes, although horizontal ones are also possible (Shenton, 2014). The textured effects start when removing the fabric, and the warps start shrinking in different tensions, making the material have unsmooth textures. Fashion apparel brought this seersucker fabric into the formal silhouette patterns such as suits in summer season to make its look have a more casual style and be suitable for outdoor occasions. The texture effect appearance of fabrics can be designed by processing the materials.

The advantageous invention of durable textured fabrics, some of which are created by structuring effects and some by undergoing the advanced processes of new technology, provide the advantage of the durability of the texture's appearance. However, this is less well-maintained after the washing process. Besides function and utilisation, the textures of textiles need to be created for the significant concepts and styles of the fabric's appearance.

Based on the context above, wrinkles resulting from the washing process have led to the invention of both maintaining a wrinkle-free condition and the alternative textures in fabrics. Along with these creations, the artists and designers attempt to find their own style by using traditional methods but emerging with a unique kind of textural appearance, as mentioned with regard to the differentiated fashion styles of pleats between Mariano Fortuny and Issey Miyake.

As the inevitable constancy of change is always occurring in everything, the actual texture in the natural system is an expressive tool for artists and designers to create works according to their points of view. The washing process in the cycle of textile usage affects the appearance.

This point generates ideas about how the changes, such as the washing process, cause a negatively unsatisfactory appearance or the other subjective 'change'. It can be a tool to approach the textured effects and their aesthetic value in textile art and design appearance through the personal question regarding the inevitable change of things.

With a wrinkled texture, natural materials such as silk and cotton are accessible. There is an extensive range of materials that are used to make textiles. The various natural materials that are most useful in fabrics are cotton, flax, silk, and wool. This research focuses on a well-known local material: Thai silk, as a valuable product of Thailand. Local Thai fabrics have been produced for domestic use using production techniques that have been inherited from generation to generation. In terms of design, handwoven cloth has over time been adjusted, developed and created to serve everyday utilisation. Therefore, to maintain this skilfulness and further combine the handmade aesthetic heritage, it is beneficial to expand and interpret the aesthetic value of texture effects through this study as an expressive tool for creative vision.

Furthermore, this research aims to approach the process and methods of texture effects and expand the aesthetic value of texture effect appearance as an expressive tool in creativity, with the primary sources of material used in this research being selected from local Thai materials. Texture effects and constancy of change are the conceptual keys that this research focuses on; the physical appearance and aesthetic of accepted inevitable changes in texture is the question in the study that is intended to identify its advantages of appearance through the unavoidable changes in texture.

2. RESEARCH OBJECTIVES

This research adopts a question regarding wrinkling as an inevitable event in the life cycle of cloth in order to focus on and explore the relevant physical and aesthetic knowledge. Therefore, this paper aims to experiment on creating a textured effects appearance having advantages by using Thai materials and handwoven fabrics as follows:

1. To study and explore the existing textured effects and relevant appearances.
2. To identify the key factors of creating textured effects and relevant appearances having advantages in handwoven textiles.
3. To experiment and map the key factors to create texture and examine the textured effect creation in handwoven textiles.

3. RESEARCH METHODOLOGY

This research is an iterative research-led practice and practice-led research to identify the key data for creating the texture in the experiment. Figure 1, the illustration of the research methodology and the expect outcome, shows that the research-led practice starts with the study and analysis of the data collected from existing knowledge to be explored as knowledge relevant to the topic. This was done in parallel to the practice-led research (Dean, 2010), by starting with an idea or innovation on the material processing and weft direction of weaving. This process was followed by the formulation and theorisations that may be applied to the generation of creative texture effects appearance, in which it is possible at every stage to return in a revisiting of the generational idea. These can jump from one point to any other found in the research structure in order to analyse the results and discuss the refining of the creative works and the data of relevant knowledge.

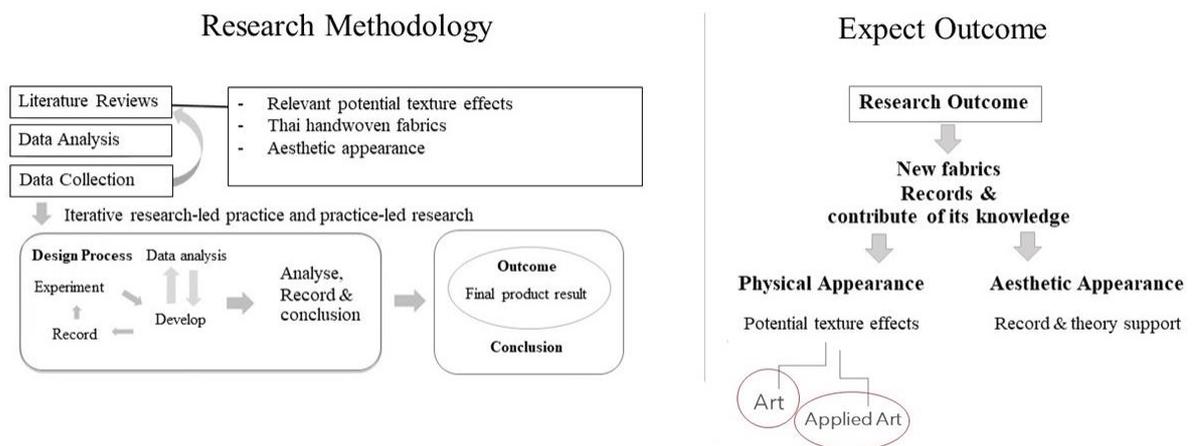


Figure 1: Illustration of the Research Methodology and Expected Outcome

Based on the review of the literature on existing texture fabrics, the key factors in making textures vary for the different types of production and processing. Materials, tension, structures, heat, water and moisture are all potential factors involved, especially the yarn twist that has an exciting influence over the surface of fabrics. Therefore, this paper is focused on Thai materials and local processes, of which the further stages can apply the knowledge from the experiment to handwoven techniques.

The steps to approach the results of the research are as follows:

1. Studying the properties of commonly used materials and the previous studies of existing texture effects of textiles and their relevance.
2. Selecting subjective objects in change-related texture effects to analyse for key findings
3. Experimenting based on the findings related to texture effects in handwoven textiles.
4. Results and discussion
5. Examining the results
6. Drawing conclusions

4. PROCESS OF THE STUDY

4.1 Properties of commonly used materials and the study of existing texture effects in textiles and their relevance

The vast use of cotton and silk in traditional Thai handweaving has been passed down as a legacy by the small-scale family production from generation to generation. Handmade silk and cotton yarn that are mostly produced in homes are the primary materials used in this research. The essential characteristics of fibres, yarns and weave structures, and the conceptual cycle of wash and dry are described in this research, and it was found that textile properties are significant to creating in the practice-led research. There are many ways to create texture in textiles by using material characteristics such as yarn structure twisted in a different direction, tension and stress effects, shrinkage, and weave structures. Due to the long history of twist and texture in weaving, this research is focused on twist yarn.

One of the powerful influences on fabric appearance that has a surprisingly long history is yarn twist. The use of highly twisted yarns to create textured fabrics goes back at least to ancient China. As can be seen nowadays, some samples are delicate textures of the crepe effect, known for thousands of years, and the techniques in S and Z twist in the alternating warp and weft that can create an overall crinkled texture continuing until today. Anne Richards is an outstanding textile designer-maker and a teacher who used the contrast of fibre and yarn twist to create textiles that transform themselves into textured and elastic fabrics. The use of yarn twist results in highly textured effects in materials. The fine yarn needs more twist than a thicker one. In Figure 2, the illustration shows yarn twist in different angles. The 15 degrees twist angle can give a soft twist, 20 - 30 degrees provides a medium twist, and a tough twist is about 40 - 45 degrees. The very hard twist affects the firmness of the texture, crepes, and crepons with silk (Richards, 2012). An angle of twist was selected for the experiment in this paper. Hand spinning can be freely controlled to achieve a specified angle of twist. For the experiment details to achieve the hand twist yarn, see Experiment 4, yarn twist processing.

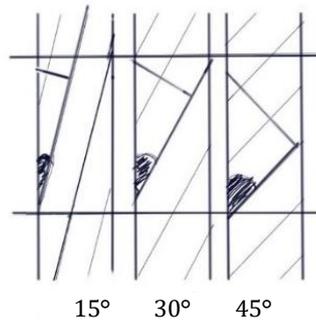


Figure 2: Different Angles of Yarn Twist

4.2 Selecting objects in the subjective experience of change related texture effect to analyse key findings

4.2.1 To approach creative texture elements as an expressive tool

Many artists and designers make textures that stimulate the senses. This element can make connections between formal art and design instruction, and our daily visual culture (Kristin Farr, 2016). Sculptors, ceramists, textile artists, and artists or designers working in many other forms have thought about how to engage the viewer's sense of touch. It is an expressive tool used to reinforce their overall messages by incorporating textures to convey something relevant and vital through their perspectives.

The approached textures are an expressive tool for artists and designers to use for reinforcing their overall messages. There are many artists who create the textural elements of their art by natural inspiration. The constancy of change is focused on a subjective point of view of the artists, which relates to the texture making. Bryan Nash Gill was an American artist who worked primarily with wood to create relief prints and sculptures. His implied texture making by organic texture sources from nature was an expressive tool. His artistic perspective was that *"art is (or should be) an authentic experience, which brings you closer to understanding yourself in relation to your surroundings"*. Gill's art captured the very essence of a tree's lifetime. He observed trees and captured them in each season through his art, which conveyed meaning as if the tree's perspective of one existing lifetime was a uniqueness created by his experience. His prints revealed the changes of trees in each season that was a window into his life's seasons. Gill's art-making process and the moment of creation was more important than the destination of the art's appearance. He lived in the organically textured

creative moment and never worried about the goal of his art's appearance, but about the process of discovery, and where he was right then (Bryan, 2013).

Hanne Friis, a Norwegian sculptural textile artist created her work that linked up subjectively with the natural cyclic process. Friis built upon, and challenged, tradition through tactile, handmade, and sculptural works. She saw that ferns naturally grew curly when unrolling and finding their own shape. The growth is internally programmed. The realization of change towards the path of decay and decomposition were revealed in her textiles with waves and peaks. She created the forms by hand using a needle and thread, resulting in the fabric's distinct layers, which was a compact structure with an organic expression.

Another spectacular nature-inspired paper sculpture is the art created by Peter Gentenaar, a German paper sculptor. The story of plant buds and the evaporation stage of fibres curling around the spine was his inspiration for making the new form of his paper art. Although he had the natural inspiration, he did not work traditionally. He used a vacuum and designed his own beater for making pulp. "Dry" was the key formative process of Gentenaar's sculpture. His work was formed above the wet vacuum table surface and shrunk up to 40 per cent by dehumidifiers and fans that speed up the drying. This force puts the non-shrinkage bamboo framework under stress, just as a leaf when it is dried. His sculptures were constructed using shapes borrowed from plants. The leaf spine was imitated and the more basic forms such as triangles, squares and trapeziums were used to allow more control over the results. The triangles and rectangles sharply turned and twisted.



Figure 3: Works of Art Simulating Natural Inspiration in Different Processes of Texture Making
 Left - Arch20 (n.d.)
 centre - TIFA Working Studio (2020)
 right - Gentenaar Torley Paper Artists (n.d.)

The left figure of Figure 3 shows Bryan Nash Gill's art that used a tree's actual texture to create an implied texture element in a print. He experienced the moment of making art to express his view on the natural cycle of trees in each season. In comparison, Hanne Friis and Peter Gentenaar also brought natural cyclic processes to create their textures and art forms. Furthermore, the work of Gentenaar did not only fabricate art from the two dimensions, but the evaporation process of making sculpture also showed a unique autonomy movement in his three-dimensional art forms.

The mentioned stories of natural inspiration of artists are examples that show the potential subjective tools of expressive textural elements in their works. Moreover, the study of the creation process emphasizes that the materials were well-selected by those artists and designers to illustrate texture and movement.

4.2.2 Studying and analysing key factors of change in a selected natural object

According to sample selection of artists' works, the texture is created to express their perspective in arts that are inspired by the system of change. These textures are used as expressive tools in their art works to simulate existing texture effects that occur in nature. In this research, leaves that are easily found were selected to be the case study of a natural object with texture changed. This stage is one of the methods that analyses the case study of the artists' subjective experience of their works. In the study, not only can the subjective natural inspiration be used to investigate the object inspired, but the structure, shape and form are also defined to obtain the potential vital factors that make textures appear in natural things in both physical and aesthetic views.

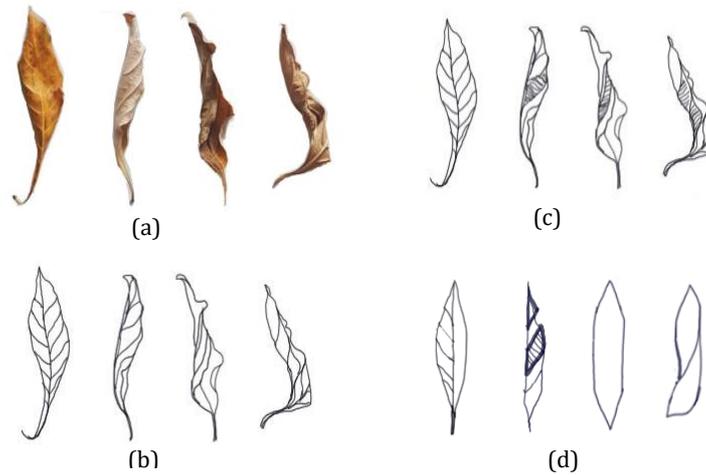


Figure 4: Leaf Textures and Forms Studied and Simplified from Selected Natural Objects

4.2.2.1 Physical forms of leaves

Figure 4 (a, b) show the structure and form of evaporated leaves which are naturally curved and delicately flowing. In this research, Figure 4 (c, d), the actual leaves, were simplified by selecting the general form of the leaf for a simple illustration as the diagonal lines and rhombus shape. These can be transferred to the weft direction and the shape of the weaving for the experiment.

Also, the structure of a leaf with its veins and ribs are like a spiral. This structure strengthens the form of the leaf, and it is also crucial for the naturally formed direction of the dry leaf's appearance. The small rhombus-shaped leaf in between the connected veins turned into a rigid form after natural evaporation.

4.2.2.2 Aesthetic value in the constancy of change

1) The truth of nature

Evaporation is the one part of the natural process in the life cycle of a leaf. This life cycle contains the truth of nature. Once the life is started, it must naturally continually grow and constantly change. It is an inevitable part of every life and the law and truth of nature. All life is an experience that is based on this truth of its life cycle.

2) In the truth of life

According to the Buddhist Four Noble Truths, the Buddha questioned life and gained enlightenment in the truth of nature that the cycle of birth and death is inevitable for everyone. Every life has to grow and die, and this is the loop in the universal life cycle. The Buddhist teachings let people accept this unavoidable occurrence in life, perceive everything in the suchness of the truth, and go beyond the life cycle by practising mindful living and staying in the middle with simplicity.

3) The truth of life and acceptance of the reality

Wabi-Sabi, the Japanese aesthetic concept, relates to beliefs of the Buddhist teachings. In Leonard Koren's book, Wabi-Sabi is the beauty of things being imperfect, impermanent, and incomplete. It is also a beauty of things being unconventional. The initial inspiration for Wabi-Sabi's metaphysical, spiritual, and moral principles come from the ideas about simplicity, naturalness and acceptance of reality found in Taoism and Chinese Zen Buddhism. (Koren, 1994).

The truth of the life cycle inspired many ideas for the experiment: cloth also has a life cycle; it is used and is maintained. Washing is essential after-use caring and cleaning. Thus, the surface appearance of a material after being washed is a reality in its life cycle. Therefore, this research and experiment include the idea of the acceptance of the texture and inevitable appearance of fabric.

4.3 Experiments on key findings on the texture effects on handwoven textiles

4.3.1 Experiment 1: Shape in the weave

From the experiment shown in Figure 5, when trying materials twisted on both the table loom and the needle weave frame in a rhombus shape, once they are removed off, the woven objects formed the natural leaf shape by themselves.



Figure 5: Left - Rhombus Woven Shape on Table Loom; Right - Woven Plied Yarn on Needle Frame

The next step of the research was to examine the relationships among the materials, yarn twist, and the shape or weft direction of weaving that affects the fabric form. This process was conducted to experiment on the materials or yarn twist and weft direction to identify and investigate the materials to explore irregular angle wefts. After the simplified form of the leaf and natural object were selected, the plan of the weave was calculated to examine the effects of the materials combination and the shape of the textile weaving. Meanwhile, the previous experiment with mixed plied yarns on the needle frame woven in a rhombus shape made performantly natural curved textile objects.

4.3.2 Experiment 2: Mixed yarn twist and weft direction in the weave

The yarn twist was created with different combinations of selected local yarns woven by beating various weft directions in handwoven textile weaving.

Figure 6 shows a piece of W50 x L70 cm handwoven fabric. It shows that there is irregular weft direction on various materials found in local Thai markets, such as cotton and metallic yarn, and across multiple weft directions by using single and double plied yarns created to generate ideas. The interesting texture and shape at the edge with a diagonal weft line using yarn twist with a combination of thick and thin cotton together twist can be used to design the surface in the following experiment.

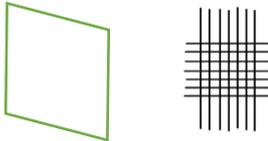
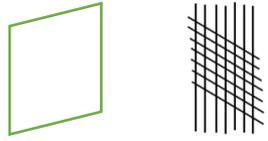


Figure 6: Experiment on Mixed Materials Twist and Various Weft Directions

4.3.3 Experiment 3: Exploring and comparing the effects of yarn twist and simple single yarn to test the effects on fabric

To examine the relationship between the materials and weft directions, the experiment of handwoven fabrics was performed as seen in Table 1: (A) uneven angle twisted of single plied cotton yarn in weft, shows a potential effect on fabric texture and (B) shows fine cotton double piled X handspun cotton double yarn in weft.

Table 1: Shape and Structure Formation in the Experiment Comparing Single Yarn with Double-Twist Yarn

Weft Yarn	(A) Single plied cotton with handspun yarn (single yarn)	(B) Fine cotton double piled X handspun cotton (double yarn)
1	 	 
2	 	 
3	 	 

Materials used:

Figure 7 shows the different appearance of two fabrics. Fabric [A] is handwoven using single plied handspun cotton as weft yarns. Fabric [B] is the different materials used combining two type of yarns that are fine cotton double plied and handspun cotton.

Results of the experiment of two fabrics show that the left (A) woven fabric has a flatter surface, and the other (B) woven fabric appears wrinkle rolled with a curved texture appearance.

4.3.4 Experiment 4: Yarn twist processing

The selected local Thai materials used were divided into two groups of yarns: the fine and textured yarn, silk and cotton, which are the most commonly used in Thailand. Four yarns were selected, which are *a.* fine silk, *b.* Fine cotton, *c.* Handspun cotton, and *d.* Eri silk.

Local selected yarns used in experiment

- | | | |
|----|-----------------------------|-----------------|
| a. | Fine silk | (Protein fibre) |
| b. | Fine cotton, S double-plied | (Cellulose-veg) |
| c. | Handspun cotton | (Cellulose-veg) |
| d. | Eri silk | (Protein fibre) |

Figure 8 shows that the local selected yarns used for the experiment are twisted by pairing into two groups by size, as follows:

- Combining thin yarns together.
 - a+a: fine silk x fine silk*
 - a+b: fine silk x double plied fine cotton*
 - b+b: double plied fine cotton x double plied fine cotton*
- Combining thin with thick yarns
 - a+c: fine silk x handspun cotton*
 - a+d: fine silk x Eri silk*
 - b+c: double-plied fine cotton x handspun cotton*
- Combining uneven, thick yarns together.
 - c+d: handspun cotton x Eri silk*



Figure 7: Experiment to Compare the Weft Yarn of Single Weft and Yarn Twist Weft

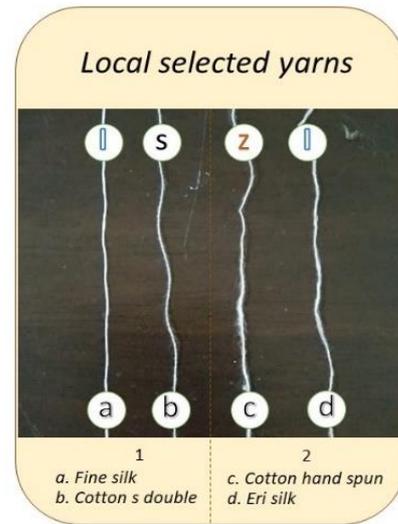


Figure 8: Local Selected Yarns Used for the Experiment

Processing of yarn twist

High twist yarn is important to the texture appearance of fabrics. According to the constancy of change in subjective experience, this experiment was designed by the processing of yarn twist and adding uneven angle twist yarn in the low and high twists in the same yarn. Figure 9 shows the steps of yarn twist processing. First step, spinning yarns by crossing them more than 45-degree twist and then slowly moving to less than 45-degree until about 15-degree twist, respectively. To see how the effect possibly appears, for the uneven yarn twist, two angles were used to twist from over 45 degrees to less than 15 degrees. This makes the high and low twists, respectively, and the yarn twist characteristic is similar to elasticity.



Step 1 More than a 45-degree twist



Step 2 Slowly move hand to less than a 45-degree twist



Step 3 Move yarns to about a 15-degree twist, respectively

Figure 9: Steps of the Uneven Angle Yarn Twist Experiment

4.3.5 Experimental weaving formats

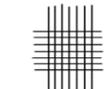
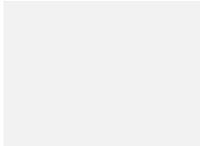
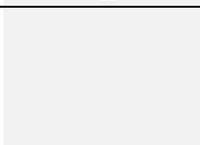
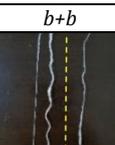
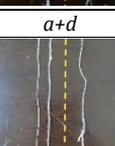
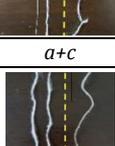
Plain weave was selected for the experiment because of the basic structure of the fundamental weaving. This one-beam weaving technique is widely used in local Thai handwoven fabrics. Commonly, the type of texture is usually flat. Therefore, it can be examined with a focus on the materials affecting the textures.

Table 2 shows a total of six pairs of yarns woven with two structures of weft directions and four shapes of weaving, one simple woven shape and three simplified shapes from the leaf.

5. RESULTS AND DISCUSSION

The experiment results in Figure 10 show 21 small shapes of unwashed woven fabric, divided into three warp rows and seven weft lines. The photos of the weaving of each of the material combinations are seen in Table 2, from the top Line 1 to bottom Line 7 with numbers attached to the front of each combination. The results of Line 1: (a)+(a), 2 (a)+(b), and 3(b)+(b) in Table 2 show that less or non-textured effects appeared. Additionally, in Figure 10, right – after washing the fabric, these all-fine yarn twists wefts show less or non-textured effects, but some regular wrinkles can be seen in its appearance.

Table 2: Data Recorded and Details of Experiment

Warp & Weft	Construction & Weft Direction				
	Shape				
Material Combination	Yarn Twist	Results			
<i>a+a:</i> <i>fine silk x fine silk</i>					
Line 1	<i>a+a</i>	<i>1 a+a</i>	X	<i>2 a+a</i>	<i>3 a+a</i>
<i>a+b:</i> <i>fine silk x fine cotton</i>					
Line 2	<i>a+b</i>	<i>1 a+b</i>	X	<i>2 a+b</i>	<i>3 a+b</i>
<i>b+b:</i> <i>fine cotton x fine cotton</i>					
Line 3	<i>b+b</i>	<i>1 b+b</i>	X	<i>2 b+b</i>	<i>3 b+b</i>
<i>a+d:</i> <i>fine silk x Eri silk</i>					
Line 4	<i>a+d</i>	<i>4 a+d</i>	<i>5 a+d</i>	<i>6 a+d</i>	<i>7 a+d</i>
<i>a+c:</i> <i>fine silk x handspun cotton</i>					
Line 5	<i>a+c</i>	<i>4 a+c</i>	<i>5 a+c</i>	<i>6 a+c</i>	<i>7 a+c</i>
<i>c+d:</i> <i>handspun cotton x Eri silk</i>					
Line 6	<i>c+d</i>	<i>4 c+d</i>	<i>5 c+d</i>	<i>6 c+d</i>	<i>7 c+d</i>

The bolder combined yarns twists in Lines 5, 6 and 7 of unwashed fabric show textured effects, especially in the irregular rhombus shape weft direction, which shows the curved and rolled effects in the samples, and a hard curve in Line 6 (a)+(c), in the appearance before washing. The after washing samples of yarn combinations (a)+(c) and (c)+(d) show a gain of hard textured effects in the fabrics' appearance.

In conclusion, the uneven yarn twist in combination with the handspun cotton resulted in a hard effect on the fabric's textural appearance. The sharp angle of the weft direction in the rhombus-shape affects the handwoven fabric autonomy, which curved and formed itself once it was removed and cut from the frame. The result shows that the handspun cotton has its physical character in an uneven angle yarn twist and provides a hard texture effect in its appearance after being washed. Handspun cotton has its physical tacit slub-yarn character with an uneven single size. Not only is the half-fibre half-thread look of handspun cotton and cellulose

fibre similar to wool, but the protein fibre also has a high-level shrinkage property. Even though cellulose generally has less potential than protein fibre in shrinking, the results from the uneven yarn twist shows that the texture and shrinking is similar to that of wool, and the protein fibre has a notable shrinking potential factor.



Figure 10: Comparing Appearance of Fabrics, Before and After the Washing Process

Examination of the results in textile art

To examine the results, mapping of key data was started to create the textile art inspired by the constancy of inevitable change. The selected leaf is representative of the change of nature. The simple sketch of the leaf form was done before weaving. The weaving itself consisted of the simple leaf-like shape and was woven using various irregular weft directions to create two triangular asymmetrical balances in its textile art form.



Figure 11: Examining the Results to Create Textile Art. Left - Appearance Before Washing; Middle - Sketch and Details of Weaving; Right - Appearance After Washing

In Figure 11, the simplicity of the organic form with equal sides of the two semi-organic triangular shapes is simplified from the leaf structure. The line of wefts and blank space between one shape and the next all bumpingly contribute to the overall connected weaving pattern and shape. The textile artwork's outcome has naturally formed itself and the appearance demonstrated the textured effects and movements in its textural details.

6. CONCLUSION

The aim of this research was to illustrate the processes and methods of texture effects and to develop the aesthetic value of the texture effect appearance as an expressive tool in creativity. The experiment involved combining cotton and silk, which are local natural fibre materials. This research also studied the properties of materials commonly used and examined the existing texture effects of textiles and their relevance. Twist yarn

in uneven angles was selected for the approach to the textured effects in cloth. The step-by-step developed experiments led to the key findings and data of the textured results in the research. Simulating dried leaves was investigated to reinforce the research concept by analysing the artists' case studies with the similar subjective experiences.

The experiment and examination results show that uneven yarn twist with handspun cotton combinations gives an uneven textured effect and textile appearance movement. Along with the iterative research methods-led practice, the practice-led research gradually refined the experiments and results. The study on the existing textured effects provided knowledge of material processing and the expressive methods of artists and designers.

The experiment on plying materials along with the tacit knowledge study summarised the uneven angles of hand-spinning in unstable angle yarn twists of low and high twist in plied yarns. The irregular weft direction formats shape the weaving with the advantage in its autonomically curved form, particularly the rhombus shape that makes the fabric turn and roll naturally as one removes and cut it from the frame.

In the researchers' view, everything is based on the chances in the constancy of change in life. It is the truth that is very simple in the moment of what we, everyone and everything must face. Textile artwork was examined through the results of the experiments, and this is the representative sample to be used as an implied concept of our acceptance of the inevitable appearances in life.

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