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Transcendence of the Blues

Reinventing Textile Language
with Cyanotype Blue and
Indigo Blue

Vivian Fei

2021

Abstract

My practice-led project [Transcendence of the Blues](#) is an investigation and manifestation of the color blue. It aimed to create self-reflective home and memory based textile pattern languages through innovative Chinese indigo resist and cyanotype resist techniques. The intersection of textiles, home and memory was the fertile ground for my textile language generation. Personal emotions, reflections and interpretations of home were enfolded into my textile making processes and influenced my textile language generation. I explored my textile voice through an autobiographical approach; fragments of memories of 'home' extracted from my living environments were tied into a symbolic language system. My textile designs and compositions drew inspiration from Chinese indigo textile symbolism and constructions, heavily influenced by the principles of Taoism (Daoism) aesthetics.

The research journey was tinted with different tones of blue originating from Chinese indigo resist and cyanotype resist methods, framed by Taoist aesthetic compositions and filled with domestic memories and affective responses. Chinese indigo and cyanotype blues were combined to create contemporary, culturally inspired textile art works. Large format cyanotype digital printing techniques with self-adhesive film were derived from the process to produce large, emotionally resonant textile art pieces. Through the pathway to 'the internal self', I hoped to express my perceptions, my conflicts and a deeply realized textile voice. Self-referential artistic textiles were produced with both poetic and practical foundations.

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1.0 Introduction

The introduction contains background and context, project aim and the initial stages of my textile language generation.

Background and Context – Two Blues Set the Tone of My Journey

The story of my journey has been tinted by two tones of blue: indigo and cyanotype blue. My journey sought answers to a questioning of home and belonging, aiming to develop a sense of place and self in my textile pattern constructions. I spent the first half of my life journey in China – the place of my birth saturated with home memories. The second half has been in New Zealand – a place where I have received further education and grown. My intention has been to reflect on my home memories through textile languages, creating personal symbolic pattern repeat systems that conveyed discoveries of the self. It has been a pilgrimage with these two blues.

The association with the colour of the celestial hemisphere adds an extra dimension to this symbolism. Because it appears in the sky after the obscuring clouds are dispelled, blue is said to be the ‘colour of truth’. Jung conjectured that: ‘blue, standing for the vertical, means height and depth (the blue sky above, the blue sea below).’ (Ware 15. *Cyanotype: The History, Science and Art of Photographic Printing in Prussian Blue*)

Mike Ware was the first scholar who discussed in depth cyanotype history and practices (Anderson 7). He emphasized on the significance of blue, as a spiritual color of the sky and the ocean. Heaven and earth have been considered to be sacred, a reflection of Mother Nature. They are deeply respected symbols in Taoism, influencing Chinese culture throughout our history.

Indigo blue, a hometown blue, is embedded in our cultural collective memory and tinted my childhood blue. My grandmother’s indigo apron (Figure 1) was the key that unlocked my indigo reminiscences. My grandmother was my early caregiver and used to feed me rice and red bean paste. I recall sitting on the apron on her lap, the feeling of being nourished and cared for transcended into a sense of home. To me, her indigo apron has become a symbol of nourishment and family love. The blue and white pattern on her apron impressed itself profoundly - an emotional attachment that triggers my early memories every time I see it. A core of our prime material experience, domestic textiles are embedded in the cultural memory of human involvement (Jefferies et al. 122). Chinese indigo has carried the

emotional, sentimental and spiritual value of our communities. Traces of indigo blue mediated my relationship with Chinese indigo textile cultures and practices.



Figure 1.
My grandmother's
blue nankeen apron,
personal photograph
by Vivian Fei, 2019

Cyanotype blue, a personal layer of blue, has unlocked my creativity and provided me with inspiration as a favoured medium. Cyanotype is a photographic printing process which can be regarded as a resist printing method referred to as a photogram: a ‘photograph’ created without a camera (camera-less photography) by placing objects (Figure 30) or negatives onto light-sensitive material and exposing them under UV light (Figure 2) or contact printing. The blue created is called Prussian blue, a cyan-blue. Cyanotype as a substrate has similar qualities to indigo dye, both of which can undertake oxidation processes and present blue coloration. It is interestingly found to be one of the earliest commercial fabric dyeing methods used on cotton, silk and wool, and even to generate home textiles (Ware 65).

As a photographer, I developed a special bond with this blue process while studying in the Massey University photographic department. In previous 2017 studies in alternative photography, I explored cyanotype printing through photographic digital negatives on fabric (Figure 2).

My relationship with cyanotype digital negative printing contributed to another layer of (Prussian) blue. The relationship between the cyanotype and indigo blues was explored in the project, taking opportunities for innovation at the intersection of craft tradition and digital technology. “A craft approach to digital technologies supports intuitive practice that operates creative and aesthetic knowing, leading to technical or scientific insight and ultimately innovation.” (Nimkulrat et al. 7) By combining cyanotype with indigo resist practices, digital and craft techniques were aesthetically fused to form a personal and innovative language of blue.

Figure 2.
Cyanotype digital
negative printing
on silk scarf in the
UV exposure unit,
personal photograph
by Vivian Fei, 2017



Memory Blue and Personal Blue

The narratives we create will depend upon how we piece together fragments of the past. The objects we save act as keys to different stories; often, many of the things we hold onto are made of cloth. Our bodies are always in contact with cloth, it has sensory and suggestive powers, which can stir both conscious and unconscious memory. (Barnett 2)

My journey embarked with an exploration of indigo blue - my memory blue. My grandmother's indigo apron became the entry point for reminiscence, my yearning for belonging and identity. As Barnett (2) mentioned above, cloth can embed our memories and stories of the past. The style of the apron is known as blue nankeen - cloth made with paste resist indigo technique. This resist method is practiced in the Suzhou district, my grandmother's hometown. A paste mixture of soybean powder and slaked lime is applied to fabric as a resist before dyeing. Paste residues (Figure 3) are a unique feature of blue nankeen textile after dyeing and drying, reminding me of memories like a residue of past experiences. In the initial exploration stage of the project, I explored indigo textile languages and resist techniques. I mainly experimented with two indigo paste resist techniques: blue nankeen paste resist and Dali tie-dyeing resist methods, and combined them with my symbols of home recollections (Figure 4) to produce a personal symbolic language. This is displayed in my early work *Home, Sweet Goldfish* (Figures 5 and 6) and *Embedded Memories* series (Figures 8 and 9).

Visual stimuli such as goldfish and nasturtiums were the key fragments of my memories (Figure 4). Domestic objects from my everyday life in China and New Zealand were tied into my symbolic language system.



Figure 3.
Soybean paste residues
on indigo dyed cotton
during disengagement
of paste 刮浆 in paste
resist process, from
Home, Sweet Goldfish
series, personal
photograph by Vivian
Fei, 2017

Fragments of my memories of home



Figure 4.
Domestic objects of
home memories in
Kunming, personal
photograph by Vivian
Fei, 2019

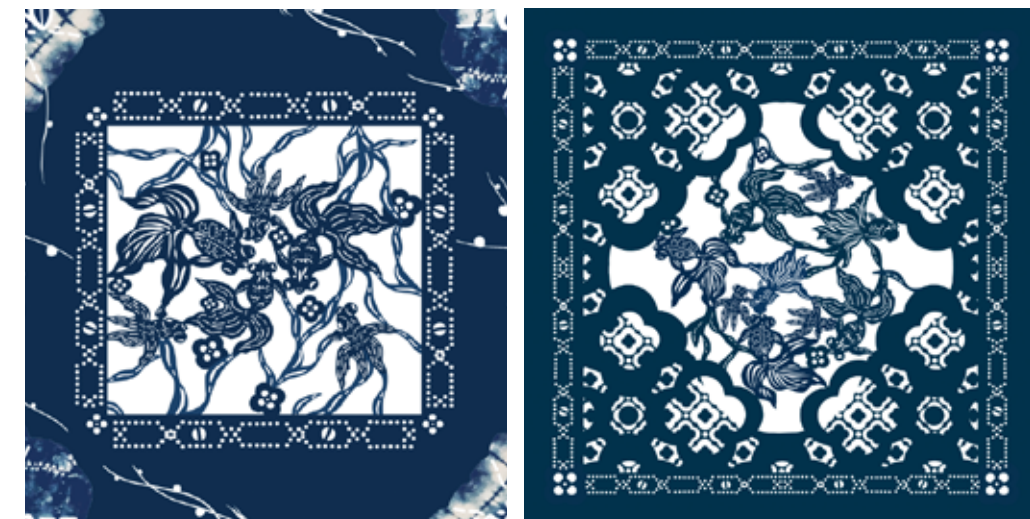


Figure 5.
Home, sweet goldfish
screen designs in
Illustrator with objects
of memories, personal
work by Vivian Fei, 5th
June 2020



Cyanotype blue was then introduced as a personal layer of blue - cyanotype digital resist printing methods were combined with Chinese indigo textile resist techniques to generate culturally inspired textile artwork.

My relationship with Chinese indigo blue has been repeatedly reflected on and developed through processes of indigo textile knowledge and personal language integration, together with indigo resist techniques, my technical skills as a photographer and graphic designer, and knowledge of Chinese and Western textile aesthetics. Indigo blue textiles have a significant presence in Chinese textile culture and are an integral part of our cultural memory and continuing practice. It was critical for me to acknowledge and respect the work from these indigo textile cultures and the communities that maintain these practices. I came to this position as a China-born NZ artist engaging Chinese cultural principles in Aotearoa, creating a culturally informed personal textile language with understanding and respect for our indigo practices. My project engages traditional and digital technologies, towards the generation of a personal design language.

Figure 6.
Home, Sweet Goldfish
paste resist fabrics
as domestic home
textiles (#1-3),
personal work by
Vivian Fei, 19th June
2020

Memories of Home, Memories of the Textiles

In further iterative processes, symbols of home memories were projected onto silk organza with cyanotype printing (Figure 8) and then imprinted into fabric memories with Dali indigo tie-dyeing folds-and-stitches resist inspired technique (Figure 9). Silk organza was cyanotype printed digitally with a photographic pattern composition of home memories and then traced with tie-dyeing inspired folds-and-stitches technique (Figure 7) to embed human memories into fabric memories - *Embedded Memories* series (Figures 8, 9 and 11-14).

An art of dynamic movement, emotional display, swooning saints in spiritual and somatic rapture, all expressed through the agency of the fold, or folds. They convey the intensity of a spiritual force exerted on the body... (Barnett 27)

The act of folding can be felt as a spiritual process, during which our memories and emotions were enfolded into the textiles. *My Embedded Memories - Projected Recollections* (Figures 8 and 9) was informed by textile artists: Yoshiko Iwamoto Wada and Fanglu Lin. Yoshiko Iwamoto Wada built my understanding of the field of international resist textile language - Shibori. Her extensive knowledge of tie-dyeing methods provided me with exemplars in my earlier tie-dyeing experiments.

The principles and techniques of Dali tie-dyeing, an indigo resist method used by the Bai community in my home province Yunnan, were also explored. Fanglu Lin is recognized for her inspired Dali tie-dyeing textile voice, developing her own vocabulary of folds-and-stitches and turning them into her unique intense and vibrant textile art. Her approach in generating a culturally influenced language was very relevant to my creative process. Below are two Dali tie-dyeing tablecloth samples with folds-and-stitches before indigo dyeing. The juxtaposed small thumbnails suggest the visual composition of untie fabric after indigo dyeing.

In the creative process, photographic digital images of memories of home were composed into Taoist heaven and earth constructions in order to reflect on Dali tablecloth compositions with Chinese aesthetic principles. The digital composition was printed on tracing paper as a digital negative to produce cyanotype printed organza in the exposure unit (Figure 8).

Similar to Dali folds-and-stitches methods which depict the outlines of the subjects such as butterflies and flowers to create compositions (Figure 7), my folds and stitches were constructed by contouring and tracing the lineament of printed subjects on organza (top image in Figure 9) to “embed” memories. Silk organza is sheer, stiff and moldable. Shape, delicate and long lasting fabric memoires were formed on organza after unstitching and untying processes (bottom image in Figure 9).



Figure 7.
Two Dali tied unfinished tie-dyeing textile tablecloth samples (top 40x70mm, bottom 24x80mm) with stitches and folds, juxtaposed with finished fabric (both open up to size 165x110mm) visualisation thumbnails after indigo dyeing process, made by the Bai ethnic community in Dali, Taobao, <https://item.taobao.com/item.htm?spm=a1z10.3-c-s.w4002-15459215737.32.16997a00QCVjS0&id=520809369037>

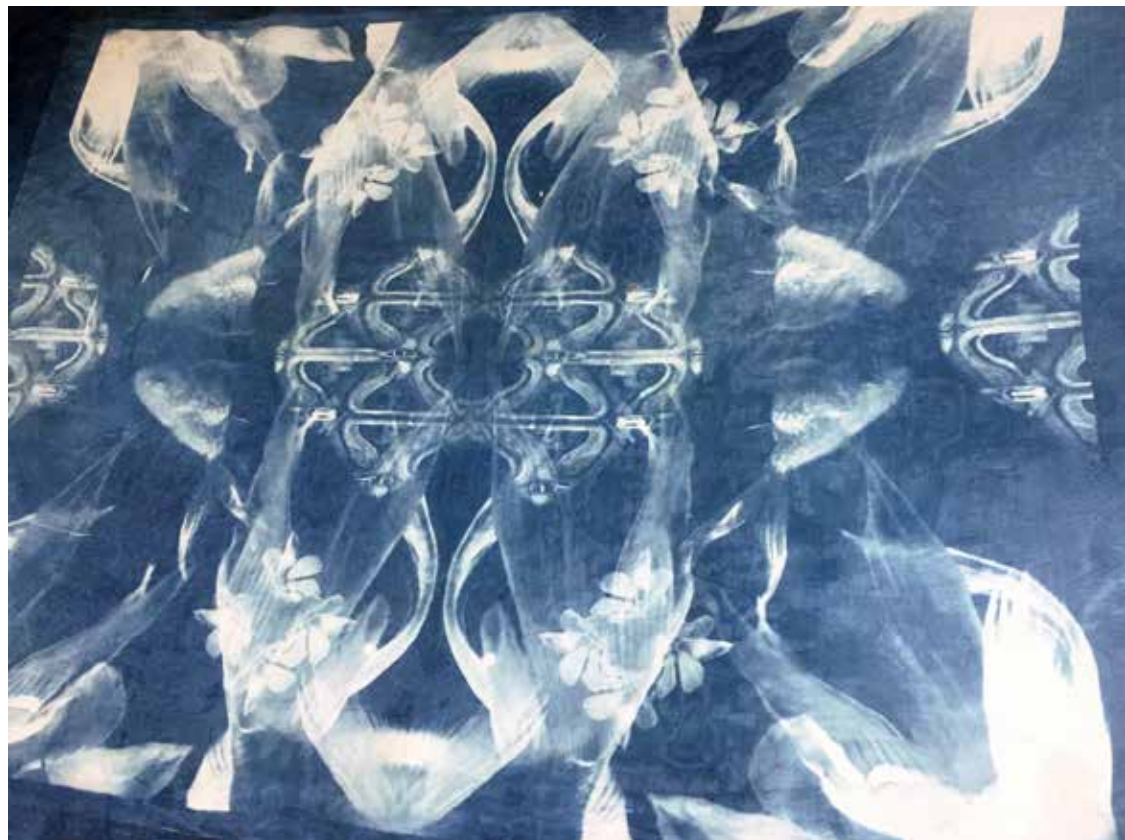
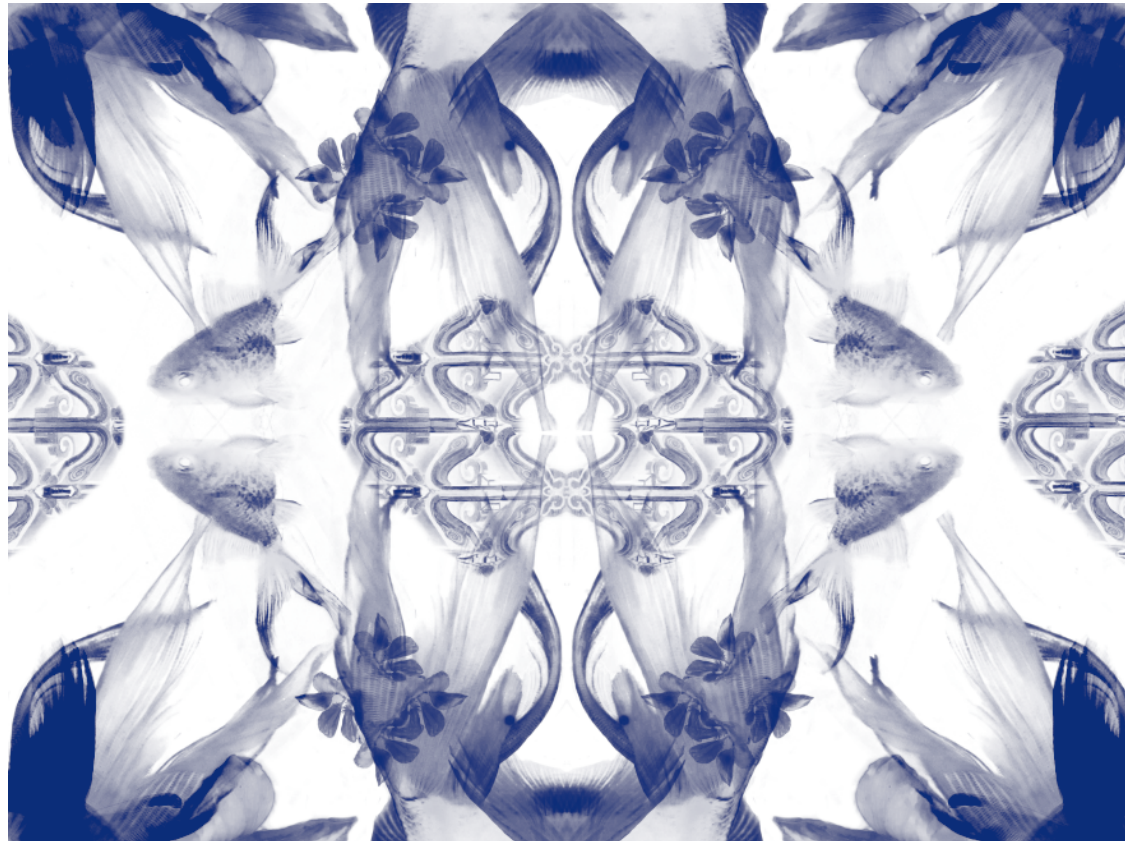


Figure 8.
Initial stage
in *Embedded
Memories - Projected
Recollections*.
Cyanotype digital
negative (top
image) and print
on silk organza
(60gm) (bottom
image) created in
the UV exposure
unit, personal
work by Vivian Fei,
September 2020



Figure 9.
*Embedded Memories -
Projected Recollections*.
Dali tie-dyeing
inspired stitched and
tied technique on
tied organza silk (top
image) and untied
(bottom image),
personal work by
Vivian Fei, 8th Oct
2020

‘The Sweetest Medicine’ also consists of small stitched objects filled with salt, which I designed to fit into the palm of my hand. They refer to my childhood memories of the hand as receptacle for the communion wafer. (O’Rourke qtd. in Koumis, *Art Textiles of the World: Australia* 106)

My *Embedded Memories - Childhood Savor* (Figure 11-14) was inspired by Rosemary O’Rourke’s organza work *The Sweetest Medicine* (2) (Figure 10), in which the organza was stitched and filled with salt, referring to her childhood memories of “the hand as receptacle for the communion wafer” (Koumis, *Art Textiles of the World: Australia* 106). Similar to O’Rourke’s metaphorical approach, I embedded childhood memories of my grandmother’s apron into silk organza with rice and red bean grains that alluded to her cooking (Figure 11). The flower patterns on the apron were traced onto organza and embedded with the grains, which transformed fabric into an evocative object. I then cyanotype digitally printed on the surface of the organza, adding fragments of home memories (Figure 12). When unfolded after the rinsing process, rice grains were revealed and deconstructed into fragments (Figure 13), implying the secretive, vulnerable and precious quality of child memories.

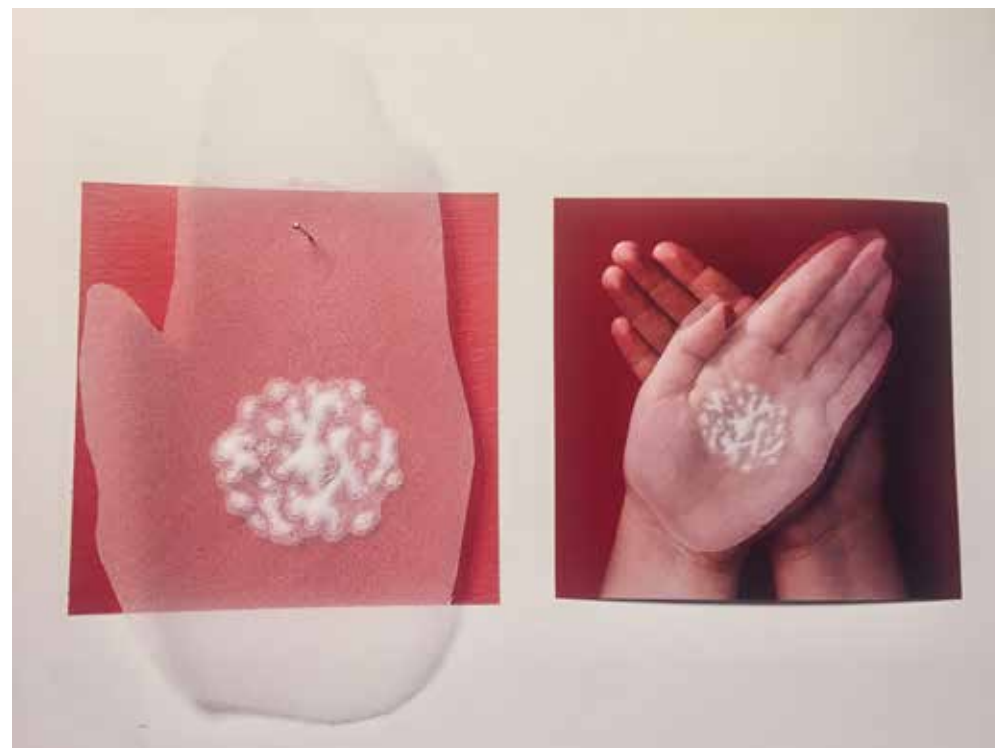


Figure 10.
O’Rourke, Rosemary,
The Sweetest Medicine
(2), 2003, salt, synthetic
organza, polyester
thread paint, photograph,
hand-stitched 15x20cm.
Matthew Koumis, *Art
Textiles of the World:
Australia*, Telos, 2007, p.
108.

Figure 11.
Tying process in creating
*Embedded Memories -
Childhood Savor*. Organza
fabric embedded with
rice grains (symbol of
family love), personal
work by Vivian Fei, 11th
Oct 2020



Figure 13.
Detail in *Embedded
Memories - Childhood
Savor*. Untied silk organza
with cyanotype printing,
personal work by Vivian
Fei, 11th Oct 2020



Figure 12.
Rinsing process in creating
Embedded Memories -
Childhood Savor. Cyanotype
printing on embedded
organza, personal work by
Vivian Fei, 11th Oct 2020



Figure 14.
Embedded Memories -
Childhood Savor. Silk organza
with cyanotype printing,
personal work by Vivian Fei,
11th Oct 2020

2.0 Research Question

In this series, my personal memories have been transformed into fabric memories; my personal blue has merged with the cultural blue. My textile language generation was shifted from indigo resist inspired experimentation towards cyanotype resist driven production. My tone of voice became stronger as cyanotype entered into the process; my position as a digital textile artist became more certain.

The discover of similarities between indigo and cyanotype blues brought them closer (refer to chart on page 43). As I developed my personal language, indigo and cyanotype knowledge converged further to generate 3 final cyanotype digitally printed pattern repeat artworks with cultural inspiration discussed in my project section 5.0. The tone of my textile voice settled between the two blues.

From the study of indigo textile cultures, I discovered their textile compositions are influenced by Taoism. Taoist heaven and earth ideology, where the sky and the earth are deeply revered, is considered one of the influential aesthetic principles in Chinese art and indigo textile compositions (Figures 18-20). Taoist ideologies therefore, have strongly influenced my final pattern compositions. Taoism, one of the major religions derived from philosophies founded in 6th and 5th century BC in China, has had a great impact on Chinese art and culture, both intellectually and spiritually. The study of Taoism was important and relevant to the study of Chinese textile cultures. Yin-yang and “qi” also influence indigo textile blue and white aesthetics and subject matter compositions. Wu-Wei, a concept from Taoism which emphasizes the spontaneous act and the sense of flow, has strongly influenced Chinese art practices such as brush paintings as a methodology.

How to generate self-reflective, home and memories based textile languages through innovative combinatory Chinese indigo resist and cyanotype resist techniques?

3.0 Methodology

The following research methodologies were employed. Together with influential ideologies, cultural constructs and field knowledge, they formed the theoretical framework for my design.

3.1 Autobiographical

3.2 Taoist ideologies and Wu-Wei

3.3 Reflective processes

3.1 Autobiographical

An autobiographical methodology allowed me to make statements and designs based on self-reflection. My research project was based on memories of home and my emotional connection to 'blues' – the [indigo blue](#) (my memory blue) and the [cyanotype blue](#) (my creativity blue). The blues were the reflections of my identities. "Who I am" underpinned the project. Welby Ings suggests that designers can be regarded as autobiographers who perform as a main character in their work where individual subjectivity plays an essential role (227). As an interpretive method, autobiography places the researcher or designer as central to heuristic inquiry, arising from the designers' self-centered questioning of related themes or problems (Ings 228). Designers assume the central position of problem solving, seeking the "internal pathways of the self" (qtd. in Ings 228) with "intuition, reflection and insightful decision-making" (Ings 228).

"Experience, reflective search, sensitive overview and discovery" are the elements essential to new findings beyond established knowledge (Ings 227). New forms of knowing can be produced through self-reflective inquiry without reliance on past models. This approach holds similarities to Taoist Wu-Wei thinking, which also encourages artists to follow one's own experience and mind, allowing intuition and spontaneity to do its work without being dependent merely on tradition (Stunkel 184).

Reflective autobiographical approaches to textile language development are also evident in contemporary design. Textile patterns in general can embody personal experiences, stories and memories (Koumis, *Art Textiles of the World: Canada* 23). Textiles woven with emotions and personal stories offer a wider spectrum for language generation. The merging of cultural textile knowledge and personal emotional response can encourage innovation. As a Chinese, adopting Chinese visual principles into my design, fits within an autobiographical frame. In the section following, Taoist ideologies and Wu-Wei are introduced, as they were underlying principles to the Chinese aesthetics influencing my design compositions.

3.2 Taoist Ideologies and Wu-Wei

Their Influences on Chinese Indigo Textile Cultures and Visual Aesthetics

Chinese Aesthetic Theory Derived from Taoism

Taoist ideologies have informed indigo pattern compositions and Chinese art for centuries as underlying aesthetic principles, therefore became a key influence on my design construction.

Taoism seeks balance and harmony in life and believes things are formed with two basic opposite cosmology forces: yin and yang (Figures 15 and 16).



Figure 15.
Yin-yang Taijitu (central)
with Pa-kua. Stunkel,
Kenneth R, *Ideas and Art
in Asian Civilizations: India,
China and Japan: India,
China and Japan*. 1st ed.,
Routledge, 2015, p. 147.

YING & YANG in Taijitu 太极图 of Tao



Figure 16.
Yin-yang relationship
in Taijitu, diagram by
Vivian Fei, 2020.

YING & YANG - Two opposite energy flows that are coexisting,
integrated and interchangeable.
Two halves of a whole in a state of delicate balance.

Taijitu - RECURRENT, BALANCE, TRANSFORMATION, ONENESS.

Tao 道 - PATH, REASON, NATURAL FLOW, UNIVERSAL PRINCIPLE.

Cosmological symbols, the square representing Earth and a circle representing Heaven (天圆地方), can be found in various Chinese art and artefacts (Stunkel 148). In the Han dynasty, bronze mirrors incorporated this square and circle design motifs, which were common in ritual and domestic art (Figure 17). The terrestrial (earth) and celestial (sky) as the conflicts, form opposite yin-yang energies and the flow of ch'i (qi), a "physical manifestation of Tao" (Stunkel 147). This balance of opposition was demonstrated in *Taijitu* (Figure 16), which became influential to my later compositional development.

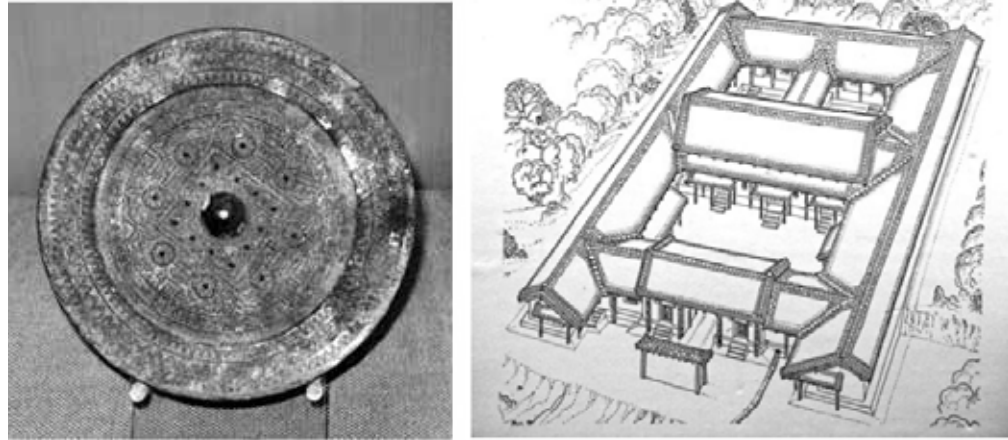


Figure 17.
Bronze mirror with cosmological
symbols, Han dynasty (left) and a walled
courtyard home with heaven-earth
structure (right). Stunkel, Kenneth R,
*Ideas and Art in Asian Civilizations: India,
China and Japan: India, China and Japan*.
1st ed., Routledge, 2015, pp. 142-150.

Wu-Wei 無為, ‘Action without Action’ as Methodology

Taoist philosophy is elemental to Chinese art, calligraphy and brush painting aesthetics. Lin Yutang (1967), a well-respected Chinese scholar mentions in *The Chinese Theory of Art*, that hills and streams in Chinese landscape brush paintings were expressed through “transformations of things without visible means of transformation” by “actions without action” (154). Characters formed in spontaneous and effortless manner were viewed as in “oneness” with Tao (Stunkel 162), a reflection of Wu-Wei. For instance, the improvisational fleeting movement of fish in paintings signified the informality of natural rhythms and cosmic order (Stunkel 167).

“Wu-Wei”, a concept from Taoism, carries a meaning of ‘action without action’ in Chinese, implying an effortless act. Tao encourages the use of one’s intuition and reflection rather than logic to experience the world around us, to let the process unfold on its own. This reflected my own practice-led, iterative process. Wu-Wei became the lens I used to observe the world around me when I collected images of my subjects; spontaneity became the guide when composing my repeat patterns based on nature’s way. Lin Yutang stated that the ability to capture naturalness effortlessly signified true mastery in Chinese art (65). Wu-Wei is a state of mind where there is no need to seek for answers as they have always been in front of you. To learn how to recognize and embrace the beauty existing in nature is the essence of Wu-Wei. It can be considered as a creative process through which we can acquire understanding free from established knowing and create in a more intuitive, reflective and sensory manner.

Chinese indigo textiles carry the traces of Taoist ideology influences. For instance, Wu-Wei’s “action without action” allows hand-making processes to reveal their spontaneous aesthetic by letting natural phenomena determine the uncontrollable in the process. This is reflected in the Dali tie-dyeing process; the textures and patterns on cloth formed after dying remain unexpected and unrepeatable.

Taoist ideologies influence on Chinese indigo textile aesthetics – compositions and textures

Yin & Yang (in <i>Taijitu</i>)	Blue and white aesthetics: positive and negative spaces balanced. Subject matter compositions.
Heaven is the circle, earth is the square	Composition in harmony, reflecting the sun and the earth (circular center and rectangular framing).
Wu-Wei	Taoist philosophy is integral to the aesthetics of calligraphy and painting. Spontaneous, effortless formation of characters was viewed as oneness (Stunkel 162). The subjects in compositions have a sense of flow and naturalness, with the flow of cosmic energy, or ch’i (qi) Spontaneous act of making in Dali tie-dyeing creates natural fabric creases under the influence of Wu-Wei thinking.

Taoist influences on composition can be seen in the Dali tie dyeing, blue nankeen (paste-resist) and clamp-resist indigo textile samples (Figures 18-20). The Taoist heaven-and-earth principle with its circular center and rectangular framing can be found in all three samples. The blue and white indigo aesthetic with positive and negative spaces reflects Taoist yin and yang.



Figure 18.
Dali tie dye tablecloths
textile made by Bai
community in Yunnan,
photograph by Vivian Fei,
December 2019

Figure 19.
Blue nankeen (calico)
tablecloth textile (left)
and detail (right) in local
paste resist workshop
in Suzhou, photograph
by Vivian Fei, December
2019



Figure 20.
Chinese clamp-resist
produced Jiaxie
indigo textile in local
workshop in Suzhou,
photograph by
Vivian Fei. 2019

Wu-Wei, drawn from Taoism, has therefore not only a conceptual but also strong methodological influence on my practice. The heaven-and-earth composition is a significant element of Chinese visual symbolism. It represents our worldview and the ground we stand upon. The ideologies and aesthetic principles of Taoism were central to each stage of my design.

3.3 Reflective Processes through a Double Diamond model

Reflective processes offer the designer a mode of thinking and practice. They are particularly important for practice-based design projects, which seek to know through exploration, connection and innovation. Donald Schon suggested that reflection-in-action is not a linear process, rather a dialogue conducted between the creator and the subject (Laamanen and Hakkarainen 106). The intertwined relationship between practice generated textile knowledge and the materiality in Schon's argument is realized in textile thinking (Salolainen et al. 2).

My reflective processes were based on the *British Design Council's Double Diamond design process model* launched in 2004 - a holistic and comprehensive strategy for design. The model outlined four stages in a design process: discover, define, develop and deliver (Norman 220).

This model (Figure 21) provides an opportunity for designers to expand their initial research in order to discover the issue before further development of solutions (Norman 221). Identifying the basic problem, searching for potential creative solutions and then converging to problem solutions is design thinking. And the double-diamond model is one of the more powerful design thinking tools (Norman 219).

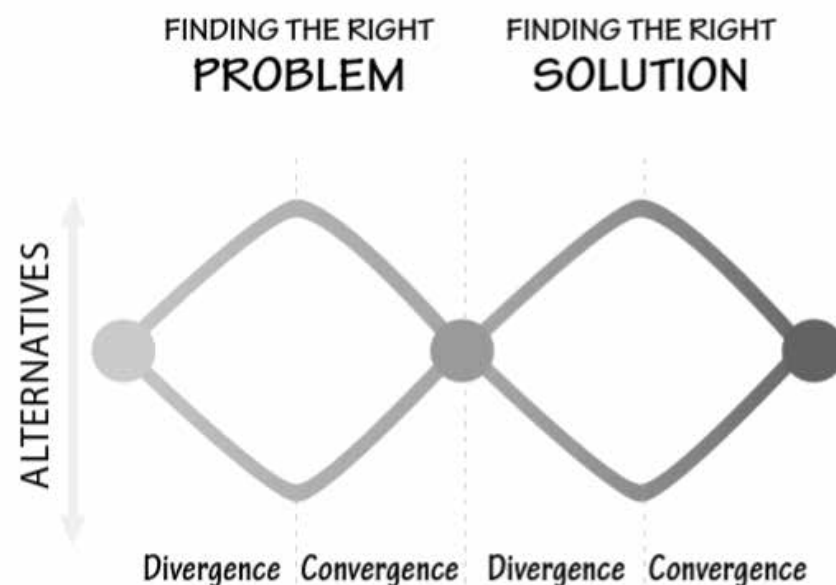


Figure 21.
Norman, Donald A, Slightly modified *Double Diamond* model based on *British Design Council's model*. The *Design of Everyday Things*, Basic Books, 2013, p. 220.

I generated a model for my final 3 conceptual reflective processes based on the *British Design Council's Double Diamond design process model* (Figure 22). It is a continuum of diverging and converging iterative processes, entailing a recycling and backtracking in each design stage. I used this model as a guide for my iterative design process.

Iterative process for my 3 concepts in each stage

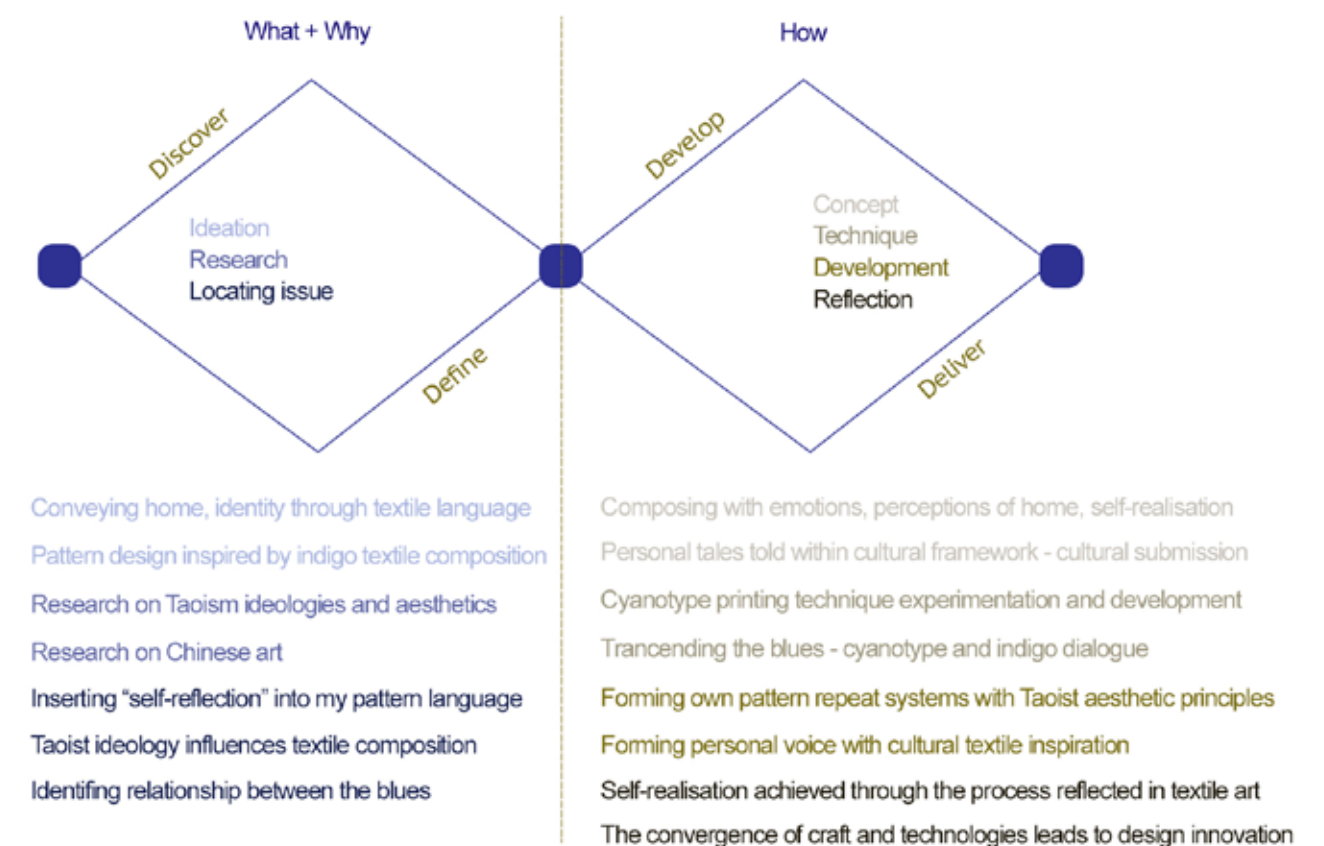


Figure 22.
The double diamond model created for my reflective process based on the *British Design Council's model*, diagram by Vivian Fei. 2020

4.0 Literature and Precedent Review

The two sections following introduce the foundational concepts and influential precedents of my project.

4.1 Home, Textile and Memories

The invocation of memory, whether nostalgic, culturally constructed, embodied or socially engaged is a powerful current in textile art practices. (Jefferies et al. 371)

Contemporary textile practice is often closely related to the concepts of home and memories. Textile artist Monica Nilsson for instance, an important precedent, mentions how domestic textiles are closely connected to our emotions. Textile often carries the scent of “home” which reminds of one’s identity, brings forth memories, emotions and awakens spiritual connections. Behind every textile, there are different traditions, histories and making practices, providing unique sensory qualities and evoking personal memories (Jefferies et al. 121).

Jones suggests that memories reside in domestic places (qtd. in Ratnam 3). They are recollections of everyday life that evoke emotions and experiences of place as sensory stimuli. They are important elements for creating a sense of home as they engage with place and identity (Ratnam 2-4). Domestic objects carry sentimental value that can contribute to our storytelling. Home is the greenhouse that cultivates memories; it is a sanctuary for emotional reflections. Specific fabrics can offer visual stimuli, triggering tactile feelings and memories (Jefferies et al. 370). We enrich our emotions with textile objects. Visual images of home textiles emit warmth and remind us of our feelings, touches and special bonds. Additionally a textile language of memory can be evoked through a tactilely experienced object (Millar 15).

The relationships among home, textile, memories and identity were essential to my language generation. These concepts set the tone of my voice and contribute to my vocalization.

4.2 Precedent Review

4.2.1 Plangi as Textile Language

Yoshiko Iwamoto Wada - Textile Resist Dyeing Method Shibori

This renaissance in Japanese textile crafts and the personal re-interpretation of old techniques in recent years has given a much-needed, vitalising stimulus to our often set and limited designs. (Sandberg 97)

Yoshiko Iwamoto Wada, a Japanese textile artist and author, is known for her pioneer field knowledge in shibori methods, which include tie-dyeing (fold-dye), stitch and clamp resists (Wada 7). She popularised shibori in the international resist dye context and has become an inspiration for many resist dye artists (Wada 7).

Shibori, a present term used for every form of plangi (Sandberg 94), is a Japanese word that refers to dye resist methods, in which shaping and manipulating cloth take place before fabric dyeing, to generate textures and patterns. The cloth is shaped and records the fabric “memory” that is imprinted with the stitching, folding and tying actions which will change the fabric surface from 2D to 3D (Wada 8).

In her book *Memory on cloth – shibori now*, she (2002) introduced a range of shibori techniques including marble shibori on silk. They became technique references for my early experimentations. In comparison with Chinese indigo techniques, Dali tie-dyeing, Jiaxie and Miao’s stem stitch resist (Wada 32) can be considered as methods of shibori. Different from shibori which has developed, re-interpreted and become a contemporary textile vocabulary with a wide range of techniques, Chinese plangi has been however preserved and practiced by particular ethnic and folk groups. Dali tie-dyeing’s composition and aesthetic for example, has a strong sense of cultural identity with distinctive pattern arrangements.

Fanglu Lin - Dali Tie-Dyeing Inspired Stitches and Folds

Fanglu Lin is a Chinese artist and designer known for her Dali tie-dyeing indigo textile inspired stitched fabric designs as furniture collections (Figure 23). Trained as a fine artist in Central Academy of Fine Arts, Lin recognized significance in Dali tie-dyeing, a thousand year old labor-intensive resist technique practiced by Bai women. Lin's work was selected as one of the finalists in the LOEWE Foundation Craft Prize in 2020. Her work has intensified the intricate stitching and tying craftsmanship of Dali tie-dyeing and brought international attention to Chinese contemporary design inspired by Chinese textile cultures.

Engaging the unfinished Dali tie-dyeing textiles, Lin is seeking to present the beauty of the fabric details of the pre-dyeing fabrics. Her work uses stitching, folding and pleating on white cotton cloth inspired by Dali tying techniques and transforms them into fabric sculptures, intricate yet radical. The exaggeration of the ingenious Dali tie-dyeing textile details bloomed with new energy and vibrancy. Lin's indigo work emphasized a particular tie process in tie-dyeing making and improvised into a re-creation. Inspired cultural textile techniques, her work generates new personal languages in a state of transcendence.

Lin regards her work as personal and emotional expressions with cultural expression. She also emphasized the relationship between hands and cloth during the making process. As her understanding of tie-dyeing practice developed, her work has been elevated. Wu (2018) suggested that Lin is passionate about Chinese indigo blue dyeing because she believes that Chinese design innovation needs to be built on the foundation of traditional cultural heritage. By amplifying the beauty of tying technique, Lin offers an alternative tie-dyeing aesthetic with personal expression and cultural inspiration. Like Lin, I also experimented with a range of traditional resist techniques to create a personal textile that spoke to my fragmented childhood memories of home. The interrelationship between cultural value, personal emotion, and design tactility was essential to my textile art generation. In my practice, I aimed to explore resist techniques, while always remaining faithful to the spirit of the original practice.



Figure 23.
Lin, Fanglu, *She*, 2016,
Stitched and tied
cotton 600x300x55cm.
CDC, <https://www.chinadesigncentre.com/works/fanglu-lin-extra-luxury-in-indigo-dyeing.html>

4.2.2 Fabric Memories, Human Memories - Rosemary O'Rourke

Cloth and thread dominate a great variety of rituals due to their strong metaphorical inferences. Cloth is malleable and so can take on many forms and transformations. It can also be fragile, evoking the vulnerability of human beings; and thread can evoke ideas of connectedness. (O'Rourke qtd. in Koumis, *Art Textiles of the World: Australia* 110)

Rosemary O'Rourke is a contemporary textile artist from Australia. Her fabric memories were generated and embedded with her childhood memories in a metaphorical approach. Her textile art pieces are often displayed with hands; organza and salt work well together to form a visual delicacy. Salt was stitched and enclosed on the organza surface to create fragile objects, which spoke of vulnerability and sensitivity. The formed fragile objects imply the vulnerability in the relation to the human body (Koumis, *Art Textiles of the World: Australia* 110). Her organza underwent manipulation and reconstruction through stitching, and was eventually re-interpreted and transformed into small precious fabric objects (Figure 24).

The insertion of personal memories and emotions into organza to create fabric memories in textile language generation became an approach informing my series Embedded Memories.



Figure 24.
O'Rourke, Rosemary,
Phials for Bernadette,
2003-05, salt, synthetic
organza, polyester
thread hand-stitched
dimensions variable.
Matthew Koumis, *Art
Textiles of the World:
Australia*, Telos, 2007,
p. 104.

4.2.3 Mood Textile - Monica Nilsson

Textiles (cloth), colour and light are the three corner-stones of my work... I set the stage for textiles with a content which is open for different interpretations and associations. A sort of prototype of elements: heaven, yearning, water, sorrow, energy, home, and so forth. Memory and imagination (fantasy) are put in motion. A transparent cloth, with the character of glass when a strong sunbeam finds its way through, is materialised before my eyes. (Monica Nilsson qtd. in Koumis, *Art Textiles of the World: Scandinavia* 102)

Sweden artist Monica Nilsson's textile artwork emphasizes the relationship among three elements that can reflect ideas of memory, motion and imagination: cloth, color and ambience. Nilsson is fond of stories imprinted in everyday textile scraps and fragments, regarding them as moments in our daily living (Koumis, *Art Textiles of the World: Scandinavia* 108). She strives to mediate concepts which are open to interpretation - such as dreams, yearning and memories - into her textile objects (Koumis, *Art Textiles of the World: Scandinavia* 104). The patterns on her textiles are shapes from her memories. They are abstract rather than illustrative. Her stories were told with lights passing through the transparent abstraction, creating a layer of energy with sentimental messages. In her installation textile work *Furniture* (Figure 25), she manifested her reminiscence through lights, air movement (created with fans) and fabric layering, which set up an atmosphere or a mood of reminiscence. The combination of motion, patterns, fragments, and transparency on multi-layered translucent textile create an emotional resonance that captivates the viewer (Figures 25 and 26).

My work was inspired by her layering technique implying the structure of memories, and the use of ambient stimuli to illuminate the positive space on sheer fabrics as an emotional element.

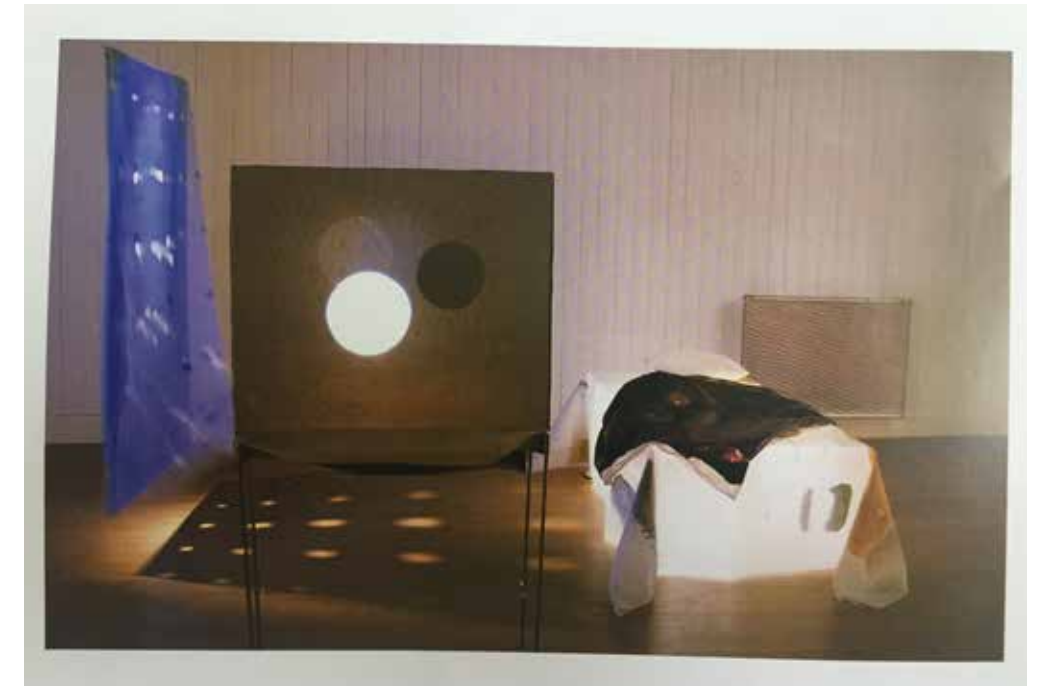


Figure 25.
Nilsson, Monica,
Furniture, 2001, textile
installation. Matthew
Koumis, *Art Textiles of
the World: Scandinavia*,
Telos, 2005, p. 108.



Figure 26.
Nilsson, Monica, *In
Brugge Every Mirror is
a Sleeping Water*, 1998,
layers of monolen,
with transmitted and
processed photos 450
x 240cm. Matthew
Koumis, *Art Textiles of
the World: Scandinavia*,
Telos, 2005, p. 104.

4.2.4 Digital Meets Craft - Sung-Soon Lee

Through stitching and dyeing, I have tried to express the intimate relationship of material and colour in a visual and emotional space of tactility and flexibility. (Sung-Soon Lee qtd. in Lee 73)

Sung-Soon Lee is a Korean textile artist with an interest in shibori techniques and Korean folk art in her practice. Her work (Figures 27 and 28) addresses personal and social everyday issues such as East and West cultural differences with re-interpreted stitching and dyeing textures drawn from Korean textile language to create emotional statements (Lee 74). She stated that “the forms expressed reveal the structural beauty of our traditional folk art, such as bamboo basketry or straw bags” (Lee 74). Her combination of cultural textile knowledge with digital visual language (Figure 27) opens an interesting dialogue between craft and digital technology and became relevant to my practice.

Similar to Lin, Lee also brings her culturally inspired folk art into her textile languages. The difference is that Lee brings digital elements into her textile artwork to open up further dialogue.



Figure 27.
Lee, Sung-Soon, *The Land We Must Preserve*, dyeing and hand printing on fabric.
Mi-Kyoung Lee, *Art Textiles of the World: Korea*, Telos, 2005, p. 4.



Figure 28.
Lee, Sung-Soon, *Long Journey & Rest*, 1995, stitching, drawing and dyeing on velveteen 300 x 40cm. Mi-Kyoung Lee, *Art Textiles of the World: Korea*, Telos, 2005, p. 74.

5. Practice: Transcendence of the Blues

青出于蓝

青出于蓝，而胜于蓝。

– 荀子《劝学》

Translation: Indigo is extracted from indigofera (the blue plant), its blue is however transcendent.

The above sentence was from 荀子 (Xunzi c.310-c.235 BCE), an eminent Chinese philosopher. It is a well-known metaphor with the meaning of exceeding one's predecessors and excelling. I chose this phrase as the title for my project, as it reflected my development process: the transcendent cyanotype blues were generated from the inspiration of Chinese indigo blue during my exploration of my blue languages.

The transcendence of the blues took place after the convergence of the blues. This chapter introduces the relationship of these two important blues – indigo and cyanotype blues.

5.1 The Convergence of Two Blues

Chinese indigo making has been practiced since the Song dynasty (960 - 1279). Indigo textiles were common domestic fabrics found in almost every home in Jiangsu (Kiangsu) from the 15th century on (Sandberg 73). Yunnan (the birthplace for my mum and I) in South West of China and Jiangsu (the birthplace for my grandmother and my father) in East of China, my homelands (Figure 29), have many stories colored with indigo blue. Ethnic cultural groups in Yunnan such as Bai and Miao, have been deeply influenced by indigo cultures. Dali, a historical city in Yunnan, has been practicing indigo tie-dyeing for nearly a thousand years. Miao ethnicities have been known for their indigo wax dyeing or batik. Suzhou in Jiangsu, also has a long history of indigo practices. Their folk textiles are known as blue nankeen and Jiaxie. These are the areas that have maintained the indigo practices. In my early design process, I have explored Dali tie-dyeing and Jiaxie resist methods to better understand these processes of textile making.

During 2019 and early 2020, I visited Dali in Yunnan and Suzhou in Jiangsu (Figure 29). By researching Chinese indigo cultures and practicing indigo making techniques, I started to develop a relationship with this 'blue culture' and formed a connection with my past memories and my ancestry. Developing understanding of our resist methods and their associated textile languages and aesthetics helped with my engagement with the resist methods and re-interpretation for my language generation.

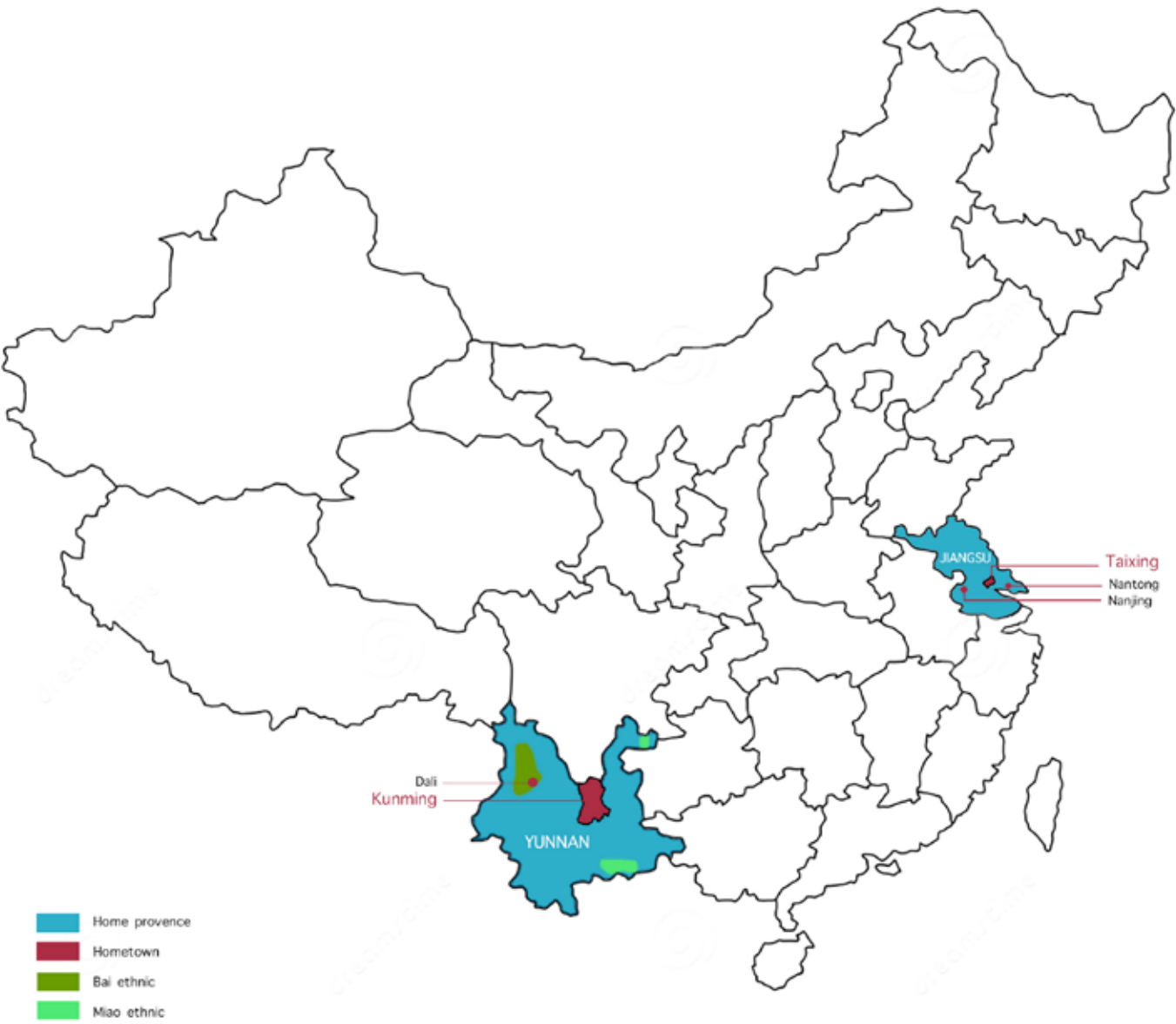


Figure 29:
Place I was born in
relation to indigo cultural
practices in China,
diagram by Vivian Fei,
2020

The tables below are the four indigo resist practices in China with their textile resist methods analysis:

Indigo resist methods in different parts of China:

Dali tie-dyeing 扎染 (Figure 18)	Stitch & tie resist. Bai ethnic group in Dali, Yunnan Province
Blue Nankeen Paste Resist Dyeing 蓝印花 (Figure 19)	Paste (made of soybean and lime) applied on stencil carved paper. Nantong, Jiangsu and western Hunan
Blue Clamp Resist Dyeing 夹纈 (Figure 20)	Carved board clamping resist. Nantong, Jiangsu and Zhejiang Province
Miao Batik 蜡染	Wax resists dyeing. Miao and Zhuang ethnic group, Guizhou and Yunnan Province

Chinese indigo resist methods visual analysis:

Dali tie-dyeing 扎染 (Figure 18)	Stitches, folds & ties can create the most unexpected textures, which reflect Wu-Wei thinking. Composition mostly follows Taoist heaven-earth ideology. Subjects are extracted from the daily natural environment such as butterflies and flowers.
Blue Nankeen Paste Resist Dyeing 蓝印花 (Figure 19)	Hand carved pattern board / screen for paste to go through onto the fabric as resist. Patterns are graphical and pictorial. Composition mostly follows Taoist heaven-earth ideology. Often refers to folk cultural aesthetics.
Blue Clamp Resist Dyeing 夹纈 (Figure 20)	Hand carved wooden board with symmetrical patterns for clamping resist. Often refers to folk cultural aesthetics.
Miao Batik 蜡染	Miao people use a special batik tool to hand-draw patterns on fabric with wax as resist. Drawings are illustrative and decorative. Wax resist dyeing can create ice-cracking textures (冰裂纹) on fabric. Subjects are extracted from the daily natural environment such as butterflies and flowers.

Cyanotype was introduced and integrated with indigo blue during the process and gradually became the main media for my blue pattern language development. By converging indigo resist textile language with cyanotype resist printing technique, original contemporary textile creations could be innovatively generated.

Cyanotype substrate was discovered by Johann Jacob Diesbach in 1706 (Anderson 4). The first photo book - 3 volumes of *British Algae: Cyanotype Impressions* (1843–1853) was produced in cyanotype photogram by Anna Children Atkins (1799-1871) (Anderson 5). Her prints (Figure 30) demonstrate the tone of Prussian blue. Many contemporary cyanotype practices engage with digital negative printing (Figure 82).



Figure 30.
Atkins, Anna, Cyanotype
of British algae from
*British Algae: Cyanotype
Impressions*, 1843–1853,
cyanotype printing
photogram, Natural
History Museum,
[https://www.nhm.ac.uk/
discover/anna-atkins-
cyanotypes-the-first-
book-of-photographs.
html](https://www.nhm.ac.uk/discover/anna-atkins-cyanotypes-the-first-book-of-photographs.html)

I shifted from a focus on indigo technique based textile designs *Home, Sweet Goldfish* (Figures 5 and 6) to cyanotype printed textile designs *Embedded Memories* series (Figures 8, 9 and 11-14). As I gained understanding in indigo practice, I started building connections between indigo and cyanotype as stated in the chart:

Cyanotype printing vs indigo resist dyeing:

	Cyanotype printing	Indigo resist dyeing
Differences	<p>Textures can achieve detailed transitional tonal ranges, as the same in photographic negatives.</p> <p>A quick experimentation, 15-25 minutes exposures under UV and 15-30 minutes rinsing.</p> <p>The dye is normally set on the surface of the fabric without penetration. The surface printing can achieve photographic details.</p> <p>Blue will not go deeper after a period of time (around 45-60 minutes) during UV exposure.</p> <p>Acid based printing process. Vulnerable to alkali and lights, paste resist slaked lime can remove cyanotype and leave a burned golden residue. A small amount of alkali can affect the tone of Prussian blue.</p>	<p>Textures have limited tonal changes. Dyeing fabric different times can create the tonal ranges. To achieve darker tones, it needs to be dyed 7-8 times in indigo.</p> <p>A time-consuming process, 15 minutes immerses in the dye and 15 minutes exposures to air afterwards. It normally needs 6-8 times dyeing to achieve a darker blue tone.</p> <p>The dye will penetrate the fabric. It is challenging to achieve intricate detailed textures on fabric.</p> <p>Adding more immersion procedures can deepen blue.</p> <p>Alkali based indigo dyeing process. Acid can be added to achieve the ideal PH level in vat.</p>
Similarities	<ul style="list-style-type: none"> Both processes can be regarded as resist methods. Oxidizing process during printing and dyeing. Fabrics turn from yellow-green to blue (Figure 77). Blue colorations are generated on fabrics. Textures can be affected by fabric structures, natural conditions such as UV light and air. Both of the processes are time consuming and can involve digital and hand-making techniques. Both blues can record the trace of fabric memories (Figures 32 and 33). Both of the techniques have been used in domestic textile productions. Cyanotype Prussian blue has the resemblance of indigo blue when printing on silk organza under natural UV light (Figure 31). Cyanotype digital printing can take place (with self-adhesive film method) in natural environment, reflecting indigo printing process (Figure 78). 	



Figure 31.
Cyanotype sun exposure (left) and indigo dyeing (right) on double silk organza comparison, personal photograph by Vivian Fei, 15th September 2020



Figure 32.
Cyanotype photogram on linen, exposed in a UV unit (left), personal work by Vivian Fei, 2019

Figure 33.
Indigo tie-dyeing resist technique on linen (right), personal work by Vivian Fei, 2019

My early works of technique and language explorations introduced briefly in the introduction section, were significant to my later developments and personal language generation. The chart below indicates the details of these early series:

Earlier work	Technique	Inspiration	Aim
<i>Home, Sweet Goldfish</i> (Figures 5 and 6)	Indigo paste-resist method	Blue nankeen textile aesthetics and resist techniques; Taoist heaven-earth ideology; Home, memories.	To express the idea of home, memories and connections with indigo through the expression of goldfish with blue nankeen textile inspiration.
<i>Embedded Memories - Projected Recollections</i> (Figures 8 and 9)	Cyanotype digital printing + Dali indigo tie-dyeing resist methods	Dali textile composition; Taoist heaven-earth ideology; Home, memories; Fabric memories and resist techniques (Yoshiko Iwamoto Wada and shibori); Fanglu Lin with Dali tie-dyeing textile inspiration.	To further develop my textile language with home memories and fabric memories created with Dali tie-dyeing stitches and folds method. Prussian blue came forward to the surface layer to generate personal connection to the blue.
<i>Embedded Memories - Childhood Savor</i> (Figures 11-14)	Cyanotype digital printing + Dali indigo tie-dyeing resist methods	Home, memories; Fabric memories and resist techniques (Yoshiko Iwamoto Wada and shibori); Fanglu Lin with Dali tie-dyeing textile inspiration; Rosemary O'Rourke with imprinted childhood memories on organza; Taoist Wu-Wei.	Transition from embedded personal memories into textile memories with Dali tie-dyeing stitches and folds method. Cyanotype printed imagery on tied fabrics to generate personal textile languages with cultural inspiration.

My background, memories and relationship with home have influenced my textile language development. To summarize the transition from indigo to cyanotype-based technique, I produced a diagram (Figure 34) indicating the journey of this shift with Taoist Taijitu structure:

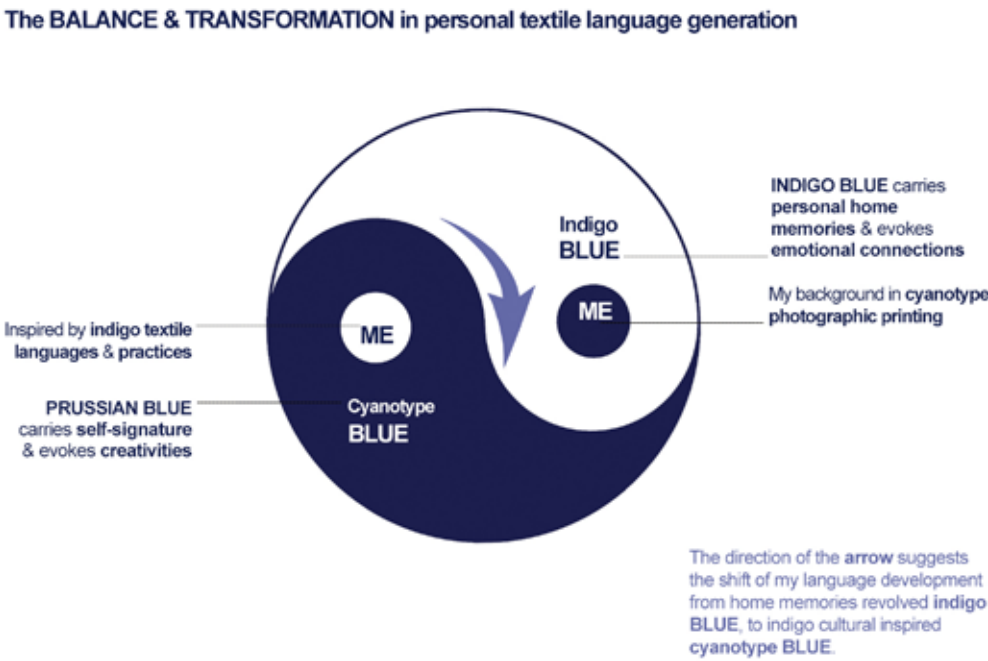


Figure 34. The balance & transformation in personal textile language generation, diagram by Vivian Fei, 2021

5.2 Reconnecting with Home

鸿雁长飞光不度，鱼龙潜跃水成文。
昨夜闲潭梦落花，可怜春半不还家。

– 张若虚（唐）《春江花月夜》

Translation of the poem: The swan geese kept flying but could not reach beyond the boundless moonlight, fleeting fish created ripples in the water. I dreamed of flowers falling in the fishpond last night, but unfortunately it was halfway through spring and I still couldn't reach home. (Zhang, Ruoxu, Tang Dynasty, *A Moonlit Night On The Vernal River*)

Home is a place where memory resonates. Certain images and objects from home – the memory stimuli, provoke homesickness. I have always had goldfish as pets; they have accompanied me during my childhood. The golden sparkles reflect the warmth and comfort of family love. I visited home in China in November 2019. Walking along the fishpond in my backyard (Figure 35), familiar scenes of the fleeting goldfish reminded me what home had felt like.

My connections with home were made through memories and domestic objects such as goldfish and nasturtium – the memory stimuli. They became the symbolic language in my textile pattern generation. In the next section the significance of goldfish to concepts of home, memories and identity in my designs are addressed, and the rationale for choosing goldfish and nasturtium as my symbolic language explained.



Figure 35.
Fishpond in the backyard
at home in Kunming,
personal photograph by
Vivian Fei, 2019

Goldfish Culture in China

Goldfish can be considered a significant part of Chinese livelihood with special symbolic meanings and auspicious motifs in Chinese culture (qtd. in Laing 102). Goldfish figures appear in many popular folk cultural prints as domestic pets for children in their role. “May gold and jade fill your house” (Figure 36) is a popular goldfish with little boys’ motif in many prints (Laing 104). The playfulness of the children with the goldfish implies a close relationship between them.

As a childhood pet goldfish held an emotional attachment for me that carried sentimental value. The daily routine of caring for the goldfish, such as feeding and water changing, helps embed them in childhood memories.



Figure 36.
Gold and Jade Fill the House, late 19th century, Yangjiabu, Shandong province, pair of polychrome woodblock prints on paper; each H. 46 cm; L. 46 cm. Laing, Ellen Johnston, *Carp and Goldfish as Auspicious Symbols and their Representation in Chinese Popular Prints*, 2017, p. 105.

Domestic objects, home and memories

“摇啊摇，摇到外婆桥，外婆叫我好宝宝。
一只馒头，一块糕。”

Translation: Rocking my little boat to grandma’s bridge. My grandma called me a good girl, and kindly provided me with a steamed bun and a cake she made.

This is a popular lullaby in China from the 80s, which I was brought up listening to as a baby from my mother and my grandmother. Like a goldfish, I swim towards my roots and I feel the warm current in that blue river.

My visual design elements develop from subject matter that embedded strong emotional relationships with my childhood in China. Objects of my recollections such as grandmother’s apron, goldfish (childhood pet) and nasturtium registered as reminiscences of the domestic, provoking a sense of belonging (Figures 37 and 38).

As Gregson mentioned, cohabitating domestic objects such as pets, plants and household daily commodities link to our familiarity of place and are essential to home-building as an extended self (qtd. in Ratnam 4). The imagery of goldfish contributed to personal storytelling and became a symbolic language of home and identity in my textile pattern design. By designing patterns with the objects of attachment, I was able to trace my past memories with emotional response. Goldfish related art and textiles (Figure 38) from my home in Kunming were collected as design references when I visited home in November 2019. Nasturtium is a common garden flower seen in Kunming, which also reminded me of home (Figure 41).

Figure 37.
Goldfish in fish bowl
(left) and goldfish in
backyard pond (right) as
domestic pets at home
in Kunming, personal
photograph by Vivian Fei,
2019



Figure 38.
Goldfish on domestic
objects in my home
in Kunming, personal
photograph by Vivian Fei,
2019



Home and Identity - the Convergence of Two Homes

My chosen subjects (goldfish and nasturtium) for pattern repeat design and my chosen techniques (indigo and cyanotype resist methods) are unusual combinations. These design decisions were based on personal life memories, my background, identities and my connections with homelands.

Goldfish and nasturtium have symbolic meanings (Figure 39) related to my perception of “home” and memories of “home”. Not only are both of them commonly seen in my hometown in China (Figures 37 and 41), but they also can be found in New Zealand (Figures 40 and 42). They are the memory stimuli that trigger my yearning for a sense of home and questioning of identity when I see them in New Zealand. “Is New Zealand another home to me? Where do I belong?”

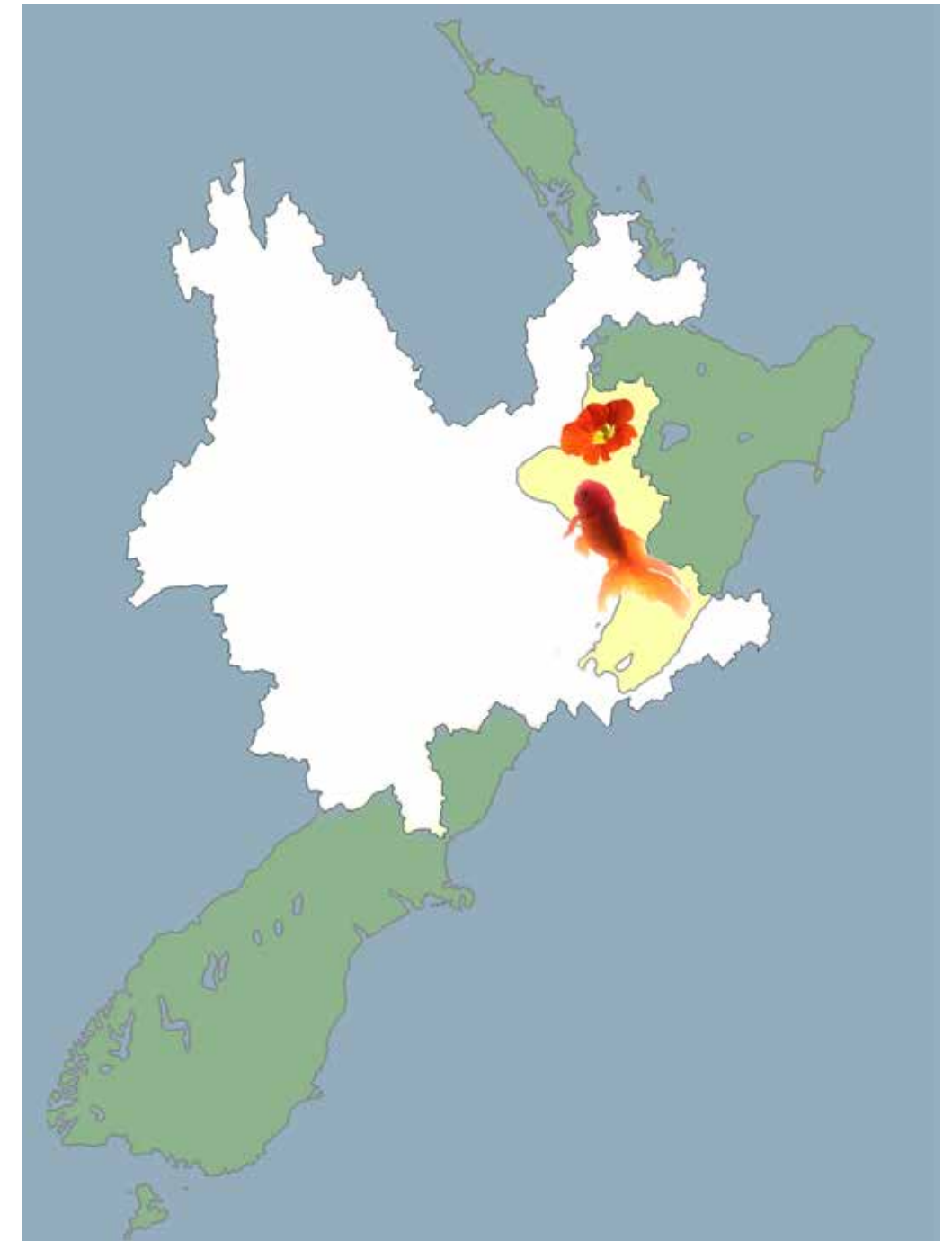


Figure 39.
Goldfish and
nasturtium exist in
the convergence of
two homes – Yunnan
(China) and New
Zealand, diagram by
Vivian Fei, 2021



Figure 40.
Goldfish
in Chinese
restaurants in
Wellington,
photograph by
Vivian Fei, 2020



Figure 41.
Nasturtium in Kunming,
China, photograph by
Vivian Fei, 2019



Figure 42.
Nasturtium in
Wellington, photograph
by Vivian Fei, 2020



Goldfish is a species introduced to New Zealand from China; it is used as a metaphor, implying my identity as an immigrant. Nasturtium's distinct rooting system is one of the visual elements adopted in my design. The extended stems suggest my extended living territory derived from my land of origin – my root. The adoption of nasturtium roots as a metaphor for home and away can be seen in the development in the series Yin-yang Liminality in concept 2.

Observational Photography Based on Taoist Naturalist Thinking – Wu-Wei

In order to create my repeat systems with my chosen subjects, I observed and documented the movement of goldfish and the natural growth of the nasturtium through photography (Figures 43 and 44). Photography, the core of cyanotype printing, became my main media for creating Prussian blue textile languages as I shifted my technique from indigo to cyanotype.

Taoist ideologies underline the aesthetic principles of my designs. By recording photos of movements instead of deliberate capture, I discovered the effortless beauty of nature. Drawing from Wu-Wei approaches, I applied this as a methodology. Through my observations I learned to embrace the emergent beauty from balance, imbalance and the sense of movement - “qi”.

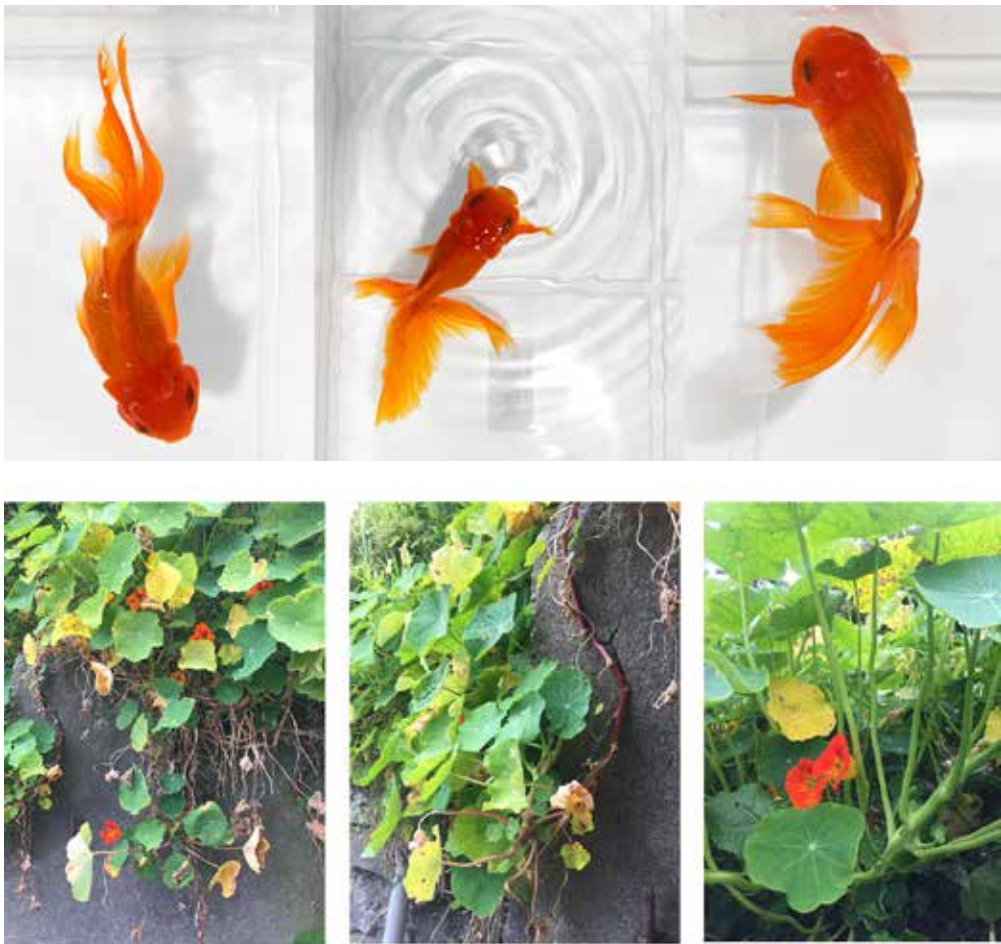
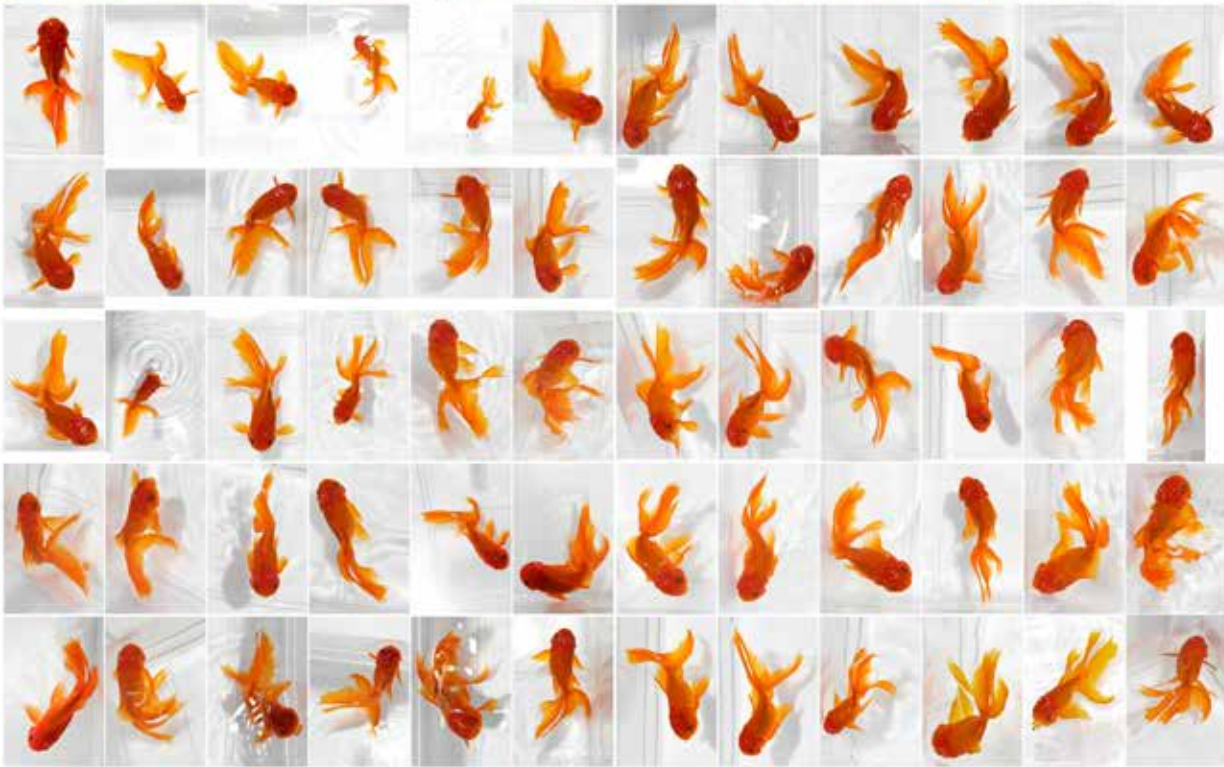


Figure 43.
Photo studies of
nasturtium and goldfish
fleeting movement,
personal photograph
by Vivian Fei, 2020

Goldfish movement – 1 taken with natural light on the 29th Sep, photos captured the moment of action with high shuttle speed.



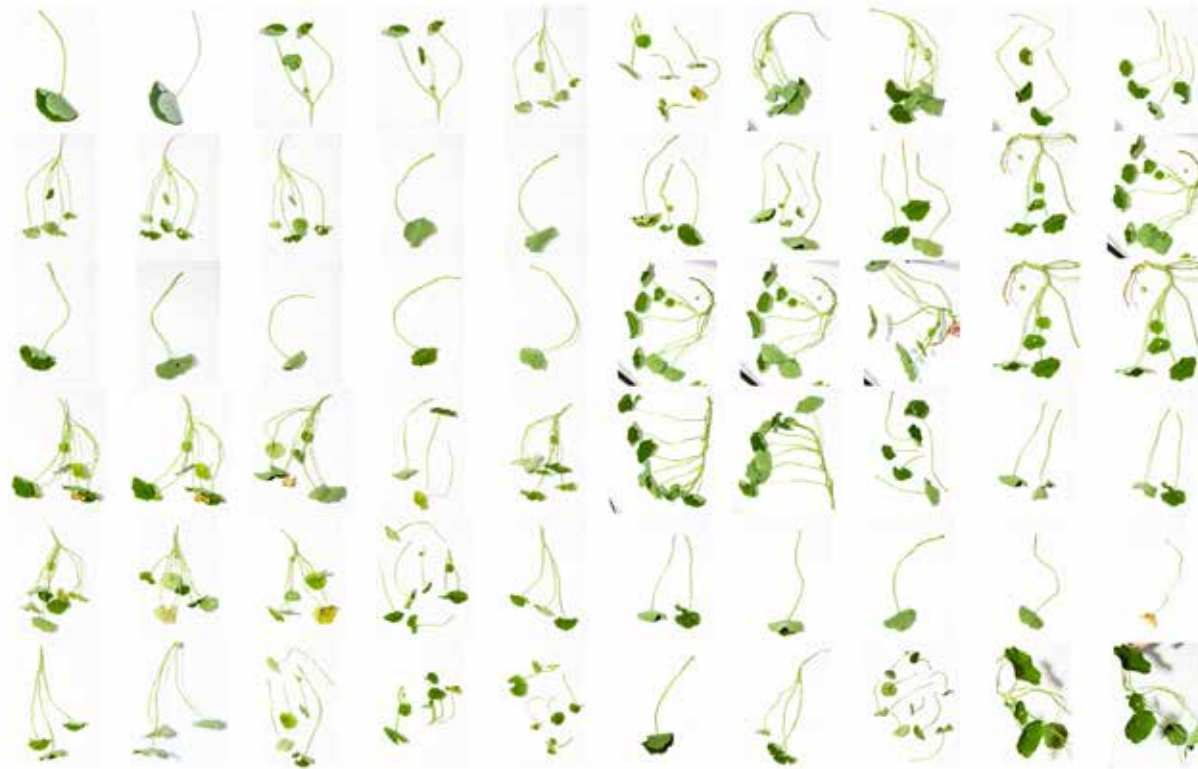
Goldfish movement – 2 taken with natural light on the 29th Sep, photos captured the fleeting movement with long exposure.



The long exposure with slow shuttle speed recorded the duration of movement of the fish.
The blurry imagery of the fish suggested concepts such as memories, dream and the fleet of time.

Nasturtium leaves – 1 taken with flash on the 30th Sep

Leaves are flat-layed to emphasis on the shape of the stems.



Nasturtium leaves – 2 taken with flash on the 30th Sep, flash is to mimic the sunlight.



Leaves are elevated from the ground, shooting with bird's-eye view suggesting a relationship with the sky.

Nasturtium photos taken with flash on 29th Sep



Long exposure to create dream-like effects as the reflection of memories – 1

Nasturtium photos taken with flash on 29th Sep



Long exposure to create dream-like effects as the reflection of memories – 2

Clear images of nasturtium

Figure 44.
Series of natural movements of
nasturtium and goldfish photo
documentation on contact sheets,
personal photograph by Vivian Fei,



Figure 45.
Black and white
photographs of subjects
in motion photographed
with long exposure,
personal photograph by
Vivian Fei, 2020

I created a set of imagery that simulates the transient, dreamy, visual quality of the memories (figure 45). These time-based photographs with long exposure recorded the movement of my subjects, reflecting the ‘natural’ expression of Wu-Wei. It also implied that memories are time-based records of life experiences, temporal and illusive. I then turned my black and white photographic materials toward cyanotype digital negative generation.

To me, Taoism and its associated philosophies were also the underlying life principles of my self-discovery and self-realization, paralleling my autobiographical research method. It provided guidance and enlightenment during this project, contributing to my pattern repeat system of personal and emotional responses. Taoist aesthetics informed my pattern construction, communicating my work as Chinese designs. Specifically, four Taoist aesthetics principles were adopted in my textile pattern constructions as per the following 3 concepts:

Taoist concepts and ideology influences on the pattern compositions in my 3 design series

Heaven and Earth	<i>Between the Two Realms</i> (Figure 56)
Taijitu, Yin-yang	<i>Between the Two Realms</i> (Figure 56) <i>Yin-yang Liminality</i> (Figure 64)
Wu-Wei	<i>Between the Two Realms</i> (Figure 56) <i>Yin-yang Liminality</i> (Figure 62) <i>Evolving with Wu-Wei</i> (Figure 70)
Qi / Chi	<i>Between the Two Realms</i> (Figure 56) <i>Yin-yang Liminality</i> (Figure 62) <i>Evolving with Wu-Wei</i> (Figure 70)

5.3 Concept 1 – Between the Two Realms

I intended to generate Dali tie-dyeing inspired textile languages through Taoism influenced compositions in cyanotype. This section describes the development of the concept with design iterations.

The “two realms” in the title imply: heaven and earth; cyanotype blue and indigo blue; personal and cultural; home and away; craft and digital aesthetics.

As mentioned in the discussion of aesthetics in the methodology section, Chinese indigo textile pattern compositions are strongly influenced by Taoism, especially Dali tie-dyeing and blue nankeen. In my previous studies of blue nankeen and experimentation with an indigo paste-resist method (Figures 46 and 47), I created a series of pattern designs based on Taoist Heaven and earth concepts. During the development of this work *Between the Two Realms*, I generated a series of compositions with goldfish and nasturtium photographs, which also referred to this circle-and-square construction.



Figure 46.
Blue nankeen
experimentations
and pattern designs,
personal work by Vivian
Fei, 8th June 2020

Design Compositions with Taoist Influences

1st Iteration



Figure 47.
Goldfish theme designs
with paste resist technique
dyed in indigo on thin
cotton and linen, personal
work by Vivian Fei, 9th June
2020



Figure 48.
First iteration of digital
negative tile pattern design
compositions, personal
work by Vivian Fei, 2020

2nd Iteration

Beyond the Taoist heaven and earth ideology as design compositional principles (movement of goldfish created a layer of centeredness, nasturtium leaves formed a squared frame in Figure 49), Taoist yin-yang *Taijitu* (Figure 15) and “qi” were also applied aesthetic principles. *Taijitu* suggests a sense of positive and negative balance. Oppositions of yin and yang create a visual movement and fluidity of “qi”. The concept qi was introduced to break the static symmetry and suggest a natural flow, reflecting a Wu-Wei approach. To activate the symmetry and to break from the static reflections in compositions, I created a subtle visual imbalance in my symmetries (Figure 49).

By rotating the leaf stems and flowers 180 degrees instead of flipping horizontally or vertically as *Taijitu* might suggest, I achieved a natural flow of “qi” (#1-4 in Figure 49). The photographs of goldfish and nasturtium were taken from a birds-eye position, also referencing the concept of heaven and earth.

The challenge when working with monochrome (blue) was to create layers and contrast. The dynamic tonal range in my photographs and the contrast created by clarity and blurriness (stillness and motion) brought depth to the compositions. The introduction of tie-dyeing textures (transformed as photographic elements) in the final iteration introduced another layer of visual distinction.

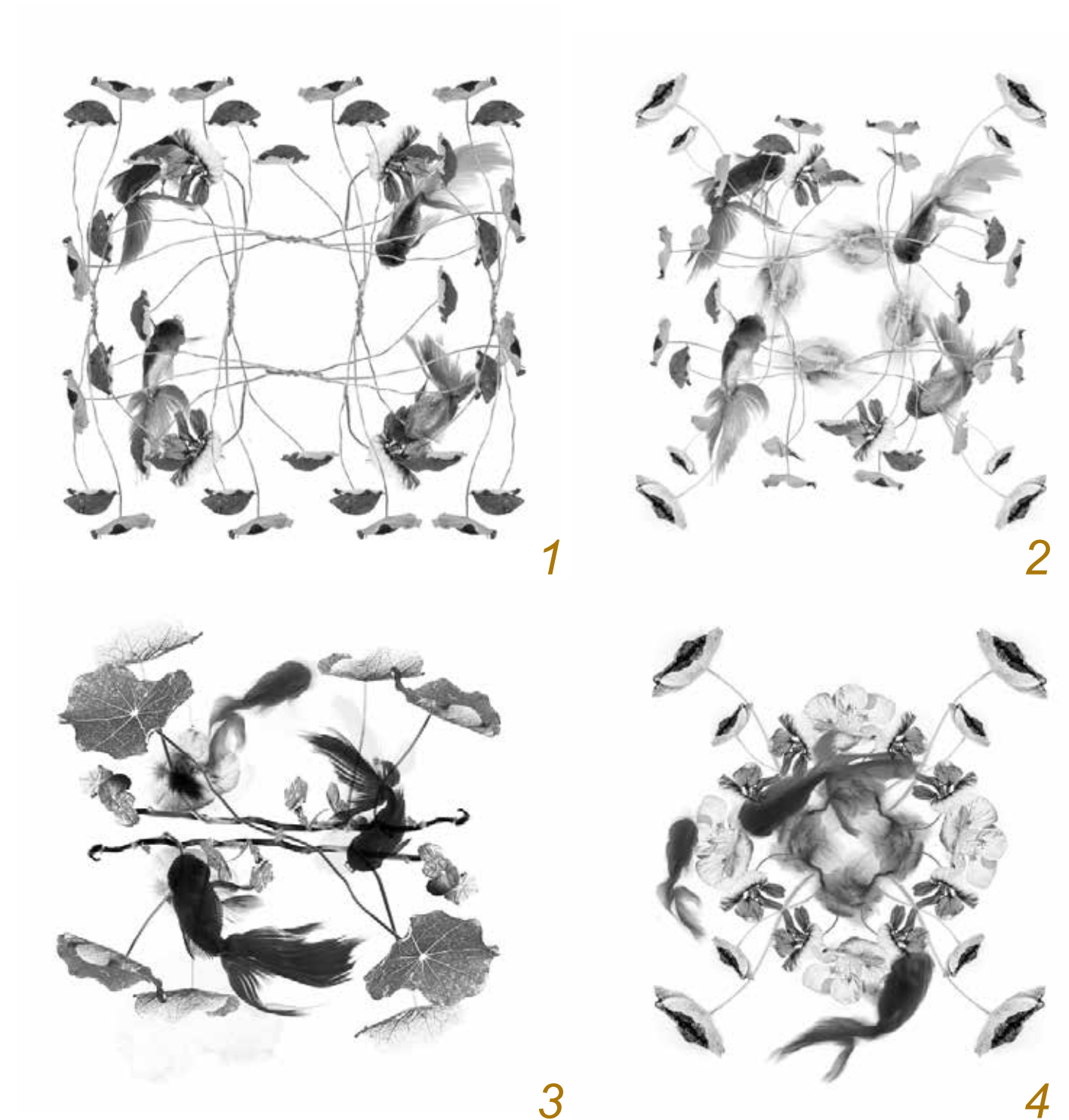


Figure 49.
Second iteration of digital
negative tile pattern design
compositions (#1-4),
personal work by Vivian Fei,
2020

3rd Iteration

Inspired by Taijitu, I then created a set of pattern repeats (Figures 50 and 54) with the tiles from Figure 49. By rotating and overlaying, the “qi” is activated through the natural flow of the goldfish movement.

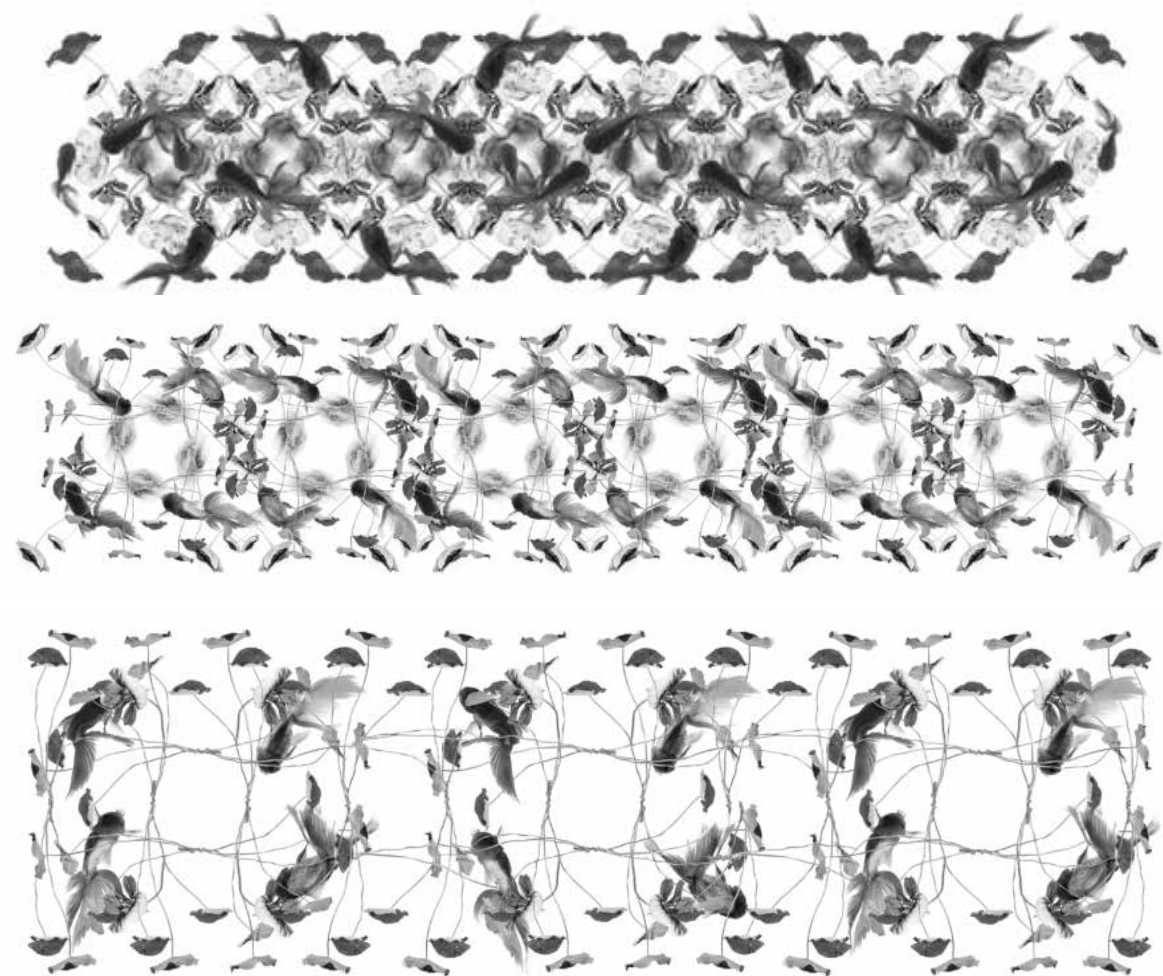


Figure 50.
Third iteration pattern repeats based on the second pattern designs inspired by Taoism with rotating and overlaying techniques, personal work by Vivian Fei, 2020

Cyanotype Printing in UV Exposure Unit

Cyanotype digital negative printing was used to produce the photographic composition on thin silk organza (16gm). Digital negatives were printed on tracing paper and used in the UV exposure unit in the University's textile department (Figure 51).

Exposure time was measured by testing strips in 15 minutes increments in the UV exposure unit (Figure 52); 45-60 minutes was the ideal exposure time range.



Figure 51.
Third iteration pattern repeats digital negatives exposed in the UV unit, personal photograph by Vivian Fei, 2020



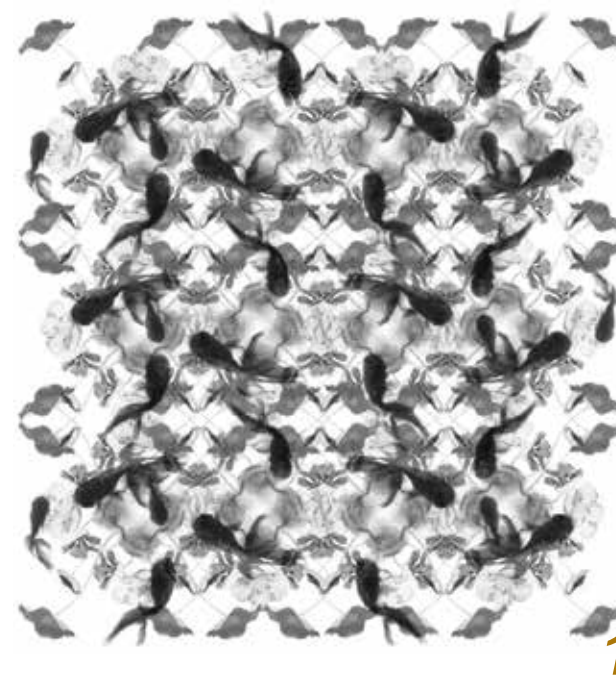
Figure 53.
Third iteration pattern repeats printed in cyanotype on thick silk organza (90gm), personal work by Vivian Fei, 2020



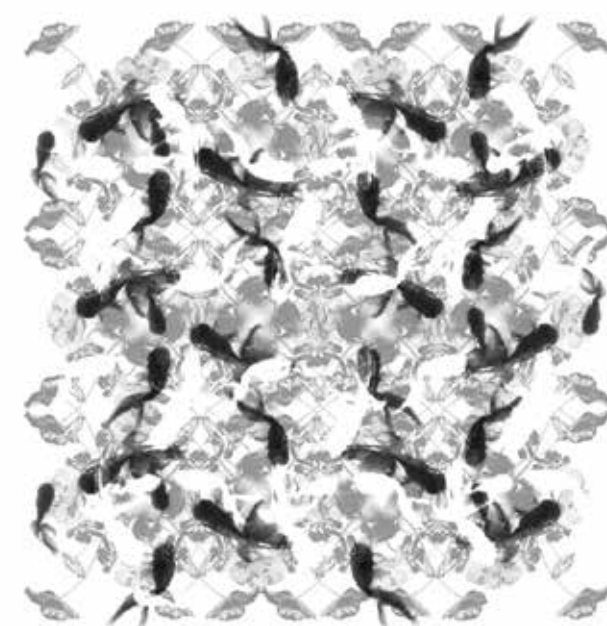
Figure 52.
Cyanotypes printing in the
UV exposure unit with test
strips, personal photograph
by Vivian Fei, 2020

4th Iteration

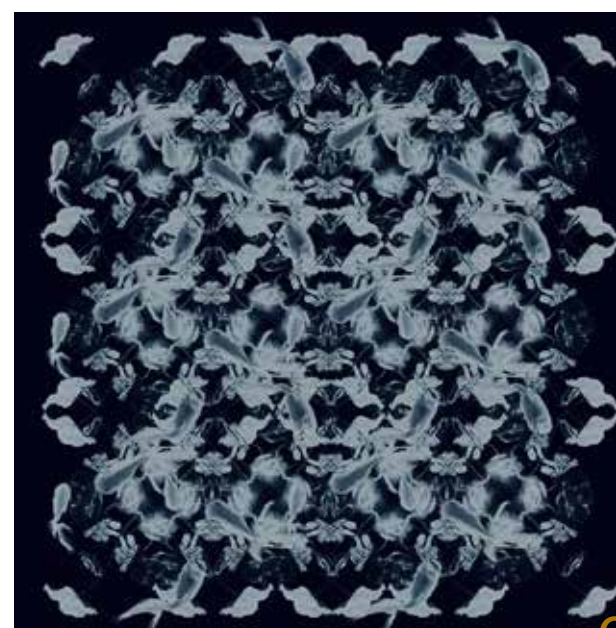
The designs below (Figure 54) are the extended repeat of the second iteration (#4 in Figure 49) inspired by Taoist Taijitu, with overlaying and rotating techniques. The structure became less defined after the repeat; the central circular structure was no longer obvious.



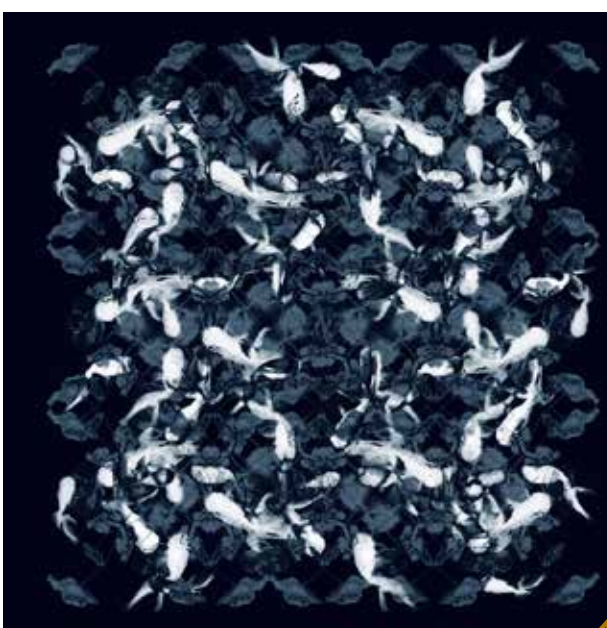
1



2



3



4

Figure 54.
Fourth iteration of pattern
repeats (#1-4), personal
work by Vivian Fei, 2020

5th Iteration

My final iteration in this stage was inspired by Sung-Soon Lee's *The Land We Must Preserve* (Figure 27), which combines Korean folk art tie-dyeing aesthetics with digital photographic printing to generate culturally inspired textile language. Her combination method was the inspiration for my development. I turned tie-dyeing marks created previously (Figure 55) into digital photographic information as visual components to merge with my photographic imagery. The final design *Between the Two Realms* (Figure 56) followed Taoist aesthetic principles with a strong sense of cultural transmission. The tie-dyeing marks in the final design suggested a sense of home and familiarity, which connected to my memory blue. It was however portrayed with a foreign blue, the cyanotype blue. The dialogue between craft and digital; home and away was delivered naturally through cyanotype digital printing.

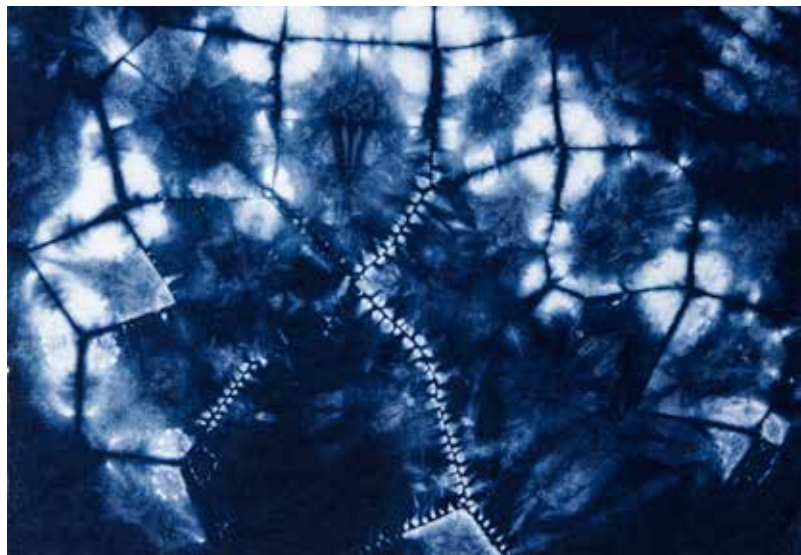
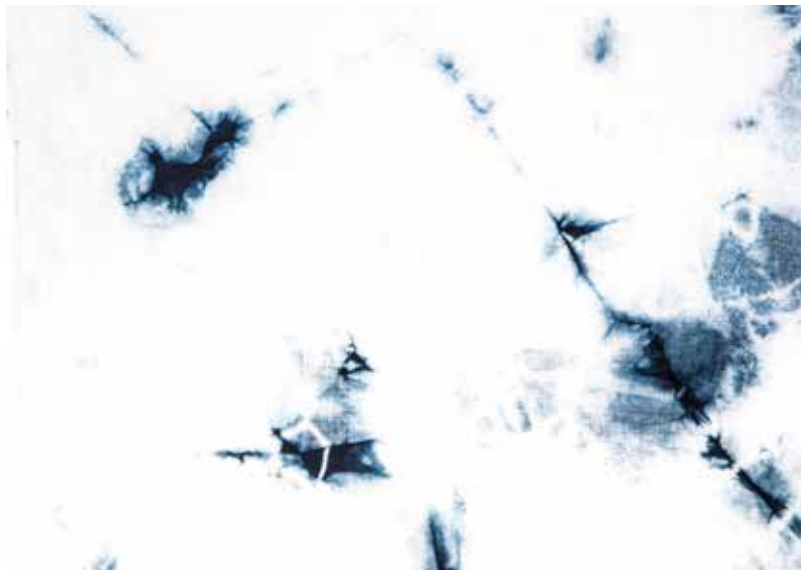


Figure 55.
Fifth iteration with tie-dyeing textures from previous indigo tie-dyeing resist experimentations, personal work by Vivian Fei, 2020



Figure 56.
Final digital negative pattern design *Between the Two Realms*, personal work by Vivian Fei, 2020

5.4 Concept 2 – Yin-yang Liminality

“Where is home? Am I in the space between?”
“I am a goldfish with two homes.”

I searched for answers within myself. Where my home was, I now have two. This project provided me an opportunity to explore home and memories through autobiographical approaches, generating textile artworks through self-reflection.

I have spent the first half of my life in China and another half in New Zealand as an immigrant. The concepts of home, belonging and identity have become complicated through living and travelling between these two places. The structure of my life reminded me of Taijitu yin-yang opposition coexistence, becoming influential to my design composition. The relationships among textile, memories and home were analyzed and re-constructed to form a personally expressed emotive response.

This design aimed to produce a seamless repeat pattern, reflecting the repeat system from my grandmother’s indigo apron – my emotional trigger. The patterns on the apron became a part of my embedded memories mirroring my relationship with family and my perception of home. Pattern analysis of the apron repeat is displayed in the following section. The composition was centered on a Taoist yin-yang ideology to create oppositions and contradictions: the East and the West, the Northern hemisphere and the Southern hemisphere, night and day.

Apron Repeat System Analysis

My grandmother’s blue nankeen apron has a unique repeat system. The irregular shaped tile (covered in orange, #1 in Figure 57) repeated itself and forming seamless repetitive patterns (#2). The repeat can also be manifested as a rectangular tile (white highlighted area, #3), similar to that of Swiss repeat tiles.



Figure 57.
Tile pattern repeat system
analysis of grandmother's
apron in Photoshop (#1-3),
personal work by Vivian Fei,
2020

My Pattern Repeat System Generation

Inspired by the apron repeat system, I then created a repeat with my symbols following the textile analysis. The stems of nasturtium were built up to form a repeat tile (irregular shape) adopting a Wu-Wei approach through allowing a natural flow in the growth (Figure 58). The irregular tile was repeated seamlessly and formed a background (Figure 59). Rectangular seamless repeat tiles were marked in red highlighted areas (Figure 60).



Figure 58.
Tile pattern generation
progression with overlay
techniques, personal work
by Vivian Fei, 2020

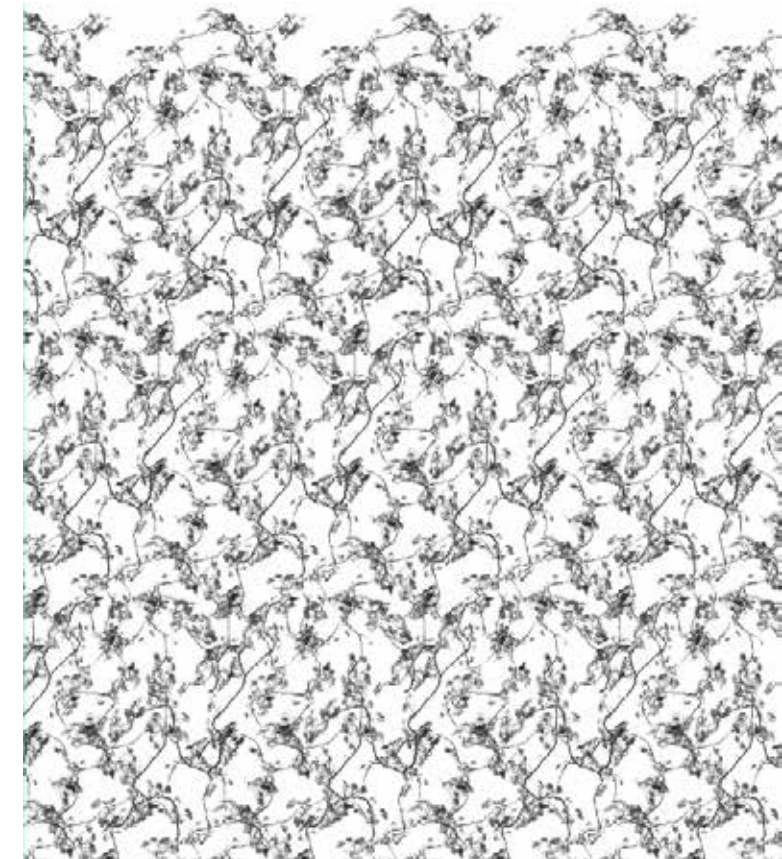
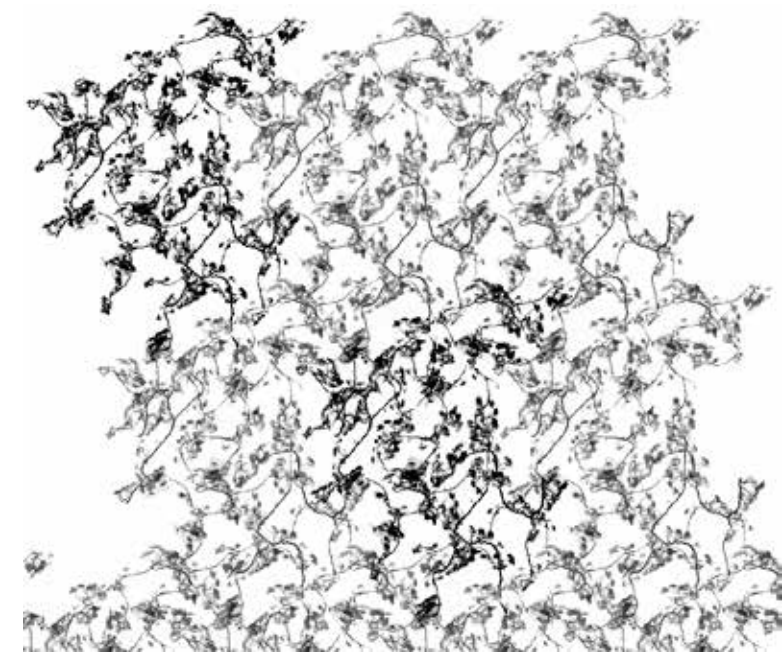


Figure 59.
Irregular shaped tile pattern
repeat inspired by apron
repeat system, personal
work by Vivian Fei, 2020

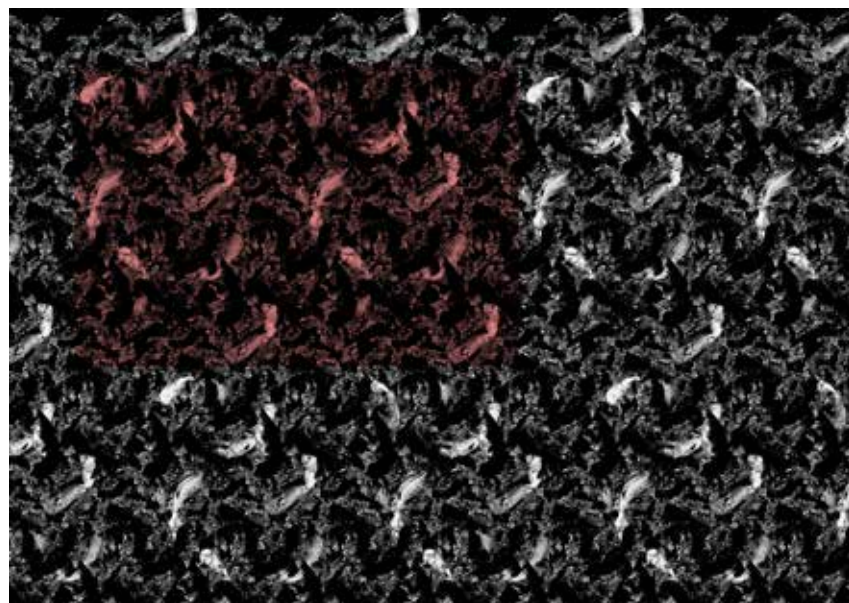
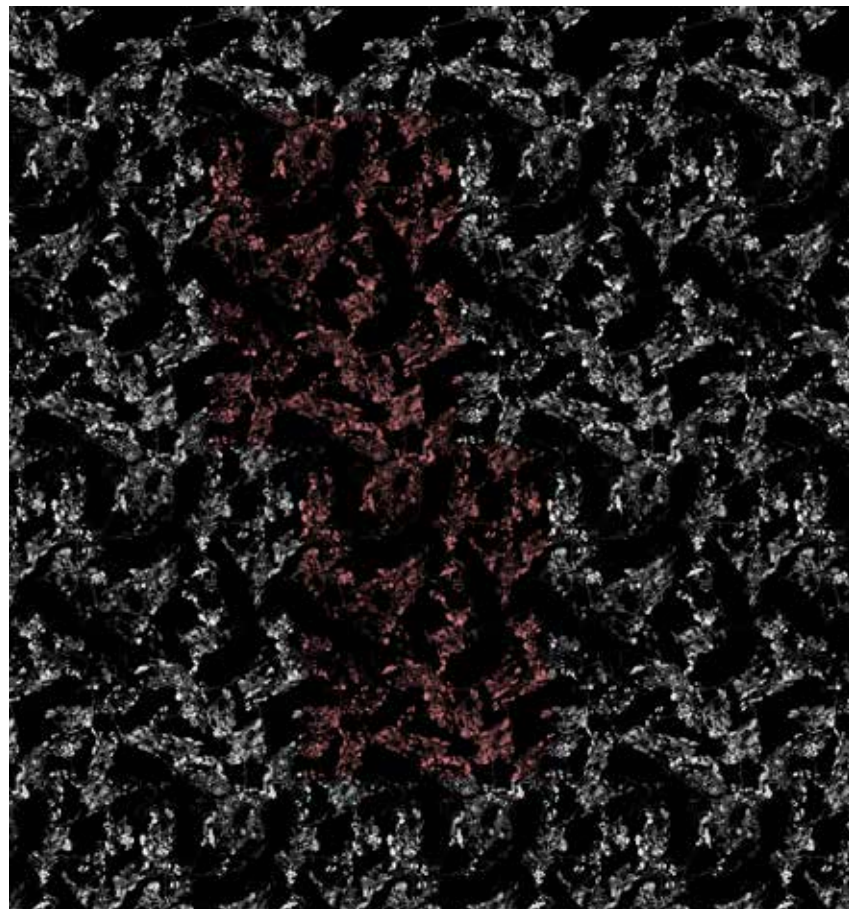
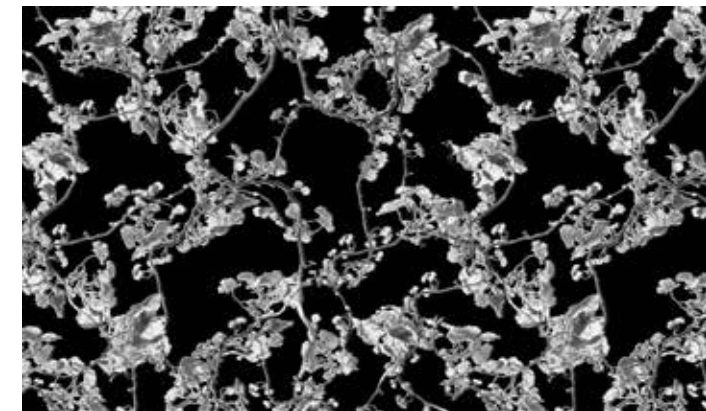


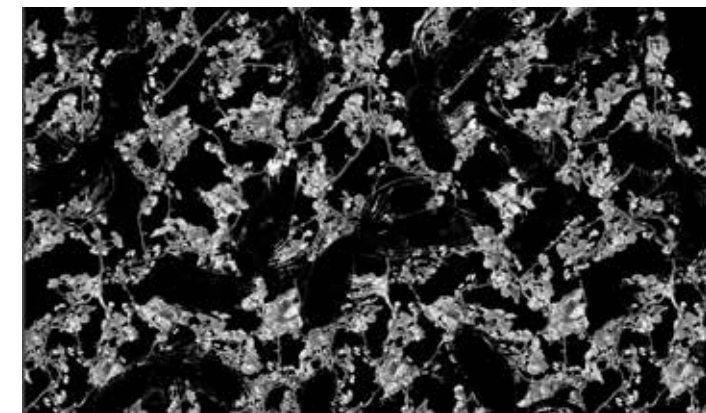
Figure 60.
Tile pattern repeat
identified, personal work by
Vivian Fei, 2020

Interplay Between Yin and Yang

The shading area created with the repeat hinted at similar forms to the goldfish (#1 in Figure 61). Under-exposed black goldfish patterns in their negative form (yin) were placed into the shaded areas following Wu-Wei's natural flow (#2). The white goldfish (yang) was placed among the black ones to break the stillness creating a sense of imbalance (#3).



1



2



3

Figure 61.
Pattern repeat
progression (#1-3),
personal work by
Vivian Fei, 2020

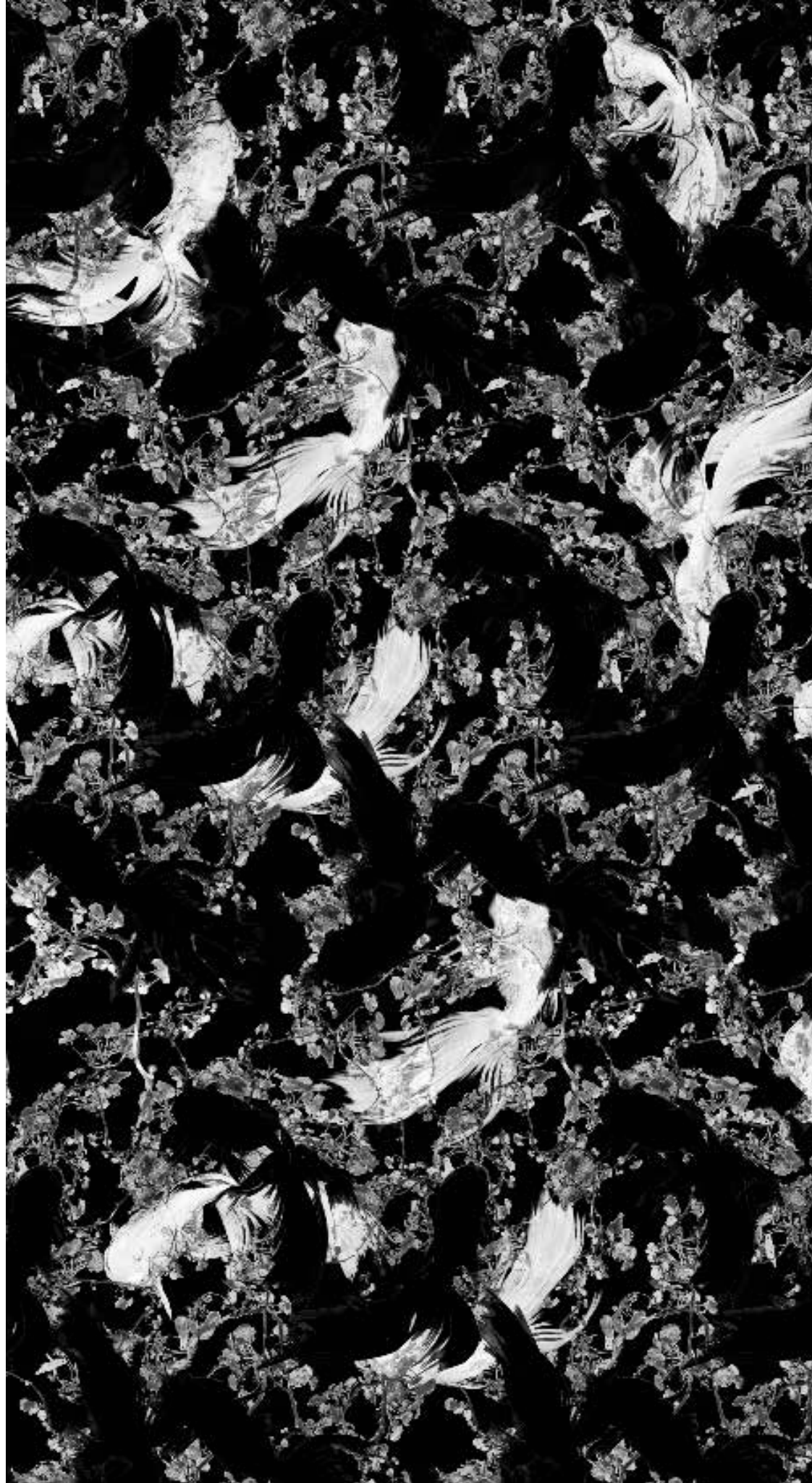


Figure 62.
Final pattern repeat
digital negative of Yin-yang
Liminality, personal work
by Vivian Fei, 2020

As an immigrant from a land of the East living in the West, I feel I am living in a liminal space. The inner self-conflict forms an opposition: yin and yang - a state of ambivalence. A dialogue between these two spaces emerged during the constant shift between two places. Issues of rootedness and uprooting floated to the surface. I was seeking a sense of belonging in Aotearoa, searching for the familiarity and rootedness of “home” in China. I began to realize that I had built connections between the land I had growing up in and the land where I am living. Like the nasturtium, I am now rooted in both lands. Sensations of belonging defined where home is; I am no longer stuck in the middle but have learned to embrace this in-between transitional space - like yin and yang in Taijitu - switching between the positive and negative spaces while keeping balance. The interchanging dark and light goldfish implied my transforming identity. The nasturtium rooting system has knitted a gateway between two homes. My final pattern repeat *Yin-yang Liminality* (Figure 62) was developed from these realizations.

The diagram below inspired by the Taijitu yin-yang structure (Figure 63) displays the self-realized transformation process:

The BALANCE & TRANSFORMATION in home, self-identity & self-realization

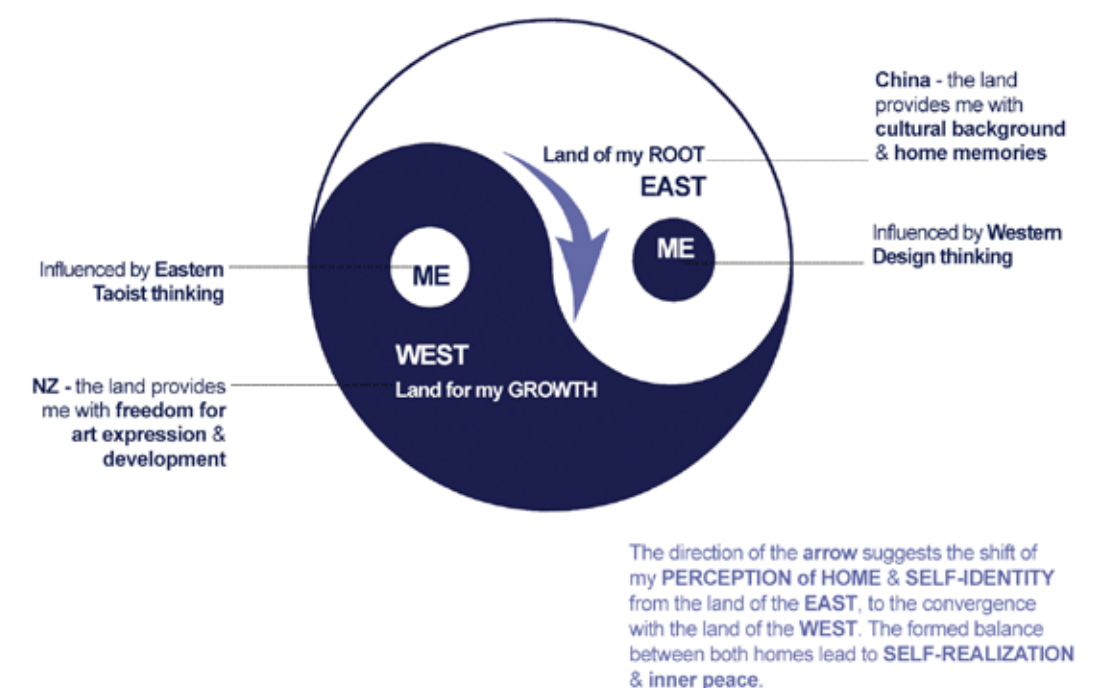


Figure 63.
The balance &
transformation in home,
self-identity & self-
realization, diagram by
Vivian Fei, 2021

5.5 Concept 3 - Evolving with Wu-Wei

This section outlines the focus of my textile language shifting to self-expression through a Taoist Wu-Wei influence. By introducing Chinese brush painting aesthetics and adopting previous tie-dyeing marks, my work established distinguishable Chinese cultural influences. My pattern repeat followed Wu-Wei's 'action without action'. The structure of the repeat emphasized the natural growth of the nasturtium, alluding to my natural growth as an artist in New Zealand and the self-realization described in the previous concept 2.

Design Symbolism and Compositions

Nasturtium is widely grown in Kunming with a Chinese name 金莲花, which can be translated as 'golden lotus'. Although nasturtium and lotus are not botanically related, the shape of the nasturtium and its leaves resemble a lotus. And lotus is often paired with goldfish in Chinese art with a meaning of "abundance of wealth and honour" (富贵有余) (Laing 106). When I enlarged the scale of the nasturtium leaves in my final series, they could be seen to share a similar appearance with the lotus.

The Taoist concept of Wu-Wei and its influence on Chinese landscape calligraphy paintings is reflected in my final work *Evolving with Wu-Wei*. Similar to *Between the Two Realms* (concept 1) inspired by Sung-Soon Lee, tie-dyeing textures (Figure 27) and brush marks (Figure 65) previously created were used as visual material to merge with the photographic imagery. Although the brush marking was abstract, the way it combined with the goldfish suggested a sense of natural flow (Figure 65). The fish tail merged into the brush stroke effortlessly, reflecting Wu-Wei thinking. My tie-dyeing texture resembles the form of a nasturtium leaf, sharing a similar visual rhythm (Figure 64). A similar Wu-Wei influence can be seen in Chinese brush paintings, where "qi" is emphasized and spontaneously created.



Figure 64.
Tie-dyeing pattern
combined with
photographic imagery with
overlaying, personal work
by Vivian Fei, 2020



Figure 65.
Tie dye texture and brush
mark combined with
photography, personal work
by Vivian Fei, 2020

Four basic pattern tiles were generated to reflect heaven and earth, in a similar manner to that seen in Chinese landscape paintings, again influenced by Wu-Wei. Tao-chi's and Chu Ta's (Figures 68 and 69) personal emotions are manifested through a natural flow in brush action. To know one's own mind, and to allow the magic of the brush to do its work without slavishly following tradition, reflects the Taoist principle of action without action. (Stunkel 184).



Figure 66.
Four basic pattern tiles
in *Evolving with Wu-Wei*
generated with heaven and
earth ideology and Wu-
Wei from Taoism, personal
work by Vivian Fei, 2020

Reflecting on Wu-Wei, the tiles were then built up without deliberation by following the natural growth of the leaf stems (Figures 66, 67, 70). This also reflects the Landscape painting structures of the Qing dynasty, where a sense of flow from earth to the sky was commonly exhibited (Figures 68 and 69).



Figure 67.
Tiles repeat build up with
overlay techniques followed
by the flow of "qi", personal
work by Vivian Fei, 2020



Figure 68.
Tao-chi (Tao-ji), The Waterfall on
Mount Lu, hanging scroll with
ink from Ch'ing dynasty. Stunkel,
Kenneth R, *Ideas and Art in Asian
Civilizations: India, China and Japan:
India, China and Japan*. 1st ed.,
Routledge, 2015, p. 185.



Figure 69.
Chu Ta, Landscape, hanging scroll
with ink from Ch'ing dynasty.
Stunkel, Kenneth R, *Ideas and Art in
Asian Civilizations: India, China and
Japan: India, China and Japan*. 1st
ed., Routledge, 2015, p. 185.

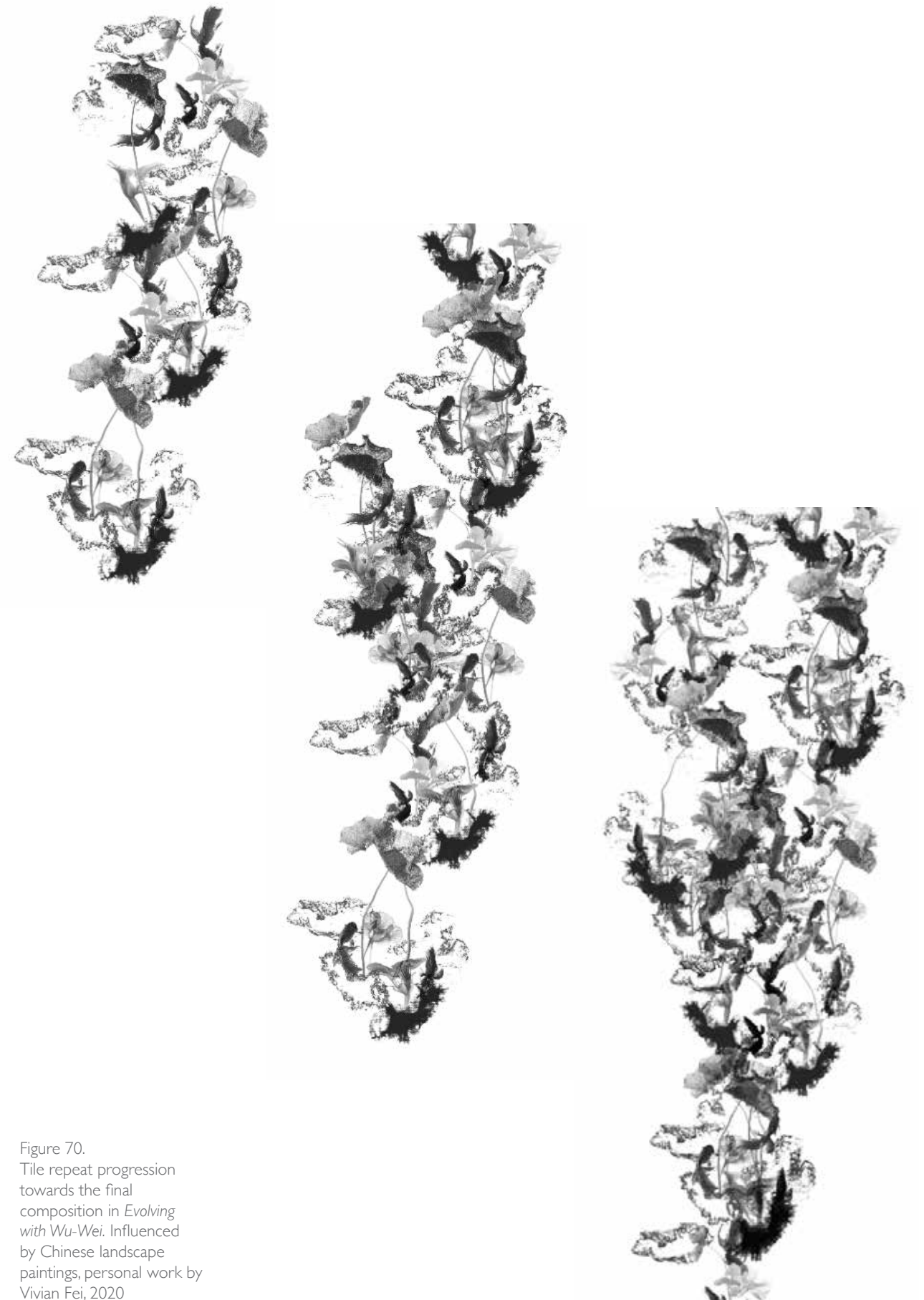


Figure 70.
Tile repeat progression
towards the final
composition in *Evolving
with Wu-Wei*. Influenced
by Chinese landscape
paintings, personal work by
Vivian Fei, 2020



Figure 71.
Mock-up of *Evolving with Wu-Wei*, printed on paper;
personal work by Vivian Fei, 2020

Figure 72.
Mock-up of 3
conceptual designs,
printed on paper;
personal work by
Vivian Fei, 2020



The final designs were printed on paper as mock-ups (Figures 71 and 72) to determine the printing sizes on fabric. I intended to print on large-scale silk organza for emotional impact. The large format aimed also to reflect that of Chinese brush paintings, which are commonly composed on long scrolls. It also relates to the large scale of blue nankeen textiles (Figure 79). The printing size was limited however to the size of the exposure unit. By developing a self-adhesive film printing technique, I was able to print in a large format (as discussed in section 5.6).

Monica Nilsson's layered textiles evoked for me the structure of memories, how we reflect on the past with different layers of imagery. Drawing from this, an overlaying method was used generated in Photoshop. I intended to adopt the layering technique for *Evolving with Wu-Wei* to generate what Nilsson calls "the idea of labyrinth" (qtd. in Koumis, *Art Textiles of the World: Scandinavia*. 104). I produced 3 layers of this design and displayed them in layers (Figure 73). Light also plays an important role in Nilsson's textile installation - when light filters through her semi-transparent hanging organza layers, the patterns on the fabrics are activated (Figures 25 and 26). Inspired by this relationship between light and fabric, my 3 layers of *Evolving with Wu-Wei* design were hung in a gallery space where natural light can illuminate the textile art (Figure 73). The multi-layering patterns on the ethereal organza created a "mood" that stimulated emotional responses and imagination (Figure 74). Hanging organza also references the way Chinese scrolls and blue nankeen textiles are displayed.

There were 3 different tones of cyanotype blue generated during the printing processes: indigo blue, deep cyan blue and light cyan blue (Figure 73). The blueness was affected by natural UV levels, temperature and humidity, the time of exposure in the day, the duration of exposure and rinsing, and the alkalinity of the water used for rinsing. The deeper blue was generated under the afternoon sun with mid-level UV. The lighter blue occurred due to the high alkalinity in water during rinsing. These processes reflected "nature's way" and the unpredictability inherent in Wu-Wei. The blues transcended from a culturally based, memory blue to innovative personal blues.

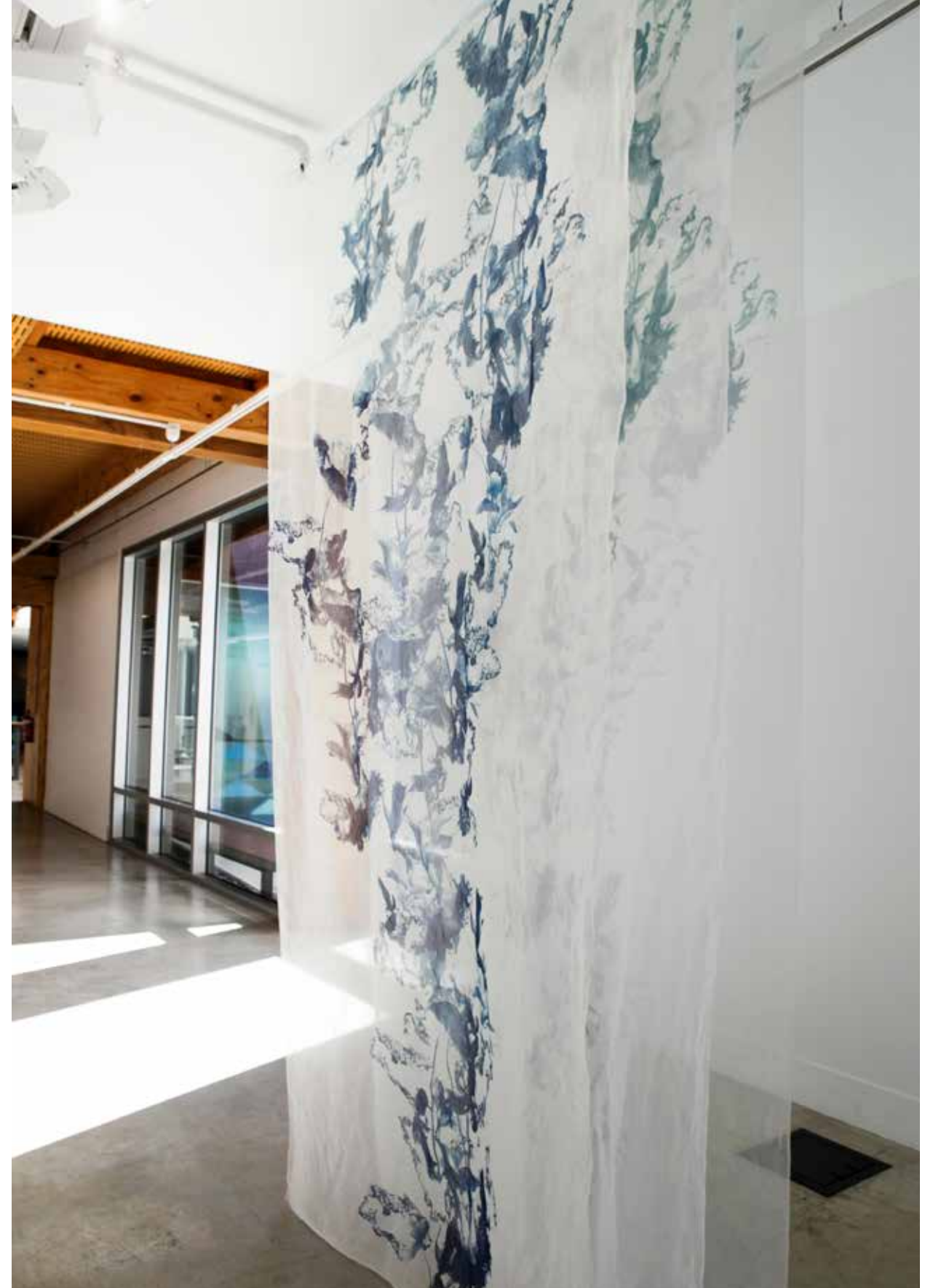


Figure 73.
Evolving with Wu-Wei with multiple layering effects printed on silk organza (16gm), personal work by Vivian Fei, 2020



Figure 74.
Multiple layering
details on *Evolving
with Wu-Wei*,
personal work by
Vivian Fei, 2020

5.6 Large format cyanotype printing solution

Cyanotype digital negative printing in a UV unit is a commonly used technique but because of the fixed size of the machine, printing of large format fabric was constrained. Due to this shortcoming, I developed an alternative technique for large format cyanotype printing using self-adhesive film under natural sunlight exposure.

Like indigo blue, Prussian blue is also a spiritual color; its relationship with the natural environment is indisputable. This became another important reason for me to expose my cyanotype print under the sun.



Figure 75.
Cyanotype exposure
testing under the
afternoon sun on
organza silk, personal
photograph by Vivian
Fei, 2020



1



2



3

Figure 76.
Cyanotype exposure
with digital negative
on self-adhesive film
testing strip under
the afternoon sun on
organza silk (30gm)
(#1-3), personal
photograph by Vivian
Fei, 2020

The juxtaposed photos below show the similarities shared between indigo dyeing process (left) and the cyanotype self-adhesive film printing process (right) (Figures 77-79). Also refer to chart on page 43.



Figure 77.
Fabric immersed in
indigo just before
oxidation (left) and
fabric with cyanotype
solution just before
oxidation (right),
personal work by Vivian
Fei, 2020



Figure 78.
Indigo dyeing (left)
and cyanotype printing
(right) in the natural
environment, personal
work by Vivian Fei, 2020



Figure 79. Blue nankeen textiles in Suzhou (left), my cyanotype large prints (right), personal photograph by Vivian Fei, 2020

Indigo and cyanotype, as discussed earlier in the comparison chart, undertake an oxidation process where both substrates can turn from green-yellow to blue (Figure 77). By enabling cyanotype digital printing exposure through sunlight, I brought the cyanotype process to a natural environment (Figure 80). This approach bridged indigo and cyanotype practice while reflecting a Wu-Wei unpredictability when printed under the changeable natural conditions. Variations of the cyanotype blues were produced during different times of the day with different levels of UV. Through experimentation I found that cyanotype blue was closest to indigo blue when exposed in a sunny afternoon with a UV level 3-5 between 4:30 -5:30 pm (Figure 81). Through these comparisons, the relationship between indigo making and cyanotype printing was brought much closer.

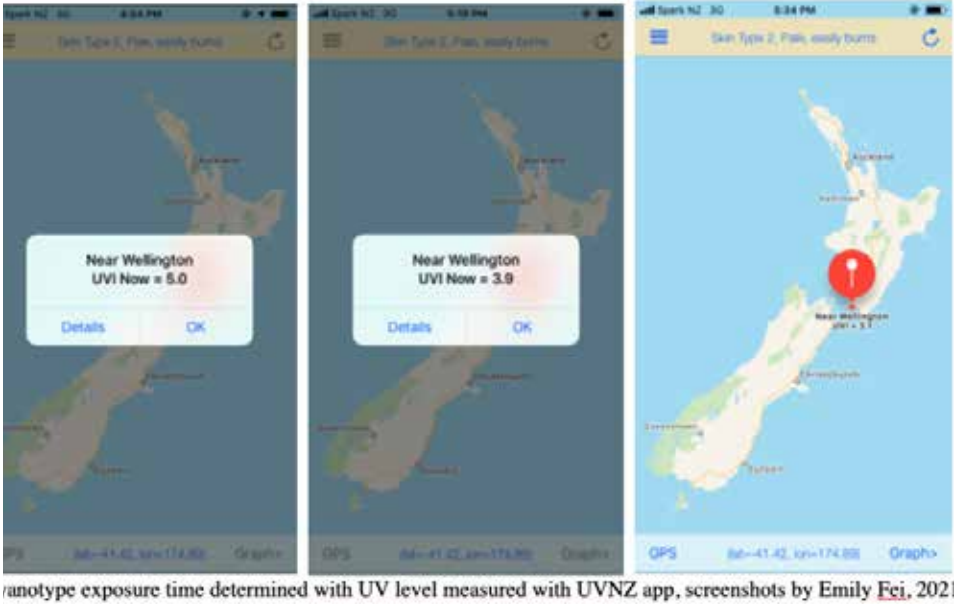


Figure 81. Cyanotype exposure time determined with UV level measured with UVNZ app, screenshots by Vivian Fei, 2021



Figure 80. Cyanotype exposure with digital negatives on self-adhesive film testing strip under the afternoon sun on organza silk (90gm and 30gm), personal work by Vivian Fei, 2020

Cyanotype printing with artificial UV exposure unit and natural UV comparison

	Artificial UV exposure unit	Natural UV (sunlight)
Features	Glass screen in front of the UV lamps which offer mainly the UVA spectrum due to UVB can be stopped by glass; Vacuum suction enabling seamless contact between digital negative and fabrics	Contains UVA (315nm – 400 nm), UVB (290 nm – 315 nm)
Exposure time	45-60 minutes (in 15-minute increments)	35-60 minutes depending on the time of the day for exposure (different UV levels)
Printed tonal fluctuation (on silk organza)	Similar tonal range of cyan-blue	Variables in tonal range. Afternoon sunlight with UV level 3-5 creates indigo blue (around 5pm)
Differences	<ul style="list-style-type: none">Reasonably consistent light source, environment and outcomesNot weather dependentLess variables and less unexpected outcomes	<ul style="list-style-type: none">Easy accessible light sourceUV level can be measured with appRelating to indigo dyeing natural process and Wu-Wei thinkingCreate unexpected visual outcomes which is relevant to my project
Limitation	<ul style="list-style-type: none">Limited unit sizing can restrain printable sizeLimited UV spectrum range	<ul style="list-style-type: none">Not a constant UV light source, needs consistent measureDifficult to conclude the testing results, more experimentations are needed

I researched large digital negative sunlight contact printing methods; the available sources suggested printing photographs onto small pieces of transparent film sheets and then joining them together with clear adhesive tapes to form a large digital negative (Figure 82). The advantage of this method is that the size of digital negative is not constrained by the printing devices. The shortfall though is that the final cyanotype print can display visual divisions generated by taping methods due to different material UV transmittance for films and tapes.

Close contact printing can be difficult to achieve with non-adhesive films. Critically my repeat patterns require a visual cohesion and uniformity, to achieve consistency. By printing on self-adhesive film from a large format inkjet printer, I was able to resolve two major issues: clarity guaranteed through the seamless contact printing (film adhered to fabric) and visual harmony. I developed a specific, self-adhesive film digital negative printing method as a solution to my problem and applied it in my final process so that large format cyanotype printing could be created under sunlight exposure (Figure 80).

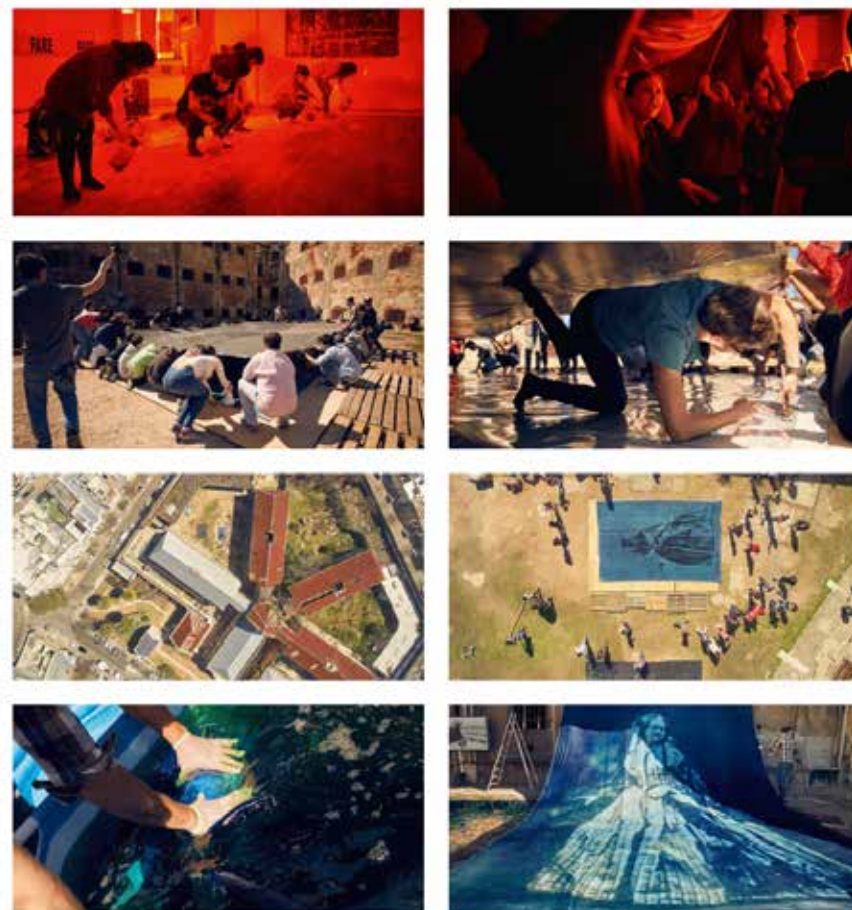


Figure 82.
Dario Invernizzi, Jessica Stebniki, Martín Tarallo, Alexis Magnone, Mauricio Castro, Luis E. Sosa and the Producción Gráfica 2D Team, Large Cyanotype Portrait of Anna Atkins, year unknown, 5 x 7.5m on sewn cotton, Uruguay, South America, photos courtesy of Tali Kimelman. Christina Anderson, *Cyanotype: The Blueprint in Contemporary Practice*, Routledge, 2019, p. 9.

The Self-adhesive film used is called Arlon 4500G clear, a polyethylene material with a high transmittance ratio, which allows more UV light penetration (Turner 1757). Printing with self-adhesive film (Figure 83) is an alternative and innovative approach in cyanotype digital negative printing. It is a better solution for printing large formats onto fabric in comparison with my previous methods. Below is a chart, which explains in detail the rationale for adopting self-adhesive printing.



Figure 83.
Digital negatives printing on self-adhesive film (Arlon 4500G clear, 1500mm width) in HP Designjet L26500 color inkjet printer with HP Latex Inks, personal photograph by Vivian Fei, 2020

Cyanotype printing with tracing paper and self-adhesive film comparison

	Tracing paper	Self-adhesive film (Arlon 4500G clear polypropylene)
Opacity (Impenetrability to UV radiation)	Semi-opaque with high opacity	Semi-transparent with low opacity
Transmittance (Measures the amount of light can pass through a material)	Low transmittance – film stops less UV radiation	High transmittance – film stops less UV radiation
Printable density (Ink holding power)	Slightly higher density	Slightly lower density
Printable format	About 800mm width (supplied by Rieger’s print and copy)	Film format can vary; the width used is 1500mm to match my fabric width (supplied by Blue cat signs & graphics).
Limitation	<ul style="list-style-type: none">• More UV light is stopped by this material – cannot achieve deeper blue• Only suitable for printing in the UV exposure unit, more UV is stopped by the glass from the unit• Limited paper size can constrain the printable size• To form large digital negative by taping can result in visual division• Close contact with fabric needs vacuum suction system in UV unit	<ul style="list-style-type: none">• Mid-tone can be lost, prints show less photographic tonal range. May due to lower printable density for this film• Time consuming process when attaching fabric onto the film (Figure 84)• Only suitable to adhere detachable surfaces such as fabric• Fabric may stretch during adhesive application• Adhesiveness of the film may be affected by heat and humidity:• Long exposure leads to material overheating;• high humidity leads to detachment of the fabric.• Large film may only be used once
Advantage	<ul style="list-style-type: none">• Can achieve photographic detailing in prints (higher printable density)• Cost-efficient for printing, the exposure unit is however costly• Acquire less preparation for printing in UV unit• Re-usable	<ul style="list-style-type: none">• Portable, can print on location• More UV light can penetrate through this material – can achieve deeper blue• Provides close contact between digital negative and the fabric surface• Makes large format cyanotype printing with visual cohesion possible, chance for producing innovative work• Not constrained by exposure machinery

The steps for cyanotype printing with self-adhesive film technique:



Figure 84. Cyanotype printing with self-adhesive film negative on organza (16gm, 3m long) steps, personal work by Vivian Fei, 2020

Self-adhesive printing process requires dialogue between the body and the fabrics. Unlike printing in the UV exposure unit with vacuum suction which ensures even and seamless contact between digital negative and fabrics, self-adhesive film may not guarantee such even contact, resulting in the effect shown in Figure 85. The blurriness and ink-like texture arose due to the fabric parting from the film. The adhesiveness of the film was affected by the temperature and humidity. Because of the uncontrollable factors, the printing process generated unexpected visual outcomes. This process again reflected Wu-Wei, the inky texture reflecting Chinese brush painting aesthetics. By combining digital and hand-making processes, an alternative aesthetic was created through this innovative approach.

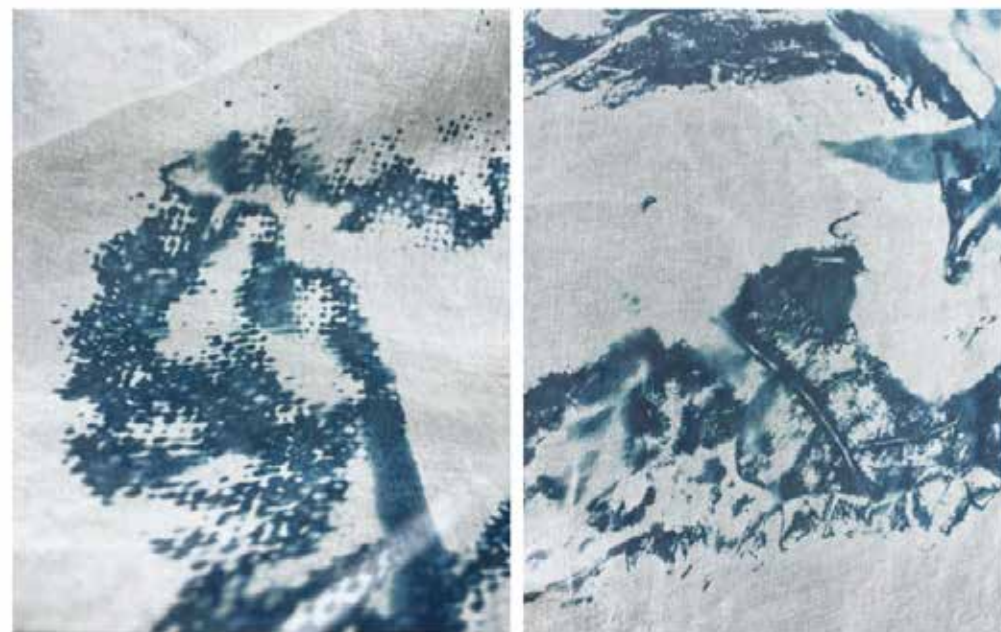


Figure 85.
Printing inky details from
Evolving with Wu-Wei,
personal work by Vivian
Fei, 2020

A UV transmission Densitometer X-rite 361T was used to measure the opacity of the printed self-adhesive film (the darkest and the lightest area) (Figures 86 and 87). Developing a better understanding of the opacity measure can help gain more control of digital negative generation in future practice.



Figure 86.
Opacity measurement of
the darkest area printed
self-adhesive film with UV
transmission Densitometer
X-rite 361T, personal
photograph by Vivian Fei,
2021



Figure 87.
Opacity measurement of
the lightest area printed
self-adhesive film with UV
transmission Densitometer
X-rite 361T, personal
photograph by Vivian Fei,
2021

I photographed my 3 textile artworks in domestic settings as well as in a gallery space. When they were displayed as domestic textiles (Figures 88-90) they provoked different emotional responses to that when viewed as artworks (Figures 91-93). In the latter the textiles spoke out and required the viewer's closer examination, cultural understanding and imagination.



Figure 88.
Final cyanotype print
Between the Two Realms,
personal work by Vivian
Fei, 2020



Figure 91.
Between the Two Realms
in gallery space, personal
work by Vivian Fei, 2020



Figure 89.
Final cyanotype print
Yin-yang Liminality
(detail), personal work
by Vivian Fei, 2020



Figure 92.
Yin-yang Liminality in
gallery space, personal
work by Vivian Fei, 2020



Figure 90.
Final cyanotype print
Evolving with Wu-Wei
(detail), personal work
by Vivian Fei, 2020



Figure 93.
Evolving with Wu-Wei in
gallery space, personal
work by Vivian Fei, 2021

6.0 Conclusion

This research through design project aimed to create a personal symbolic textile language in response to my memories of home in the form of layers of Chinese indigo and cyanotype blues. Indigo blue suggests my cultural background as a Chinese woman. Cyanotype blue reflects my role as an artist living in Aotearoa whose practice is influenced by other cultural knowledge. Together, the blues imply the emergence of two homes (China and New Zealand) forming a unity (oneness). My practice also moved toward resolving the inner conflict of home and away.

Through interweaving Chinese indigo textile knowledges into cyanotype printing practice, I reframed and re-stated a personal position in contemporary textile design. An alternative cyanotype printing technique was introduced to enable large format printing on fabric with sunlight exposure, opening up opportunities in cyanotype making.

The project developed unique pattern repeat systems to create my own symbolic pattern languages based on an autobiographical approach, conveying my memories of home, identity and emotions. Textile knowledge was acquired through making practice and material studies. Digital and hand-making technologies and aesthetics were integrated to vocalize my personal textile language. Taoist aesthetic principles were influential to my textile repeat pattern structures; their philosophies became the guide and inspiration for self-discovery and self-realization, further influencing my textile language development.

Alternative aesthetics were generated through combining craft and digital techniques. Cyanotype self-adhesive film printing under a natural UV light solution offered opportunities for uncontrolled processes, creating unexpected visual outcomes and increasing the artisan value of the work. Since this process was labor-intensive, it reflected Chinese indigo resist processes in which tactility and the relationship among hands, body and the artwork are integral. The pattern design and cyanotype printing with self-adhesive film processes were also influenced by Taoist Wu-Wei principles. By following nature's way, my creative processes and generated textile languages were spontaneous, reflective and innovative.

As an artist born in China and living in New Zealand, my approach to developing a Chinese textile practice potentially offers fresh perspectives. The converging of the two blues in the practice conveys innovative approaches to the generation of culturally influenced designs. In the future, it would be constructive to exhibit my work in both cultural environments to gather responses from these distinct contemporary audiences.

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