



HDK-VALAND - ACADEMY OF ART AND DESIGN

Delicacy for living

A poetic journey through marquetry craft.

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Abstract

How can I re actualise the decorative Marquetry craft toward multi-sensorial experiences in furniture/object?

In this project, I challenged the wooden marquetry craft's tactile and aesthetic experiences* qualities. Named after wavy cloud formations, the final 'Undulatus' cabinet acts as a reminder to stimulate our mind and senses at home while encouraging us to take meditative breaks. To do so, its handcrafted volumic Marquetry invites tactile interactions allowing the imagination to wander freely. Like a loyal companion, the cabinet purpose is to contain and hide from others personal items such as treasure boxes or memories. The user can then sit next to it on the floor or place the cabinet on low furniture to interact with it.

***aesthetic experience def.:** high cognitive engagement triggering fascination, emotional unity with objects, and focused attention.

(Marković S, 2012).

Finally, two frames showcase how I use Nature as an inexhaustible source of inspiration for my designs and process. Similar to 'butterfly cabinets' and 'scientific collecting', they display samples collected in the forest that inspired me to abstract patterns and volumes for experiments and the final cabinet.

Key - words

- Marquetry - Craft - Design - Wood - Tactility - Aesthetic experience - Well-being - Volumic - Fascination - Nature - Delicacy - Poetry - Multi-sensorial experience -

Note to the reader

With this thesis, I hope to bring more transparency and understanding to those even unfamiliar with design and craft processes. Also, as I learned the marquetry craft for a short time and mostly by my own means, I wish to invite the reader on my humble journey in merging poetry, nature, design and craft. I hope you will find joy and have a meditative reading of this report, implemented with many photographs and sketches just for you.

Special thanks to:

* Asa Nystrom, who took time on her busy schedule to show me some marquetry and cabinet making methods with a bright smile;

*Franz James, my teacher and tutor who encouraged and supported me to learn the marquetry craft;

*teachers and fellow classmates;

*Björn Ekblom, our workshop technician, who was patient and helpful at all time;

*my partner for endlessly reading through my work.

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Background

In the pre-exam course, I tried to create poetic aesthetics experiences*, atmospheres and forms in sculptural Marquetry. To do so, I used metaphors of the natural and universal phenomenon of season change (figure 1 & 2, next page) to trigger a wide range of emotions, as we, humans, thrive on contemplating the small changes occurring in Nature.

***Aesthetic experience def.:** high cognitive engagement triggering fascination, emotional unity with objects, and focused attention.

(Marković S., 2012).

Nature is a source of inspiration that can be used to achieve 'physiological relaxation and stress recovery'. It is proved that 'stimulus' such as exposure to images of natural landscapes are beneficial for well-being indoor. (Miyazaki et al., 2019). In the present exam work, I hope to bring the benefits of Nature into our homes with Marquetry in a poetic and subtle manner. I will use my previous discoveries in volumic Marquetry to explore dynamic and tactile surface experiences and qualities. Indeed, I believe Marquetry can exist both for functional and aesthetic purposes and values.

Autumn



Dwelling - Slowing - Pause -
 Meditative - Fall - Mist - Seeds -
 Warmth - Golden - Decomposition

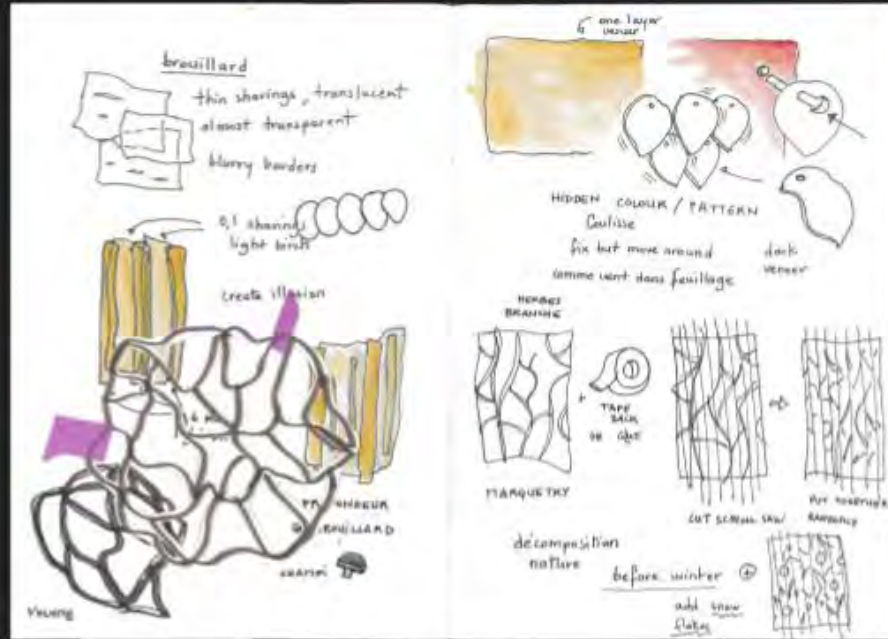


Figure 1. Materialisation of autumn season, translated to mood-board, keywords and sketches (2020).

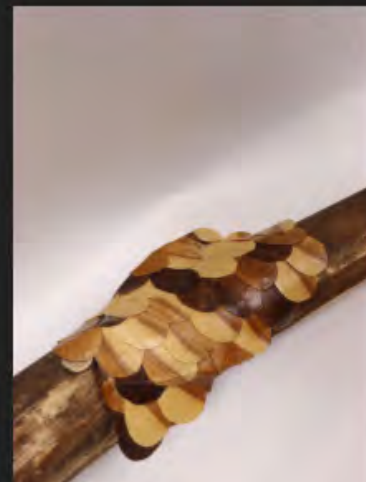
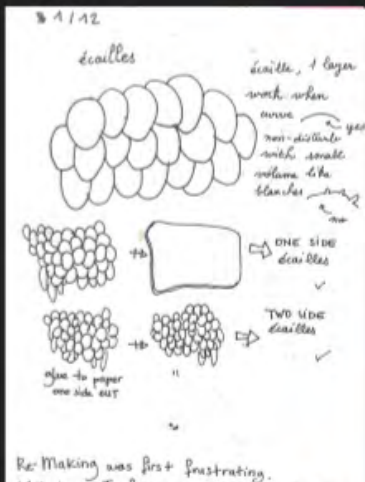


Figure 2. Materialisation samples of poetry concepts: the autumn season into sculptural pieces (2020).

Purpose

I will challenge marquetry qualities to improve a sense of well-being in daily home settings. I will investigate if 'aesthetical experiences' can trigger sensations and emotions with tactile and visual stimulus. Beauty or judgment of taste is not my focus.

Goal

I will explore non-traditional uses of the marquetry technique through series of experiments aimed towards wooden abstract and volumic depictions of Nature.

I will apply a selection of experiments in a piece of furniture, in the hope to contribute to the discussion of whether Marquetry can be more than an accessory craft. Indeed, to transfer its decorative purpose to a utilitarian one will add to the field discussion about non-purpose/purposive craft.

Question

How can I create emotional and sensorial experiences with wooden marquetry aesthetics and volumes/forms?

From this central question, other arose:

*How can Marquetry be used as a tool for remembrance?

*How can Marquetry be used to establish restorative atmospheres?

*How can an object communicate meaning and values to the beholder through aesthetic experiences and sensorial stimulations?

*How can I, as a designer, create deeper emotional connections between a person and the designed object?

Approach

The project will be based on material investigations (explorative process), from which a selection will become tactile and visual furniture/objects features and/or details.

I will navigate between learning techniques (marquetry and veneer shaping methods), material explorations, reflections on experiments qualities (aesthetic experiences conveyed + effective techniques findings) and research.

To find ways to engage emotional, restorative, sensorial experiences with visual, form and volumic material explorations, I will :

- Alter marquetry craft with volume: merge traditional marquetry qualities with volumic experiments qualities in wood veneer.
- Play with expression balance: contrast, movement, dynamic, patterns (or how to tune on and off visual information, from subtle to oversaturated compositions).
- Use abstract depictions of Nature: with the help of poetic methods and approach, where keywords such as 'sprouting', 'soft', or 'windy' can direct my explorations.

This explorative time will be divided into two phases: material experimentations and final prototypes designing and building.

II

RESULT OF PROCESS

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My practice

As a designer apprentice, I never fully experience the in-depth dialogue with materials as much as I hoped for. To think with my hand, experience failure and the harsh truth of materials by making is one of the missing keys in my development as a creative person.

With this bachelor, I wished to transform this innocence into in-depth personal material knowledge. Like Sennet Richard's Goldsmith example in his book *The Craftsman* (1997), I would like to 'travel in search for opportunities, wander, learn, and develop skills.'

Therefore, I carried out my project by reading literature about Marquetry, poetry in design, emotional design and product experience, in parallel with research on scientific collecting such as botanic databases etc. Most of the process was dedicated to experimenting and learning the marquetry craft in the workshop, followed by designing and building final prototypes.

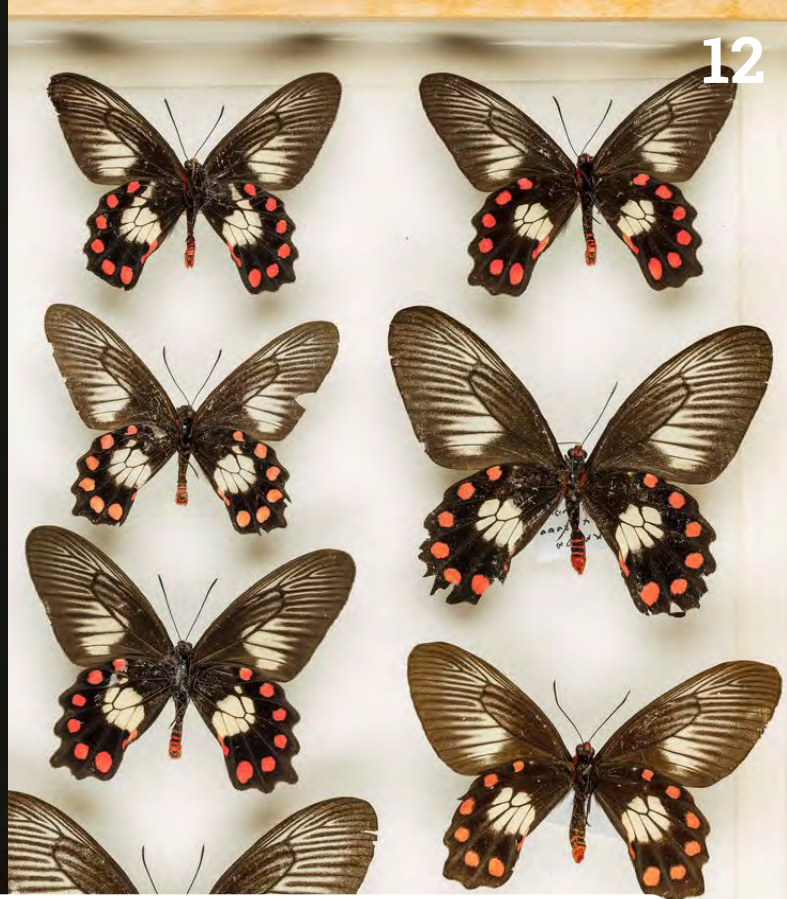


Figure 3. Terra Incognita Project (2020). First used of framed mood boards for my process.

Figure 4. J. Landy butterflies collection. Australian Museum Archives. Photograph : Ron Lovatt.



Figure 5. Aechmea fosteriana by M. Mee (1965). US National Herbarium, Smithsonian Institution.



Figure 6. Acrostichum pervium Lindm. US National Herbarium specimen. Photograph: I. P. Lin.

Bolbitis serratifolia (Mertens
ex Kaulfuss) Schott
det. E. Hennipman /1972

Herb. Linn. No. 500 TYPE

The type material of Acrostichum pervium
Lindb. Herb. No. 2, 200, 212, 213, 214
= *Bolbitis serratifolia* (Mertens) Schott
fide Hennipman, 1972

NATIONAL MUSEUM
Museum bot. Stockholm

Herb. No. 18373

Dear Nature

Nature is an inexhaustible source of inspiration in my projects. Its organic shapes and patterns -on the micro and macro scale- fascinate me. More importantly, nature provides me with a sense of calm and comfort, where I can dwell, meditate and observe endlessly. On the same note, when brought into our indoor surroundings, Nature is proven to be beneficial for our well-being (Miyazaki et al., 2019). Therefore, as a designer and maker, Nature is essential to learn from and even mimic.

In the present exam work, I hope to bring Nature and its benefits into our home in a subtle and poetic manner with the help of wooden marquetry techniques. I will extract visual and tactile qualities that intuitively push me to collect items in in the forest and translate them into a new aesthetical language.

I wish to share my awe for nature and show its strong roots in my work. This leads my research towards scientific collecting* methodologies, like entomologist butterflies cabinets and botanic database, which I will explain later (see example figure 12, previous page). This method has been present in my process already for one year without me thinking about it, as shown in figures 3 (page 12).

***Scientific collection def.:** 'a collection of items that are preserved, catalogues, and manage for the purpose of scientific study. Scientific collections dealing specifically with organisms plants, fungi, animals, insects and their remains, may also be called natural history collections or biological collections.'

(Scientific Collecting, 2021)

Poetry in design, art and craft

As a designer, I wish to bring delicacy to daily life. I, therefore, investigated how to create and highlight poetry in my design practice.

To explain what can poetry bring to design, I will quote Dr Donna Roberts in her paper *Poetics as a Science: Roger Caillois and the Surrealist Order of Things* (2018), where she stated that 'Caillois, in its search for hidden correspondences, wore the mask of a scientist but looked at the world with the eye of a poet' as he connected 'human artistic creativity with the impersonal energies of nature's patterns (...). Caillois' interconnecting of poetry, aesthetics and science can be seen to highlight the vital bridging role that is endowed to the arts'.

As a parallel, many designers suppress their creativity and personalities, like Caillois hiding its true self. I believe designers should feel free to create accordingly to their sensitivity. For this reason, I try to combine poetic values with functional and emotional purposes.

Furthermore, as the Encyclopedist Caillois, I have a lifetime fascination for 'highly aesthetic or poetic natural objects'. Poetry appears to me daily in seasons change, the morning dew, nature but also in art, design and craft. It is a powerful tool for my design practice.

'As I observe the wood, the pear pieces became a Van Gogh painting, lively and turbulent as an impressionist chef d'oeuvre. The intense walnut appeared daring and intense. Contrastly, the alder and cherry pieces expressed subtle delicateness and calm feeling. Ash pieces became an appealing chocolate and vanilla cream. As for birch, its flamboyant pattern was similar to seducing golden flames. Oak reminds me of straw marquetry, shiny and extrovert. The elm grain was a softer version of pointillism painting. Next, to the intense tropical wood set, the beech appeared shy and soft, but few beauty spots enhanced its well-behaved aspect. Finally, Pine, an under-rated wood, had a mediterrean summer breeze scent completing its appetizing grain'.

Marquetry* Craft

***Marquetry def.:** (also spelt as marqueterie; from the French marqueteur, to variegate) is the art and craft of applying pieces of veneer to a structure to form decorative patterns, designs or pictures. The technique may be applied to case furniture or even seat furniture, decorative small objects with smooth, venerable surfaces, or freestanding pictorial panels. The veneers used are primarily woods, but may include bone, ivory, turtle-shell, mother-of-pearl, pewter, brass or fine metals.

(Marquetry, 2021)

My wish to learn and use this luxurious craft arose when I realised both Marquetry and wooden veneers naturally embody poetry, preciousness** and delicacy. Convenient for my experimental process, wood veneers are versatile and generous when shaped and in appearances/aesthetical qualities.

****Preciousness def.:** '(Value) The quality of being very valuable because of being rare, expensive, or important: I have always had a sense of the preciousness of life.'

(Preciousness, 2021)

Product Experience

During the experimenting phase, the book *Product Experience* by Hendrick N.J Schifferstain and Paul Hekkert (2008) helped me understand how and why people attribute meaning and feelings to objects; and how they perceive things.

As explained in the book, humans possess different systems to interact with their surroundings: the motor system (the nervous system which allows movement), the sensory system (sight, sound, smell, taste, and touch), the cognitive system (thinking, knowing, remembering, judging, and problem-solving) and their instincts. Still, the ways we interact and perceive depend on our individual skills and subjective tastes.

As people attribute meaning and feelings to objects -given aesthetic response, (dis)pleasure based on sensory perception, beauty, quality, attachment, and/or emotions- designers developed methods to direct or influence how people interact and perceive products, employing different materials, compositions, structural properties etc.

In my project, my interest lies in the sensory system (sight and touch experiences) and the cognitive system (imagination, perception*). I aim to combine attractive and tactile features in a poetic process, creating preciousity value and allowing the imagination to wander.

***Perception def.:** 'perceiving is the ability to comprehend information, which can be in forms such as speech, text, sounds, shapes or images. (...) The form, color, and style of the product all influence the user's assessment of its aesthetic, symbolic and practical value. This affect not only their willingness to interact with the device, but also their ability to do so successfully.'

(Product Experience. Chap 6: Human capability and product design. p 186)

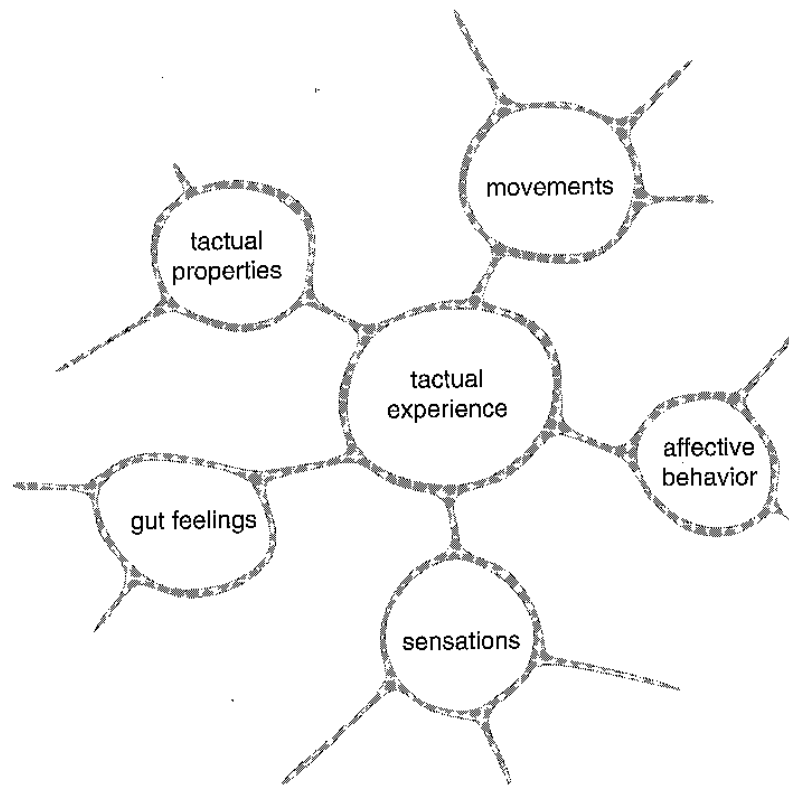


FIGURE 2.1 Overview of the five domains of tactual experience presented as a mind-map

Figure 7. Figures from the book *From Product Experience* by Hendrick N.J Schifferstain and P. Hekkert (2008), p 42.

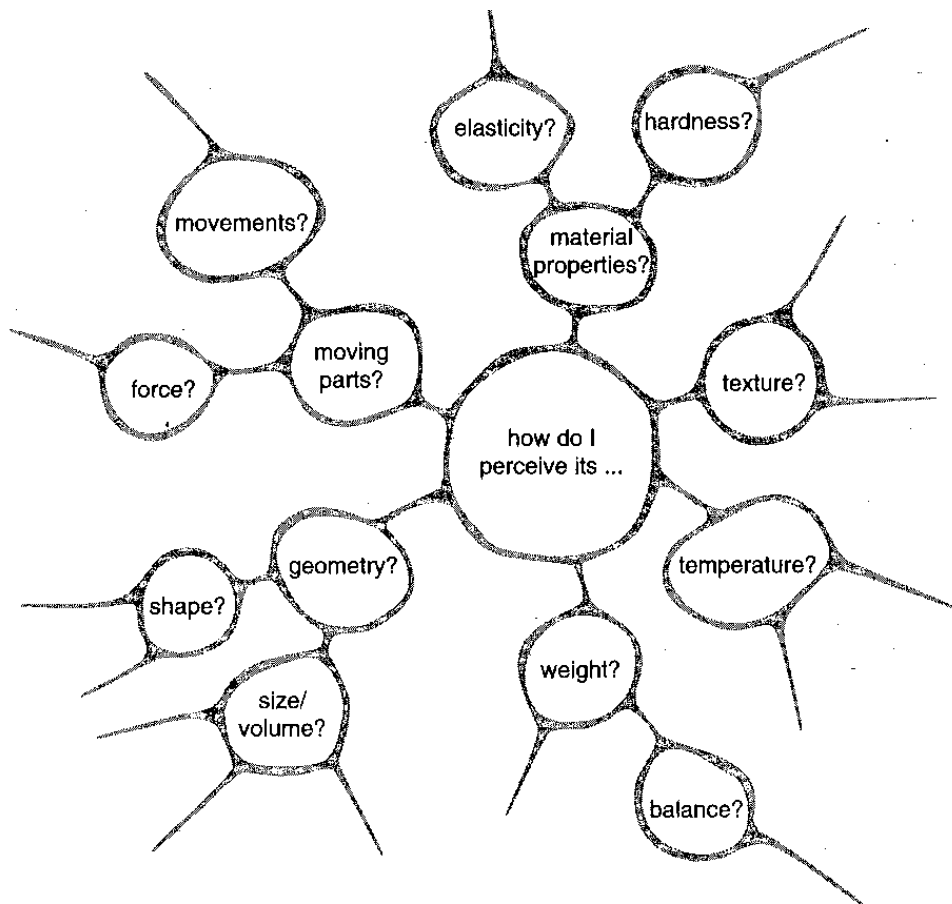


FIGURE 2.4 The map on Tactual Properties of an object presents the different properties perceived in tactual experience: How do you perceive the object's tactual properties?

Figure 8. Figures from the book *From Product Experience* by Hendrick N.J Schifferstain and P. Hekkert (2008), p 49.

J. Ekdahl, Dear Disaster

Alike my project, Ekdahl investigated 'visual and tactile structures aimed to instinctively evoke curiosity and fascination'. She wanted to 'illustrate an emotional exchange between the user and the designed object, where the object has gained a deeper meaning beyond its practical function'.

Her project embodies most of the goals I gathered for this project, such as investigating aesthetic experiences, provoking emotional responses, adding poetry to product experiences,

stimulating psychological needs, and widening the definition of function in objects. I consider her work highly inspirational and as a central reference for my project niche.

'I want to create objects with a character, which tell stories, arise curiosity and stimulate our thoughts. (...) I want my design to reveal a background that has multiple layers to be interpreted. By doing so I hope to intensify the aesthetic experience and enhance the value of the object.'

(Ekdahl, J., 2012).



Figure 9. Dear Disaster Cabinet. (2012). Images : M. Thorvinger & O. Nystedt.

K. MccGwire, How does it make you feel?

In her project 'How does it make you feel?', MccGwire seek people intuitive reactions when seeing her artwork. To do so, she 'asked people from many fields, including children, poets, curators, film-makers, scientists, writers and food historians to select one artwork' and answer her question. As a result, she juxtaposed pictures of the work with one person feelings (see figures under).

I relate to her work as I was admiring of how she managed to evoke such different, broad and deep perceptions and feelings. In a way, I wish that my final experiments and final prototypes will create similar deep reactions.

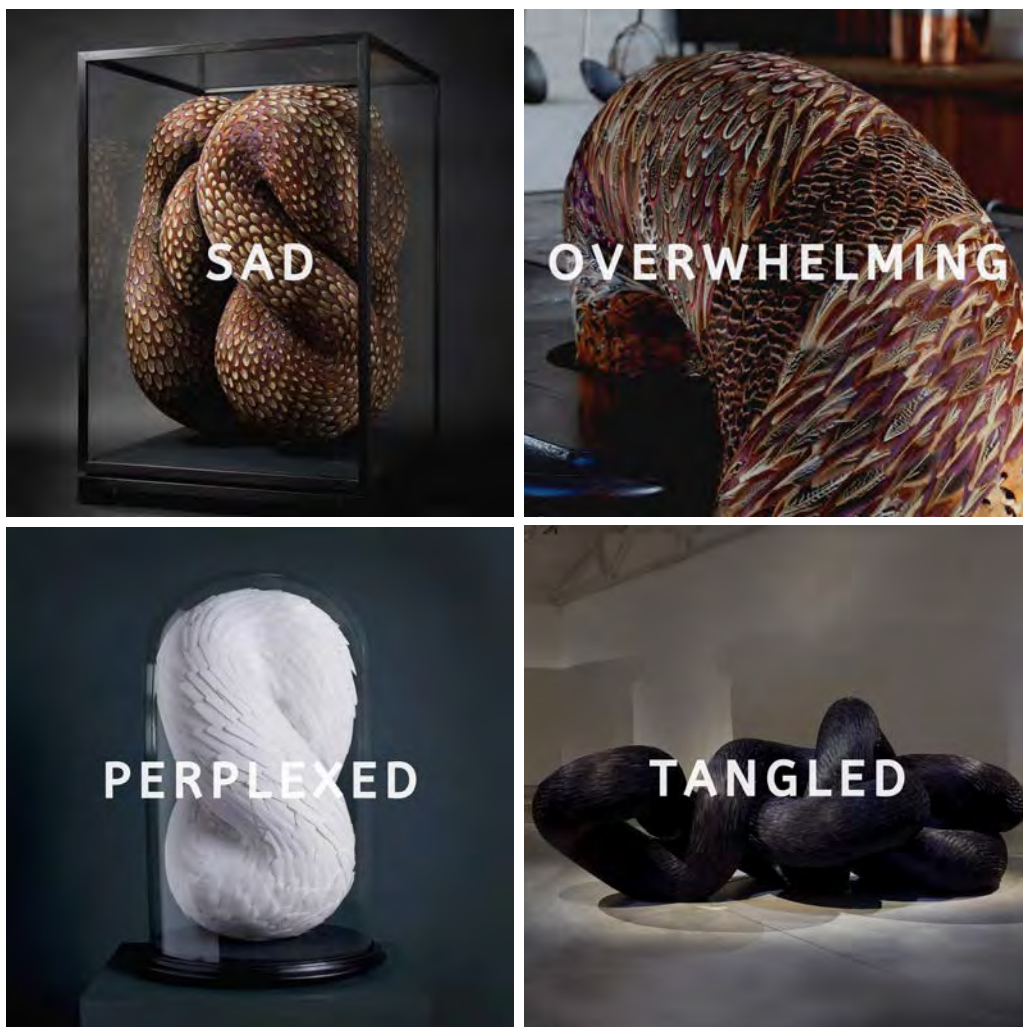


Figure 10. Kate MaccGwire works. Feathers (undated).

Sanna Lindholm, Växtkraft

In her stoneware clay relief, Lindholm picked up the aesthetics and sensitivity of the Småland landscape based on the keywords 'comfort' and 'peace of mind'. The reliefs carry abstract and figurative plant motifs - sheer straws, buds that stretch and roots" to interact with.

Lindholm's work lifts the importance to 'meet viewers both through visual imagery but also through the tactile relief patterns of these images that the hand can follow'. With this, she invites hikers to discover Nature through other senses than only vision, a concept I am also exploring.



Figure 11. (left). Spånarkivet (undated).



Figure 12. (right). Växtkraft (2021).

B. Process

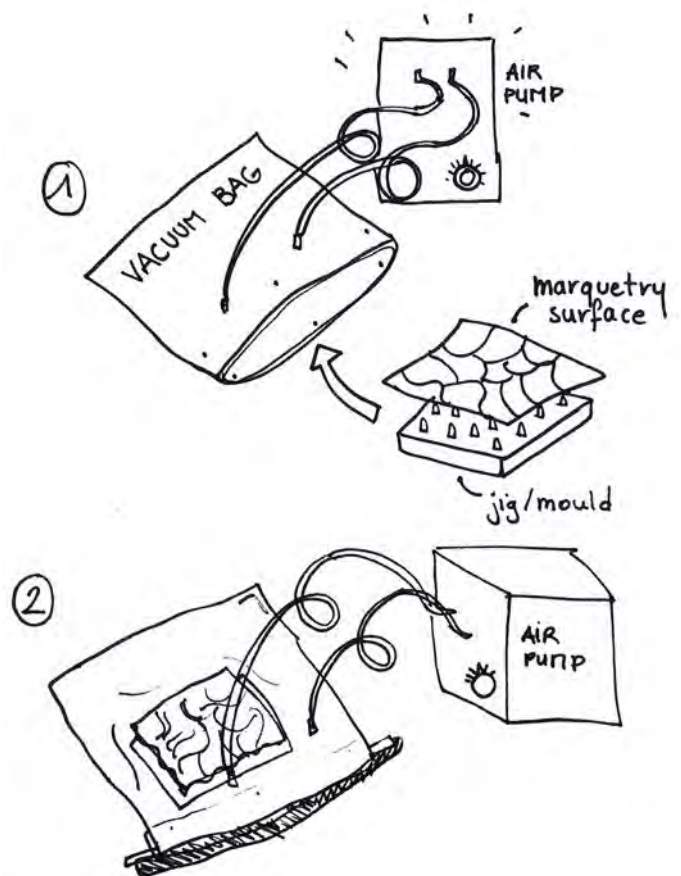
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Making Methodology

Most experiments started with joining the pattern with the mechanic marquetry scroll saw. The puzzle surface was then pressed on jigs/templates to create volumic and sculptural features.

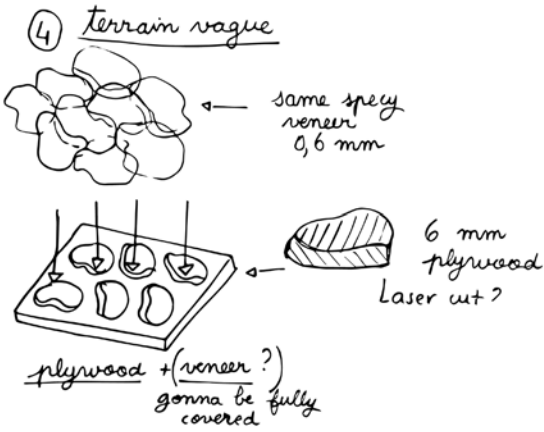
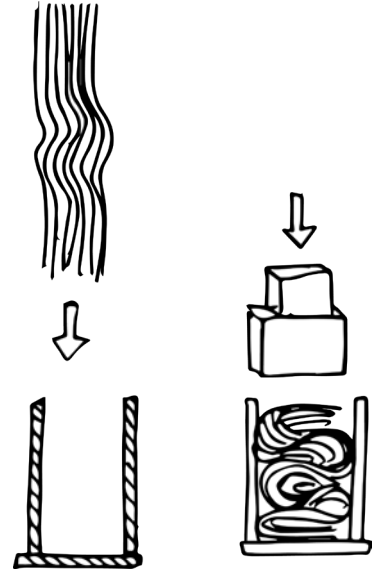
In my work, I chose to press veneers with the Vacuum Air Press (see sketch on the right) instead of making two-sided press jigs. From my experience, the technique makes the veneer bend only until it possibly can with less chance to break. What could be perceived as a lack of precision was a perfect way to embrace each material technicities in the expression of the pieces. In a way, it was a collaboration between maker, machine and material.

For transparency and to reveal the strong craft presence in the project, I used my Instagram account ([@laurannecb_design](https://www.instagram.com/laurannecb_design)) to post short videos and pictures of experiments' processes. It was a way to get feedback from people, as I had to cancel workshops (given the pandemic) with potential users to evaluate samples.



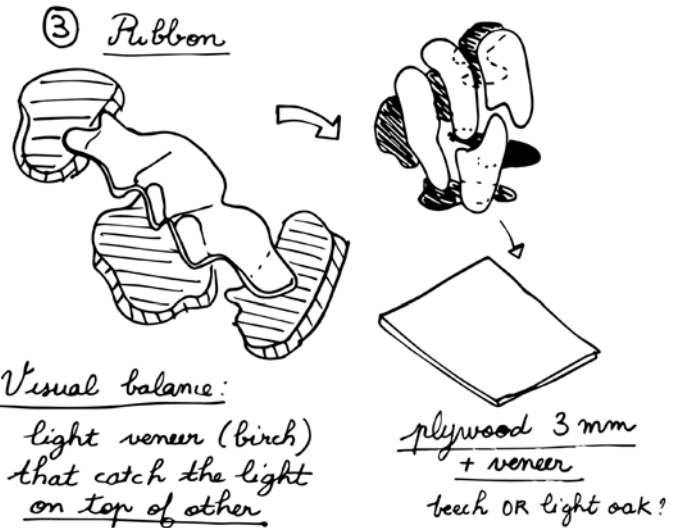
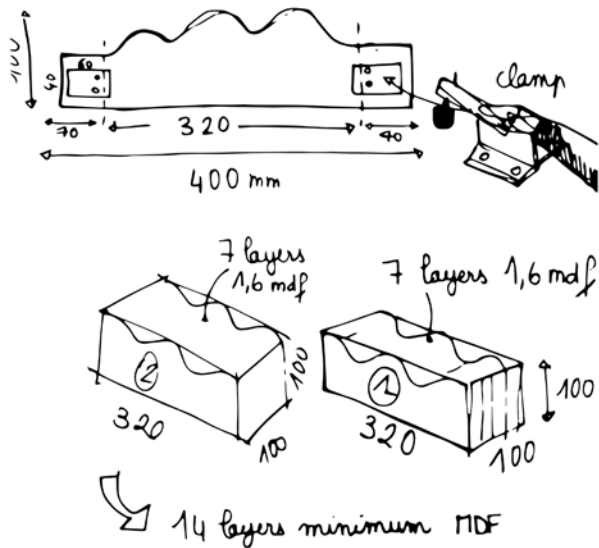
Sketching

Throughout the process, sketching allowed me to visualise what and how to make things. It was an essential step that helped define ideas and clarify my mind. Here are some extracts of my sketchbook.

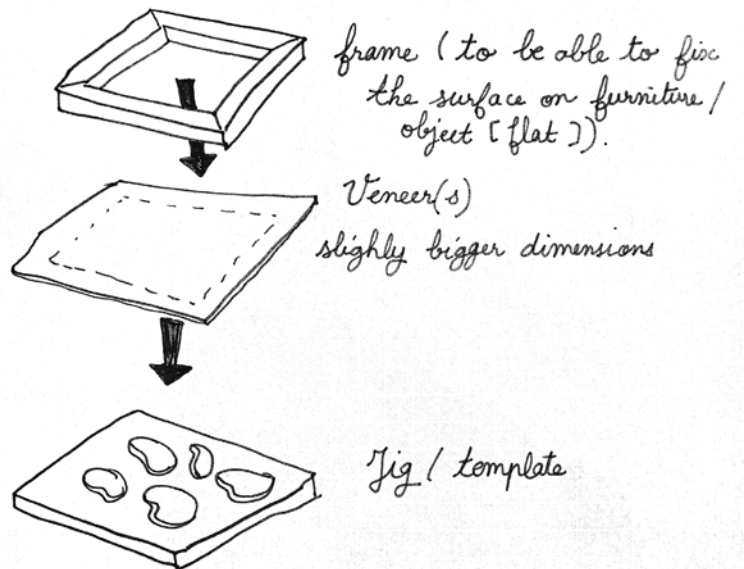


2021-03-27

Press mould MAKING



2021-03-02



Pre-Exam Experiments

During the winter semester, I started experimenting with volumic Marquetry. The resulting samples became sculptural pieces, with no plan to apply them yet on furniture or objects. My goal was to find aesthetic balance and poetic compositions that catch the gaze and intrigue the viewers while learning the craft and how to apply volume on veneers properly.

Écorce 1

As I used metaphors and inspiration from Nature's seasons, I experimented from the beginning with abstract organic patterns and volumes. I then tried to bend the veneer on a branch, which exceeded all expectations. To make the piece stronger and help the entire veneer surface bend without breaking, I pressed the Marquetry on a 3D veneer inner layer (3D veneer is standard wood veneer cut into tiny strips, allowing the surface to take unprecedented organic shapes)



Figure 13. Écorce 1, Marquetry sculptural piece (2020). 3D beech veneer covered with walnut and birch veneer. Scroll saw cut and glued together, then air-vacuumed press on a branch.

Écorce 2 & 3

Getting confident in the process, I started to alter more the Marquetry surfaces. In the first picture, I searched how to make a poetic, metaphorical translation in the material of plants sprouting out of the winter soil. I made a jig consisting of dowels rising from an MDF sheet (see sketch below). Unexpectedly, the dowels didn't only raise the surface in spots but also created a web of veins in the surface.

As a final touch, I applied light coloured shellac on the pieces to bring back the finishing technique of traditional Marquetry. The finish enhanced the contrast between the different veneers and emphasised its preciousity appreciation.

While the process went on, I noticed the strong contrast between walnut and birch veneers faded out the volume perception and divided the piece visually. I started to combine wood species with similar tint/hue to tune this off and go towards delicate calmer compositions.

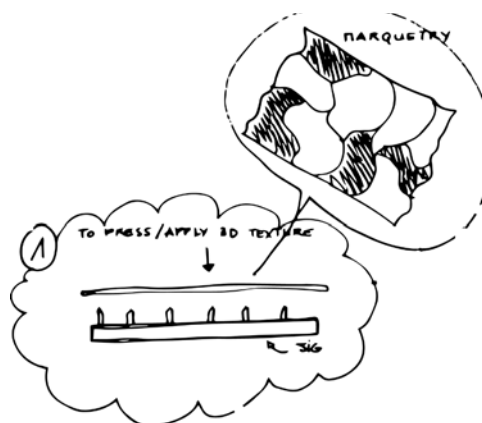


Figure 14. Écorce 2, Marquetry sculptural piece (2020). Walnut and birch veneers.

Figure 15. Écorce 3, Marquetry sculptural piece (2020). Light ash and birch veneers.

Parquetry

To better understand the contrasts balance between different wood species and compositions, I learned the Parquetry craft, a geometric derivate of Marquetry. As shown before, experiments with light veneers appear calmer, while angled arrangements bring more dynamism.

Also, to check if I wasn't missing any potential aesthetic experience working only with organic abstract shapes, I tried to press one parquetry surface on a branch. The result triggered curiosity with its unusual aesthetic and almost surrealistic visual effects but lost its delicacy and poetry with the geometric linear pattern. I, therefore, continued with organic shapes, pattern and volumes.

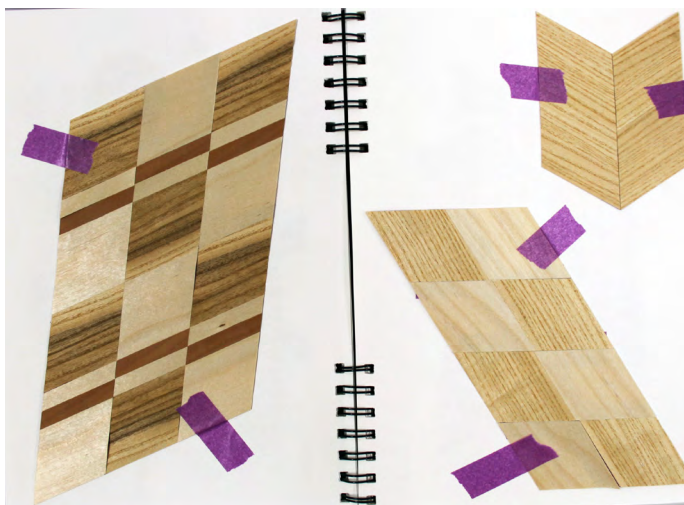


Figure 16 & 17. Flat conventional marquetry samples (2020). Several wood veneers species.

Figure 18. Sculptural parquetry piece (2021). Air-pressed on a branch. Pear, birch and ash veneers.

Écailles 1

Still in the mindset to learn as much as possible, I tried another derivate of traditional Marquetry: the layered veneer technique, where veneers overlap to create a surface.

For this experiment composition, I embraced the method's messiness when layering the scales. The few walnut scales contrast was equalised with similarly toned ash. With a more heterogeneous visual balance, the piece appeared as one surface. Surprisingly, the surface worked as a whole when pressed and created graceful folds similar to textile.

The piece gained a satisfying touch with its subtle volume from the layering technique. Finally, the light coloured shellac finish gave the piece a daring and golden tint look, awaking a creature aesthetic when enhancing its folded edges.



Figure 19. Écailles 1, Marquetry sculptural piece (2020). Ash and walnut veneers scales. Scroll saw scales cutting, then air-vacuumed press on a branch. Shellac finish..

Scientific Collecting

From the bank of experience acquired last semester, I set a direction on what to continue exploring. The first week, I spend time in the forest in an active and passive mindset. I played with trees trunks and barks searching for tactile and visual experiences, and tried to discern what contrasts or textures triggered my eyes and touch sense. Again, Jenny Ekdahl work illustrates my project thoughts when she 'investigated what shapes, textures and patterns the human being automatically is intrigued by, such as rhythm, complexity, and playfulness'.

I gathered samples to analyse what features in them triggered my touch, vision and fascination. Collected from dead tree specimens not to harm alive trees, and I proceeded to bathe my new

'treasures' in lukewarm water to prevent damages when pressed flat. Later on, I created a keyword database and placed them next to the samples, defining visual and tactile stimuli they offer (ex: scars) and associations they reminisced (ex: stream, wind, blossom). Throughout the process, I could go back to them for inspiration.

As a result, two displaying frames were built inspired by entomologic butterfly boxes (see figure 20, next page). Applied on black backgrounds and displayed behind a glass door, the samples gained value. They will be exhibited next to final prototypes to showcase my attempt to merge scientific approaches with poetic vision in my design practice.



Figure 20. Frame 1 and 2 (2021). Nature samples nailed down on a cork surface covered with black paper. Frames in birch and glass, with brass hinges and locks.

New experiments

Rubans & Cratère

Those marquetry experiments can reminisce easily the pine tree it was inspired by. These fast try-outs helped me to understand what kind of veneer overlapping could catch the gaze. In Ruban, the light veneers on top make all composition stand up. In Cratère, on the other hand, overlapping the same veneers species tuned off the volume perception.

If those experiments weren't developed further, they helped me identify the different techniques to make volumic Marquetry (see sketch next page).

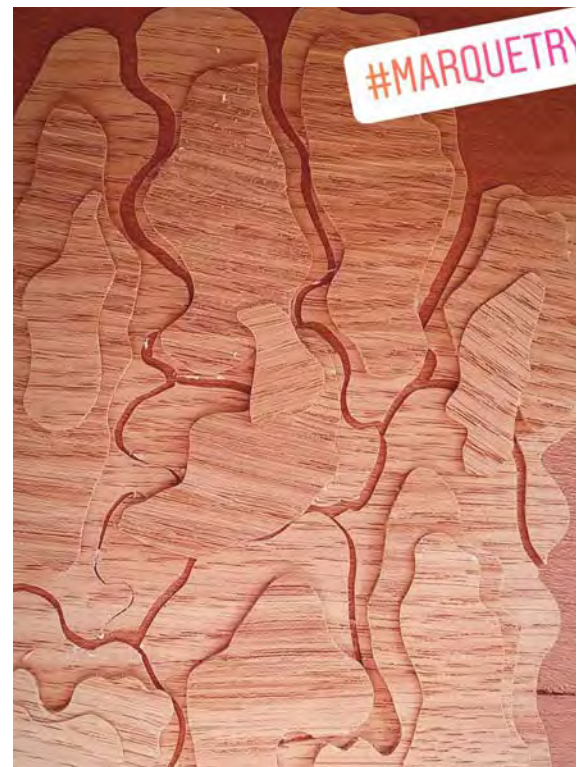
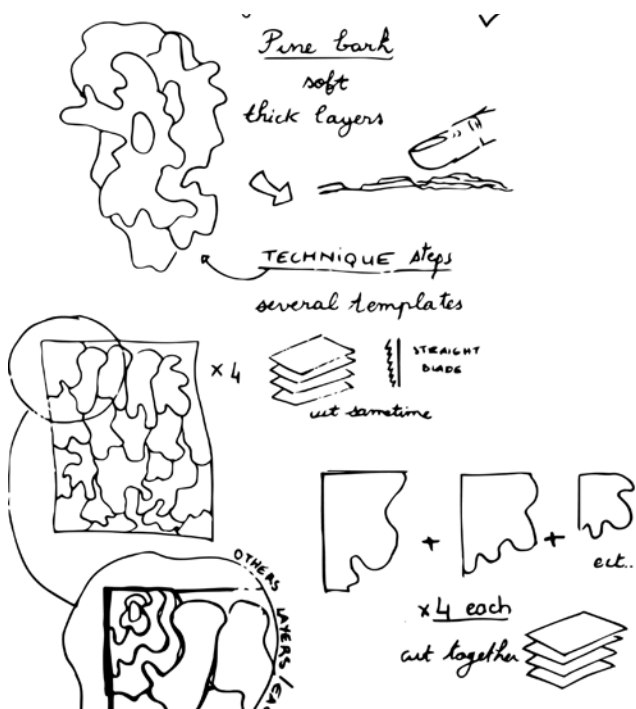
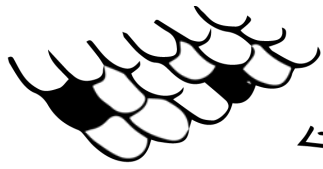


Figure 21. Beech background with 1mm thick oak and 0.4mm birch veneer on top (2021).

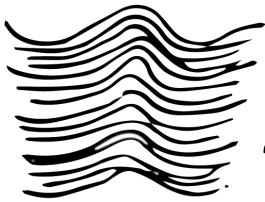
Figure 22. Pear veneer background with 0.4mm thick oak veneers (2021).



Scales



volume (techniq) exploitation
layering technique



'self'-made veneer



volume perception
visual volume effect



Ribbon



volume implementation
pressing on template

Écailles 3

With this experiment, I tried to recreate the web of veins effect with scales Marquetry. The layered scales were pressed on a developed dowel jig allowing most of its surface to remain flat after press to adapt it for furniture/objects surface.

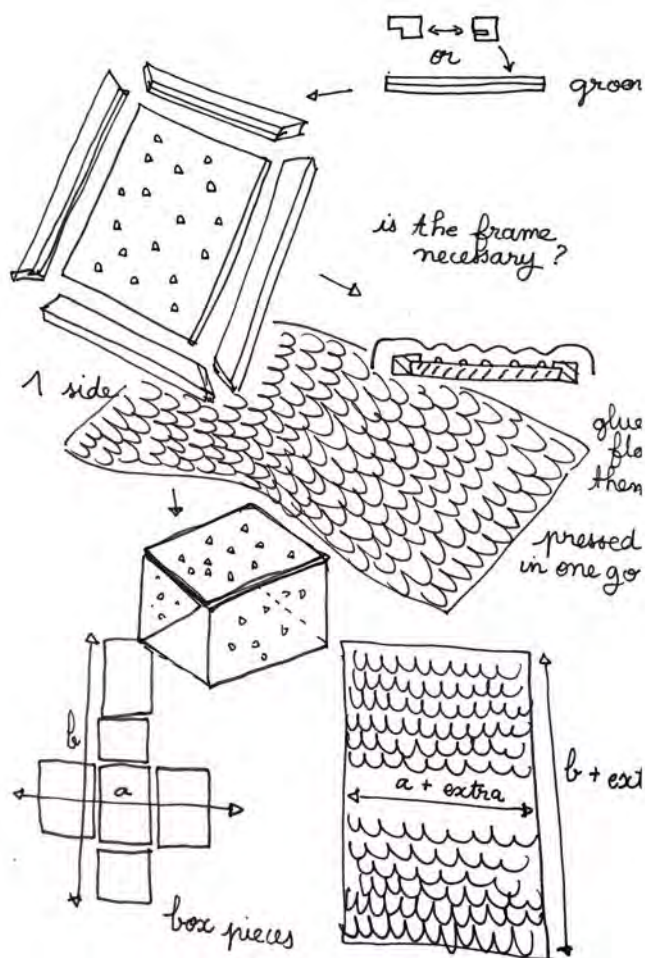


Figure 24. Air-Pressed marquetry. Birch, Walnut, Beech, Oak, Pear and Ash veneers. (2021).

Figure 25. Layering before the gluing and pressing (2021).

Flammes

I realised I didn't experiment with visual volume effects yet. Merged with the wish to make handcrafted veneer, I created an organic pattern by pressing different veneer together in a two-side jig (see figure 28, next page).

The long process required to build the jig, try it out, and develop it. The goal was that several pressed bodies could interlock themselves without losing a large amount of material when sawing them together. I proceeded to cut hundreds of veneer straps (birch, beech, pear, walnut, ash and oak) before hand pressing them and let them dry for at least two days inside the jig. Finally, I divided the pressed veneer bodies into thin 0.8 straps in the band saw before assembling

them as a puzzle with the marquetry scroll saw. Glued and press flat on textile for two days; I then sand thin the resulting surface before pressing it into a dowel jig. Pictures in the following pages display the process to help you visualise the steps.

Looking at the result (figure 27, bellow), the handcrafted veneer was more resilient when being shaped compared to standard ones. I had managed to alter the technical properties of the veneer to reduce cracks when being pressed on templates. Also, combining the new veneer with textile highly increases the veneer's flexibility and strength. As I controlled volumes and get finer results, this became project technique and focus.

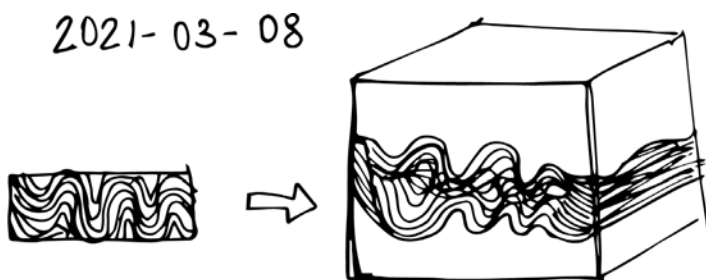


Figure 26. (left) Sketch of the idea, inspired by mushrooms and tree rings patterns (2021).

Figure 27. (right) Zoom on the surface after sanding it to 0.4mm thick (2021).



Figure 28. Freshly pressed veneers bodies next to the hand-press jig, sand and cut into thin straps.

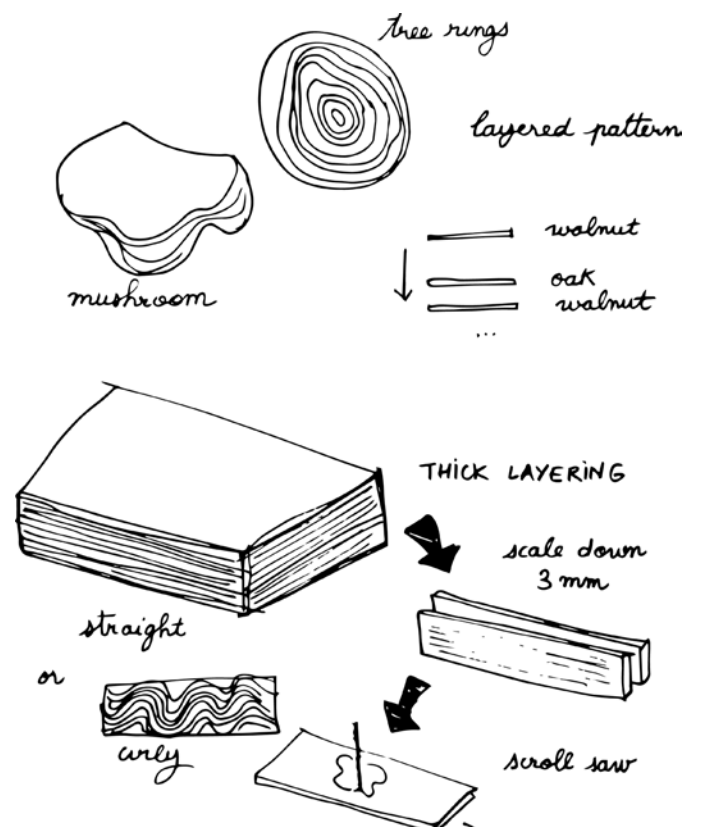


Figure 30. Making of 'Flammes' marquetry surface with the scroll saw before pressing and gluing it flat with the hand press (2021).

Prototyping

I decided to build one to three small boxes to apply different Marquetry on and one small cabinet with marquetry on its doors where I could store them. Each object will be able to stand on its own, but together they convey my project concepts, atmosphere and values. In all the final objects/furniture, I will play with their perceptive preciousness value to show my vision of the world.

First, I realised a cardboard mock-up to set the cabinet and boxes' dimensions and shapes. My focus was to make sure the Marquetry applied will be the first noticeable feature by users and viewers.

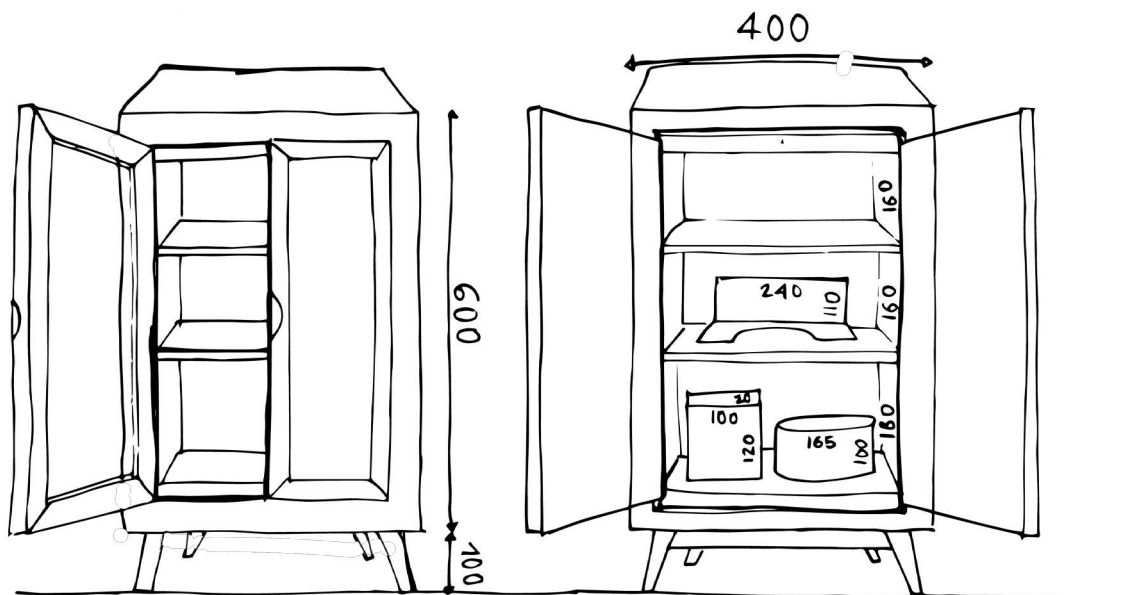


Figure 31. Mock-ups to check and make design of the cabinet and the boxes inside (2021).

Figure 32. Sketch of the cabinet and boxes with rough dimensions (2021).

C.Final Prototypes

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Figure 33. Undulus Cabinet. Elm body with tactile hand-crafted marquetry on the doors (2021).
Shellac and transparent osmo finish.



Cabinet

The 'Undulus' cabinet embodies the act of emotionally treasuring objects beyond their function. Named after wavy cloud formations, the cabinet acts as a reminder to stimulate our mind and senses at home while encouraging us to take meditative breaks. To do so, its handcrafted volumic Marquetry invites tactile interactions allowing the imagination to wander freely. Like a loyal companion, the cabinet purpose is to contain, protect and hide personal items such as treasure boxes or memories.

Designed to stand on the floor level or a low desk surface, the cabinet invites the user to sit at its level while interacting with it. With time, affection and preciousness values will grow, creating a special lasting bond between objects and users. My goal is to offer a valuable object to cherish and pass down like heirlooms*. Indeed, the cabinet purpose is to be treasured as a receptacle that contains emotionally valuable items. To some extent, its purpose is similar to the French definition of the altar**: a podium to worship or honour something, here the contained valued boxes hiding treasures inside.

***Heirloom def.:** 'something that has been passed down for generations through family members.'

(Heirloom, 2021).

***Altar def.:** ' "altar" may have been influenced by the French autel derived from Latin words altare meaning podium or stage and adolere to adore, in this sense meaning to worship, honour and offer sacrifices to influence forces beyond human understanding.'

(Altar, 2021).

As the cabinet doors are the first surface to interact with, I emphasised its tactility to trigger the user to pass his/her hands on the surface. I covered them with a new handcrafted veneer developed from the 'Flammes' experiment (same process). The wood species combination (pear, walnut, ash, oak and birch) set calm visual contrast to meet the cabinet concept. Later, I noticed the linear pattern layout created a fascinating optical illusion plus its visual volume. As much as I was enthusiastic about it, worries arose as I feared it would be too disturbing to look at. I decided to continue, hoping the soon applied volume would minimise this effect.

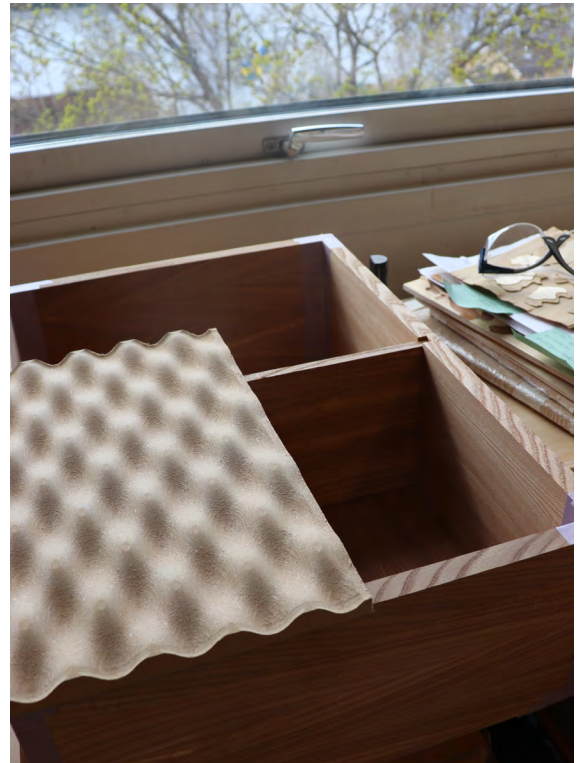


Figure 34 (top right). Cnc milled test template next to the cabinet body (2021).

Figure 35 (bottom right). Dry layering of the veneers straps to search for compositions (2021)

Figure 36 (bottom left). Early sketch of the cabinet look (2021).



Figure 37. Undulus Cabinet. Elm body, with tactile hand-crafted marquetry on the doors (2021).
Shellac and transparent osmo finish.



The final handcrafted veneer was vacuum pressed and glued on a CNC milled MDF template. Experimenting with CNC milling enriched my bank of experience and allowed me to combine highly craft processes with technologies. As time flew by, I only made one try-out before the final milling but did discuss with the CNC technician beforehand to select the final volume. Inspired by birch wavy bark patterns, I made soft volumes to get a consistent bending result on the whole surface. The final milled template results from limitations of the veneer technical properties, my restraint knowledge in 3D modelling and the machine manufacturing limits.

The making was full of uncertainties. I wasn't sure the pressing would work. I was relieved when it did, as I had only one marquetry surface that took me dozens of hours to make.

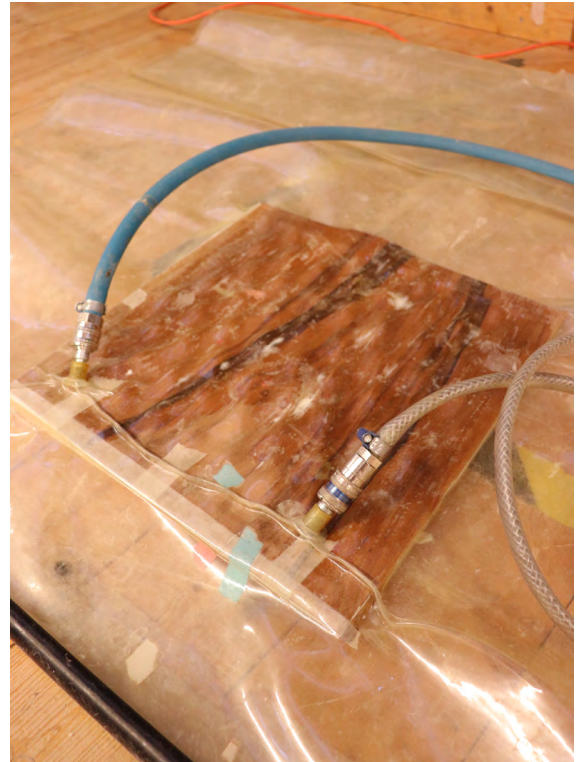


Figure 38. Air-pressed walnut on a Cnc milled test template (2021)

Figure 39. Cnc milling in direct, photograph (2021).

The wavy 3d-shape on the cabinet doors gave more depth and movement to the Marquetry pattern I overlaid on top of it. One big inspiration for the Marquetry was the rainbow colours like shading river birch trees, while the 3d-shape is an oversized inspiration of the singular birch tree tactile texture resulting in a repetitive wave 3d-shape. The consistent soft volume was to enhance the calmness of its pattern while inviting the user to touch its surface in a relaxing set of mind.

Finally, I arrived at the last but significant details to serve the design concept. One was to make a discreet lock to enhance the cabinet secret objects it contains. The final design was carved into the door frames and served as door handles too. Finally, the cabinet was only missing sturdy legs. After some quick mock-ups, I opted for a discreet and elegant design to lift the cabinet personality. To see a video of the cabinet marquetry making, you can click [here](#).



Figure 40. Frame 1 (2021). River birch bark samples (2021).

Figure 41. Birch bark texture. Image : Eli Sagor (2008).

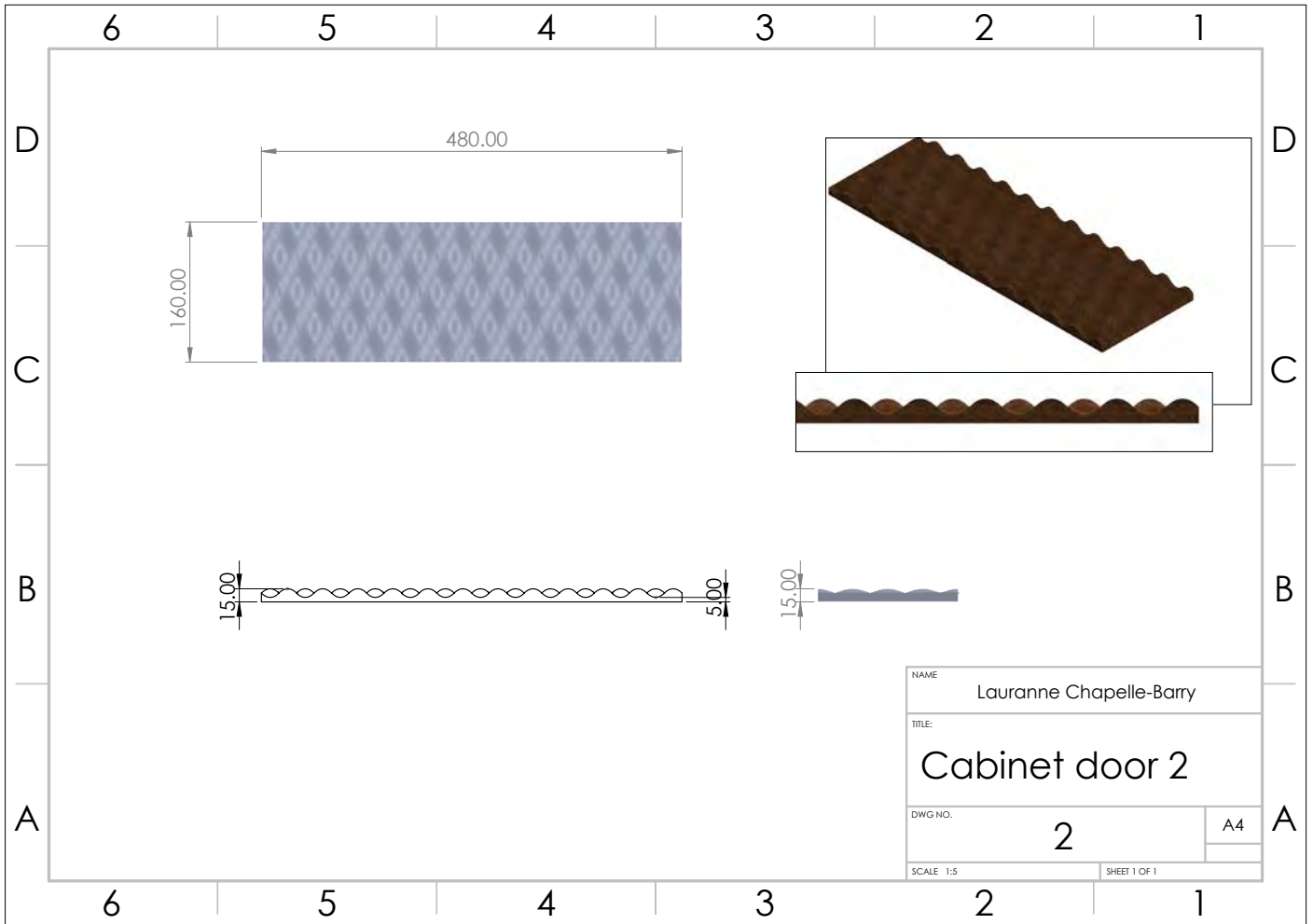


Figure 42. Technical plan for the CNC milled mdf (door number 2, 2021). Solidworks software.

Figure 43. Early 3D Model of the cabinet design (2021). Rhinoéros 6 software.



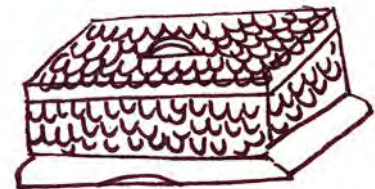
Figure 44. Box 1 in bend ash with marquetry outside, and box 2 in ash with layered scales outside. (2021).

Boxes

I made two boxes showcasing different marquetry compositions chosen from the previous experimentation phase. After reflection, they took the status of experiments more than final objects, as they were my first attempts to apply Marquetry on functional objects. The boxes purpose was to contain precious emotional treasures such as cherished memories (pictures, stones etc.). They take inspiration from 'treasure boxes' that you can also hold and hug as the goal is for them to be as valued as the memories they contain. Their small dimensions enhance the mysterious atmosphere surrounding them to drive their owners to store them in secret.



The first box is a traditional ellipse box inspired by the wood veneer craft Näverslöjd, reminiscing my project material core: the veneer craft. The marquetry surface is similar to the handcrafted veneer applied on the cabinet doors. Still, I wanted to show the visual effect the pattern could offer when undisturbed with volumes on a flat surface. The pattern was attractive visually but lost the fascination trigger that intuitively makes people want to touch the object.



Music boxes inspired the second box's outer shape to embody nostalgic memories that can arise when going through treasure boxes. I decided to try the scale layering technique to see how it will behave when applied on a rectangular shape with squared angles. Scales took over its surface to give it a creature-like aesthetic, as a precious old friend. The result appeared lifeless as the box sharp edges were too visible. If I were to redo it, I would apply the scales to an organic shape. Therefore, I do not regard this experiment as a success. Still, I earned knowledge from this mistake for future development.



Figure 45. Exam exhibition, HDK-Valand Steneby. Trädgårdsföreningen (Gothenburg).

Photograph : Maja Kristin Nylander (2021).

Furniture & Design Industries

I believe my project raises important questions for the future of furniture companies and industries. By merging high craft material approaches with industrial design, I hope to implement discussions about the quality standard designers should provide to their customers. From material choices and qualities, showing care in the process raises the object's value and shows the designer will to offer quality services meeting today's needs. For these reasons, I believe industrial designers and craftsmen/craftswomen should collaborate as much as possible. Then, if the future of furniture is to provide more pricey options, designers must create objects and furniture that can last and be inherited.

Also, soft values such as emotional connections with objects are essential, alongside functionality, to create new relations between object and users. This can become a tool against over-consumptive and over-wasting systems since designers are at the beginning of the production chain.

In my project, I share my poetic vision of the world to help people look at things differently to fill their lives with joy and curiosity. Designing long-lasting companions for life hopefully guide us toward better living. By stimulating our senses and providing psychological comfort, Undulus illustrate my future career focus.

Reflection

Overall, I am satisfied with the amount of work I did. I immersed myself in cabinet making and craft learning, something I felt was missing in my bachelor journey. If this was challenging, I multiplied my bank of experience and knowledge more than I had anticipated. I enjoyed the freedom of working on a self-formulated project; still, without the introspection of my tutors, I would not have reached this quality. I am particularly thankful to my teacher Franz James, who encouraged me to learn Marquetry in the pre-exam course. Also, to my external tutor, Åsa Nyström, a wonderful craftswoman teaching at the Steneby woodworking preparatory school, who gladly passed on her cabinet-making and Marquetry knowledge.

Looking back at my process, I am satisfied with my time management, even though I could have been more efficient. I took time to experiment and plan each step for the final prototypes. In the end, I did fall short of time, but as I got aware of my strengths and weaknesses, I prioritised the challenging, time-consuming tasks over what was more comfortable to achieve.

One regret was not organising workshops with people as I intended (given the pandemic situation). For my project, I wished to observe and listen to people experiences and perceptions when interacting with my visual and tactile stimuli experiments. I then took the opportunity to experiment with CNC modelling instead. I am delighted to have had the chance to try this technique, as it turned out fruitful for my last prototypes. Also, it was good to improve my Solidwork modelling skills and be introduced to CNC for my future career. Nevertheless, if I develop this project, I will organise workshops to complete my research, try different paths and strengthen my project outcomes. This step will increase my confidence and chances in thoroughly triggering people's senses and fascination and creating a deep bond between users and objects.

Discussion

For my presentation, my main opponent was the designer Maria Vinka, followed by the designer and PhD student Elisabet Yanigisawa. The discussion following focused on mainly one topic, which I will now reflect on.

First, Maria Vinka pointed out one statement in my project description: 'beauty and judgment of taste is not my focus'. When I formulated my project, I was afraid to have to sur-explain what can be considered beautiful. Indeed, between functionalism, modernism, art & craft, and other contemporary movements, the notion of beauty and aesthetic in design history is still either highly criticised or praised. As beauty is subjective, my vision of beauty does not prevail over others. Still, I should have been braver and embraced my beauty and taste concept as a personal strength in my practice. Secondly, As Elisabet Yanigisawa stated, beauty exists outside the final results. Beauty can be knowledge and is an effect to cause indissociable from design methods. Therefore, my approach's poetic sensitivity, focus on senses, and tribute to nature can also be perceived as beautiful. As a designer, my concepts, strong intentions and care in

the process make the final result deep in beauty or not (depending, of course, on people own sensitivities). Maria Vinka completed this discussion by saying that beauty exists in all senses and is not only a visual matter, which I strongly agree with. The whole composition can be perceived as beautiful to the beholder's eyes. Both Vinka and Yanigisawa gave good comments on the multiples definitions of beauty that I have had misjudged and failed to identify myself. They helped me appreciate all layers of meaning in my process and project, as they are all essential and serve my concepts and aims. In the end, I am delighted that people perceived my passion for the material wood as fuel to bring delicacy to the senses.

Furthermore, I got asked frequently what final object was the principal one. I could not answer until I finalised both boxes and the cabinet, as they were as important for me to try and interact with. After, the cabinet became the centre of attention suddenly. Indeed, the boxes were only supporting the narrative of the cabinet as experiments. Still, I do not regret making them, as they helped me lift the cabinet and project values.

Conclusion

To conclude, I found a niche I wish to explore and define further in my future career. I am determined to learn properly wood cabinet making and Marquetry to deepen my knowledge in the material and provide high quality in future projects to complete my design practice.

In the present exam work, I brought Nature into our home with Marquetry in a poetic and subtle manner. I challenged marquetry qualities to improve a sense of well-being in daily home settings by providing aesthetic and sensory experiences with visual and tactile stimulus. Therefore, implementing the Marquetry only decorative purpose with functional goals showed that Marquetry can be more than an accessory craft.

From the exhibition and the presentation feedbacks, I observed that the cabinet triggers aesthetical experiences and emotions such as surprise, fascination and senses triggers with its tactile Marquetry. I hope I created a piece of furniture that allows deep emotional connections between a person and my cabinet. I can only speculate about the cabinet restorative benefits, as I need to evaluate and observe more closely user responses to it. Still, I believe I am on the right path to figuring this out.

Thank you for reading this bachelor thesis,
In the hope you enjoyed it,

Lauranne Chapelle-Barry.

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