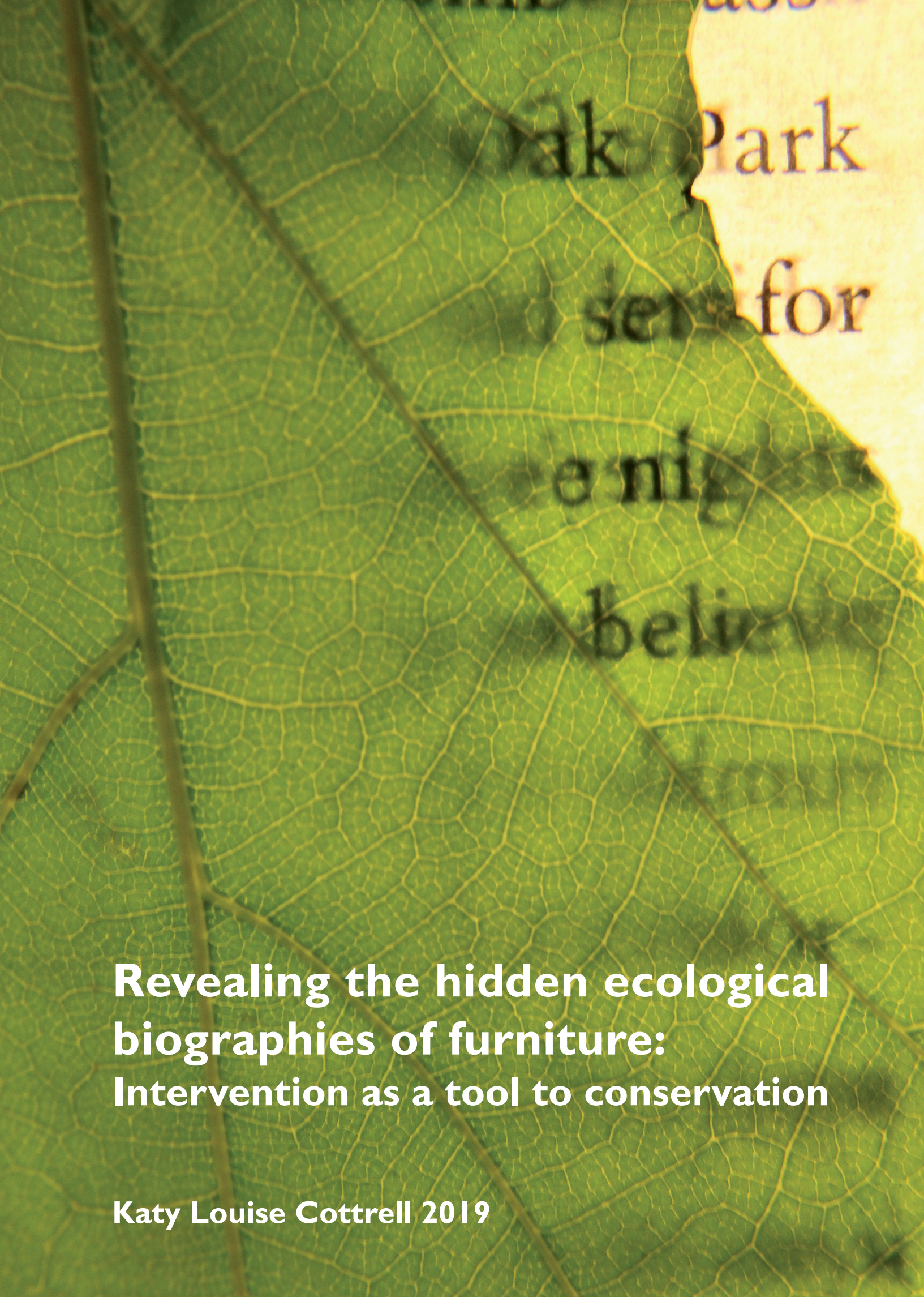


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**Revealing the hidden ecological
biographies of furniture:
Intervention as a tool to conservation**

Katy Louise Cottrell 2019

Revealing the hidden ecological biographies of furniture: Intervention as a tool to conservation

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Abstract

This study looks at the growing decline of once common tree species, due to the increasing threat of pathogens globally. As a consequence the availability of once commonly used timbers in furniture making is growing scarce. There is an irony in how many older items of furniture made from these timbers, at a time when they were more readily available, have endured the test of time due to the quality of the materials, and yet are devalued in their second hand state or rendered vulnerable due to poor quality elements. This study looks at the ecological biography of furniture considering what stories are intrinsically embedded within older, discarded or devalued items of furniture and how these items can play a role in future education, engagement and preservation.

Using case studies with ecological biographies has enabled me to examine the materials, cost, style and their functionality, which in turn led to the development of an intervention model. Here, I closely examine the level of intervention that is needed to expose the furniture's story and bring awareness to the value of the material. I explore how embellishments through aesthetic can encourage social engagement and discussion to connect users with narrative.

Through traditional and modern craft techniques such as marquetry, illustrator craft and embroidery, my approach aligns to the Arts & Crafts movement. Here I use case study pieces to act as ambassadors in the fight for increased awareness around the vulnerabilities to both threatened timbers and the crafted objects with which they have been historically made. Relegated to charity shops, these forgotten items of furniture require intervention to introduce them to new audiences and provide an identity that helps celebrate and enhance appreciation for the natural qualities of the timbers.

“Putting dark stains on beautiful Australian grained timber for the sake of imitating continental dark wood furniture is a crime.” (George Korody the Moderns: European designers in Sydney exhibition)

Adapting old furniture through inlay work and modern marquetry I tell its ecological biography, aiming to educate the user of the stories or intrinsic qualities that lie beneath dark stain, worn elements or damage. The study looks at breaking down the components of furniture to determine what is considered valuable and what impedes my notion of value. Employing functional pieces of furniture such as a dining room table and chairs as canvases, the user is able to interact with the piece through visual, conceptual, tactile, multi-sensory engagement. The table provides a site for social exchange, thus encouraging conversation that may lead to efforts for conservation/education.

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Preface

Trees and their stories have always been close to my heart. As a child my parents would frequently take me to Westonbirt Arboretum in Gloucestershire (UK) for day trips to study leaves, collect pine cones and to see the majestic, old trees throughout the seasons. Here I would see cheeky squirrels running up the trunks of the trees and harvesting their acorns for winter. Autumn would yield a bounty of ripe, shiny conkers fallen from horse chestnut trees. The bigger the better, their warm amber and burnt umber rings protected under a glaze of hard, natural wax. The early connection with nature would form a foundation of respect, inquisitiveness, and exploration.

One of my first books was on tree identification, part of the 'I-spy series'. The book consisted of pictures of species with points that would identify its commonality or its rarity. I was always excited when I managed to see something that was rare. Beyond my interest in nature I was inspired by the illustrations in the guide books. Some of the principles of art: balance, proportion, variety and harmony are inextricably linked to nature. Perhaps it was this combination of awareness of nature's aesthetics, coupled with art principles, that led to my interest in design.

At primary school I always remember the large English oak tree that was in our playing field. My friends and I would shelter under it from the sun, and the rain, collect its acorns and play with the caps from the acorns. The bright green leaves would always be covered in a sticky resin which had that strong smell of oak. For me, these native species are my pūrākau (my foundation, identity and story): pū relating to the foundation and the rākau relating to the tree. Oak, a symbol of strength and longevity, remains iconic to the British, and naturally so. In 2010 Westonbirt Arboretum was the location of my wedding; here I was not only surrounded by the majestic, living species of trees, childhood memories my husband and I had there, but the harvested valuable timbers that the oak hall was made from. To me the material symbolised strength and a long lasting relationship.

Seeking a greater purpose I retrained as a secondary teacher specialising in hard materials. Here the connection with woods and timbers brought me back to my roots, enjoying the aesthetics brought from the grains and hues different species provide. That sensory connection with the grain, texture and smells could be released through process. The closeness, the tangibility and the relationship with the trees could finally be enhanced through traditional craftsmanship and technique. Here I had stepped beyond the mere collecting of acorns, instead harnessing the materiality of these mighty, aged species.



Figure 1 and 2 Cottrell, K. L., 2019 Westonbirt Arboretum

As an educator I have conflicting feelings for trees; I admire their spread, shape, presence and at the same time think about the amazing material that lies under the bark. I am conscious about timber origins and would always buy FSC (Forest Stewardship Council) timber where possible. These values were instilled in me from my very first job as a reprographics officer, where I would see reams and reams of photocopier paper emblazoned with the FSC logo. Issues of sustainability, responsibility and preservation have endured throughout my years, somehow always harking back to a connection with forests whether as a resource or inspiration.

In 2015 I moved to New Zealand to teach hard materials. Here I was faced with a big challenge, identifying the country's native species and how they would perform in particular environments and projects. I had to learn different grains, strengths and growth speed. One of my first trips was to visit the famous Tāne Mahuta in Northland. It was here that I first witnessed the preventative measures to a fungal disease known as kauri dieback. Beyond the Māori history of Tāne Mahuta was the ecological narrative of species threat and realisation that more of these ecological stories existed and shared some of the same fungal pathogens as their English counterparts.



Figure 3 Cottrell, K. L., 2017 Tāne Mahuta

As a wood worker this made me realise the stresses these species were being put under for their valuable materials. Being design conscious made me reflect on my own practice considering alternative species, reclaimed materials and upcycling. When I researched the possibilities of using reclaimed furniture, I became aware of their vulnerabilities and the scarcity of disease-threatened trees and the timbers they produced. As an educator I see the importance of preservation and conservation, and through narrative and functionality hope this message can be conveyed to future generations.

Trees bring a connectedness to the land. As both British and now New Zealander, the unique species of each nation can connect me with both lands, in a tactile, functional way in the furniture created from their timbers.

Introduction

Globally, fungal pathogen diseases are threatening or wiping out tree species such as oak, elm and kauri. In turn, this is making their once commonly used timbers scarce, and thus valuable. At the same time furniture made from these materials is being taken to charity shops or abandoned on the side of the road, leaving these pieces vulnerable to being discarded through a lack of understanding of their inherent material value.

As a woodwork teacher I have a passion for working with quality materials and have witnessed first-hand this growing scarcity to source certain timbers that were more plentiful in previous eras. When ordering oak in England I was forced to order American white oak due to the difficulty in sourcing sustainable English oak. This same issue applies here in New Zealand where only American oak can be bought, though even this is becoming more difficult to source and costly.

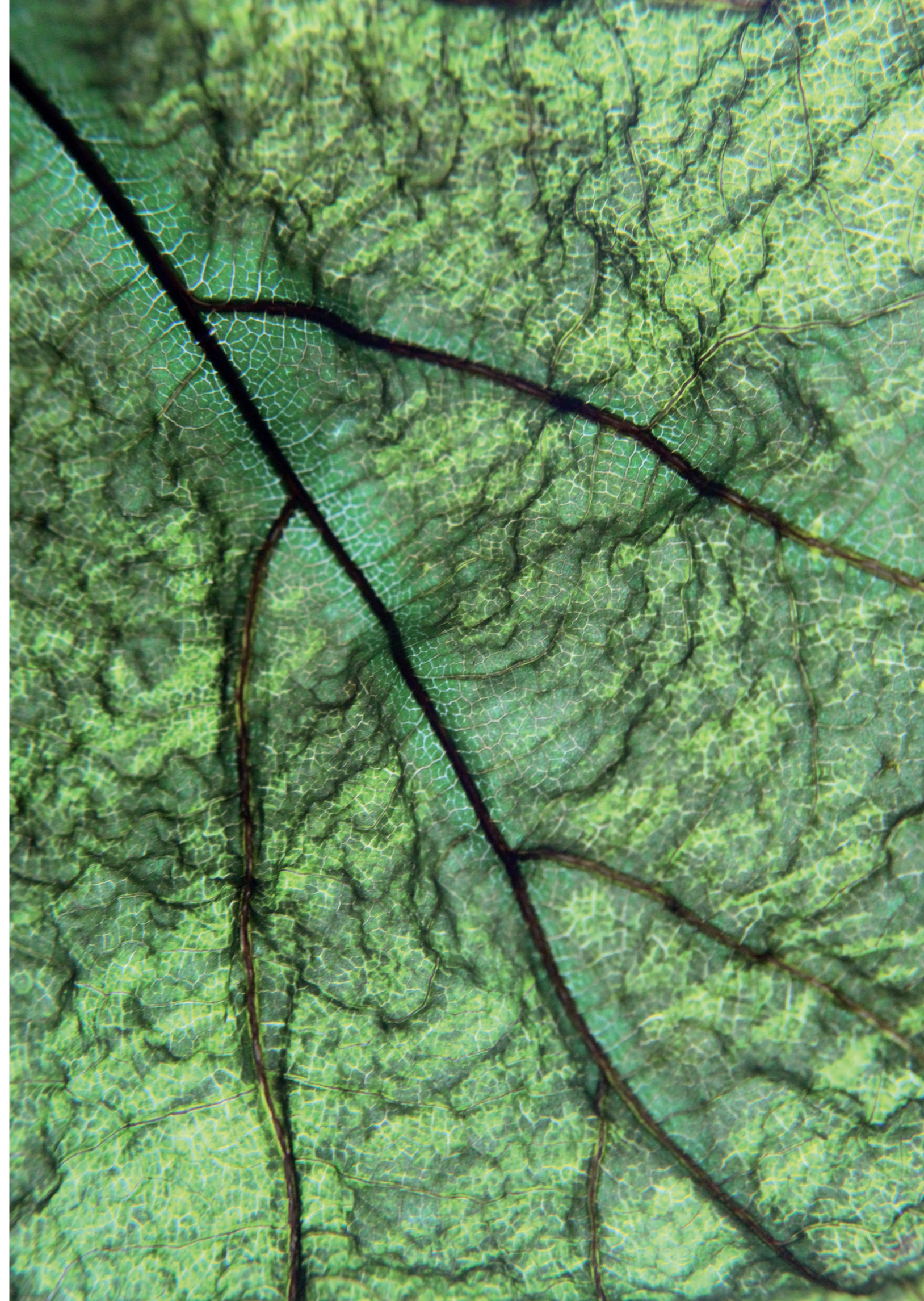
Through creative intervention I tell some of the ecological biographies of pieces of furniture made from these timbers and examine their inherent value considering functionality, cost, material and style. Exploring how to intervene led to the development of an intervention model to help me determine parameters around when to take action to preserve furniture and to what extent. American illustrator Wendall Minor states *“The need for us to understand how we can better utilise and conserve our resources has become a matter of urgency”* (P.21 Wendall Minor *Art for survival*).

Social activist William Morris valued quality, craftsmanship and respected the environment. He also saw the importance of the relationship between the maker, material and the user. Through his designs he used imagery to tell a romanticised utopian story of nature and to present his socialist agenda. Here and now, 150 years later the need for discussion on preservation of timber species, craftsmanship and shifting human values is as pertinent as ever before.

We must begin with a story. This is the story of discarded furniture and its agency through the mediation of an artist/designer to communicate conservation. There they sat against the roadside exposed to the elements; four chairs with framed rattan backs against an extendable table. The grain identified to my trained eye the set as oak, hidden beneath a weathered, dark stain. The beautiful simplicity of the oak legs and frame was marred by a peeling veneered top. Here we had oak; old, crafted and growing in scarcity through disease and climate change, and valued at a mere \$65. This find led to a process of salvation through intervention.

Removing the ‘devaluing’ elements of the set – the worn, veneered top and damaged rattan- left me with a solid, intact oak frame. Factors threatening the oak trees survival would form the narrative for the set’s new life. Utilising laser cutting and engraving technology and traditional embroidery, I replaced and embellished the damaged elements with new, better quality parts.

From an old abandoned oak dining set we transcend from mere functional dated object to a tangible story of conservation rendered accessible and containing elements of hope, darkness and harsh reality in times of changing climate. After all, many conversations happen at the dining table. Here that conversation can be driven through artistic intervention to focus on future conservation, education and preservation.



Chapter I. Oak threats and diseases

Oak trees are an integral part of the northern hemisphere valuable ecosystems. According to American poet and philosopher Henry David Thoreau, English and American species of oak were 'rigid as iron, clean as the atmosphere, hardy as a virtue, innocent and sweet as a maiden'. (P.43 Radkau, *The History of Wood*). They have for many years provided a source of timber products and non-timber products and the USDA Forest Service have identified these as "high-quality lumber for furniture and flooring, tannins and dyes for leather and clothing, high-value urban and community landscape trees, and habitat and mast (food) for wildlife species" (*Challenges and successes of managing oak wilt in the United States*). Pests, invasive plants and diseases made a significant impact on the mortality and well-being of English oak, European white oak and American red oak trees species (see figure 4 and 5 below) Hundreds of thousands of trees have been infected or killed across North America, United Kingdom and Europe.

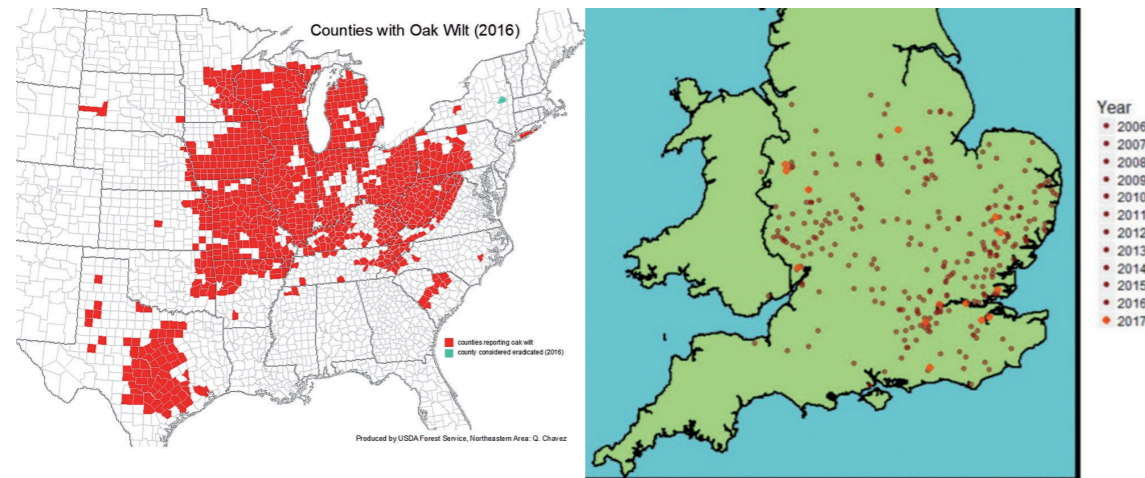


Figure 4 USDA, Forest Service., 2016 States with oak wilt disease.
Figure 5 Forestry Commission., counties affected by acute oak decline

Scientific research has shown that climate change has also contributed to the decline and contributed to growing occurrence of diseases through weather stress to the bark. Examples of this include extreme weather and temperature variation. These conditions render trees susceptible to fungal pathogens including oak wilt (*Bretziella fagacearum*) and acute oak decline. Pest species like the processionary moth, strip the trees of their leaves while the sweet-smelling leaves attract the oak wilt beetle (*Nitidulidae coleopteran truncates* and regional variants *Carpophilus sayi*, *Glischrochilus fasciatus*, *Scolytus intricatus* and *Agrilus biguttatus*) which lay their eggs in fungal mats on the trunks. Natural vectors such as squirrels and woodpeckers then pass the pathogen as they go from tree to tree stripping the bark. Beetles then utilise these wounds in the bark to lay their eggs. Infected trees show decay with leaves slowly dying off from the crown to throughout the tree. This process can take around four to six years.

Oaks are known for their strength and resistance to disease but with multiple vectors and diseases this makes the species highly vulnerable. In order to preserve this species early diagnosis and educating an awareness is crucial to the species survival. According to the USDA "Early diagnosis of oak wilt is essential to successfully control the disease and justify the expense of treatment" (*Challenges and successes of managing oak wilt in the United States*). Whilst researching fungal pathogens related to oak, I happened upon scientific research that exposed links between this disease and similar such as kauri dieback, Dutch elm and plant pests like climbing spindle berry. Each of these also presents their own unique ecological narratives.

French designer Phillippe Starck is a good example of a designer who saw the importance of conserving and protecting resources through furniture. As part of the Trois Suisse Foundation in France, he designed a console table, dining table and bench. The customer would buy the table and then contact the forestry service, who would then select a suitable log, which would then be labelled in front of the customer and then form the support of their table (see figure 6). By the customer seeing this process it not only educated them about sustainable selection but also the table would have a story to tell. While the log exists as the central actor in the narrative one could argue it is an excessive use of materials and is more performance than political substance.



Figure 6 Starck, Phillippe., 1980-1990 Log Table.



Figure 7 Ciardello, Joe., The Northwest chainsaw massacre.

Using pre-existing furniture as my 'canvas', I have incorporated illustrator craft (the use of visual images for various media or medium) through traditional and modern technological techniques to depict the species' ecological biography within the furniture. This acts as an intervention for storytelling to encourage and educate users on the need for preservation. American illustrator Wendell Minor believed that "The illustrator's craft communicates visual images to millions of viewers around the world every day in various print media." (P.21 *Art for survival*). He pointed out that the opinions of images are usually for the audience as opposed to being the feeling of the illustrator. Craft illustrator Joe Ciardello depicts the concern for consumption of timber and the animals that inhabit them in his piece 'The Northwest chainsaw massacre' (see figure 7).

Pittsburgh-based artist and educator Ashley Cecil's (2019) values also align with those of the Arts & Crafts. She maintains that "The whole idea is that this philosophy of caring for trees should be in everyday life. We're bringing that into the home, in a similar way that the decorative arts and arts and crafts movement had done—that this love of flora and fauna is in and around us everyday, and not just up on a pedestal." (<https://www.wesa.fm/post/art-grows-awareness-and-appreciation-trees>). She creates works that educate the user about the importance of trees and the ecosystem that they are a part of 'coexist'. The work 'Life supported (17 year cicadas)' (see figure 8) uses imagery of native species to represent the percentage of what the current tree canopy in Pittsburgh can and cannot support. This is depicted by the use of colour and outlines. Ashley Cecil also runs workshops around education and preservation of native species and recognises the threats they are under; "we're losing trees because of disease, we're losing them because of invasive species" (<https://www.wesa.fm/post/art-grows-awareness-and-appreciation-trees>)



Figure 8 Cecil, Ashley., Life support 17 year Cicadas



Chapter 2. Intervention and ecological case studies

In this chapter I will be presenting cases studies of furniture that have an ecological biography to tell, which in turn also contributed to the foundations of my manifesto intervention model based on inputs of taste. Each case study helped me gain knowledge about material vulnerabilities, their value, and importance of preservation, while setting context for discussion around both ecological and human stories associated with the piece of furniture. Factors related to the life of the furniture become contributors to the narrative, subsequently integrated into the design intervention. Material culture expert, Ian Woodward also thought this was important; *“The object is given meaning through the narrativisation of broader discourses of self, identity and biography, which link aesthetics to ethics of self, and social identity”* (P.6 Ian Woodward *Understanding Material Culture*)

Some of the pieces were also selected from developed knowledge of native, introduced and scarce timbers and have been crucial to this research. Though according to French Philosopher Pierre Bourdieu this method of selection could be argued one of the markers of ‘aesthetic and cultural value’ and therefore represents social inequality as this is one’s taste. German philosopher Immanuel Kant takes this judgment one step further: *“judgements of taste are based upon objective and absolute criteria by showing that particular social and class fractions tended to have distinctive taste preferences, which amounts to professing a liking for certain objects over others”* (P.6 Ian Woodward *Understanding Material Culture*). I argue against Kant as all the pieces were not necessarily picked by choice but rather selected for their vulnerability as opposed to being ‘liked’ in their current state. However, selecting the pieces of furniture could be subject to taste - here my own as the author selecting for their solid and rare material as a basis to work upon and adapt. This is very much apparent in consumer class societies. Though I do agree with Woodward’s progression of Bourdieu’s theory of aesthetics: *“one can progress...objects act as markers of aesthetic value and of self identity”* (P.6 Ian Woodward *Understanding Material Culture*). Later, I will discuss where each piece sits in relation to the vulnerability elements through my intervention model.

English oak chair

Conversations around the development of principles for choosing items of furniture has been crucial in helping others source items of furniture for me to use. Already I knew I wanted functional items of furniture for my canvas that people could engage with. Inherent stories was an important factor and so the items needed to convey this through their material or design. I sought inexpensive items that were considered devalued knowing that particular timbers were vulnerable and in need of ‘saving’. This would inform their story and need for future salvation. Armed with these loose principles my husband discovered this chair (Figure 9) in Petone’s City Mission charity shop.



Figure 9 Cottrell, K. L., 2019 English oak chair.

This represented a key moment where someone else was making a decision based upon understanding of what to recognise. My husband saw a cheap chair which caught his eye - the wood was a solid, dark timber (the material), it had an interesting shaped back (the feature), it fitted my wish for old chairs for a canvas (something functional) and it was very cheap at only \$6. It was the timber and the design that suggested a hidden narrative imagined by my husband, fed cues by the object. Through Face Time he could seek my appraisal, and I could ask him questions. I could verify that the chair was likely oak through asking whether it was heavy, asking to describe and show the grain which was dense with strong and dark lines and asking whether it dented easily.

Here, through appraisal I am advancing my manifesto of selection and hidden narrative within otherwise ignored or devalued pieces. This appeared to be old oak with carving and other design elements potentially from the 1970s. Here I saw the perfect example of a piece in need of intervention to help others understand the story behind it. Perhaps it's the narrative of consumption that now revalues this material as a rare and valuable commodity, that we can only access in past components of furniture. We can no longer supply the material affordably in bulk, but can still access it through its past life. Here is a piece of vulnerable furniture that through lack of knowledge about its origins and material, could have been discarded and ended up in landfill.

A conversation with Susan; respecting through perspective

On a separate occasion visiting Salvation Army's Family Store in Johnsonville I spoke with Susan, one of the volunteers. Susan had an intense interest in preserving those items of furniture that came through her store. Remarkably, she informed me that furniture had a shelf life of only three weeks where upon if not sold it was sent to the landfill. *'Furniture sits here for three weeks then it goes on the van,' she said. 'and that upsets me so I'm always pulling pieces off the van. It makes me angry what people drop off here when it still has use and value. All this furniture still has a long life but people don't respect it. People ruin it with paint, hiding the natural timbers.'*

As a 'furniture activist', Susan supports exactly the ethos I feel and I could see the emotional connection she felt with the origins of old wooden furniture. She recognised the philosophy of William Morris's aversion to mass manufacturing. She could see how hidden beneath the stain, paint and varnish is a precious resource and an unknown ecological narrative. Susan stated *"oak and natural hardwood timbers like kauri and rimu should be respected for what they are. I have an appreciation for wood as my Grandfather and Father were cabinet makers in Miramar. I like the stories old furniture can tell. I like to run my hands over the curves thinking about all the people who have used this over the years. I appreciate the labour and craftsmanship shown through the arts and crafts and art deco. We really need to keep these skills alive."* She is also making an aesthetic appraisal and laying a judgment on others due to that appraisal.

English oak dining room table and chairs

During a visit to Jackson Street, Petone, I happened upon a dining room table and chair set as I passed the Salvation Army shop. I was not looking to purchase a dining set but my curiosity got the better of me and I am glad it did. The cost of the set was \$65, it appeared to be circa 1950s and on close examination I could tell by its weight, grain, smell and colour that this was also going to be solid English oak. This piece was in need of preservation due to its material scarcity. It had potential to be improved minus the damaged woven rattan backs and the worn, veneered table top. These were the critical vulnerable elements of the piece, as the flimsy rattan could not withstand the test of time and use to the same level of durability as the solid oak - this rendered a part of it weaker and thus subject to detriment inconsistent with the rest of the set. Though the table and chairs were still functional, the set's value was compromised by the worn and damaged parts. I saw this had potential for interaction by utilising the pull-out leaves to extend the table. These act as pages in a book or a performative element that could be interacted with to help depict its hidden ecological narrative. William Morris also established connections between functional pieces acting as canvases to place his artistic works upon: *"The furniture stood as functional canvases awaiting the artist's impression; each item was a distinct vehicle for self-expression and homage to the stories and period which transfixed them."* (P20 William Morris & His Palace of Art).



1830s Colonial Kauri desk:

Whilst looking at furniture for sale online I came across this 1830s kauri desk, listed at \$200. What attracted me to this piece was its rarity, its hand crafted aesthetic through the carving, its beautifully turned legs and it was also made from New Zealand kauri, which is very scarce now since the occurrence of kauri dieback disease. The piece was listed with its own ecological biography and was infested with wood borer. While borer compromised the material, leading to its reduced value, it still maintained its functionality. When collecting the desk from the seller, I was asked lots of questions regarding its restoration. One of the first questions was 'are you going to put chalk paint on this?' My response was 'no' and that I would retain its true beauty. This was music to his ears and his response was 'I am glad and if you were, I would not sell it to you. That piece needs to be restored to its original beauty'. He then continued to quiz me about my restoration methods and gave me tips. This piece had the potential to be fully functional once its vulnerability had been treated to retain its embedded historical, stylistic value and very visible ecological narrative.



James's chair:

On my way home from work one day I drove past this trailer and at a quick glance could see wooden, shaped arms amongst the garden waste. I kept driving but as I got to the end of the street my curiosity got the better of me so I turned round and drove back. The trailer was ready to go and it appeared it was heading to the landfill site. As I approached the house, the owner came out and I



asked him if it was possible to have the chair frames. He said 'yes and do you want both of them?'. Underneath the garden waste were two frames and the actual chair base. His wife approached him and as he was unloading them she said 'you can't get rid of those as they are James's chairs'. He replied 'they are no good and would cost too much to do anything with'. She agreed and when I explained why I wanted them, her response was 'I am glad they are going to a good home and being used'. At close inspection the chairs appeared to be teak and circa 1970s, they were damaged to the extent they were non-functional and their value was compromised through excessive wear and tear. At the time I also noticed the garden waste had distinct orange berries. This appeared to be climbing spindle berry cuttings, an invasive plant that grows around the trunk of host trees, eventually killing it. The chair was ironically being engulfed by the waste and was about to head to landfill.

To intervene or not to intervene: developing my manifesto

The case studies helped identify the vulnerabilities which has been lost or compromised. Through intervention these stories can be exposed and used to educate about the importance of preservation of the underlying timber and tree species. The selection process has considered some evident notion of value to warrant intervention such as the material quality, style, cost, and functionality.

Material Quality: Elements considered a material vulnerability could include wear and tear, poor craftsmanship, cheap material, lack of durability, damage, and evidence of borer.

Style: Elements considered a style vulnerability could include mismatched, dated, or unaesthetic, embellishments, stains, superficial/cosmetic damage.

Functionality: Elements considered a functionality vulnerability could include elements missing, poor ergonomics/comfort, structurally compromised, poor craftsmanship, damage and breakage.

Cost: Elements considered a cost vulnerability include lack of knowledge about the piece, not needed or wanted, trends, convenience.

Consideration was given to including a fifth 'historical value' i.e. the irreplaceability of something aged, however it does not feel like this is a value that can be 'lost' since historical value only grows with time. Historical value remains as part of the ecological narrative and is ultimately a constant - its main vulnerability would be loss of knowledge, however, this would likely then be reflected as a loss of cost value rectified through placing into a different market.

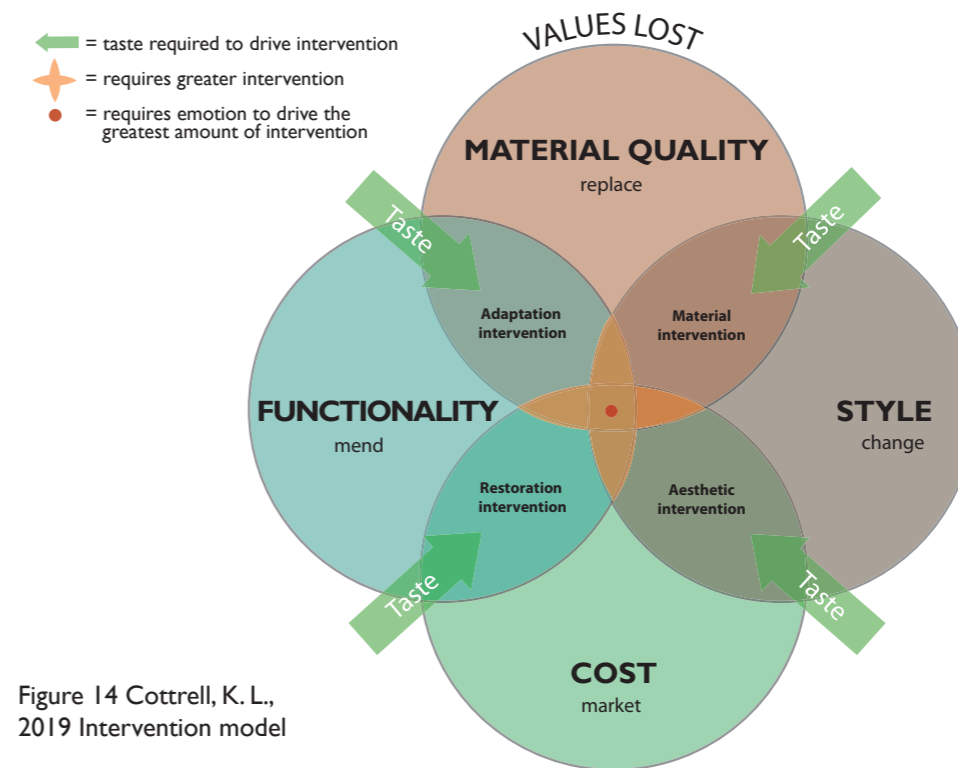


Figure 14 Cottrell, K. L., 2019 Intervention model

Intervention methods

It has been recognised that a vulnerability is where there has been a conceived loss of value. The only way to 'save' these items of furniture, and thus tell their story, is through intervention. Intervention varies greatly according to what value has been lost and whether more than one. Ultimately the loss of value is subjective and a matter of taste. While the notion of taste is deep and complex, here we need to understand that 'taste' represents a driving force to 'want' to engage in an intervention and recognise some inherent value within a piece of furniture. Value represents a purpose or worth. Regarding interventions - at the very basic level these can be seen as:

Material value lost - the simplest intervention is to **replace** the poor quality elements for better quality or new material. Where vulnerability might be damage such as evidence of borer, this requires simple **treatment** (it's a material vulnerability not a functional one).

Style value lost - this could be the most subjective based upon the subjective nature of taste and aesthetics. However, based upon the manifesto users conclusion that style value is lost the basic intervention would be to **change** that which they do not like e.g., re-upholster, remove stain, paint, embellish or add design.

Functional value lost - ultimately loss of this value jeopardises its ongoing use. This covers **repairing** or **mending** components that are compromised. This includes addressing ergonomics to ensure it is healthy and safe to use.

Cost value lost - where cost value has been lost essentially the owner no longer sees the item as 'valuable' to them. They may not know of its inherent 'value' or care and so the basic intervention includes **education** to inform them of historical, stylistic or material value and placing the item into a different **market** for those with an appreciation and desire for it. The market may be a charity shop, antiques store or TradeMe depending upon the potential value.

Multiple vulnerabilities requiring greater interventions

The case study examples include some pieces that have required more than simple intervention. Here the justification to warrant intervention may become a challenge based upon the manifesto user's abilities and problem-solving, commitment to invest time, patience and perceived reward.

When vulnerabilities overlap this requires a force to drive greater investment of time or money. Essentially the user must **want** to save the item and this is defined by their taste. To put the effort into saving the item you must appreciate and like either its aesthetic, historical value, monetary value, function or form. Like and want as drivers are key elements of taste as is recognition of potential reward.

At this stage judgements become more difficult as the manifesto user must go through an intra-personal conversation to balance effort over reward. This greater vulnerability stage can lead to conflicting opinions over saving the item. Here it is at greater risk of losing all value, its identity and potentially its ongoing story.

Loss of values

Material and style- Material intervention improves the aesthetic element using a better quality/new material.

Style and cost- Aesthetic intervention is essentially upcycling, where an aesthetic element is added to ultimately increase the cost someone is willing to pay.

Cost and functionality- Restoration intervention restores functionality and maintains its original state and preserves for future users. This also increases its value in the market.

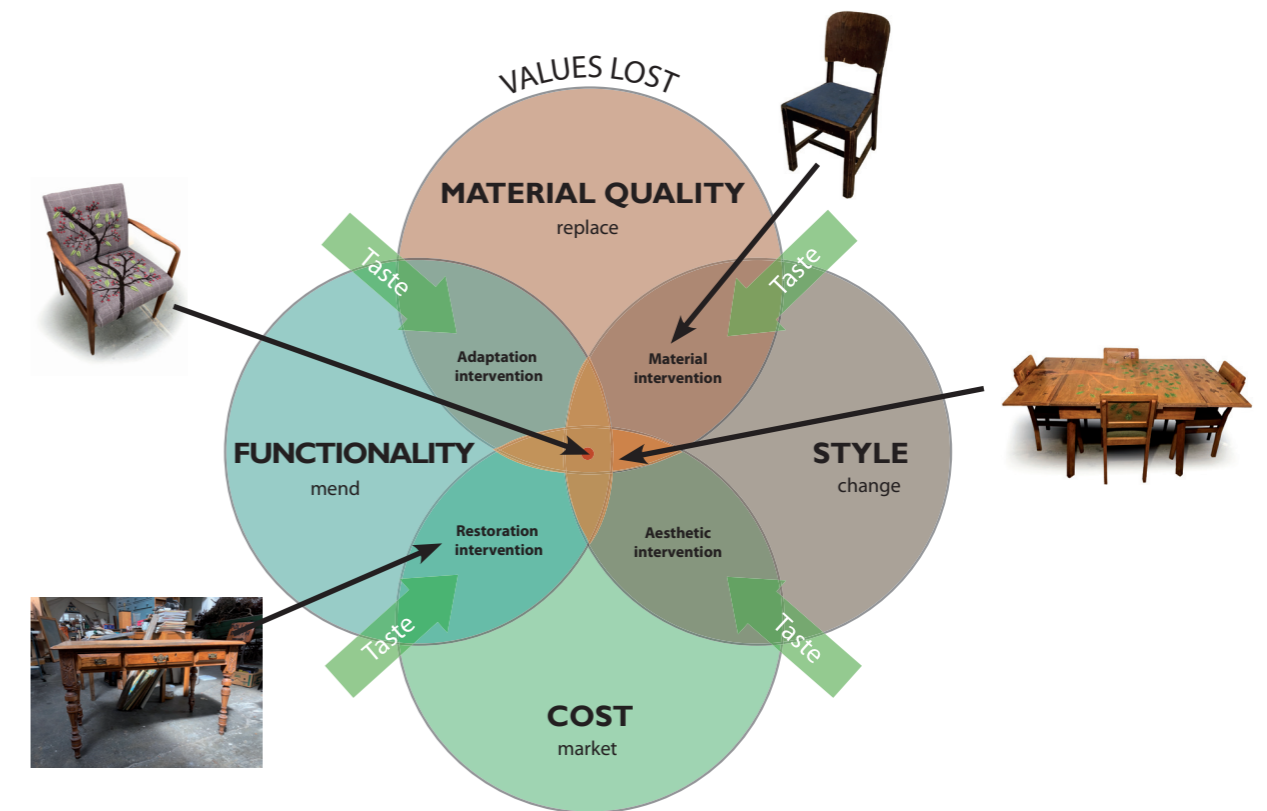
Functionality and material- Adaptation intervention improves on the original design with use of replacement parts of superior quality.

Emotional intervention zone

On occasions, there will be pieces that rely on emotional intervention to save them and their identity and values. These will be found in such a state of extreme disrepair, that they may not commonly be worth the investment of time and money to save. Here a greater force is required to drive intervention and may cause conflicting emotional decision making. The central point requires the greatest emotional investment to drive extreme interventions, e.g., a piece may have been inherited and not necessarily to the manifesto user's taste. Any piece in this zone has lost most value and any manifesto user would need to strongly balance the likely time and monetary investment (where functionality, style and material are all compromised and it has no clear perceived monetary value), against the preservation of the piece. Here any piece is on the brink of being discarded.

Taste may need to be supplemented with emotion as driving force to preserve. Put simply the manifesto user needs to either want, like, or feel a connection with what remains of the piece and its potential for preservation. Here the investment could be justified by adapting the piece to something better fitting the manifesto user's taste, so that the emotional connection is maintained and value returned.

So where do the case studies fit within this model?



The oak dining room table and chairs are situated in the greater intervention zone, where there is some degree of emotion driving its preservation. The table and chair frames were of good quality and made from English oak. However, the material quality was compromised by the damaged rattan backs in the chairs and the table top was warped, worn and chipped. The underside was covered in bird faeces and a cockroach was residing in it. The set still had its functionality, but some of the chairs' legs needed regluing together. The upholstery was worn and not very comfortable to the user and the table was covered all over with a stain that had chipped away in many places. Valued at \$65 there was potential for this set's ecological narrative to be told.

Guerilla artist Will Holman believed in utility as a value (see his manifesto appendix 1). Ergonomics and stability were important elements to his work as they are to mine. Here I decided to re-upholster the chairs for comfort, stabilise the legs to be structurally sound to the user and for its future preservation. Vienna-based design firm EOOS's sustainable furniture manifesto (see Appendix 2) aimed to produce furniture that was functional, well-designed and helped create a social community. As I wanted to educate and create awareness about material vulnerabilities, creating a space to enable discussion was crucial to the work. EOOS's manifesto stipulated their pieces needed to stimulate communication. It also stipulated careful material selection again drawing parallels with my manifesto in relation to material preservation and education. Their furniture also had to meet ergonomic, functional and aesthetic requirements, which aligned with all my case study interventions.

James's chair is situated in the emotional zone as it had lost all values; worn material quality leading to compromised functionality, no cost and unattractive style. The chair was not functional as the seat webbing had perished and stretched. It was not secured to the frame so was also unsafe to sit on. The style was compromised by the ripped and worn aged upholstery.

The frame was still of good quality and was made from teak, a precious hardwood rainforest timber used less these days and growing scarce. It was no longer valued or wanted and therefore deemed to have no cost value as it was going to be taken to landfill.

The intervention to preserve this piece was based on emotion as it required a lot of work and cost to make it fully functional again. This piece tested my emotion, as I was not an expert at re-upholstering, I got this piece priced up at a local upholstery company. The cost to fix this was \$1000. My gut reaction was to ask myself 'is it worth it and can I justify that cost?' The answer was 'no' to the cost but I felt that I needed to restore it so it could tell its ecological biography about the climbing spindle berry that engulfed it in the trailer. Plus, I would be doing the exact same thing the previous owner was going to do. After some research I discovered I could do a two-day upholstery course and learn the craft myself for a mere \$330. I saw the value in doing this as I could work on the 1970s chair and use the skills learnt for future projects. Rather seeing this as a challenge, I embraced the opportunity to upskill much like William Morris did over his lifetime. Here, the investment of time and a certain amount of money was deemed worthy to return value and especially save the element that retained a trace amount of value - the teak frame. Here utility was also important, the chair was unstable and ergonomically uncomfortable to the user. Here I decided to re-upholster and stabilise the chair by repairing the supporting furniture straps.

The colonial desk is situated between cost and functionality, therefore needing restoration intervention. The desk still has its functionality, however the structure and material is vulnerable as it is infested with wood borer. To add to its structural vulnerabilities there were also two supporting struts missing between the desk legs. The desk's cost was compromised by the borer as colonial furniture is usually worth more than \$200. This piece had a story to tell and needed to be preserved. Will Holman believed in honesty as a value within his manifesto. He believed material, ornamentation, and marks by the maker should be respected and preserved. The colonial desk had many decorative carvings, and user marks that needed to be preserved, but its biggest vulnerability was loss of its ecological narrative. I made the decision to just treat the desk for wood borer and keep the holes as part of its story and to align with my manifesto.



Figure 15 Cottrell, K. L., 2019 Re-upholstering stages of James's chair.



Chapter 3. Time and method

The maker and the piece

Building a relationship with the pieces through manufacture and restoration methods was key to rebuilding the pieces' identity and narrative. Documenting time and methods were crucial to the research, both these elements contributed to the notion of value, taste and the ecological narrative. Dinah Eastrop stated "Documentation has become a central part of conservation. It is no longer considered acceptable to undertake a conservation treatment without recording the object and the intervention" (P.519 *The handbook of material culture*). Nicholas Bourriaud believed that the artist's behaviour was reflected in the act of the making, such as through brushstrokes or, in my case, embroidery and marquetry. "The transparency of the artwork comes about from the fact that the gestures forming and informing it are freely chosen or invented and are part of its subject (P.42 Bourriaud, *Relational Aesthetics*).

Through everyday objects, English designer, poet and social activist William Morris wanted to create beautiful, functional pieces and saw the importance of joy from purposeful labour. He also needed to make a connection with the design and its execution. Author Tessa Wild thought this was something he did not get in his earlier role as an architect: "As his skill in the traditional arts grew, it became apparent to him that he wanted to make what he designed and that architecture did not have the tangible quality he craved" (P.19 *William Morris & His Palace of Art*) The notion of joy though labour is something that really resonated for me when working on my pieces and, in particular, the oak dining set.

Material, preservation and society needs

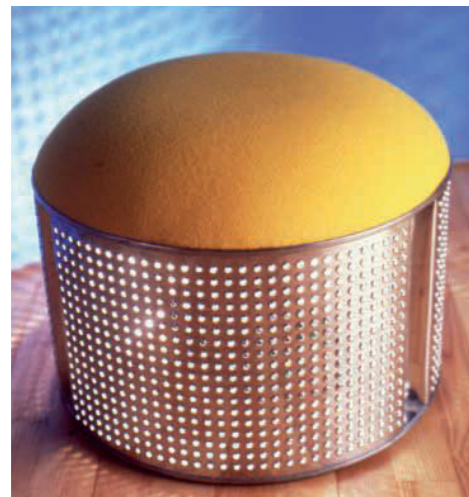


Figure 16 JAM The Art Branding., 2019 Whirl Pool Stool.

My passion for material is very much an integral part of my work. My disciplines and parameters are defined by the materiality, by digesting the inherent nature of material I learn how to develop the process. It's this relationship that allows my passion to take form. London-based artist group JAM (named after Jamie, Astrid, and Matthieu) produced a body of work around what they called 'Innovention'. Their work involved using objects and materials from around them to change consumer awareness and also highlighted recycling and environmental issues. This angle of their work really resonated for me. I could see parallels to my values with my use of found furniture and the ecological message that I am conveying through the material to create an awareness.

Conway Lloyd Morgan believed Philippe Starck's designs "emerge from a series of reflections on non-design issues-technology and materials, human behaviour, and society." (P.69 Starck) In an 1980 interview Starck stated "In that thousands of perfectly valid versions of most pieces of furniture exist, a new work must of necessity be symbolic. This symbolism is directly linked to social life, to material technology and to production methods." (P.70 Starck) Morgan comments further in response: "From this perspective the designer is not creating but responding: the design arises from the anonymous needs of society, even if it is mediated by the designer's personal decision to intervene" (P.70 Starck). Starck's work was a response to societal needs as opposed to just designing a piece of furniture.

With my intervention or by 'mutating' as Morgan suggests, the dining set has now become a symbolic piece related to current society needs. Starck uses an example of this: "It has lost the connotations of a club chair, but still is one" (P.71 Starck). Here the dining set is still a dining set, but has been adapted as a response to a societal need to promote preservation. Dinah Eastrop believed 'True nature' was important to the preservation and conservation of objects, requiring "evidence of its origins, its original construction, the materials of which it was composed, and information as to the technology used in its manufacture" (P.518 *The handbook of material culture*).

Process and methods

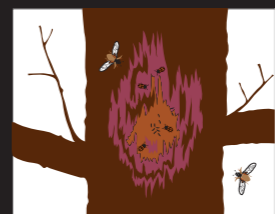
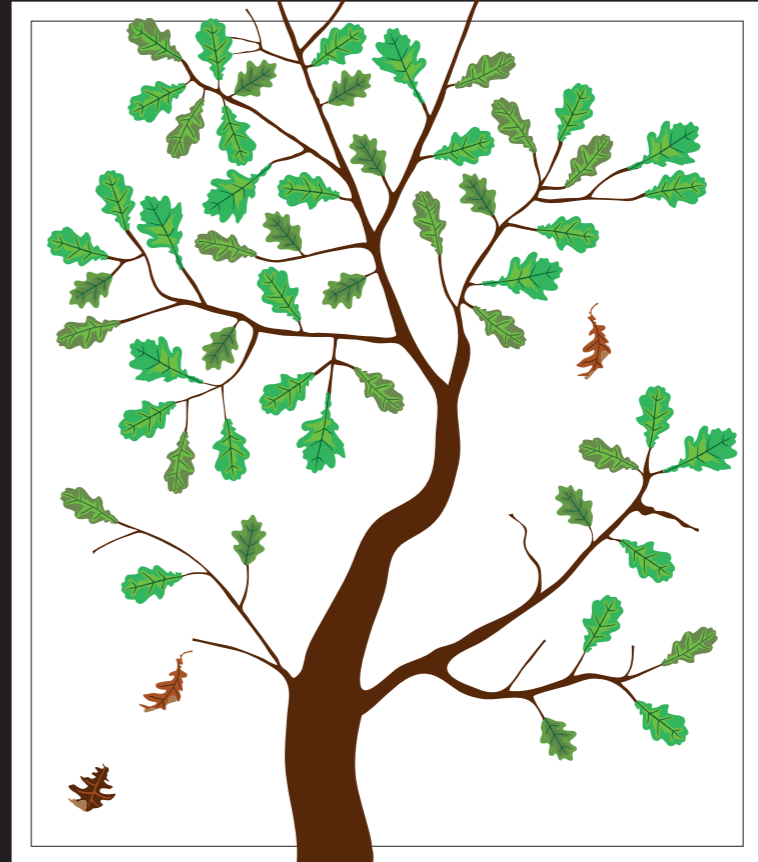
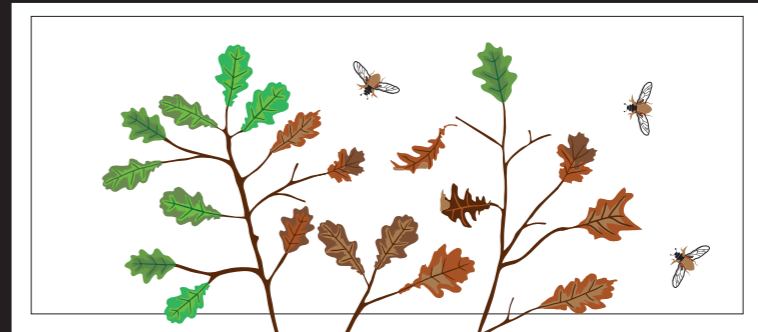
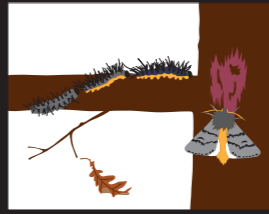
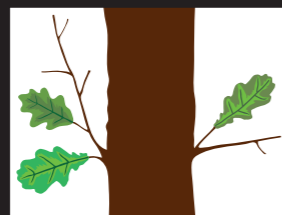
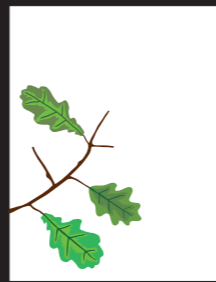
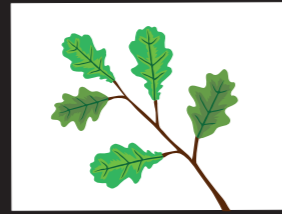


Figure 17 study of leaves from Plimmer oak, Figure 18 Plimmer steps in Wellington (one of the first oaks grown from acorn in NZ by John Plimmer in 1812.) Figure 19 Oak outside Wellington's Beehive

To visualise the ecological biography of the oak dining set, I used research from various sources such as the Forestry Commission, USDA, and the Natural History Museum, London, that had seen the disease and vectors first-hand. I also used photos from previous visits to the UK and North America, visited oak trees in NZ and took rubbings from leaves. Using inspiration from nature first-hand was really important to me, as was this to Morris when developing his wallpapers and textiles, which I will discuss further in chapter 4 "Narrative, craft and political agenda"

Using all these sources I began to storyboard the ecological narrative. After traditional hand sketching I was able to import these into Adobe Illustrator, where I could illustrate the details further. Once I was happy with the narrative and the scenes I could use the vector software outlines to create laser cutting files for the marquetry wood veneers and the engraving of the chair backs and table top. William Morris would have been against the idea of using technology to do such a thing as he felt the connection would be lost between the maker and the piece. Though Morgan believed Philippe Starck's success was based on the reinventions of this relationship with manufacturing: "His secret is to have understood that something has run its course in the designer-manufacturer relationship, that the respective crafts have to be reinvented" (P.43 Starck)

Considering both perspectives above I like to think I have made a compromise between modern technologies and traditional craft. By using modern technology to cut the intricate wood veneers out, the piece has been reinvented but yet I still feel a close connection to the pieces by the amount of time I have invested in them and therefore adding to its value. Spending a total of seventeen hours supervising the engraving process, the pieces were inlaid by me, the veneers were dyed by me, the new top and chairs backs were laminated and chiselled out by me.



Chair backs, fronts and table top illustrations - non-extended and extended versions

European design duo Studio Job used a high quality laser cutter to create their 'perished collection' (see figure 20) which consisted of a folding screen, a pedestal, table and a high-backed bench. Each of these pieces was veneered with rare macassar ebony and maple. Each of these pieces was designed by Studio Job but they were assembled by highly skilled craftspersons. Here I would argue a relationship between the piece and the designer is lost. Though I could argue that the upholstery of the dining set chairs could have disconnected me from the piece as I got professionals to do the work, as I was not an expert in this field. Here a compromise again happened as I hand-embroidered the work to be placed on the seats.



Figure 20 Studio Job., 2006 Perished Collection

Natural materials

Using natural materials was also crucial to the work and important to me, as my piece was focusing on the environmental factors and vulnerabilities of the material. Using natural vegetation dyes helped complement the natural grain that was masked by its dark stain. William Morris only believed in using natural dyes from vegetation for his work and he employed the skills of Thomas Wardle to help him with this. Thomas Wardle was an industrialist and innovator of dyeing silks with natural dyes. Like Morris I started in my back garden; here I used fennel foliage and grass to dye the green oak leaves. This was a time-consuming process as vegetation can produce so many variations. To create the wounds on the chair backs and table extension I used Cochineal beetle's dye to give it a pink tinge. Before each veneer was inlaid, I coated the dyed pieces with protective varnishes ranging from Danish oil, shellac (also made from beetles), and beeswax. These were then exposed in a UV light test, as I wanted to give the set longevity. The Danish oil combined with shellac provided the best protection and was applied once every piece was intricately inlaid and sanded. Each of the chairs was replaced with upholstery fabric and then hand-rendered before being embroidered with New Zealand wool to create the oak decline/disease vectors. To complement the set and match the grain I used American white oak FSC (Forest Stewardship Council) offcuts as I was unable to source English oak. All the veneers were offcuts and I was also kindly donated some kauri veneer for the large limbs and branches. The rewarewa that was used for the table frames came from a local Otaki mill which sourced the tree locally after it was felled by a storm.



Chair back showing marquetry oak leaves

Second-hand wood

Your body dignifies the \$5 rimu chair.
Second hand wood you say as you go
on a second-hand wood hunting trip.

You come back surrounded by old wood.
It's the way you arrange your limbs
on the chair that makes this wood
precious again.

You give the rimu a second chance,
a sensuous way to go back to a time
of roots and leaves and arterial desires.

Something happens in the chair's memory
as your skin touches the spot where
a shoot stopped its journey into the world.

Something trembles deep in a wood
as you turn the act of sitting into
so much more than just grabbing a seat
or pulling up a chair.

~ Leonel Alvarado, Massey University







Close detail of fungal mat with oak wilt beetles and larvae rendered in marquetry



Chapter 4. Narrative, craft and political agenda

The Arts and Crafts and influences

The Arts and Crafts movement began in the late 19th century, inspired by the ideas of English architect Augustus Pugin, English art critic John Ruskin and English designer, poet and social activist William Morris. The Arts and Crafts movement influenced my contemporary principles around value, aesthetic, quality and taste. The founders of the Arts and Crafts movement were quick to realise the environmental implications around production methods. It was seen as a reaction against the perceived decline in standards associated with mass production growing from factories of the Industrial Revolution. Lessons from William Morris and the Industrial Revolution are timely in our current day and age. I see many parallels with his celebration of nature and my respect for native and threatened timbers. His relationship with furniture, aesthetic, story-telling and nature began through his tapestries, later growing into a style that adorned furnishings, wallpaper and prints and tiles.

Morris's love for decoration and nature began at the Red House, designed by architect Philip Webb and commissioned by Morris. *"Together they shared high ideals...They were bound by their love for nature and the English countryside, its vernacular buildings, ancient traditions and craftsmanship and strove to revive and uphold these things in an increasingly industrialised and socially riven age"* (P.17 William Morris & His Palace of Art). The Red House, referred to as the 'Art Palace', was where experimentation, discovery, success and failure happened. The house needed to be decorated and furnished, it was this need that founded Morris, Marshall, Faulkner & Co, which is known as Morris & Co today. Since 1861 the company has been highly influential and has given people the opportunity to introduce nature inside our homes and expressed the importance of art in our everyday lives. Tessa Wild states it was *"revolutionising and influencing taste in Britain and abroad"* (P.8 William Morris & His Palace of art).

Narrative and political agenda



Figure 21 Cottrell, K. L., 2019 Fabric sample of the Strawberry thief.

Within William Morris's iconic designs lies a story. 'The Strawberry Thief' (see figure 21) tells the story of thrushes stealing his strawberries from his back garden at Kelmscott Manor. Within Morris's designs we often see a utopian, romanticised story or narrative conveyed. Curator Samantha Manton observed *"This utopian world was articulated through graphic, wallpaper and furnishing design, as well as various literary offerings"* (Whitworth - The Gardener Digs in Another Time) The imagery not only served as a narrative but also influenced his socialist agenda. Here he used imagery to portray equality in art, craft and design.

Morris also wanted this to demonstrate the value of good craftsmanship. Will Holman also saw value in hand-crafted design and stated *"Hand-building furniture... is also a political act - a practical protest against corporate hegemony, environmental destruction, and individual apathy. Building as an act of resistance flips the usual paradigm of protest, creating positive products instead of merely going down the status quo."* (P8 Guerilla Furniture Design) Drawing parallels with my oak dining set, here I used imagery through traditional and modern craft techniques to portray my social agenda around the education of oak wilt disease/decline and its material vulnerabilities. A romanticised utopian approach attracts the user, but as the table is used it reveals its dark story.

The oak dining set narrative tiers

Within the dining set are narrative tiers that portray the dark, hidden ecological biography of the disease. Starting from the bottom; the chairs are hand-embroidered with natural vectors that are revealed as the user pulls them out for sitting. On the front of the chairs (see figure 22) are scenes that portray the natural vectors' actions and contribution to the disease. When these chairs are placed next each other, the marquetry panels can be viewed in a linear narrative and show the multiple elements that contribute to the destruction and eventual death of the oak: A woodpecker creates gaping holes in the trunk; the oak wilt beetle lays burrowing larvae within these wounds; and processionary moths, whose caterpillar larvae strip a tree bare of its leaves. Finally, a squirrel strips the bark, exposing the vulnerable underside to invaders.



Figure 22 Cottrell, K. L., 2019 Oak wilt disease/decline chair fronts.

On the back of the chairs are marquetry panels, that are extensions of the table top's artwork and leads the user into a false impression that the oak is healthy and full of life. American furniture maker Silas Kopf utilises the front and back within in his marquetry pieces and they usually depict an image of nature (see appendix 3). While his use of imagery is merely decorative and used to enhance the furniture's existing beauty, I have utilised the space to portray the ecological narrative. On the top of the oak table, a large oak marquetry panel is inlaid into the table. Again, this leads the user into believing the oak is healthy. When the table extensions are pulled out this reveals the dark ecological story: of a fungus mat riddled with beetles and the crown of the tree with brown curled up leaves starting to fall. On top of the table lie the coasters which are inlaid with marquetry images of new life and the growth stages of the acorn. These symbols of new growth represent cues for positive conversation around preservation.



Figure 23 Cottrell, K. L., 2019 Coasters

Heritage and design influencing the story

Bohemian cabinetmaker and traditional craftsman Anton Seuffert (1815-1887), also influenced my dining set. Seuffert, like myself, was an immigrant to New Zealand. His furniture was highly influenced by European style but featured marquetry images from New Zealand, including scenes of Māori dom and native plants and birds. Drawing parallels with my work, here I used European imagery but added New Zealand native materials as a nod to both my new and old heritage. Seuffert's marquetry scenes also featured extinct species like the New Zealand moa and it's role as a character within the story of

it's loss (see figure 25 below). In 1881 William Greenhow also depicted his story through his tool chest. A nod to his new and old heritage is evident in his use of native timbers and English oak. He also carved the date the work was completed in oak leaves which was shortly after he arrived in New Zealand (see figure 24 below).

Using art/illustrator craft on furniture can give the piece its meaning, its identity and educate the user. For example, Russian artist Constantin Boym in his Ultimate Art collection used paintings on his furniture. He believed "Art becomes a new material to make the furniture with, which opens many narrative possibilities...the chair expresses different sentiments and feelings by virtue of the paintings it is made of...When design becomes art, there is a possibility to re-imagine the object in a very different and radical way" (P80 Telling Tales).



Figure 24 Cottrell, K. L., 2019 1881 Greenhow tool chest. Figure 25 Cottrell, K. L., 2018 1867 Seuffert Bureau



Chapter 5. The importance of table talk and setting

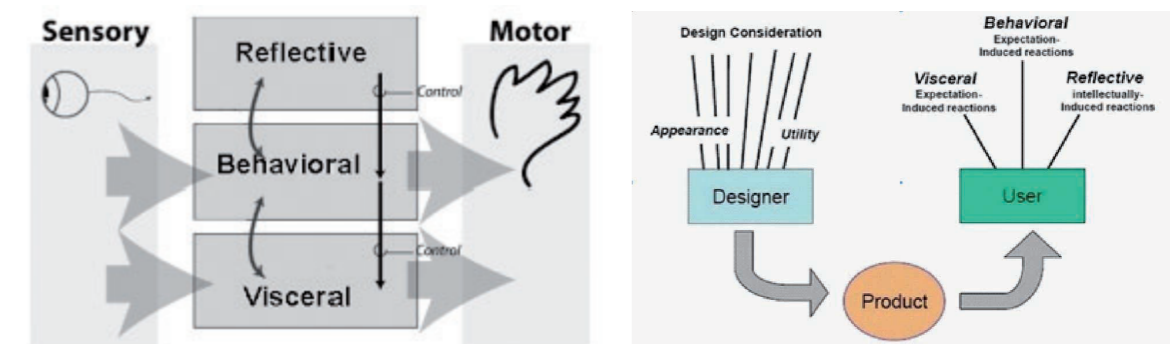
Elements needed for a successful discussion

Inviting the user to discuss about fungal pathogens through craft images to depict the ecological narrative and the material vulnerabilities is a key purpose to my work. I wanted my aesthetics to be presented on a piece of furniture and saw the oak dining room table and chairs as a perfect 'canvas,' providing the opportunity for a discussion to take place around the table. In order for a successful discussion, the piece must be functional, inviting and accessible to the user. Jane Gerhard believed *"many aspiring artists in these years [1970s] railed against both the narrow range of aesthetic options and about making art as a commercial product... in response, they turned towards ephemeral or "art-off-the-easel" works"* (P8 *The dinner party Judy Chicago*).

Part of my manifesto's criteria was to make sure the piece was functional and comfortable for the user. In order to do this I had to remove the elements that rendered the table and chairs uncomfortable, unusable and replace/repair these elements (as discussed in chapter 2). Some of these elements could be deemed as a matter of taste. Kant's philosophy on taste (the pure taste model) are not based on logical, cognitive principles nor its brand or monetary value. Pierre Bourdieu made pointed expressions at Kantian versions of aesthetics; that things are judged upon their impurity, cheapness, shallowness and superficiality. Kant stated; *"in order to judge what is beautiful, a purely 'esthetic' judgement must be made. The central component of this judgement is the feeling of pleasure or displeasure provoked in the viewer of the object"* (P117 *Understanding Material Culture*). Nicholas Bourriaud argues that objects should be viewed with 'transparency,' allowing the viewer to consider the material, function, manufacturing, production process and the creative behaviour of the artist/designer. He agrees, however, that the success of a piece can be judged by instigating a response by the spectator: *"If a work of art is successful, it will invariably set its sights beyond its mere presence in space: it will open dialogue, discussion"* (P41 *Bourriaud Relational Aesthetics*).

Creating an emotional reaction

In order for the oak dining set's narrative to be successful, it not only needed to open discussion but also needed to create an emotional reaction. Taste and emotional design feed off of each other and the commonality is a positive or negative reaction. Dimorphous aggression is commonly known as 'cute aggression', a term coined through a study by Yale University researchers Oriana R. Aragón, Margaret S. Clark, Rebecca L. Dyer, and John A. Bargh. Cute aggression creates a positive reaction which then leads to a negative reaction. The negative reaction being a benefit though as this demonstrates the user's care and feelings for the object/matter. For the oak wilt table and chairs this was key to the narrative and intention. The user pulls out the chair from the table to see a disarming looking character and is torn between whether to sit or look, as witnessed in the critique.



Figures 26 Norman, Don., 2007 Three levels of processing Figures 27 Norman, Don., 2007 Levels of design.



Figure 28 Cottrell, K. L., 2019 **Projected illustration of oak wilt disease**

Closer investigation reveals more to the story; the front interior of the chair depicts a scene of destruction and also a conflicting feeling - is it the contributor's fault the tree is dying of the disease or is it just nature? Don Norman's three levels of design also supports this research with the visceral level making rapid judgements of what is good and bad. "Positive emotions are as important as negative ones-positive emotions are critical to learning, curiosity and creative thought" (P.19 *Emotional Design*).

I tested aesthetics on the set and invited users to sit at the table. This first test consisted of a projected Illustrator-rendered image of an oak tree with disease and the vectors that contributed to it (See figure 28). Guests were able to touch the table and engage with the artwork. While they felt comfortable, and interpreted the artwork, the ambient darkness inhibited peoples' natural tendency towards conversation, since social visual cues could not be read. The artwork for me also lacked the tactility of craft and the relationship I wanted to create with the piece. I also wanted my piece to connect with a wider audience and I felt technology as the visual platform in this instance hindered the natural connection people feel with furniture. Applying the aesthetic through projection limited its situation only to a specialised, gallery setting leading to the table's role more as art than function. Judy Chicago a famous feminist artist states "art should circulate broadly and not be limited to or by museums. I believe that is what artists have to do if they really want their work to reach out and affect a wider audience-make images that are clearer about subjects people care about, find ways to make those images seen by more people than gallery goers" (P.10 *The dinner party Judy Chicago*).

Chicago, created a monumental piece in the 1970s called 'The dinner party' (see figure 29). The piece was referred to as a reinterpretation of the Last Supper. The triangular table is set with 39 place settings that commemorates women of historical significance.



Figure 29 Judy Chicago, Dinner Party, Essentialist Feminism, c. 1980

The piece also tells the stories of the women who helped Chicago make the piece. On the heritage floor are 999 hand-cast tiles with the names of women who made a mark on history. Each place setting has a needlework runner that represents a status of the woman's time, a ceramic plate, embroidered napkin and ceramic chalice. The last place setting also links with the first place setting. The ceramic plates were hand painted in the tradition of the decorative arts. The place settings also had hidden decorative embroidery that was only seen upon sitting, that related to the particular woman's story.

Similarly, within my dining set I also included a continued narrative with the chair fronts, when sat side by side the marquetry panels connect together. Another parallel was the hidden embroidery that related to the natural vector that was exposed when the user pulled the seat out in preparation for sitting only revealed through engagement like turning the pages of a book. Chicago's embroideries not only aided the narrative but also added value through the labour intensive work. Gerhard believed "Judy, in that very quick, true way she has, saw the narrative possibilities of presenting the history of needlework through the runners, echoing the chronology of the women on the table" (P.114 *The dinner party Judy Chicago*).

On my second test, I invited guests in my critique to sit at the table. This time the table was inlaid with modern marquetry and was not tied to technology, so the piece could speak for itself. On this test I decided to place the dining set in a white space with windows to give a subtle nod to a domesticated setting. Here we discussed potential guests who would sit at the table, the artwork's narrative and its locality in the space. The guests were comfortable in the seats and kept running their hands over the table. This experience led me to test 3 (see figure 30) where I placed the dining set into a domestic setting. Here I included the use of some complementary ceramic pieces; the jug had illustrations of the natural vectors of the disease and the mugs had illustrations from the coasters that represented new life, portrayed through illustrations of sprouting seeds. The jug portraying all the problems the vectors caused and central point of discussion. I also thought that pouring the contents of the jug into the mugs showed a sense of the problem shared.

In the domestic setting I sat with guests, and we discussed the issues of oak wilt disease and its natural vectors over a cup of tea. The guests were comfortable and the only reservation was "I don't want to scratch the table surface". During our discussion one of the guests mentioned the issue of the processionary moth in the Netherlands that was killing oak trees, explaining, "the processionary moth has been causing a lot of damage in the Netherlands currently. Hard to believe the 700,000 hairs can be released as a defence, have you seen the rashes it can cause?". The use of illustrations in marquetry and props supported a sharing of knowledge, as engagement through the tactility and aesthetic prompted discussions around the shared understanding of loss of native species. Essentially this was the ecological narrative of the table and chair set released and expanded upon through direct involvement with it.



Figure 30 Cottrell, K. L., 2019 Tea party

Motivational speaker Brian K Patterson in his TEDx talk 'Everything I know about life I learned at the dinner table' referred to his dining experience as "sacred time". He observed "metaphor and stories were used to address any problems that was encountered during that day...the beauty was in the sharing" (Patterson/TEDx). German Protestant Theologian Martin Luther [1483-1546] also saw the value of sharing table talk at his dining table in Lutherhaus. German Minister and Lutheran reformer Johannes Mathesius [1504-1565] recorded the conversations between Luther and his students and compiled a book called Tischreden. The conversation topics would range from religion to the natural world. One of his conversation topics for discussion was about the necessity for wood: "*wood is one of the greatest and most necessary things in the world, which people need and cannot do without*" (Martin Luther P332 Wood a History).

In collaboration with Wellington's ecosanctuary, Zealandia on conservation week, I installed the oak dining room table and chairs in their reserve grounds. As part of the installation I had to take the oak dining set through bio-security. During the procedure I could see visitors to the sanctuary taking an interest and when every piece was through the gates, one member of the public took pictures and engaged in a conversation about the piece and noted the material being oak and its narrative. There was an irony in bringing something in that was deemed to be a 'pest' as it was not a native species. But this fitted well with their educational ethos around preservation of native species. Within the grounds they have invasive species tightly controlled but their purpose is to educate and to create an awareness. I invited guests from Zealandia to participate in a table discussion. We discussed change of mind set, preservation of materials, education and the importance of space for discussion. Being in a conservation space and sitting with educators led to some key discussions about the importance of conversations and connectivity. Education Ranger Steve Moorhouse stated "*we need to have these conversations, but have these in a mature open minded way*". Volunteer Lauren Peatfield also stated: "*If everyone does something small we can make a difference, but we also need to know what to do, otherwise you would not be aware of what is in your environment and how to deal with it.*" In order to create maximum impact and educational awareness about vulnerable diseases such as oak wilt disease/decline, I believe placing an engaging piece in public spaces like this would be key.

Conclusion

This research project involved understanding the impact of global fungal pathogens such as oak wilt disease/decline as key issues contributing towards species loss in our time. Here art and design plays an important role in connecting audience with message - tactility and aesthetic can be employed to drive engagement and discussion, hopefully encouraging action around preservation and conservation. I examined the vulnerabilities of these materials through pre-existing furniture that was made from these scarce materials, that were also vulnerable due to lack of knowledge about their inherent value. Through case studies I examined issues of vulnerability, what is considered value, identity of furniture and what was needed to expose the inherent ecological biography within the furniture. During this process I engaged in many interesting conversations and sampled people's perspectives on what their values were on material vulnerabilities.

Through this process I was able to identify common themes and elements based upon inputs of taste that later became my manifesto though an intervention model. The single oak English chair helped me identify how far to intervene with a piece by deconstructing it, the kauri colonial desk taught me the art of restoration, James's chair played with my emotions and tested how far I would go to intervene. All this knowledge built the foundations of the ecological narrative for the oak dining room table and chairs.

Using intervention craft methods, I have adopted new skills and upskilled like William Morris, for example, who demonstrated the same broad skills across embroidery, surface design, natural dying and furniture design. I have used modern and traditional ways to inlay and cut the marquetry veneers, I have taught myself to embroider, how to dye veneers with natural vegetation and how to upholster basic furniture. Using modern and traditional making methods has made me appreciate the value of both. I would argue that employing both does not lose a connection between the maker and the piece.

By making the table functional and ergonomically comfortable, guests have been able to sit at the oak dining set to have a discussion around the story of oak wilt disease/decline and the importance of education and awareness. Taking the dining set through bio-security at Zealandia is something I will not forget in a hurry, nor will the viewers who witnessed the act. This is only just the beginning for the oak dining set and I would hope for many more discussions to take place over it for many more years to come, whether this is in a domestic setting or whether it is invited into another space. While this study has focused largely on the oak set the same approach could bring attention and raise discussion on the plight of kauri dieback, rendered on old kauri furniture to make relatable to a New Zealand audience. Here an artist can play a role as educator, utilising craft and aesthetic to encourage curiosity and engagement with otherwise unremarkable objects. These objects can be given new life, meaning and an identity and placed into a context whereby they become the focus of discussions towards preservation.

Through this research I have realised there are more biographies of furniture to tell and more diseases that the public as participants of art need to be made aware of. As materials become more vulnerable, societal demands will need to shift to understand why and raise the question of preservation for future generations. Already people are witnessing species eradication at alarming rates and the once common trees of our nations should never be taken for granted. As a wood work teacher I see my role in educating future generations about the importance of preservation of these vulnerable materials. After all we cannot use their timbers in years to come if we cannot sustainably preserve their tree species.

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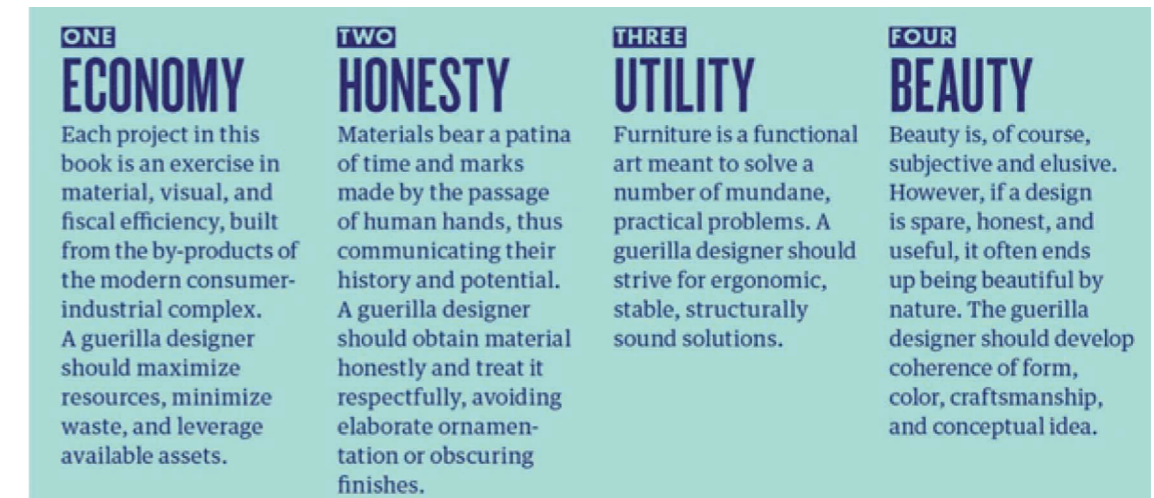
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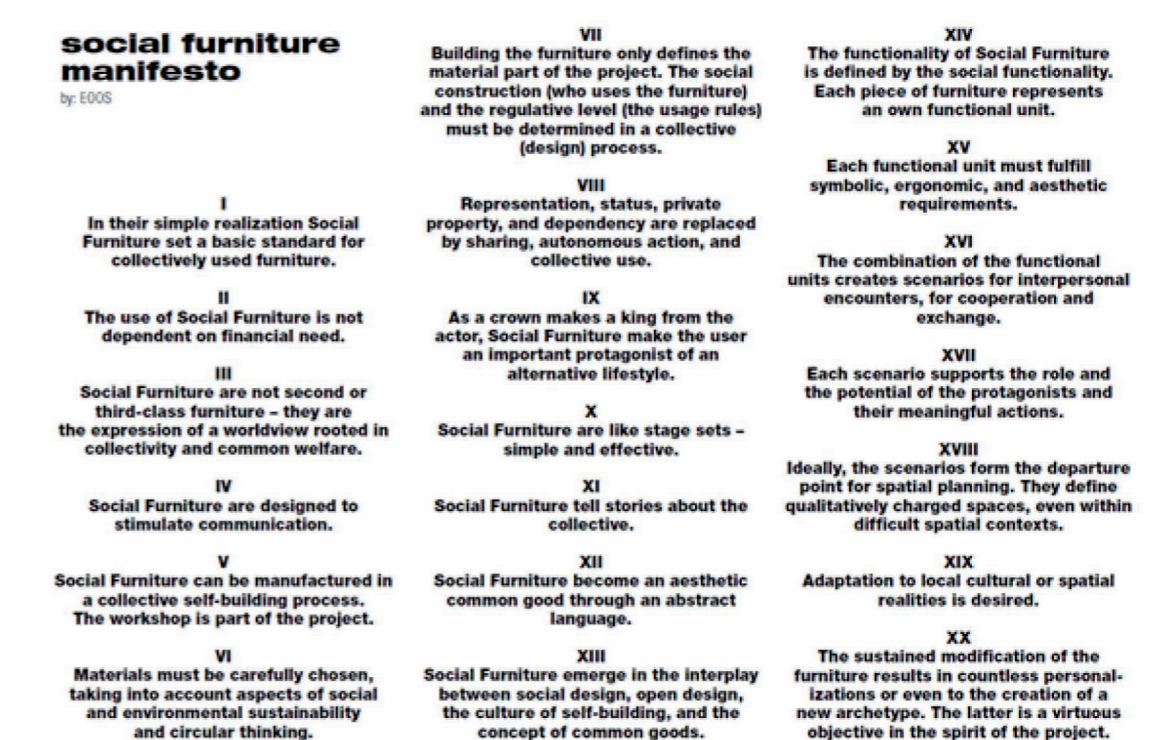
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Appendices

Appendix 1: Guerilla philosophy Will Holman



Appendix 2: Social Furniture Manifesto



Appendix 3: Silas Kopf chairs, <https://silaskopf.com/gallery/>



