

LANDSCAPES OF TIME

HENRY LANHAM

HDK, MASTER OF FINE ARTS, JEWELLERY

2011

PROFESSOR KARIN JOHANSSON

Contents.

Introduction	03
Main Text	
▪ Background	04
▪ Memory text	10
▪ Process	11
Conclusion	21
Sources	25

Introduction.

If I was to sum up my concept in one word I would say improvisation. Now I have reached this stage and worked through a long process of writing, making and thinking I can say my work is an improvisation around a theme, but I didn't know that at the beginning. I didn't know what I was trying to do, I certainly couldn't put words to it. I simply had a strong motivation to explore and expand on certain ideas, feelings and experiences that seemed apparently unrelated.

I have trained in engineering, architecture and design, I have interests in motion, evolution, change, growth, mechanics, patterns, structures, repetition. They are my fabric and must be allowed to surface in their own way. I have also been interested in movement for a long time. Not so much in an engineering sense of precise mechanics but the idea of movement, of change, of impermanence. This project started out as a desire to find exactly what it was in these that captivated me so I shall try to retrace my footsteps and reveal how I got from there to here.

Background.

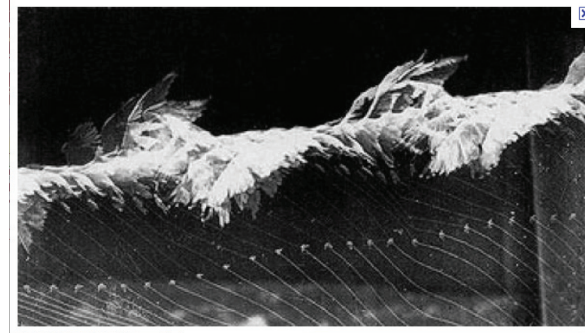
My inspiration has come from nature, from observing plants and animals and the cycles that happen around us and we are part of. I discovered however that it was not the actual physical components of movement that were interesting but the flow from one state to another and how these places are connected. I wanted to explore the idea of connecting entities that change over time in one object in the present. I began by taking the cycle of movement of a bird's wing in flight. It appealed to my engineering thinking and also the idea that the effectively two dimensional movement can be interpreted in to a fourth dimension. The changing form of the wing occurs as it moves forwards through space and time. I can only see any one moment of that cycle but what happens if I trace the cycle through time? A three dimensional form will be revealed.

Will that form resemble the birds wing or its flight in any way?



I began to make some physical sketches of the form I could only imagine. I simplified the wing in to two components, as to achieve a sense of what form would be revealed there must be many of the individual stages assembled.

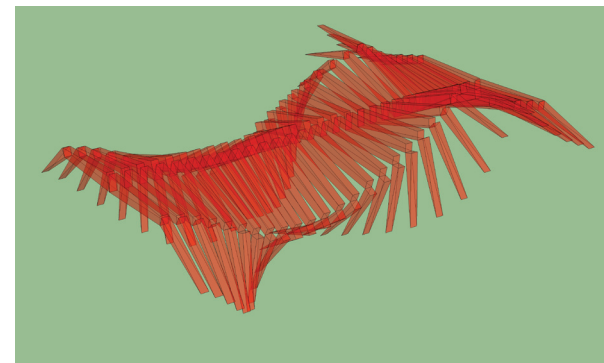
While pursuing these ideas I began thinking about early photography and the experiments done by some to capture movement, especially of animals.



Étienne-Jules Marey

These captured moments of a sequence show quite clearly a connection to my sketches made around a birds wing. Étienne-Jules Marey 1830 - 1904 was an early pioneer of photography and studied birds in flight amongst other things.

The first model I made in cardboard along with a 3D computer version. This idea was really exciting and I felt a great anticipation for where it might lead. I could generate form in quite a free way, but there was a very strict format and I must make many parts before I could enjoy the more intuitive assembly process. Working on the computer was very unsatisfying as I had no physical connection to the work, so there was no sense of ownership, and that is a very important aspect for me.



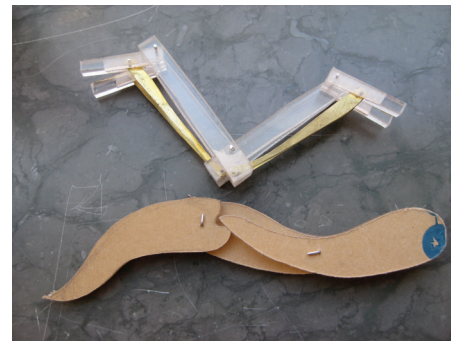
3D virtual model.

The small models I made to begin with were an important step but they were very constrained in expression. In part due to my wish to use repeated parts that could be mass-produced prior to starting the building process.



Left: Repeated aluminium pieces bent to shape.

Articulated copper template used to trace changing forms.



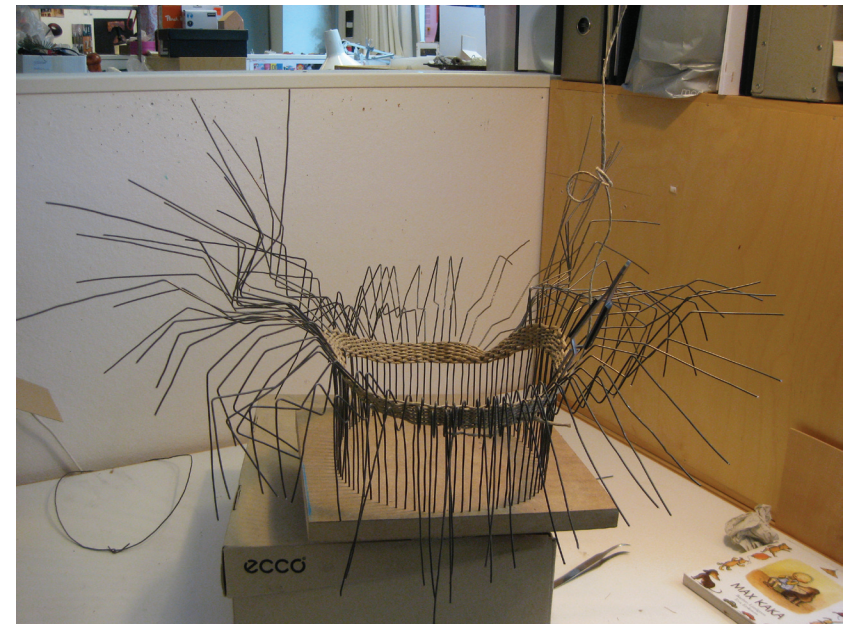
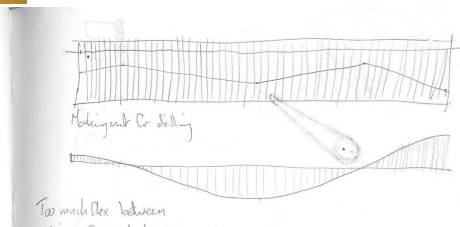
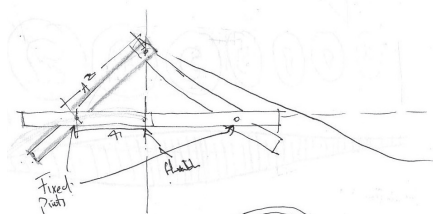
Right: Experiments with actual movement using repeated forms.

I think my background in architecture was an influence in the thinking here. I needed to challenge that way of approaching the making, which would still be very structured due to the nature of the concept, but allow for a more intuitive way of shaping each stage of the cycle; The rigid structure should support not control the expression.

I began looking for a way to make each stage individually while relating it to its predecessor. I tried using wire, which was then inserted in a base and bent as required. Flight was still the inspiration so the metal took the approximate form of a pair of wings in section.



Left: Repeated forms. Controlling movement by hole position marked out as shown in the sketch below.



Above: Wire model.



Once all wires were finished I wove string between them to fill in the form. The process was slow but still much more fulfilling than assembling my own mass-produced parts. I was free to focus on each section rather than the whole form. As I was working with flight and the form was elliptical it was appropriate to make the cycle continuous so there was some thought behind bringing the form back to the start.

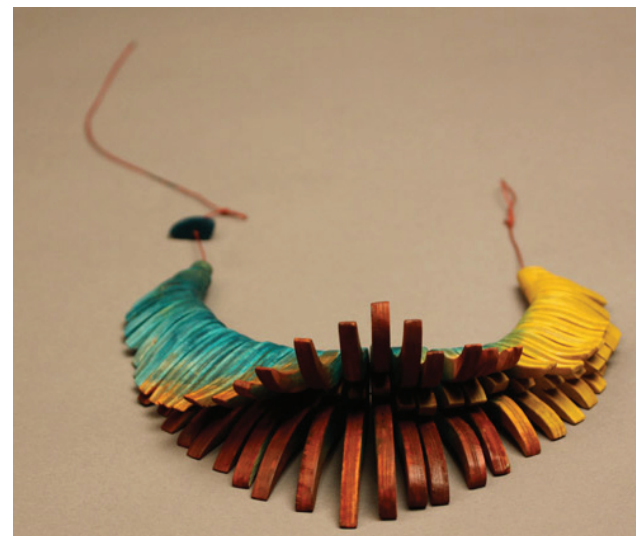
Above: Steel wire and hemp string.

At this point I felt as though I had become less constrained in my way of working. I stopped trying to control the functional aspects of the work or remain too close to the inspiration. Sketch pieces proved predictability in the final form and that was not interesting for me. What was becoming appealing was the realization that I had created a framework, which I could work within and also forget, while putting my energy in to creating each stage. Initially with some idea of the final form, but the possibility of becoming more abstract was alluring.

What happens if, within this framework I work around a theme or a feeling?

Something less tangible even than the idea of a bird's wing.

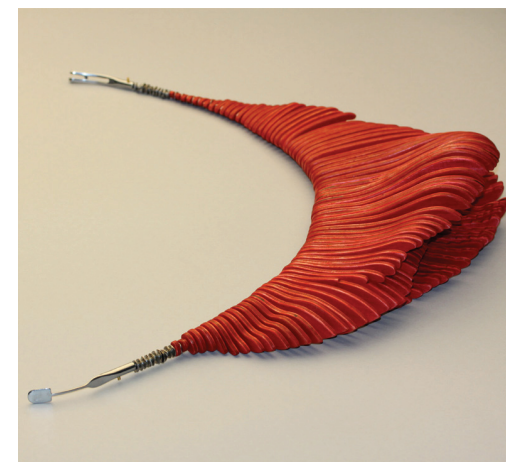
These pieces were a step in that direction and were an abstraction of the cycle of growth and decay



Above: Plywood, paint, string.



Left: Plywood, paint, steel, string.



Above: Plywood, paint, steel.

Would there be some expression in the final form that related to a more impalpable origin, if the focus was on making one segment at a time and relating each to its predecessor?

The expression is then not the primary aim but the result of my approach to the theme.

That is where I began my Master project. With thoughts of allowing my subconscious to come to the fore and see what was revealed without the conscious mind controlling my expression.

At the same time I began writing. Simply beginning at a certain point in my life and seeing what came out in the process. It was an interesting way to explore memories with some unexpected results.

I wondered if I was to make a physical object instead of writing would something of that memory be revealed?

If I focused on my text and began making segments in the way I had already tried would there be an expression in the finished form that provoked some response in me as the texts had done?

Would these pieces become landscapes of time?

The purpose of the writing was to develop detail around a situation from my past in an attempt to fill in some missing or forgotten parts, to achieve an emotional response from that recollection.

My question was could that exercise then create the foundation for the working process. I hoped it would provide me with a frame of mind to begin, and then develop each stage, which would then represent a moment in time each connected to the next in a linear

way, so a story or piece of music is a good analogy. The overall form is then the result of those individual moments.

The work is then a result of the process. The process is in part a vehicle for self-discovery.

Once said or written a thought cannot be so easily disregarded so by using writing and making I can piece together aspects of my own make up.

Something that has become clear is a duality in my character. Two sides that have surfaced independently in the past and almost seem at odds to one another. A desire for control and security and a need for freedom and resisting control. Often the two things have been in conflict or one has been ignored for the sake of the other. Now I recognize the dual approaches not as incidental qualities but as two fundamental characteristics of myself. They represent order and chaos.

When I began working on this project theme the two sides were very much there, but not in unity. The sketches I made were very stiff in their expression; the idea was too literally translated and therefore lacked the freedom of expression that I felt was required. The early 'bird' pieces show this approach and after some months of engaging directly with the concept, drawing and planning what should be made, I stopped planning, I stopped sketching and almost out of frustration took a saw and some plywood and began cutting forms. One led to the next and within a day I had made a necklace that while still embodying the concept had some other expression that was absent in previous sketches.

I can say that the process of making intuitively was allowed to prevail, and as a result when I look at that piece (green/yellow/red, page 6) objectively I can see that it contains subtle elements of many of my interests and characteristics that were not permitted to surface previously because of conscious decisions to control the process.

Music had cropped up several times in my memory writing. It was an important influence some years ago and I was beginning to recognize some similarities in the way I was working to the way many musicians improvise. There is usually a strict framework in music that the player follows, though perhaps not consciously. The improvised play becomes an expression of the subconscious mind that relies on previous preparation. The resulting sound is a combination of many notes or rests that on their own carry no recognizable expression but overall they can have a powerful impact on the listener. A player must get in to a certain frame of mind for the best performance and it is something that belongs only to the present: Unrepeatable and irreversible.

One source of inspiration is the film "Ascenseur pour l'échafaud" 1958 directed by Louis Malle in which Miles Davis, 1926 - 1991, improvises the score while watching the screen.

Others musicians include; Blues singer/guitarist Leadbelly 1888 - 1949, Fats Waller 1904 - 1943, Louis Armstrong 1901 - 1971 particularly his Hot Five and Hot Seven recordings and pianist McCoy Tyner, 1938 - .

Improvisation has been explored in the visual arts as well of course with the Abstract Expressionists exploring spontaneity and

Russian artist Wassily Kandinsky working with abstraction and the expression of the subconscious mind.

I wanted to achieve a feeling of improvisational flow as I made each section and drove the composition along. I would also like the pieces to be read as one form, without the eye being distracted. It would require certain qualities from the material I would use or the flow would be interrupted or even never start. If the flow could not begin there would be the danger of conceptualizing the forms and I didn't want any of the exam pieces to be preconceived in terms of form. My conscious thoughts were to be engaged in possible technical solutions for construction, finishes and function.

The focus became concentrated on improvising form within a framework and to explore this I felt it necessary to use a larger scale. It was interesting to discover that Alexander Calder, 1898 - 1976 better known for his mobile sculptures also worked with jewellery. Some pieces were of a more usual size and some were quite large with around 1800 jewellery items made during his lifetime.

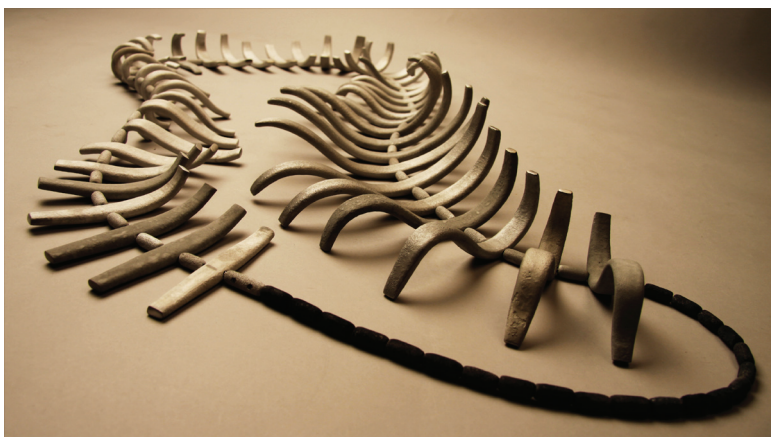
My early pieces were inspired by simple physical events, natural occurrences such as the cycle of growth and decay or the movement of a bird's wing in flight. These are another guiding element in the process, a concept to remember and be consciously aware of during the making, although I am not suggesting these are negative qualities they perhaps contribute some predictability to the form.

What happens if I use something less tangible as the inspiration, something less literal to drive the composition along?

What would be the feeling then from the final form?



The large pieces (shown left) are an experiment with that idea in mind. I wanted to take out some of the requirements or expectations ordinarily associated with jewellery such as wearability or functionality and exaggerate the expression by using a larger scale. Try to bare down to the minimum the controlling influences so that the focus was on the overall form and its expression. The pieces must be linear, they will be made and assembled one piece following another, have no definite beginning or end and they must use the body as a platform or framework for display. Beyond that they must be free to grow in to their final form.



It was important not to restrict the idea, at this stage of its development, by imposing functional prerequisites. I would explore the working process and then see what could be done afterwards to finish the piece.



An important aspect of my working process is problem solving and working within certain limits. These limits are usually environmental. What space or materials I have available. Obviously it is possible to find spaces to suit a job or buy almost any material but I enjoy the challenge of using materials creatively and find that often the most inventive solutions come out of these restraints so I usually use what I have already available in my collection of 'useful' things. I am not uncompromising in this way of working but I find that I am often influenced by these choices in the making process, particularly as I like to work quite quickly and spontaneously and using what I have available keeps the work flow going.

Left, top to bottom: Plywood, paint, steel, enamel, length 1.8m

Aluminium (anodized), steel, length 1.8m

Ceramic, oak, brass, string, steel, inner circumference 0.75m

Memory.

I walked in to the room. There was an exhibition but I hardly noticed it, I was immediately conscious of the smell. It was perhaps a carriage store in former years, or so it felt by the proportions, and carved in to a rock wall. The large arched entrance was boarded over with only a small fabric doorway for access. Step through that split, hanging sheet and the space within is dark, noticeably cooler and has a smell of wet stone. You only find that sensory palette underground. That was where I found myself, 18 or 19 years old and working in a coal mine. Its nearly 20 years ago but that's where I was, walking along the "main way" towards the coal face, stooped forwards and head leaning to one side, following the yellow shaft of light coming from my lamp. It may be 5 foot 6 inches from floor to ceiling, between the timber pit props and 5 foot 6 inches wide but at the face, your working, you know it's 5 foot or less head room. Water drips from the underside of the timbers like drops of amber through your lamp light, small flakes of stone let go of the ceiling as the earth around you sighs. If you are lucky your working will be dry but on the half-mile walk in you balance on the narrow iron tub rails like an ungainly gymnast keen not to wet your feet or slip on the greasy shale floor. You learn not to move your eyes independently but like an owl move your head as your vision is limited to the narrow, bright, yellow shaft of light coming from the lamp on your helmet. It's not far from the entrance when you go around daylight corner and all contact with the world familiar to your senses is behind you. This is a drift mine not a deep mine. It's entrance is on the hill side and it follows the seam of coal which is effectively on the level in to and perhaps 2 or 300 meters under the moorland above. Some of the mines extend for 5 miles before reaching the face. I'm lucky. My pit was the most recently started, it's dryer and the coal seam is a better height. 15 to 18 inches. Sandwiched between stone above and below. Stone is very heavy and hard to remove, plus you only get paid for tubs of coal so move as little stone as possible. That's why the main way is as narrow and low as necessary but either side of the main way the coal is worked 5 or 6 meters back and 2 meters ahead giving a coal face of 10 to 12 meters. In this way several

miners, each with their own working, advance systematically through the coal seam. This type of mine working hasn't changed for hundreds of years. There are no modern machines here. Only a pneumatic or "windy" pick tells me I am, at least in the 20th century. Some of the miners can remember when horses were used to pull the tubs out at the end of the day.

The coal is manually chipped away from the face and shovelled back to the main way and in to a tub. Crawling 5 meters through a 15 inch gap, and shovelling the loose coal out to the tub, a square trolley on rails, takes a certain skill, strength and determination that becomes second nature. It is also a focus. If you think about the weight of stone above you, listen to the cracking in the ceiling or watch small pieces of coal jump off the face as the weight from above settles, you can panic. I had never had to deal with fear before that. Down here it was part of the job, made light of and a generator of raw humor, but everyone knew the risks and you had respect for all the men who worked down the pit, whoever they were outside.

The pick was heavy and cold. Made from cast aluminium and steel with a sharp hardened steel blade. The air pipe was probably 1 1/4 inch rubber, called the "hogger" and was connected to a reservoir tank some way down the main way. The connections always hissed from leaking air and were wet from condensation. With the trigger depressed the pick shook your entire body as you put your full weight behind it, forcing the sharp steel tip in to the coal until it gave up some lumps. The exhaust was a grid of small holes in the steel body. The rush of air, with droplets of water spat furiously, stirring up a fog of coal dust so thick the lamp could penetrate only a couple of feet through the glittering haze. Still, it was better than stone dust. When we had to drill through stone the dust was so thick I could taste the sulphur and so fine any mask was quickly blocked and made breathing impossible. We always did that job last so we could leave the dust to settle overnight.

Process.

The first piece is made from plywood and steel. I decided that it would extend from one wrist to the other. That was because of the possibility of movement in the body between those two points and it was a relatively long span in which I could explore improvisation. Movement is also an aspect of the works that I would like to explore as mentioned in the project proposal.

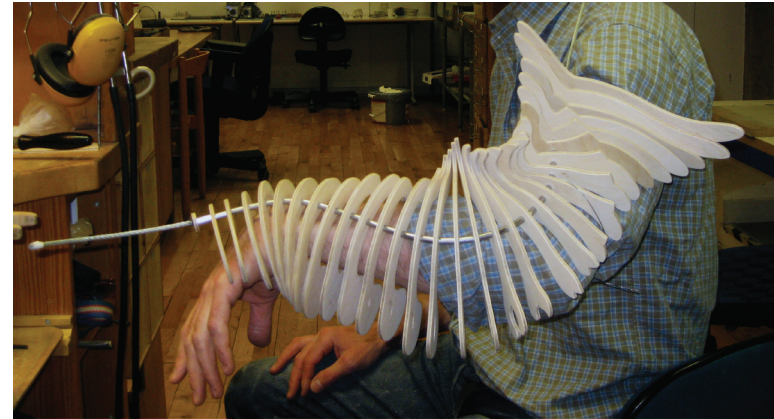
I am interested in what the physical object communicates as a static form but more I think what happens when there is an interaction with the human body, and the animated form can reveal or conceal different facets.

Something in common with all three pieces is the difficulty I had actually beginning. Once the first form exists the process takes over but it was quite a challenge to justify to myself why one form and not another was best. Was there a particular form that suited the theme I was trying to work with?

Should I concentrate on the memory texts to find the perfect beginning?

It seems such a simple decision to make but it felt as though the entire piece rested on the quality of the first form.

In actual fact I cannot say there was any special reason behind the first piece's shape, it was just important to begin and if I remember correctly after working so far along the piece in one direction and placing it on my arm, I found that it fitted better in a certain place so I went back to the first point and worked the form in the other direction.



Above: Early stages of the first piece.

I was cutting about 10 pieces in a day to begin with, which meant the flow was interrupted but it was possible to pick up the last piece and see where it might be going. I was constantly resolving and initiating new movements within each section. As a point began and grew it must go somewhere.

Where were the limits?

The pieces could grow anywhere so there was some conscious thought keeping them within the realms of body dimensions and also the dimensions of the ply board I had, and hand saw I was using. I found the hand saw quicker and more accurate than the machine saws, which I feel create some distance between me and the material.

There was quite a lot of waste especially towards the larger shoulder segments because they had to be cut, then traced before altering the tracing and cutting the new form so it was only possible to do one at a time.



Left: The segments. Here they have been painted.

As each segment was cut it was also drilled and sanded then threaded on to a steel cable. Temporary ends were made and I decided on a suitable gap between each piece so that spacers could be made.



Left: Testing the fit.

This was necessary so the form could be assembled as it was created and helped with the continuity of ideas when I had breaks in making. Only the ceramic forms were made in one session.

The decision about spacing of segments was based on the perception of the overall form being maintained, allowing flexibility of the piece and not making more parts than necessary.

The spaces create the rhythm. There is a relationship between that, and how much each segment changes, that affects the sense of form.

Right: The steel tube was hand made. It was enamelled after the wood was painted white.

Visible at the centre of this picture is one of the end clamps, the other is concealed in the wooden end piece shown.



Originally the spacers were intended to be subtle and as invisible as possible. They should also not take too much time to make. I had some 0.5mm steel sheet long enough to make tube so I have used that as it adds very little visual, or actual weight, being no more than a sleeve over the cable.

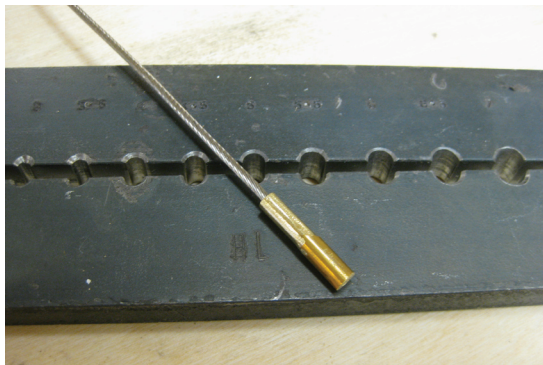
The finished piece has now had each tube enameled red, which is far from subtle because the line created by the tubes took on a significance I had not considered, particularly in the plywood piece because of the three dimensional movement of the line that is absent in the others. The red line suggests to me a vein and a sense of life and movement along the composition.

The idea expressed in the form has no definite beginning or conclusion so the ends are also red, suggesting a continuation.



Left: Wooden end pieces with enamelled plate sitting on the beaker.

The cables I use need to be secured at the ends or at the join. They cannot be soldered or the cable loses its flexibility and strength so I made a crimping tool that has allowed me to crimp soft metal ends on to some of the cables. It worked very well on smaller cables and has been used successfully on the ceramic piece. The aluminium piece required an alternative solution because I could not create enough force to squeeze the aluminium crimp.



Left: Crimping tool made for various sized ends.

The plywood piece needed the possibility of disassembly in case I had to repair or replace any parts so the ends had to be removable. Their size meant they would be very obvious so I made oversized end segments in which I could conceal the clamp.

I have used this exam work as an opportunity to challenge myself. It could have resulted in failures or unfinished pieces but it was necessary to try the unknown and challenge prejudice. My preferred approach to working is to gradually reduce or reform a resistive material by hand, while remaining in contact with it physically until a point is reached where by its proportions and form feel appropriate and correspond to my intellectual or emotional requirements. So in that respect I am using materials or techniques that are unfamiliar.

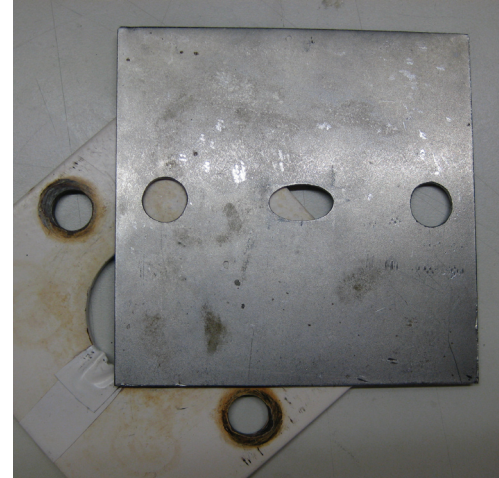
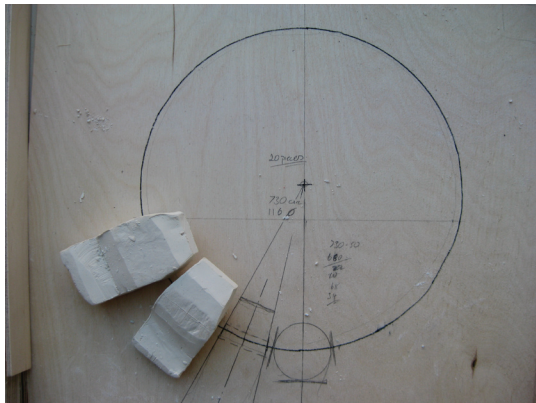
It has been an interesting route to take, some personal preferences are revealed by the challenges that are strong enough to remain intact despite the unfamiliar ground.

I wanted a material that could be shaped freely and relatively easily so that it accommodated my desire to form a segment, that related to the previous one without spending too much time getting it so a flow could develop as the overall form grew. That meant that there could not be more than one step involved in getting the shape, so cutting, bending or carving work well; A direct action by my hands, not considering finishing which can be done afterwards.

The following pages show images from piece's two and three. They also had the same improvisational approach as the first.



Left: Never having used ceramic before it took several tests before I could find a way of shaping one piece after another.



Above. Once the extruding machine was discovered I made a die and created the basic form with which to work.



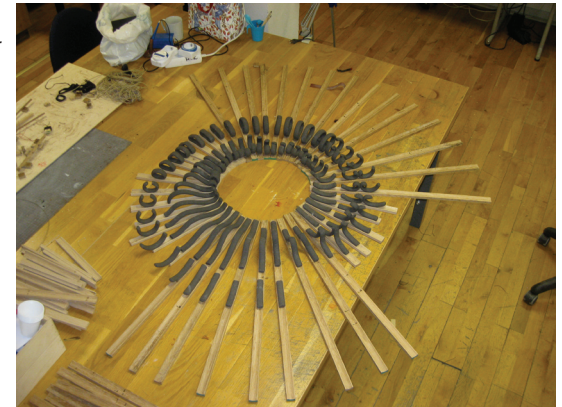
Right. No thought went in to how these ceramic pieces would be connected prior to firing. Once they were fired I decided to leave their appearance as unadulterated as possible, reflecting their quick and spontaneous formation.



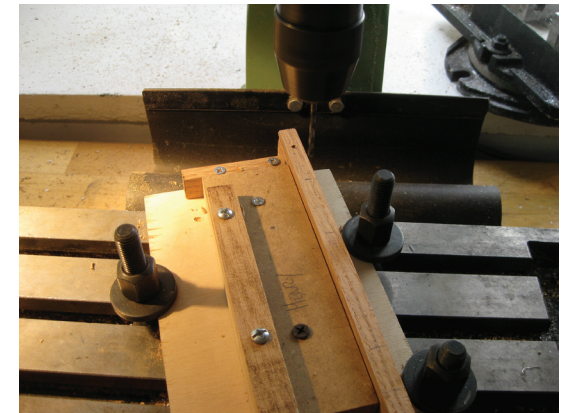


Right. Initially the piece was linear but with thoughts of wearability it became radial.

One inner cable will connect the wooden sections.



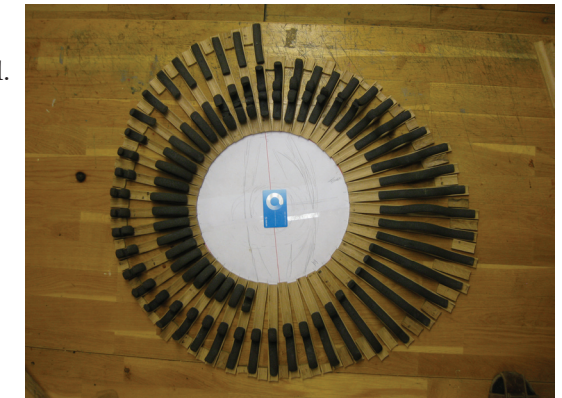
Right. All of the holes in the wood were drilled with the aid of a guide. It meant I did not need to mark each hole.



Left: After several tests I decided using a wooden carrier was most suitable. It allowed me to connect and support the pieces without altering them. Preserving them in their original state.

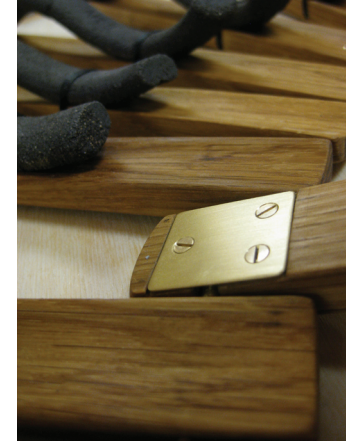
Right. There was a lot of arranging and rearranging before the final configuration could be fixed.

The blue card is creditcard size.





Left: The inner holes were lined with a brass tube which also acted as a spacer between sections.



Above. The unfinished crimp joining the cable ends with the wooden piece to conceal it. A small brass cover conceals the crimp.



Below. The final piece being worn.



Left: Testing some string. This is cotton which I waxed. It was not strong enough so waxed polyester was used.

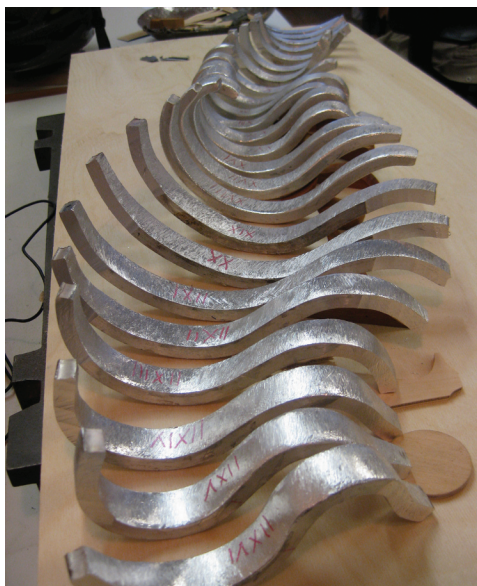




Left: Aluminium bar 20 x 10 mm hand forged to shape then filed to profile the ends.

This turned out to be extremely labour intensive.

Right: I had thought of this piece rather loosely as a linear form with little consideration for how it would interact with the body. Originally conceived as a collar with a long tail at the back.



Below. Temporary wooden spacers were made to test the distance between each piece and how that affected the overall form and flexibility.

Right. I tried various ways of fitting the piece to the body. It worked very well at the front but how to deal with the ends took some resolving. Here I am trying a loose end hooked around the neck. The weight of the tail section was too much and pulled the arrangement out of shape.



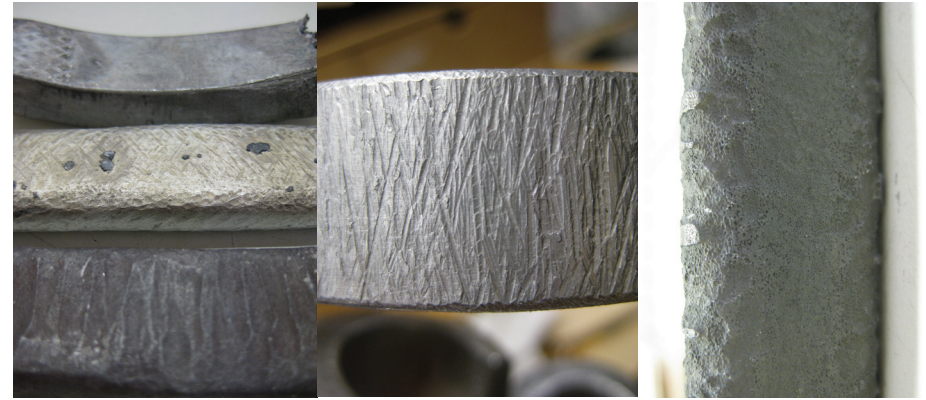
Right. Second half. After struggling with the first half I decided to profile the ends of each piece with a milling machine before bending. I had decided on the lengths of these pieces partly due to what material was left and how much longer the piece should be. Also the longer pieces took more time to form and finish and were heavier. At this stage there was still going to be a long tail.





Above. The second half under-way.

Right. A long tail.



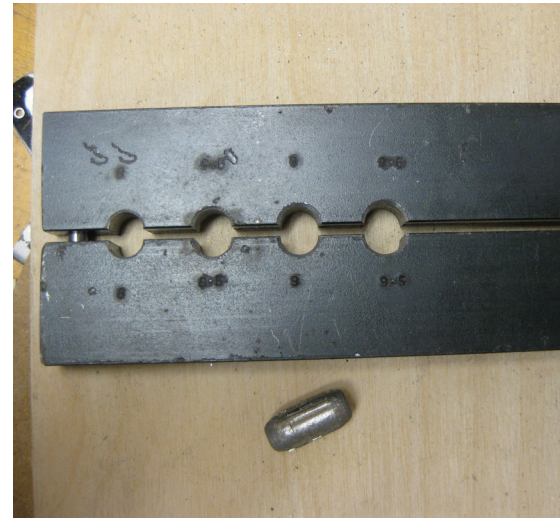
Above. Thoughts of finishing. I wanted to express the aluminium's own qualities so tried heating, filing, hammering, etching and anodizing. I was keen to avoid using a coloured anodized finish because it is so commonly used and would be too easy a choice to make at the beginning.

Below. Testing sand casting out of interest.



Below. The filed surface was too inconsistent and labour intensive to achieve so I used etching initially.





Above. A larger crimping tool for the 9mm aluminium spacers. I could not create enough force to crimp them so used a grub screw instead (right).



Above. The etched surface was very interesting.

Left. The first bath was caustic soda, then copper chloride, then nitric acid.

Below. I was very pleased with the overall finish of etching but it gradually got darker and left grey residue when touched.



Above. Each piece was cleaned and then anodized to give a permanent finish. The piece also changed in how it was worn. The sections needed to be supported along the whole length so it became a figure 8 instead of a free hanging tail.





Above. The anodizing process and its results. I tried colour but preferred the light grey of un-dyed anodizing.



Left. The dark spacers were dyed black so they did not disturb the form at the crossing point.



Conclusion.

Time has been a factor in all of these pieces. I had not fully considered the consequences of making large pieces with many sections, that although not intended to be absolutely alike, should be unified in their appearance. The improvisational part of the process was one thing but it relied heavily on planning before, and the finishing after.

This project began with questions and it ends with more questions. For me these objects that have come in to existence are footprints and they can only show something or express something of me if I let them come, unhindered by plans, ideas or strategies. I have begun to develop a way of expressing something of who I am and the body of work created over the last year is beginning to show some coherence with that thought. That is of some satisfaction to me but the pieces are too fresh in my mind for a truly objective view.

I feel that the work does of course express something of me but how directly connected to the text writing process is very difficult to quantify. At the onset I referred to using text as a foundation to the improvisation. I feel that the writing process has influenced how these pieces came in to existence. It was an important part of the process but I cannot say how the text directly influenced the forms we see now. I feel that the exercise opened my mind and challenged my comfort zone by forcing me to question certain choices made in life and simply accept others. This has fed in to my working practice and approach to what I make. Writing memories was a way of putting words to my own behavior which

otherwise may not be considered. Certain characteristics have become apparent and now they are in the open they become way markers for future endeavours; For example the duality of my character. Two sides that have merged in my recent works. Far from being in opposition to one another they are like pillars supporting a beam. Each must be maintained at the same approximate level and strength for the beam to bear weight. Perhaps I am resolving some internal conflict with that acceptance.

Movement was at the beginning an important aspect and something I hoped to explore once finished with the making. This is something that has opened up future possibilities although I have only had the opportunity to try using a performing model briefly due to time constraints. Using someone else and letting them interact with each piece was an interesting experience. I had no input regarding what they should do, I simply took photos and film of their reaction. It showed the pieces in another light. The plywood piece was by far the most interesting in terms of movement and I hope to create more pieces of this nature for the purpose of performance. The other two pieces revealed themselves to be so much more interesting when worn than lying flat as they had been mostly during the making. That was one disadvantage of working at a large scale. They were less interesting in terms of movement though which is perhaps due to them being constructed flat rather than on the body as the first piece had been.

My route in life has given me knowledge that is not defined by any discipline or borders. My self-expression and confidence has been improved in a broader sense by being able to draw on these experiences. I think that is what I have felt, deep down, all along. An urge to communicate something that I felt but could not articulate because I did not know what it was or even have the language to begin. This project has been an opportunity to expose something of myself to myself that was hidden, suppressed or undeveloped. An opportunity to gather many loose threads in to a supporting net of confidence.

This process is more about myself than about the work. The pieces are the result of my interest in what of my own make up will be revealed when the subconscious becomes tangible in the making process. What is revealed is of interest. I want to understand and accept some of my characteristics by exploring certain periods of my life through writing and making. I must be honest about where I have come from, who and what has influenced me and in what way. I am responsible for my own work. I am responsible for my own actions and self. For comfort with that responsibility I must know and have some insight in to the self. The work undertaken for my Master exam forms part of that process.

The following images are from two photo shoots where I recorded some ones interaction and performance with one piece.





Sources.

21/05/2011, musicians dates and names from, <http://en.wikipedia.org>,

21/05/2011, <http://www.wassilykandinsky.net/>

21/05/2011, http://en.wikipedia.org/wiki/%C3%89tienne-Jules_Marey

21/05/2011, <http://urbanseagull.blogspot.com/2008/08/tienne-jules-marey-1830-1904.html>

21/05/2011, http://artinvestment.ru/en/news/exhibitions/20081229_science_photography.html

22/05/2011, <http://www.farlang.com/exhibits/calder-jewelry/online-exhibit>

THANK YOU

I would like to express my thanks and gratitude to those people who have made this project possible with their support, guidance and belief in me. They include,

Professor Karin Johansson

Lena Olson

Bodil Frendberg

Magnus Haglund

All staff at HDK

Fellow jewellery students

Karin Frendberg

Ola Frendberg

Pernilla Eskilsson