

Steps in a Developing Framework for Sustainable Designers working in the Textile Industry

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The purpose of this framework is an attempt to outline a set of design approaches by displaying three steps: understanding, applying and analysing the sustainable concerns of design. As such I have developed three steps for designers working in the textile industry which together form a framework for change. Step one, intended use for this is to understand the framework of activism looking at the likes of Cradle to Cradle (Braugart and McDonough, 2009) and how such movements can be re-used and recycled and themed. The second step is to address in a case study of how my experience of working in an industry links and refers to the first step of understanding to now applying it. Lastly, the third step of the framework will show the improvement and the critical analysis of how my researched improvements can be addressed in my own future practice and businesses in the form of a manifesto.

Step 1

Design has become a large contributor to climate change. It can also have a positive contribution to making a difference and helping in the current crisis.

Design, 'as a noun means, intention, plan, intent, aim, scheme, plot, motif, basic structure – connects with cunning and deception' (Flusser, 1999, p.17). The Greek meaning for design refers to it being a 'device designed to deceive' (Flusser, 1999, p.17).

Design also has the notion of being 'trapped' (Flusser, 1999, p.17). Design has currently led us into a trap that we can't get out of. Advertising is dishonest, it creates false beliefs and dampens the impressions of what people know. This affects how much we can act on the change we make. The different steps of design effects the eco-system in some way. For example, the process of fashion items, uses large amounts of toxic chemicals to grow the cotton, the dyeing process, large amounts of water in the process of making plus the shipping of it worldwide. As a result, most products end up in the fast fashion problem with consumers in the habit of binning it after a few uses. There is a monumental scale in which design effects the planet. The benefit of design is that we can use what we've learnt in the making process and address it to improve the sustainability of design.

The first step is to understand. We need to understand the issues of climate change in the design industry and how there can be positive outlooks from designers and craftsmen/women. This step goes through different theories and movements of artists and designers that I think can help provide sufficient research in ways I can help promote my own practice and positive strategies to other businesses and designers.

Activism, 'the activity of working to achieve political or social change, especially as a member of an organisation with particular aims' (Oxford University Press, 2019). Craft, 'an activity involving skill in making things by hand' (Oxford, 2019). Craftivism is a mix of the two; craft through activism, 'a spoonful of craft helps the activism go down' (Martyn, 2010). Marianne Jorgenson and the cast-off knitters worked on a project, Pink Tank (see fig.1). They collaborated to knit over four thousand squares covering a world war 2 era combat tank (Buszek, 2011, p.207). The activism portrays the current war in Iraq whilst the pink squares over it gives it the sense of being disarmed. 'The main impression of the knitted tank is that it consists of hundreds of patches knitted by many different people in different ways: single coloured, stripes with bows or hearts, loosely knitted, closely knitted, various knitted patterns. As such it represents a common acknowledgement of resistance to the war in Iraq' (Buszek, 2011, p.207). It is worth noting that knitting is known to be a therapeutic and relaxing hobby, peaceful. Placing knitted squares on top of the tank gives the tank a cushioned feel and no longer makes it appear as a threat. With the joint collaboration of the knitting it then symbolises the connection of everyone's signature on the tank, with the gesture of this also being in a public place I think it emphasises the group of people and also all the stitches unifying everyone together. This also creates metamorphosis, 'presence can be altered/registered simply by leaving a makers mark,' (Sennett, 2008 p.120). Therefore, the change of the procedure, everyone knitting in different styles, maybe looser or tighter stitches. Also, the process of how all the squares are made by a different person, adds an individuality to making a change. Considering this, how each individual square is then stitched precariously together then creates a complete change and appearance resulting into a blanket, making it whole. Other changes that has been caused in the making of this blanket are:



Fig.

- 'different techniques of the patterns.
- Knitted and crocheted squares equate to the preference and the change of a person making it.
- They are able to use a democratic process as well as contributing each person's dissent mindfully' (Buszek, 2011, p.207-8).

The tank portrays that it is wearing the blanket, covering and mending. Each person's stitched signature is worn by the tank and so it appears to be wrapping itself in everyone's dissent of the war and it carries views and opinion on its shoulders. Using the pink makes it stand out and creates a larger ambience of the blanket opposed to centring the focus on the tank. This affects how the tank is read.

The wrapping denotes a relationship to the tank's blanket: comfort, warmth, care, mask, camouflage, bandage, cloak, hidden, absorb, cover. 'A tea cosy for the tank, contrasts the idea of weapons and familiarises itself with the safety of knitted wool' (Buszek, 2011,

p.196). Being able to wrap the tank gives it the confidence of feeling safe and hides the danger of what is underneath. It softens the blow. Comparing this to the climate change and related issues, we hide the truth by putting a security boundary behind what we want to here and the truth of the matters. Society today lives in a world of not knowing.

The blanket covering also makes the tank more aware of the presence of itself, changing the physical presence of it also makes it no longer a scene of destruction and lessens the monumental value of the object also. The material consciousness of this has been left as a peaceful political method, but still made themselves aware that they exist. The denotive of pink: sweet/ness, nice, playful, feminine, romantic, but also large amounts of the colour pink can bring physical weakness. Having a large amount of this colour re-duces the value of the tank because it is then describing itself as having a feminine touch. Especially in the era of world war 2, women were considered of less importance over men; creates a counterargument of what the tank would usually stand for. (Gives itself a negative presence.) The pink is also like a skin effect that wraps around the tank. The colour of the blanket in general makes it lose its authority with it.

Do it yourself (DIY) and do it together notions are reshaping themselves. The ideology of this explains that designers are open to using different tools and materials. The idea of patching it up yourself. The purpose of a tank is to be a weapon of destruction for, military conflict. The word tank also defines as 'holding, transporting, storing liquids, heavily armed and armoured vehicle that moves on tracks and protects those inside (Cambridge University Press, 2019). Affordances, 'a use or purpose that a thing can have, that people notice as part of the way they see or experience it' (Cambridge University Press, 2019). This has the same approach to Richard Sennett, *The Craftsmen*. 'Collective making is also embodied in the world of craft: the social skill-share event of the sewing circle, round-robin quilts made through intentional networks of patch workers, and community-embroidered local histories (Carpenter 2011, p.49). The similar phrase of make do and mend, creates a metaphor to the tank. The knitting as a social project and collaboration resonates the idea of making and mending brings people together. At the time of war when the tank was in full use of destructing anything in its path, people would come and re-build and mend what had been destroyed. The knitting of this blanket symbolises the mending and caring for the tank. Using what you have, in the war, everything was rationed due to shortages. Perhaps this could have a similar resemblance. The connection between the 'form-giving' of the blanket, described in the 'The textility of making' these two notions of the tank and the blanket 'looks with it as it unfolds in the world' (Ingold 2009, p.97). This is another way of the object (tank with the pink blanket on top) relating to all the social agents that come with it (ideologies). I think the result of this is how an object and idea can portray multiple different values of meaning and the intentions that they bring. 'Perhaps the key to ontology of making is to be found in a length of twine' (Ingold 2009, p.100).

Do it yourself notions also stand for self-empowerment. Empowerment is 'the process of gaining freedom and power to do what you want or to control what happens to you' (Cambridge Dictionary, 2019). The process of being able to mend and care for what you symbolise self-empowerment. Celia Pym is an artist that focuses on mending and transforming of items (Embroidery, 2019). She worked on The Gold Cape project, the project was bringing communities together and was to be used once again 'without fear of

damaging it – it can after all, always be mended again.’ (Embroidery, 2019, p.16). The ethos of this regenerates the items with what otherwise would be associated as no longer fit for purpose. It also shows the process of caring and the effort that goes into the creating, leaving a maker’s mark and empowering the freedom of reviving, re-using, renewing it however desired.

To understand knitting and how it can be read on objects, it is useful to have a knowledge of semiotics. Semiotics allows intangible aspects of culture to be understood through a set of relationships which when seen together become a sign. ‘A sign can be either a word, object, picture that has meaning to someone.’ When broken into parts, ‘The sign [...] consists of the signifier, the material, object, picture and the signified, which is the meaning. A sign is always thing plus meaning’ (Williamson, 1978, p.17). So, when we look at the tank in relation to semiotics, we see knitting plus tank. The relationship between both becomes a wrapped tank or war machine covered with pink blanket. The sign is then one of an activist object removed from the connotations of war. We ignore the content of the form; we overlook and do not study the style, shape and appearance, what we see is actually made of sets of meanings within the relationships of the style and form used.

The current moment we live in is called the Anthropocene. This ‘refers to the geological time during which human activity is considered to be the dominant influence on the environment, climate, ecology of the earth. Cene – is derived from the Greek word of new or recent, (Palaeocene, Holocene).’ (OED, 2014) It mainly develops from the period of human development including from the beginning of the industrial revolution where human activity has made a major ecological force. Emily Parson-Lord (TEDtalks, N.D) talks about how she makes ‘art in the way we breathe.’ She focuses on the vital, immediate and the intimate quality that air has throughout history. From this she creates art and talks about the metaphysical change and the effects we can have on the Anthropocene. She also speaks about how air is easily forgotten and only comes to notice when maybe a cloud, mist or fog becomes apparent.



Fig. 2

The air and the quality of that we breathe is all related to the Anthropocene of today. The invisibility of it hides the truth, but when it becomes apparent our sense of the air and surroundings changes. Goffman emphasizes the ways in which we consciously create images of ourselves for other.

Cradle to Cradle (Braugart and McDonough, 2009) visions have been experienced through the companies that they have observed and worked to transition alongside them. This means that these steps have been generated by witnessing what companies go through when they re-tool and re-invent their eco-effective vision.

‘Cradle to grave, the approach of extracting resourced materials, shaped to products, sold and then disposed of in the grave’ (Braugnart and McDonough, 2009, p.27). ‘According to some accounts, over 90 percent of materials in the U.S come to waste almost immediately’ (Braugnart and McDonough, 2009, p.27). Consumerism plays a large problem to the throw away system we live in. It is normally cheaper to go and buy the same item opposed to getting it fixed. The demand from advertising also equates to the pressures and to buying and wanting the next item. We live in a reality where we’re not fully conscious of the amount we consume, to want all these items is excessive and is creating a huge amount of waste. Textile industries use large volumes of toxic chemicals and vast amounts of water, we are throwing away the resources that are not renewable and are toxic to ourselves and pollutes the environment we live in.

The eco-effective step from cradle to cradle, ‘get free of known culprits, follow informed personal preferences, creating a passive positive list, activate the positive list and reinvent’ (Braugnart and McDonough, 2009, p.165-178). The idea of these steps is to get to a point where you can swap out the classed as dangerous materials such as asbestos, that are classed as dangerous not fit for use to use eco-effective materials that are safe. The last step addresses how you should ‘re-invent’ what you know from the old, change the history by taking what is beneficial and re-using it in an approach that is a better in the process and for the economy. ‘Designing a new infrastructure. Don’t just reinvent the recipe, rethink the menu’ (Braugnart and McDonough, 2009, p.179). ‘DESSO is a textiles and floor company, committed to the morals of Cradle to Cradle principles’ (C2C-Centre, 2019). They have used the five steps to gain their own eco-effective textile substances that are being ‘developed to creat innovative products for a healthy environment and material neutralization’ (C2C-Centre, 2019).

‘Signal your intention. Committing to a new paradigm, changing the framework itself, obvious changes will have a better impact on the client base. Transformation of values and physical transformation’ (Braugnart and McDonough, 2009, p.182). Everyone needs to have the same view to promote their values across to the clients/customers otherwise creates a confusing direction to follow. The substitution of values and what signifies what you are trying to aim for is important. The value in the making and designing is conscious part to any business but if you are making a piece of textiles that is made from cotton and selling it as organic, it’s a step in the right direction but you still have the agricultural pesticides and similar to grow the crop in the first place so you are not fully signalling the right intention.

‘Restore, striving for “good growth,” not just economic growth’ (Braugnart and McDonough, 2009, p.183). ‘Restore – build, improve, construct, recover, re-establish, renovate, mend, heal, rescue, cure’ (LLC, 2019). The symbolism of being able to restore and mend the growth of the economy

‘Be ready to innovate further.’ (Braugnart and McDonough, 2009, p.184) When you believe that you have reached the optimum product and believe that it is as efficient as it can be, maybe relook into comparisons and the perfections what products are already the similar. No matter how much you can invest in something, there is no idealism of perfect as the reality of the trends and styles of today are a constant change that creates an imperfection in the economy but on the other hand is used for good growth. The change in nature and

the atmosphere, community, environment is what creates design. We change to the ambience around to suit needs by constantly learning. Change comes in time but the framework of how we build ourselves are created in steps of always working to produce.

Orangebox, relating to cradle to cradle (Braungart and McDonough, 2009, p. 9) treat their work like a pilot project. 'A small-scale experiment or set of observations undertaken to decide how and whether to launch a full-scale project' (Collins, 2019). The benefits of using a pilot project means that you can integrate new products or materials into the main flow of production. This benefits slow progress into swapping and using trial and error without too much disruption to the company itself. The negatives to this are that you are not addressing the issue of working to better sustain yourself, rather you are only solving one problem and not digesting the rest of the overlying problem.

The steps learnt from the understanding of how we address climate change. The use of craftivism and how it addresses the key points in an activist outlook, can help to promote and use a profound effect on showing climate change and the symbolisms of other people's views. This type of action gives consumers a wider angle becoming socially aware of these details. Social media and online sources also helps to transfer these types of movements around for viewers quickly and efficiently. It creates a collaboration of people and a movement. Furthermore, the impacts of being able to help yourself by using mending and caring resources addresses tips for a better sustainable design process for a designer. These varied methods all have their negatives and positives on how each designer views a solution and system of steps to gaining a productive eco benefits.

Step 2

Imperfections, (imperfect) 'not perfect; faulty or incomplete.' The sustainable imperfections of the international office furniture company Orangebox; working to improve the issue of trying to better how they address the volume of fabric they discard. Orangebox has given us the opportunity to work with them to create a stool made from their waste which helps visualise creative ideas to put into mainstream.

Heavily committed to working the economics of positive long term sustainable improvements, Orangebox, built in 2002 already have key goals of being renewable and recycling responsibly. Measures for them are already put in place, being part of a committee, the Furniture Industry Sustainability Programme (FISP) ensuring that the waste is sorted and diverted into relevant recycled areas. Furthermore, they are consistent with a zero landfill policy of their products whilst trying to upcycle pre-existing chairs, recycle any unrepairable parts or turn the beyond repair items from waste to energy (Orangebox, 2019).

The main key points that I understood to address to the brief were: the general ambience of the company wanted their workers and their products to promote the ethics of working at home feel. The reasons for this was to help reduce stress, being more relaxed in a working environment. Also, the majority of people preferred working at home so they were trying to bring that into the work place to reduce the amount of sick days that people took. The acoustics of certain parts of the furniture was something to address. The way certain chairs encased people to provide a more private scene for meetings or if there are social areas they used different products to maybe open up the space or give a better sense of wanting to interact with people.

Biophilia was talked about a lot. 'An innate love for the natural world, supposed to be felt universally by humankind' (Collins, 2019). Being able to bring the outside in. The main features of biophilic space consist of 'natural and local sources, varied vegetation, overlooking landscapes' (Sterkenberg, 2017). The benefits of biophilia design is that it gives sustainable incentives and blends into the scene of the office space. (Sterkenberg, 2017). Not only is it used for an aesthetic purpose but also has distinctive benefits. It can also 'reduce stress levels, lift moods and enhance the creativity of individuals as well as productivity, increase health and wellbeing, reduce fatigue' (Sterkenberg, 2017). The main focus of the biophilia feel was for the purpose of the employees to promote their health and wellbeing by using the design of different spaces whilst incorporating sustainable local resources.

The purpose of our visit is to address the sully stool that was addressed to a certain type of pattern and look at how waste can be reduce in the making process of this. Whilst in the making and addressing process of the stool process, I considered some solutions that could be used or promote further idea development into it: adding a customisable range, (see fig.3) 'applied stool.'



Fig.

this, letting the

a bigger opportunity of waste reduction due to the longer fulfilment of the product and also gives people a better sense of ownership. This could help extend what they are already working towards with their recycling and renewing scheme with certain parts of products.

Aesthetics of items as decorated characters is one of the factors to why people buy items in the first place. Working to use the small offcuts that can no longer be used and applied in the process of decorating is a small gesture and indicator to reworking what would be waste. This is also something that could apply and relate to a person's moods and expressive motions.

'Wabi translates to roughness, humility, asymmetry and imperfection. Sabi relates to loneliness, solitude' (Kwan, 2012, p.4). The notion of wabi sabi is to embrace the imperfect. For example, the items clothing designed with tears and wear before purchase. This is a consumerism concept of the wabi sabi notion where as if you had an item of clothing that you had worn because of excess usage and holes and marks started to appear, that would be your own story on the item of clothing and signifies your own history of events, characterising the relative of its own 'beauty and ugliness' (Kwan, 2012, p.4).



Fig.

Whilst thinking about how the small off cuts and how they can be utilised, the stool as a hole, regarding how its built and what's used to stitch it together should be taken into consideration also. I researched into the use of rPET threads that are recycled plastic made from drink bottles as well as the spool around it, made from 100% polyester, (see fig.4) 'finished applique stool.'

The steps of making the stool was utilised around using the smallest bits of scraps and wastage that I would associate of definitely going to waste. The applique process was mainly to use the aesthetics to bring both the ideas together.

From working with this brief, it makes you realise how much efforts goes into one line of production, also the process and how much consideration that goes in the making of the stool and the materials they choose for it. I think that materials are picked are more for client purposes over the idea of it being sustainable and renewable. The type of wall that we had to use along with bits of leather, was coated in chemicals which left restrictions. If these fabrics were re-used and manipulated so there was a way where the fabric did not meet landfill but for using materials that are more organic, you are reducing the amount of toxic waste which is added to the environment.

Step 3

Analysing the framework and potential solutions for myself and others for the future of sustainable design. The main key points that could be a solution to help out look the crisis we are currently in.

The current infrastructure of how institutionalised systems are working needs to be re-addressed with the consideration of climate change. Our perceptions of ourselves and the views around us should look at why. The systems we still use today are what have caused to become in this climate crisis. 'The world is not to primarily look at but to act in.' There has been a lot of slow progress, and still is with the truth and facts of the current climate crisis. I think re-educating the system for the younger generation to access views on how they want to live their future should be taken seriously. We are the generation that needs to change otherwise there might not be a tomorrow. Looking into activist groups such as Fridays for future and the extinct rebellion. Activism and protests motions such as craftivism can help seek views in a new light and forward kick this.

Current systems could look at how they can address climate change which would therefore create opportunities of becoming sustainable. Systems such as cradle to cradle are building up a reputation to help improve companies by swapping out hazardous/ listed chemicals with environmentally friendly and eco-efficient products to put back in place. Other smaller, realistic goals on helping change could be as simple as reducing fossil fuels – consumer and citizen habits/rights. Also, companies divest funds of picking and choosing who they help and should have a stronger aim of helping funds go to companies that look to sustain themselves rather than promoting and feeding into the bad habits of fast fashion, consumerism, capitalism etc. Other smaller goals are to be part of renewable energy. Energies such as solar, geothermal, bioenergy, hydropower, onshore wind are looking to be on par or cheaper than fossil fuels by 2020 (Ortiz, 2018).

I think that working on small solutions can make a big impact. These changes need to be regressed into everyday life. Similarly, the movements such as craftivism or activism are good outlooks on how you could promote and press at an angle to people and companies. As a result of this, if people were to reduce an incorporate these small measures, in the longer term could create a bigger movement of validating renewable resources and reducing carbon emissions which also make ecological benefits.

Presently, a large proportion of history pays a role to how businesses work. Institutions need to overcome a more ecological way by learning from history instead of using the same structure that is no longer bringing positive structure to sustain our way of life; businesses need to overcome historical legacies. A large proportion of industries still work to the systems that came around in the industrial revolution stage. Processes hasn't moved a lot since then, maybe due to generations of the company, also the idea of changing scares a lot of people when the way the business runs works. But due to the climate change and evolving circumstances, the businesses that don't change I believe will be affected greater than the ones that are starting to move the times. Although some companies are changing, i.e, a lot of car companies are now producing electric or hybrid cars. The way they make

these though are still in the same manner of the production lines of the industrial age and are continuing to use resources that are limited and non-renewable. Although this is one step in the right direction, there needs to be a bigger outlook on the process and production as a whole. Relying too heavily on the past isn't generating fresh ideas, there needs to be a different look at how the history of making can positively add to the re-inventing of the new. As a result, we could come up with better reinvented ideas, (look at the cradle to cradle references for inspiration of how we have exhausted what we know from the history to its present usage. Need ideas to then interpret them to how we can now benefit from them for the future by looking at historical aspects in a completely different light.) – that's then when to example the processes the processes.

The branding, logo and packaging of products can improve if business honesty is there. The majority of the time when you purchase an item there is more packaging to product ratio wise. This is used as a consumerist technique, can sometime deceive the buyers, leading to false advertisement. This creates a cradle to grave approach. Wrapping items to then bin creates a highly wasteful situation. If business were more honest about their products, you could end up with a zero package solution but counterfeiting and fraudulent activity being a known issue in industries. Honesty and trust is a tricky thing to digest. The packing and branding honesty could be improve if there was a percentage with packaging to products that would reduce waste. Also, where possible, such as food productions solutions have already started to create a zero plastic packing scheme where some businesses allows you to bring your own tubs and reusable items to pack your own food so the waste is completely cut out. Also, people do disregard a lot of the processes how items get to the store. There's no thought how products end up on shelves which creates another consumer problem and the obsolescence buying things that will break or have a short life after usage.

The Anthropocene will need to also move forward with our current living circumstance of the throw away culture we have currently obtained. Trend cycles and fashion approaches also adds to the cradle to grave approach. We all constantly have a desire of wanting the next best items and get lured in through advertising branding and deals created.

How is our generation going to evolve on the next 10 years? I think there are two ways in which the generation can see and create outcomes for our future generations. I believe that we could start making an impact and addressing the serious issues that we are creating in the Anthropocene. It is not currently too late to change but I think the pace that we are coming to realise the situation we are in is poor. The other hand of the argument could see us disregarding everything that is happening around the planet and not bother to assist due to it not currently coming to effect us personally yet. I believe it will not be taken seriously until its effecting people personally, although people are having to drink from toxic water or relocating due to serious natural disasters around other parts of the world. The obnoxious characteristics of us will not look to help.

What future systems are there to help us? I think future systems like the likes of cradle to cradle are making a real benefit to ridding the non-necessities. By this I mean, they are utilising what is important to a company in an eco-effective manner without disturbance. If we were to change and address the sustainability concerns, then we'd have to look into the history of what has benefited us and what we can move on from and take with us for a

positive outcome. Since the industrial revolution, the ways in which we mass produce has not differed at all apart from having more advanced machines to rid of us our problems. The idea of being able to re-invent everyday tasks that we currently take for granted need to work.

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Figure 3: Appliqued Stool. Taken by the Author 8th October, 2019

Figure 4: Finished appliqued stool. Taken by the Author 8th October, 2019