

**EXPANDING  
COMMUNITIES  
OF SUSTAINABLE  
PRACTICE**



**16 NOVEMBER  
2018**



**SYMPOSIUM  
PROCEEDINGS**



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**Sustainability Symposium**  
**16<sup>th</sup> November 2018**

# Introduction: Expanding Communities of Sustainable Practice

**Suzanne Archer, Sam Broadhead**

We are excited to present the proceedings from our second one-day symposium at Leeds Arts University focusing on how to expand communities of sustainable practice within and beyond art and design schools. Given the need for art and design education to transform its mode of operating in times of massive ecological crises, the symposium was an opportunity to learn from cases of good practice, to get feedback on one's initiatives and to network with others eager to make art and design education an effective advocate of sustainable practice.

Communities of sustainable practice are groups or networks of educators, designers, artists, craftspeople, researchers and students who aim to place sustainability concerns at the heart of their practice. Through the symposium we wanted to provide a space for people involved in such initiatives to effectively network and strategise together in order to enhance the positive impact and reach of what they do.

During this one-day symposium, we focused on the importance of collaboration and networks in creating art and design practices that contribute to eco-social sustainability. We were especially interested in complicating as well as expanding the notions of sustainability within art and design education and how they contribute to engaging the public in sustainable and progressively transformative eco-social practices.

We are convinced that sustainability is also about meshing up and intersecting practice and theory, thus the day encompassed theoretical and practical engagements with sustainability - always with a focus on making this day productive in terms of building alliances, projects and shared commitments between the people attending.

People who are active within art and design schools who foster sustainability initiatives contributed to the debates: tutors, students, technicians, researchers and more. We especially valued contributions by students as this is where many of the most innovative initiatives come from.

This one-day event included a presentation by keynote speaker Dr. Joanna Boehnert, parallel discussion sessions where participants presented their initiatives and networking lunch enabling discussions allowing knowledge transfer around pressing issues that art and design education faces in terms of engaging with ecological crises.



Sustainability Symposium  
16<sup>th</sup> November 2018

# Leeds Creative Timebank: reciprocity for sustainable social design

Garry Barker

## Abstract

<sup>1</sup>Leeds Creative Timebank aims to build a new sustainable economic structure that can operate inside the shell of a fast failing money led economy. The concept of a social design practice that explores the possibilities of collaborative exchange lies at the core of the Leeds Creative Timebank operational structure. It is three years since the AHRC funded ProtoPublics<sup>2</sup> project produced the Creative Temporal Costings<sup>3</sup> report that focused on an examination of how the Leeds Creative Timebank was supporting the development of creative initiatives in the Leeds area, it is also 10 years since the Leeds Creative Timebank's formal inception in 2009 and with a membership now well over 100 and still growing, there is now a need to contextualise the various forms of social design practice that it has engendered. As an academic, fine art researcher, founding member of the Leeds Creative Timebank and with a long serving commitment to the management group, the author is uniquely placed to articulate the history, working methodology, ethical constraints, successes and pitfalls and to reflect upon the practical and theoretical implications of an initiative that is beginning to gain national recognition as an alternative sustainable non monetary support for creative practitioners. This presentation will demonstrate how in fostering collaboration across creative sectors, both traditional and innovative practices are supported and cpd as a live practice is kept central to the developing needs of the sector.

<sup>1</sup> Text taken directly from the Leeds Creative Timebank 'Ethics' poster made for the Tate Modern 'No Soul For Sale' project 2010

<sup>2</sup> ProtoPublics, short for 'Developing participation in social design: Prototyping projects, programmes and policies' (<http://protopublics.org> [accessed 16.5.18]), asked arts and humanities academics and community organisation representatives to experiment with using 'agile' approaches to prototyping new products and services derived from software development, to tackle real social questions in the UK.

<sup>3</sup> The Creative Temporal Costings report was produced jointly by Leeds Creative Timebank and researchers from the RCA, Northumbria University and the University of Dundee ([http://nrl.northumbria.ac.uk/24800/1/CTC\\_research\\_report\\_online.pdf](http://nrl.northumbria.ac.uk/24800/1/CTC_research_report_online.pdf) [accessed 16.5.18]). The two key objectives were: to investigate the value of creative collaborative exchange in an emerging 'parallel' economy; and to test and develop experimental research methods for social design with the aim of prototyping new forms of collaborative research oriented towards social change.

## Paper

### History

In 2008 The New Economics Foundation published a report designed to respond to what was perceived as a 'triple crunch'; global warming, a financial crisis, and peak oil. These three threats to our future survival were set out alongside a growing awareness of global resource depletion and the dangers of an economic model that could only be sustained by constant growth. This report, 'A Green New Deal', (Green New Deal Group, 2008) called for the development of new Government initiatives to address finance, investment in renewable energy technologies and the creation of 'joined-up' policies designed to raise awareness of these issues throughout all sectors of the economy. The following year a series of workshops were hosted in response to the report in Leeds, by the then Leeds Metropolitan University, one of which was designed to explore the possibilities of non-cash economies. This workshop began to explore how the creative sector would survive the coming economic downturn and two participants in the workshop, both widely experienced in setting up and running organisations within the arts, decided that the time was ripe for the development of a new economic model that could operate as a sustainable support for Leeds creatives. They put a call out for initial members of a group that would research non cash economies and out of the findings develop a working model for an alternative non-cash economy for the support of the creative sector. In particular after researching creative guild structures and other networks of support, LETS (Local Exchange Trading Schemes) were seen as being of particular interest because they were mutual aid networks and timebanking was seen as the most practical model for the purposes of a mutual exchange network that could involve a social return of investment for its members. The final model that emerged was based on Timebanking UK systems, in particular their software 'Time Online' was to be used as a readymade database and 'banking system'. A pilot scheme with the title, Leeds Creative Time Bank was put into place and initial funding was sought from Arts Council England, which would give time to an individual to lead the implementation period. The bid was successful and the pilot was put into place, an induction program for new members was designed and a management group was developed to support the initiative. During this pilot phase several key aspects of the Leeds Creative Time Bank were cemented into place.

Structurally the need for what were to be called 'Timebrokers' was seen as essential. These would be the people who would insert details of all transactions onto the Time Online database. This 'people centred' aspect of the system would ensure that the enterprise was focused on individuals and would sustain a growing awareness of the network's interconnectedness.

A statement of ethics was produced very early on in the process and this was seen as vital to the commitment of individuals on joining. LCTB was not to be a way of getting work done on the cheap, it was to be a system whereby mutual social benefits were to be gained by joining a network of creative people. There was also a growing awareness of what Mullin (2011 p.18) pointed out in his critique of the existing money driven system, that, "Everything in a monetary system is reduced to the status of a commodity", and that "Even when efforts are made to alleviate the suffering of people in a money system it is virtually impossible to ignore the possibility of personal gain." (Ibid, p.16) Gradually currencies have separated themselves from tangible assets such as the gold standard and effectively the one thing that now backs all our currencies is, as Ashton (2016) argues, trust; a trust that has recently been severely tested and if this trust is lost, the need for alternative economic systems will become urgent and timebanking may become an even more vital model.

The need for inductions, whereby the ethics, working processes and benefits of LCTB were introduced to new members, was very important and in particular the speed dating sessions introduced in the first of these inductions, were seen as excellent ways of getting members to be aware of each other's skills and interests.

At the core of each transaction was the idea that whatever skill was being exchanged one hour of someone's time was worth an hour of someone else's. This was seen as a great equaliser and facilitated exchanges across any sector and did not prioritise intellectual skills over manual ones or presume that one skill had more worth than another.

At the end of the pilot stage the management group took over the day to day LCTB background management and timebrokers began to service transactions made.

### **The Leeds Creative Timebank in operation**

The fact that this initiative was formed in support of the creative sector is an essential aspect of its identity and purpose but there are issues that have arisen from a 'creative' definition and these continue to have to be addressed. Perhaps the most problematic concern is the definition of 'creative'. The dictionary definition of a creative is, 'A person whose job involves creative work.' It does not mention the arts. As well as visual artists, musicians, writers, dancers, storytellers, poets, designers, architects and actors, the LCTB includes software developers, philosophers, gardeners, town planners, event managers, translators and other people that would argue that creativity is central to their concerns. It is recognised that in an age of uncertainty and rapid change that the boundaries between disciplines are becoming blurred and that the complex needs of creative endeavours often require cross discipline interactions to succeed. Therefore LCTB uses a self-defining understanding of the term 'creative'.

The fact that this is a Leeds based initiative is also important and we were initially concerned to foster local connections and did not want to have members faced with difficulties such as having to think about travel costs when attempting to support another member. As the LCTB matures this may change because several types of exchange can be facilitated by technology, however this should never impact on the need to develop a face to face community of users.

All exchanges are equal in value, as the website states; 'Leeds Creative Time Bank facilitates and strengthens the informal economy between creative professionals. We exchange skills and knowledge by using time as a currency. One hour of your skill equates to one hour of another member's. (Leeds Creative Timebank, 2018)

The LCTB website also suggests that membership has the following benefits, it can enable individuals to:

- realise projects
- receive bespoke professional development
- reposition practice across artforms and contexts
- form new networks and collaborative opportunities
- enable strategic planning and research & development
- market test ideas
- gain additional employment, contracts and commissions.

Shaping these benefits are various forms of social design practice that have been engendered by the LCTB, its principles and the way it operates. LCTB operates under a belief that the term

‘social design’ is concerned with the application of general design principles to social realities and that as an entity it is concerned with designing ways to respond to social problems (such as poverty or social isolation) as they become factors that could impact upon the creative sector in Leeds. This is a definition that closely parallels the one used by Ingrid Burkett and other social design theorists. (Design4socialinnovation.com.au, 2018)

In supporting a belief that interdisciplinary solutions create possibilities for better lives the LCTB has engendered various forms of social design practice such as designing a much more inclusive non-monetary economic system, and facilitating participatory decision-making and reflective processes by supporting peer review and peer support. In particular this social creativity is inspired by facilitating ‘a sense of possibility’, (Ball, et al 2015 p. 16) which is what happens when creatives from different disciplines get together.

Central to the way that LCTB operates are its ethical values; values that ensure that people do not attempt to use the system simply as a way of accessing cheap labour. The ‘Ethics, Values and Aims’ statement is designed to first of all alert new members to the overall social concerns of the project and to emphasise the participatory nature of the timebank and is worth quoting in full:

### **Ethics, Values and Aims**

- The Leeds Creative Timebank is a working alternative to a failing cash-based economy and value system
- It aims to build a new sustainable economic structure that can operate inside the shell of a fast-failing, money-led economy
- LCT is for the Leeds-based creative community. Its ethics include flexibility, transparency, free sharing of information, critical reflection and the production of alternatives to existing economic models
- These ethics reflect its values
- We uphold a non-hierarchical, decentralised and contingent ethos that allows for, and expects, the maximum participation of those who join
- The Timebank is both the critique of, and creation of an alternative to, a system we believe is unsustainable. As such it should not be seen as a stop-gap measure during the recession but instead as an ambitious project to be appreciated as a thing-in-itself, not a means to an end
- These underlying ethics and core-values should themselves be understood as mutable and open to debate by participants in the scheme
- We uphold a non-hierarchical, decentralised and contingent ethos that allows for, and expects, the maximum participation of those who join

*Text taken directly from the Leeds Creative Timebank ‘Ethics’ poster made for the Tate Modern ‘No Soul For Sale’ project 2010 (Leeds Creative Timebank, 2018).*

These values encourage both participatory design (co-operative design or co-design), through the active involvement of stakeholders and 'social design', because participants are engaged with a 'working alternative' to the traditional Capitalist economic model, thus striving to address social issues (in this case the poverty and social isolation that can often be the lot of a struggling creative practitioner) in order to build a sustainable and ethically sound future. However during the day to day development of exchanges, members tend not to see themselves as designers of more sustainable futures, but as mutually supportive practitioners, enabling each other to achieve aims that would be impossible or very costly outside of the LCTB umbrella.

Because LCTB is cross sector it supports the design of interdisciplinary solutions to problems, many of which stem from a desire to create a better world. For example the project 'Tea and Tolerance' has recently developed 'Being Human: the Conversation Game', part of an ongoing participatory art installation that began in 2014. Tea and Tolerance is self-defined as social sculpture and encourages trans-disciplinary creativity in the shaping of a humane and viable society. (Tea & Tolerance, 2018) 'Tea and Tolerance' used LCTB hours both to help kick start the project and as ongoing support when a need for video or photographic documentation is perceived, as well as other support needs that can be offered by members such as advice on funding.

During the Proto-Publics research project members were asked how time and money economies differ in how they are using them, and what emerged was a 'dis-emphasis on the economic', (Ball, et al 2015, supplement) and a sense that participation is about 'being part of a community and about community work and the community creativity that arises from that'. (ibid). The fostering of creativity develops creative capital, which it could be argued is within the LCTB the 'real' currency that is traded between its members.

During the time of its existence the Leeds Creative Timebank has had to develop policies and procedures. The policies have been developed in response to situations that have arisen and been flagged up by members. For instance a safer space policy has been researched and put in place because of differences that became apparent between timebank members that had had different experiences of dealing with issues surrounding gender fluidity and identity.

The procedures that the timebank used were initially based on those developed by Timebank UK and were centred on the 'Time Online' software that had been developed to support the recording of members' activities and the number of hours they had in the bank. 'Time Online' was also a database that held all the different member's skills that they were offering, it allowed timebrokers to search for people that had necessary skills for possible transactions, as well as allowing members to keep a check on their own hours. However 'Time Online' is a cumbersome system and several members have complained that it is not user friendly enough. An e mail system has more recently been introduced and the organisation has begun to explore possibilities of using more up to date systems, such as a dedicated app but this is in the very early stage of development.

The most important policy however is driven by the principle of equality and that is that the act of trading hour for hour recognises that everyone's time is of equal value, regardless of how economists view the relative value of any particular kind of work. In this way notions of hierarchy, competition and superiority based on credentials, formal education, economic or professional status are broken down.

On joining LCTB members are often surprised to find that when they begin to meet other members it opens their thinking out into new territories, ‘...some people have skills that I just wasn’t aware of and ...I started to form relationships with various people within the timebank and created projects out of it’. (ibid) Creativity is inspired by facilitating ‘a sense of possibility’, (Ball, et al 2015 p. 16) which is what happens when creatives from different disciplines get together and when they come together within the ethos of an organisation that is ethically focused on developing alternatives to the current mainstream economic model, it is more likely that projects facilitated will embrace participatory design, co-operative design or co-design practices.

Interdisciplinary solutions create possibilities for better lives, and LCTB has engendered various forms of social design practice, the most important of which is its own internal structure constructed to facilitate transactions between members, a format designed as an inclusive non-monetary economic system. It has also facilitated participatory decision-making in its structures, every member having a right to participate in open debate as to what is being done and how. It has also encouraged reflective processes and cpd by supporting peer review and peer support. It could be argued that some of the most valuable transactions have been when one creative has asked another creative from a different discipline to offer a critique and ideas in relation to another member’s ongoing projects. These peer support transactions are key to the development of a self-sustaining economic model, because they encourage true investment in creative change and flexibility and they develop an understanding of investment in a way that is far deeper than the allocation of money in the expectation of future benefits. By fostering interdisciplinary transactions LCTB has begun to offer the Leeds creative community an alternative model for a future economy based on communal visions and mutual support.

The Leeds Creative Timebank is in constant flux and is continually seeking to get more member engagement in the day to day running of time brokerage and the background management of the project. We encourage new members and hope that the ethics and values set out will also encourage them to fully participate in a project that has the concept of reciprocity at its core.

If you wish to find out more about the project please visit <http://leedscreativetimebank.org.uk/> and message us via the contacts tab and if you want to join simply use the how to join tab.

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### **The author**

Garry Barker is involved in several overlapping ventures including publishing, ceramics, drawing and installations, as well as having a long history of engagement with the pedagogy of art practice. As a writer and publisher he has focused on the promotion of texts that engage with drawing, as well as developing narratives and myths surrounding art and artists. Recent publications on drawing including a chapter in the book '*Drawing Conversations: Collective and Collaborative Drawing Practice*' as well as '*Drawing and the street texts of Chapeltown*' for the Drawing Research Journal. Theoretical and fictional responses to art myths include the publications '*Readings in a Rumour of the End of Art*' and '*Art and Fiction*'. As an artist he has exhibited widely, recently winning The Rabley Drawing Centre's first prize for artist's sketchbooks in 2017 and being an exhibitor in this year's Trinity Buoy Wharf Drawing competition.

Actively involved with the development and support of the arts community in the city of Leeds, Garry is a management group member of the Leeds Creative Timebank, an organisation dedicated to the development of a non-cash based infrastructure that can support creative practitioners within the city.



Sustainability Symposium  
16<sup>th</sup> November 2018

# Creative enterprise abandoned premises

Pauline Cook

## Abstract

This venture explores the concept of using abandoned commercial premises for creative enterprise and has sustainability at its core. It is in collaboration with East Street Arts and a group of like-minded artists who have a similar vision. We take over old shops and cafes in a busy city centre which have closed down because they are no longer viable as a profitable enterprise and turn them into a temporary art gallery. In these re-purposed and redecorated spaces, we exhibit our own work and other work by artists in the local community.

Our aim is to bring art into the realm of those who do not normally seek it out and to present it in a more engaging setting than the traditional art gallery. But also to sustain a hub of activity in an area of a city, where many of the retail outlets are closing down. A once thriving, dwindling community has a new interest and the building, which would lie dormant and rot is restored and maintained. Instead of consuming goods, we invite people to consume art instead.

## Paper

### Introduction

This venture for sustainable practice explores the concept of using abandoned commercial premises for creative enterprise. We take over vacated shops and cafes and turn them into temporary gallery spaces for the exhibition of contemporary art. These premises have the advantage of being in prime locations in a busy city centre, where people pass on their way to work, to do shopping or see friends. Once well-known shops or cafes are then visited by these passers-by, sometimes their old customers, who are drawn to view the transformation. This demonstrates how the purpose of everything changes over time depending on economic demand, but that new purposes can be found and exploited if we believe nothing is ever really worn out. It is a venture undertaken in collaboration with a group of like-minded artists, who come from a wide range of different art backgrounds, including 'untrained' and who have a wealth of transferable skills. It is supported by East Street Arts and their Temporary Spaces Project.

### Theoretical Background

The aim of this venture is to bring art into the realm of those who do not normally seek it out and to present it in a more engaging setting than the traditional art gallery. My creative practice has an underlying political message about the nature of hierarchy and discrimination and the exhibition of art is one of the cultural areas where hierarchy is played out, particularly around the issue of class. Inspired by *Inside the White Cube: The Ideology of the Gallery Space* (O'Doherty, 1976, introd.), I was prompted to ask questions about the nature of art and the place

it still occupies in society. The modern gallery space with its rectangular white walls as a place outside real space and time and therefore remote from everyday life, remains exclusive and “...utterly disconnected from the life of human experience here below.” (O’Doherty, 1976, p.11)

Art tends to be the province of the dominant elite. Many people from other backgrounds, less educated, less well-off and maybe less western, are often excluded from this rarefied world. This desire to devise a more accessible route to art for the general public and the difficulty of getting established galleries to accept new artwork brought to awareness that there were places available, also unused and ignored that had once had an impact on people’s lives for different reasons.

“...in a world all but totally subjugated by the commodity form and the spectacle it generates, the only remaining theatre of action is direct engagement with the forces of production.” (Bishop, 2012, p.11)

Exhibiting our work in this fashion allows us to engage with the spirit of creation but on our own terms, outside the usual commercial context.

Alongside this desire to present art as inclusive and participatory, we are also committed to the spirit of the creative arts to help sustain a sense of belonging and well-being. It is a way to describe events and explore emotional responses through imagination and embodied expression, without the restrictions of language barriers. We support less experienced artists to continue their practice and to have the confidence to display their work in a non-threatening environment.

But this venture also sustains a physical environment. It helps maintain a hub of activity in city areas, where many of the retail outlets are closing down. There is still a steady flow of people, but these will diminish without footfall. It is with a common aim to restore a little of the dignity of these places that have been somewhat left behind by progress and been overshadowed by more adaptable and flourishing cities nearby that drives us to attempt this enterprise. Austerity has had a huge impact on the population, in terms of employment, learning opportunities and integration. Hopefully it helps to sustain a feeling of community in areas of social deprivation, where people still want to come and meet, especially where there are other such enterprises for people to visit. Museums, charitable organisations, community arts and studio spaces are all situated beside the remaining commercial premises, re-injecting life and activity to these areas, unrecognisable from a few years ago. Instead of consuming goods, we invite people to consume art as well.

## Practice

In these re-purposed and redecorated spaces, we exhibit our own work and other work by local artists and community groups who want to get involved. It is not essentially a commercial enterprise. The rules of the lease, negotiated by the arts organisation do not allow us to sell our work on the premises but we can come to arrangements away from the space. We rely on the artists contributing fees to show their work and to open up the space on days they can spare. It is a voluntary enterprise in part as we do it for the love of creating and exhibiting art; but it is a social enterprise in terms of helping others to gain experience from showing what they make.

Our management structure is based on experience of service provision in the voluntary and public sector, where there is a core group of people who administer the organisation but in line with discussions and decisions taken by a wider circle of associated artists who act as an advisory board. It is not a hierarchical arrangement, but based on the skills and time people are willing to

contribute. We invite the participation of people from all types of artistic backgrounds and welcome work in all media, not just traditional fine art.

Exhibitions are our core purpose. So far we have held two exhibitions in different premises on a short term basis, the first in Keighley, in an already established creative space in a disused department store and then in Bradford, in a closed down Costa Coffee, which was derelict and had to be decorated first. At present we are now attempting to run an on-going enterprise in a more permanent location. Our vision is to hold monthly rotating exhibitions so viewers return on a regular basis. We either invite submissions according to an agreed theme or let artists hold individual or joint exhibitions in the space, according to what they can afford. Our only concern is to cover the cost of the lease, the publicity and various other expenses associated with its upkeep. We choose artists and work that reflects and fits with the space and our capacity to curate it.

We publicise to various media outlets, social media, a distribution list and various local arts organisations. We have designed a logo and set up a website. It proved lucrative to become involved in a city-wide event organised by a community arts project, who also champion urban regeneration through art. We received funding, which we have put towards paying our nominal rent for the next few months, in return for running print making workshops for the public at the event. This drew attention and visitors to our space, but it is also provided an opportunity to introduce artistic practice to a wider audience. We are receptive to further collaborative opportunities in the future.

### **Conclusion**

Our vision for this project meets objectives of sustainability on a number of levels: social, economic, cultural and environmental. People engage with art for many reasons: as a way of making a living; as an investor; as a leisure or spectator pursuit to fill their time; or as a way of dealing with social issues or emotional distress. All these reasons are determined and affected by existing economic factors in particular communities. Our project is a product of the temporal and spatial landscape in which we operate as artists. We have tried to create a gallery space that respects the current needs of artists and their audience.

Some elements of the modernist ideal of the 'White Cube' remain in order for art to be recognised as art. Adorno (1970) reminds us that outside its context, art has no meaning. But despite the white walls, the setting is very different. We call ourselves 'Trapezium Arts', which reflects the geometric break with tradition. The gallery nestles in a row of shops, on a busy thoroughfare on the edge of a shopping centre, between a bakery and a vape shop. Painting and sculpture mingle with coffee and cake and consumables. People from all backgrounds, in particular age, race and standard of living, walk by and gaze through the glass facade. By taking the old or traditional ethos of the Art Gallery and mixing it with the new and current habits of a city culture, we have hopefully given this hybrid space a context of difference, a context not necessarily of hierarchy and privilege, in the gap between timeless unreality on the one hand and the here and now on the other.

Culture is reunited with something more fundamental and engaging, the basic human need to express and create artefacts. A level of interest in art is maintained that is not all about designer clothes and furniture but that can really raise awareness for specific community groups and political issues. Finally a thriving but commercially dwindling area has a new interest and the

building, which would lie dormant and stagnate, is restored and maintained, at least for the immediate future.

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### The author

Pauline's work as a mixed media fine artist focuses on the concept of hierarchies and how these are embedded in the language and representation around us. Her interest in Sustainable Practice led her to co-found Trapezium Arts, a collective arts organisation that runs the Trapezium Gallery in temporary space in Bradford. Their aim is to exhibit local contemporary art and photography in a broad, accessible and sustainable way.



Sustainability Symposium  
16<sup>th</sup> November 2018

# Distributed competence as a design response to the sustainable fashion challenge: engaging the amateur maker

Sally Cooke

## Abstract

This paper explores some initial thoughts on how design might be used to promote acts of amateur making in the context of sustainable fashion. Adopting a strategy of distributed competence, flat-pack cut-and-sew clothing is tested as a means to simplify the making process, empower would-be makers, and enhance their level of craft skill. This co-productive approach, bringing the designer's expertise together with the actions of the amateur maker, is intended to increase the chance of viable/wearable outcomes from a first make, enhance understanding of garment construction and promote valuable craft skills. In contrast to the globalised, exploitative and highly wasteful world of fast fashion, home making, as a form of 'slow fashion', has the potential to reconnect ideas of making and using. It also fosters the skills required for a more use-based rather than consumption-based relationship with clothing. However, sewing skills and with them some knowledge of garment construction have been in steady decline in recent decades. This paper explores one potential design response to rebuilding them.

## Paper

### Sustainable fashion context

Sustainable fashion is a broad concept encompassing a range of environmental and ethical concerns. At first glance the term may appear to be an oxymoron, because fashion as we know it has become so heavily reliant on continual consumption. However, sustainable fashion initiatives abound. Most visible to the everyday consumer are those that aim to reduce inputs (eg. raw materials, water and energy), and impacts (eg. chemicals) and increase recycling.

In academic and industry circles the language around sustainability has become that of the circular economy. There is much optimism about kind of material innovation and systemic change, championed in McDonagh and Braungart's *Cradle to Cradle* (2002), which makes the things we consume endlessly cyclable with minimal loss or reduction in quality. However, this hoped for 'cyclability' is just one aspect of a circular economy in fashion. Citing the Ellen Macarthur Foundation (2015) Twigger-Holroyd (2016a) draws attention to the aspects of this economy that would include individual practices of 'maintaining' and 'prolonging' the useful life of material things. She suggests that too great an emphasis on the commercial activities of businesses operating at scale within the circular economy risks overlooking 'the domestic arena' -

or what she terms the 'domestic circular economy' - where 'action by individuals has great potential in terms of clothes' (Twigger-Holroyd, 2016a p.60).

### The skills of the amateur maker

In their contributions to the sustainable fashion debate both Twigger-Holroyd (2017) and Fletcher (2016) focus on our use behaviour; in particular our engagement with garments that already exist in what Twigger-Holroyd terms the 'fashion commons'. This brings the actions of the amateur maker within the sustainable fashion frame. The emphasis for both these writers is on re-making, altering and mending what already exists rather than making from scratch. However, in both studies it becomes quickly apparent that many of those engaging in these activities, the handier amongst Fletcher's crafty users (2016) and certainly the knitters in Twigger-Holroyd's re-knit project (2017), are those with a pre-existing level of skill and understanding when it comes to clothing construction. For example, one of the items featured in Fletcher's *Local Wisdom Project* (Fletcher, 2018 & 2016 p108) is a jacket the owner has dubbed the 'three stage jacket'. This garment has been fashioned over time from a slim tailored waistcoat, to a larger and more accommodating jerkin, to a fully sleeved jacket. The owner of the jacket is in his 80s and describes having used both knitting and sewing techniques to achieve the modifications that have kept the item in use. This has undoubtedly taken both craft skill and some knowledge of garment construction, which raises the question of where he acquired the skill, or indeed the confidence, to intervene in this way?

The prevalence of skills for garment construction declined significantly in the second half of the 20<sup>th</sup> century. No longer seamlessly passed on from one generation to the next within the home nor routinely taught as part of a mainstream education, home sewing reached an all time low in the 1980s (Martindale, 2017). More recently there has been a resurgence of interest in all manner of craft practices including sewing (Bain, 2016; Martindale, 2017; Twigger-Holroyd, 2017). Facilitated in part by the internet, there is now a wealth of information, from YouTube videos and sewing blogs to mainstream TV programmes targeted at would-be makers. But this kind of information has long been available in one form or another, from women's magazines of the 1920's to weightier 'how-to' manuals of the 1970s. Now however, they meet an audience in general with a much lower base level of textile knowledge and skill.

### Distributed competence as design response

So how might design be used to encourage acts of amateur making and with them the skills and knowledge to engage with clothes in more use-based and sustainable ways.

I come to this question, not just as a designer but more fundamentally as a maker - specifically a sewer of clothes. The skills I apply to my making activities are ones learnt early in life in the domestic setting and honed over four decades of making. I am acutely aware of the 'tacit knowledge' I bring to these activities and the role they play in my apparent competence to design and make wearable/durable garments. This, as many craft theorists including Sennett (2009) have noted is knowledge embodied over time through the laborious process of trial and error, for which not everyone has either the time or the patience. Twigger-Holroyd (2016b) notes a common misconception that amateur crafters are in it for activity and not the outcome. But I too know from experience that for those seeking to make garments this is not the case. These amateur makers care very much about the outcome being wearable and can be easily be put off by too many false starts. So part of the design challenge I set myself is to increase the chance of a wearable/viable garment from a first make. This requires the remote sharing of tacit knowledge or in other words the distribution of competence.

Distributed competence, as outlined in Watson and Shove's (2008) research into the practices of home DIY, reframes competence in relation to the task rather than as a wholly human quality. Reframed in this way competence can be seen as distributed between materials, instructions and people, only coming together to be sufficient in the process of doing. The examples they give include modern non-drip, quick drying paints and pre-configured plumbing joints, which bring tasks previously requiring 'professional' skill within reach of the amateur. Viewing competence in this way gives scope for designing or re-designing products or materials to bring activities within scope of the amateur. In so doing, the chance of successful outcomes is enhanced and with it the potential to increase confidence and reduce waste.

### Flat-pack cut & sew

Applying a model of distributed competence to the construction of sewn garments requires some of the embodied knowledge of the accomplished maker to be designed into the materials or products available to the amateur.

Facilitated by the relative immediacy and low set up costs afforded by digital textile print, I have experimented with designs for flat-pack cut and sew products. Here, the surface pattern print and the flat pattern outline, including notches (key information indicating fabric alignment and seam positioning) are printed on the same piece of cloth for the maker to simply cut out and sew. The need for a paper pattern is negated, meaning no risk in the transfer of information (Fig.1a&b).



Fig.1 (a) Paper pattern detail

(b) Flat-pack detail

The kit is printed on a fabric appropriate to the make with colour-matched sewing thread included so no haberdashery knowledge is required. The pre-printed notches make the fabric orientation and relative positioning of pattern pieces easy to see and the step-by-step instructions include notes and tips explaining terminology and offering advice on trickier parts of the make. By addressing hurdles that come early in the making process within the product itself the chances of a successful outcome, even in the hands of a relative beginner, are potentially increased (Fig.2a&b).



Fig.2 (a) Printed flat-pack



(b) Finished cut &amp; sew skirt

This is not in and of itself an unambiguously sustainable product. It is still a form of fashion consumption - all be it 'slow fashion' (Fletcher, 2017) - involving printed cotton textiles. However, if it could be made to work for a greater number of people than currently apply sewing skills to their wardrobe, it might be a small contribution to a more sustainable future. It builds on several of the Textile Environment Design (1996-present) sustainable fashion strategies, including eliminating over supply by being a print to order product, and reducing chemical impacts and water use through application of digital print technology.

More importantly flat-pack kit-form clothing has the potential to increase makers' skills and understanding of garment construction, including skills and knowledge required for more use-based approaches to clothing discussed above. This is significant because there is some evidence to suggest a link between engagement in home making and critical reflection on consumption behaviour (Bain, 2016) including highlighting issues of ethical production. If you know what it takes to make a garment then you know someone else is paying a price for your £3 T-shirt. Greater engagement with the material possessions in our wardrobes may also impact on their emotional durability (Chapman, 2015) and therefore their longevity in use.

### Initial findings

Initial commercial testing of flat-pack cut and sew skirts was conducted with testers recruited from two women's groups in Leeds. These groups were chosen because the kits being tested were for skirts and because both groups were known to have some interest in craft, expressed through the activities they organise for themselves. Participants ranged in age from approximately 25-55. They had varying degrees of sewing experience, including beginners with very little prior experience and those with more but who rarely, if ever, made clothes. Those involved were asked to give their time for free to make up a garment from a kit and offer feedback on the experience. The relative ease in recruiting testers indicated an interest in the kind of product offered and the opportunity it presents would-be makers amongst these groups.

Motivations expressed by testers included wanting to: give sewing a second try; increase confidence to take on their own projects; and test out a less ‘fiddly’ alternative to making by traditional means. All enjoyed the experience, were happy with the finished garment and would make from a similar kit in future. Testers particularly liked the all-inclusive nature of the kit, the ease of cutting out and the nature of the instructions provided. Illustrations were seen to be particularly helpful. All found the making relatively easy, especially when contrasted with using a paper pattern:

*‘I loved not having to cut out and pin pattern pieces. Those thin bits of paper are so annoying...’*

*‘Much easier than paper.’*

There was also evidence of increased confidence:

*‘the kit boosted my sewing confidence, particularly when it comes to putting in zips (something I have avoided for years).’*

The combination of printed fabric and instructions in the hands of both beginner and more intermediate testers resulted in garments they would happily wear:

*‘Like it - fits great - feels sturdy and like it will not fall apart.’*

*‘I think the finished garment is a lovely fit, a great style/shape and very easy to wear...’*

### Conclusion and next steps

Although a very limited empirical study, these results tentatively suggest that by adopting a strategy of distributed competence, amateur making can be encouraged amongst first timers and returners to garment making. Whether this activity has any lasting impact on future making, deployment of sewing skills or the relationship with clothing and therefore more sustainable behaviours, in consumption or use, would require more targeted and in-depth research. Such research would fill a gap in the scant academic literature currently addressing amateur making (Martindale, 2017; Twigger-Holroyd, 2016b). In the meantime, based on these initial findings, the commercial viability of this product is being further tested.

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### The author

Sally Cooke is a maker and printed textile designer. She is a graduate of the MA Creative Practice at Leeds Arts University on which she now teaches. Sally is a founder member of the co-operative run Leeds Print Workshop. Over the last two years she has been researching and developing a small business based on the idea of flat pack, cut and sew clothing. Her research interests include sustainable fashion, material culture, and the meaning and value of amateur making.



Sustainability Symposium  
16<sup>th</sup> November 2018

# Viewpoints on Sustainability From the Potters of Iran

Jillian Echlin

## Abstract

This paper will explore the various dimensions of what it means to be sustainable as a potter in Iran. It will offer a very brief history and introduction to the dynamic nature of contemporary ceramic practice, which is often surprising information for many people. Then, the article will turn to practical issues of how potters are seeking to make their industry more culturally, environmentally, and economically sustainable, including specific artists who are addressing the topic in their work. Within Iran, there are many possibilities for the transition to happen organically, to grow from within the artistic communities themselves as they define how to participate in global conversations about sustainability.

## Paper

Tehran is one of the world's largest cities. It is a populous, sprawling, often-polluted city ringing with the sounds of development, of traffic, of progress. Tehran is a city born from frenetic growth. Two hundred years ago its Qajar rulers set out to transform their new capital into a metropolis that would rival any in the world. This construction, destruction, and reconstruction was of course supported by brickmakers, tilers, potters, and other tradespeople working in clay which made such expansion possible.<sup>1</sup> Today, the average age of the population of Iran is under 35 years old. This youthful energy pervades the busy fabric of urban spaces and has inspired a contemporary art scene in which ceramics has a very public presence. Out of the tradition of these original building projects vast tile murals have grown to fill the dead urban spaces beneath freeway overpasses and to enliven metro lines; public sculptures line alleyways and populate parks and gardens; and from the centre of many roundabouts rise vast decorated pottery vessels that remind both the visitor and resident of the role of ceramics in the Iranian narrative.

Although awareness of pottery is part of the cultural fabric, ceramics as a 'sustainable' practice as it might be defined in the modern environmental sense is a relatively new concept. In this rapidly changing context, emerging communities of local workshops, ceramic artists, and students interested in sustainability are expanding. As one aspect of a dynamic contemporary ceramics scene, this kind of practice is a small, but growing, voice. I hope to offer a broad survey of some of the diverse ways in which it is being interpreted. This is part of my larger original research into the history of contemporary ceramics in Iran. Aside from a few anthropologically-based studies, there has been very little scholarly interest in post-Qajar ceramics, even within Iran itself. As such, this paper is based on personal observation and countless interviews. From contemporary artists making work about climate change, to factory workers dealing with the chronic effects of

exposure to lead and silica dust, urban planners facing increasing demands on limited resources, and to the village potter seeking to maintain a valued tradition, the newest inheritors of Iran's ceramics heritage are finding ways to consider the sustainability of their profession. This generation is defining the role that Iran will take in finding global and local solutions to making the ceramic arts and industries more sustainable culturally, economically, and environmentally.

### **Production Workshops**

As the population of Iran became increasingly urbanized, potters were faced with a difficult choice. It was apparent that they could no longer continue to work in the same way they had in the past as they faced competition from factory production, foreign imports, and the introduction of metal and plastic. New opportunities to be found in the cities made the difficult physical labour of a production potter less appealing to successive generations. As workshop after workshop closed their doors, the remaining potters, and those interested in taking up the craft, had to adapt.

From 1979 until very recently, international sanctions isolated much of the Iranian economy. Inadequate access to new technologies, basic equipment, and consistent materials made commercial survival largely more important than budding environmental concerns. Conversely, it inspired a reliance on regional resources; creative reuse and repurposing supported the growth of an increasingly dynamic and creative practice. Kilns were built in the shells of old washing machines, broken car windscreens ground up for glazes, wheels and pugmills ingeniously fabricated in small workshops. The easing of such restrictions has created new opportunities for international export in addition to expanding domestic demand with both amplified economic potential and environmental cost.<sup>2</sup>

Lalejin, a town in west-central Iran—recently designated a UNESCO world capital of pottery—supporting several hundred independent workshops, factories, and a working population centred around this industry. Iran is now the world's fourth-largest producer of utilitarian ceramics (IRNA, 2016).<sup>3</sup> The scale of this kind of localized production almost must be seen to be believed. Driving down the main street of the town, with shop after shop after shop of brightly-coloured wares of all descriptions and qualities, it is easy to see why this town has come under some criticism for becoming too industrialised, too far away from the roots of an 'authentic' pottery practice.

However, it is important not to underestimate the importance of the domestic market. As ceramics has become less practically necessary, it is increasingly viewed within an ideological, and even nationalistic, framework. In small pottery towns like Shah Reza, piles of utilitarian dishes cover the roadside stands on every main street. There, the cheerful repetition of a brushwork fish is a recognizable local motif and is eagerly sought by Iranians who wish to have such wares in their homes as a distinct expression of and identification with the kind of lifestyle where one chooses to support local handicrafts—driven by symbolic value rather than strict practicality.

Promoting the economic sustainability of local pottery centres has been an important focus of official government programs. These programs have often served as an impetus for building links between traditional workshops and modern studio practice.

## Independent Artists

In the wider context of visual arts, a number of recurring and independent festivals have taken the environment as their theme.<sup>4</sup> Raising awareness of sustainability is also a topic taken up explicitly by Iranian ceramic artists such as Fatemeh Ghorbani Malefjani, whose work *The Earth Warming* features a flock of cast penguins huddling on a bed of sand, pressing in around a glaze-pool of what must surely be the last shrinking dregs of clear, cold water (Tenth Ceramics Biennale, 2011). The penguins cannot see the wider cause of their dilemma, but we can. Such art can push us to action or remind us that only through collaboration can restoration be achieved.

Bitā Fayyāzi explores themes of consumption and degradation in her work, which has found success in the international contemporary art market. Her cast and assembled sculptures often verge on the grotesque, reflecting the ugly and uncomfortable realities of contemporary life. *Road Kill* (1998), created in collaboration with painter Mostafa Dashti, consisted of hundreds of terra cotta dogs cast and modelled from those found dead on the highways of Tehran. The dogs were photographed around the city, then crushed and buried along with their real-life counterparts on what would become the construction site of a new high-rise building: monuments to an aspect of the city's social and built environment many would rather ignore.

Sara Boroujeni's piece *Arrive: (something or someone who comes)* begins with a womb-like earthenware vessel and an embryonic babe. (Hope Exhibition, 2016). The artwork is experienced in stages—the figure is tucked away inside the vessel and covered in soil. Time passes before leaf by leaf a startlingly-green plant slowly unfurls, emerging from the hidden seed planted in the mind of a child. The previously seen and possibly disturbing hole in the child's head becomes clear both as a functional means to facilitate the release of the plant, but also as a metaphorical container for the emergence of ecological thinking—an action resulting from our previous engagement with the soil and the earth. In its hardened form as clay, the earth cradles and hides away the child and its potential, but also provides for the possibility of transmission and growth in the next generation. Boroujeni is also a member of the Chaarkesht group, an artist collective dedicated to research-based and performative ceramics that address social issues.

## University Communities

Iranian scholar Majid Ziaee, another member of Chaarkesht, draws on diverse contemporary ideas in his work. He is co-author of a paper that sought to identify ways in which indigenous ceramic traditions, particularly those in the northern region of Gilan, relate to the modern understanding of environmental ceramics. (Ziaee, M., Nadalian, A., & Marasy, M., 2017) Gilan is a region where pottery production is a communal and seasonal activity that in many ways has escaped the influence of industrialisation. The study concludes that where small-scale, traditional production relies primarily on local and renewable natural resources, it is not a threat to the environment and may even reduce plastic pollution. However, continuing modernization of production and a lack of knowledge about larger motivations for limiting chemical use and reducing waste was of some concern. The study also notes the difficulty inherent in maintaining the *social* sustainability of traditional forms. For example, the shape of some pots may be explicitly connected with making a certain kind of regional food. While promoting these handicrafts would likely ensure the survival of this unique ceramic identity, increasing demand would in turn raise the costs to both human life (many potters in Gilan rely on lead-based glazes) and the natural environment.

The limited publication context of this study from Gilan makes an important point about the dissemination of research on sustainability (and ceramics in general) from and within Iran. Ziaee's art and research is grounded in a clear analytical framework and deserves wider recognition. A

variety of political, historical, and practical barriers have left Iran just beginning to develop the kind of international collegial networks that facilitate the sharing and receiving of such ideas. The most dynamic and explicit research into cultural sustainability through collaborative artistic work as well as individual contributions to sustainable studio practice are occurring in the universities, particularly among studio-based graduates of these programs. Digital technologies for communication, translation, and publication as well as an interest in international engagement are providing new tools for formulating and answering questions about the future output of ceramics to better align local and global interests.

The teaching faculty at Tabriz Islamic Art University—including Majid Ziaee—is particularly interested in addressing the various aspects of this topic. Recent dissertation projects, workshops, and student exhibitions have focused on urban statues, kiln-sculptures, environmental ceramics, and site-specific projects. As professor of ceramics in Tabriz, Mohammad Mehdi Anoushfar encourages his students to experiment with low temperature pit firing and traditional wood kilns as a way to ensure they will always have the resources to make work. Anoushfar has roots in the traditional craft industries but was also one of the first potters to encourage the development of ceramics as an expressive artform. The growth of interest in environmentally-focused projects is attributed to an increasing interest among both students and the wider artistic community.<sup>5</sup>

Such developments facilitate creative practice and create bridges between designer, producer, and artist. PDF copies of books like Janet Mansfield's *Ceramics in the Environment* and Robert Harrison's *Sustainable Ceramics* circulate freely among students. Graduates with their own workshops look for ways to challenge and to learn from both village potters and the wider world in an effort to reduce their own studio costs, limit toxic exposure, and source local materials. These young and fashionable entrepreneurs are redefining the way that ceramics are made, purchased, and valued for a new, largely urban, generation.

The potters of Iran have a unique contribution to make to international craft culture and to questions of sustainability. Existing academic, government, and industry organizations have a stake in finding ways to become more efficient, reduce problems of poor firings, and appreciate the role of ceramics in wider ecological and social systems. Within Iran, there are many possibilities for growth from within the various ceramics communities themselves as they define how to participate in global markets, understand cultural identity, invest in ceramic traditions, and create a sustainable future.

The historic culture of clay, the ways in which technology has been innovated and adopted, and the specific political and social circumstances that have defined Iran in modern times continue to play an important part in the story of ceramics resource use and conceptualization. New ways of understanding ceramic production and new ways of working, particularly the emergence of environmental art, make this an interesting time for ceramics practitioners interested in sustainability.

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1. For more about the ways that Qajar-era tilemakers adapted their practice heading into the modern period, see work by Jennifer Scarce.
  2. At the time of this writing, the geopolitical situation was again becoming increasingly tenuous, and it remains uncertain what effect the reintroduction of sanctions will have on the potters of Iran. Many local potters make work primarily for the domestic market, although it will have definite implications for those artists wishing to exhibit work outside of the country.
  3. Along with being a global player in ceramics manufacturing, sustainability is now on the radar of corporate sensibility. In 2016, Tehran hosted the 16th Energy Globe World Awards. This signalled a renewed recognition of the immense impact of ceramics construction materials on energy and material use. Intensified efforts toward sustainability have also been underlined by an expansion in programs for renewables and energy efficiency. However, this has not had much effect on the smaller-scale industries that comprise the majority of the industry, where working conditions can be hazardous.
  4. Including the Festival of Environmental Art in Iran and Residency in Hormuz, (since 2004 and which included ceramic works), the Iran International Green Film Festival (since 2009), the 3<sup>rd</sup> Homar Performance Festival (2015), the 6th International Festival of Art for Peace (2018), and the Environment & Human International Festival of Visual Arts (2018). Unfortunately, there is not room here to do justice to the myriad intersections of sustainable ceramics practice with gender, economics, visual culture, and many other important questions.
  5. Echlin, J. (2017) Conversation/online exchange with Majid Ziaee and Mehdi Anoushfar, 29 April.

### **The author**

Jillian Echlin began working with clay in a high school program that focused on environmental education. After a BFA in Studio Arts and an MA in Art Education, she taught and consulted for public schools and community organizations, with particular emphasis on interdisciplinary curriculum development. She is currently pursuing a PhD, tracing the development of the ceramics arts in Iran during the last century. She can be reached via email at [jce511@york.ac.uk](mailto:jce511@york.ac.uk), and is in the process of setting up a website that will serve as an international collaborative research portal for Iranian contemporary ceramics at [www.iranceramicarts.org](http://www.iranceramicarts.org).



Sustainability Symposium  
16<sup>th</sup> November 2018

# Designing a sensibility for sustainable clothing: practice led arts research

Katie Hill, Fiona Hackney, Irene Griffin, Clare Saunders and Joanie Willett

## Abstract

S4S - Designing a Sensibility for Sustainable Clothing is an AHRC funded project that brings together politics researchers working on behaviour change and sustainability with fashion and craft researchers and arts based research methods. The project is built around participatory making workshops to find out how engaging with making and mending clothing relates to behaviour and thinking about clothing. Working on two sites in the West Midlands and Cornwall, arts practitioners are running workshops with community participants and the research is documenting how engaging with these workshops relates to any changes in how participants make, mend, care for, acquire or dispose of clothing, and attitudes to the environmental impact of those behaviours. The research methods include arts based methods such as visual data collection, the making and exchange of artefacts, and clothing diaries that encourage participants to draw, collage and write about their clothing habits.

## Paper

The recent rise of DIY, the open source and maker movements, coupled with academic interest in community engagement and amateur practice, has resulted in increased awareness of maker agency with everyday life as a site for radical change (Gauntlett 2011; Hackney 2013; von Busch 2010). This is reflected in the shift within design studies to social design, which holds that everyone is potentially a designer and promotes design's political affect (Armstrong et al 2014). New approaches to co-creation, prototyping and redesign, moreover, explore the radical potential of amateur to 'make fashion slower, more meaningful and more sustainable' (Twigger-Holroyd 2016) or change behavioural attitudes to sustainability while creating a potential business opportunity (Janigo & Wu 2015).

Within this context S4S Designing a Sensibility for Sustainable Clothing aims to engage people in a process of change in their use and consumption of fashion through making. The project is a twenty month research project funded by the Arts and Humanities Research Council and is running from November 2017 to June 2019, therefore at the time of writing is still in progress and final research findings are not yet available. S4S is a collaboration between politics researchers at the University of Exeter Environment and Sustainability Institute, Penryn Campus and fashion researchers at the University of Wolverhampton School of Art. During the project groups of community participants are taken through sets of workshops that teach skills around making and mending clothing as part of a practice led arts research process. The two universities are working in partnership with several community partners which include arts centres, community halls,

textile producers and heritage organisations. The opportunity to participate was advertised through the community partners and the participants were recruited from the local communities around the two sites. Social Science and Design Research tools are used throughout this process to capture indications of how participant's thoughts, feelings and actions related to clothing and sustainability change when they take part in the workshops. These research tools include clothing diary sketchbooks, wardrobe audits, interviews, recorded group discussions and reflective film making. Rather than purely capturing the data, the research instruments are designed as engagement tools that are part of the process of change, a process we are conceptualising as 'designing a sensibility for sustainable clothing'. The workshops are happening between March and November 2018 in two locations, Cornwall and the West Midlands, which are local to the two university partners.

In order to foster a sense of belonging to the project and to create connections between the two sites we have been exchanging made artefacts between the two groups, where one group starts making something, sends it to the other site for the group there to add to it and send it back and so on. This becomes a form of visual communication between the groups and enhances the relationship beyond what can be achieved by Skype calls and researcher visits between the sites. Through this process four collaborative artefacts have been made. Two of these artefacts were exhibited at London Design Festival in 2018 as part of the Design Research for Change exhibition. This visual essay tells the story of one of these exchanged artefacts and with that some of the stories of the workshops - the participants and processes that are together designing a sensibility for sustainable clothing through making. In the images you can see the process starting in Cornwall, from making dye and dying yarn to weaving the yarn into fabric. At this point the fabric was sent to the group in the West Midlands who stitched it into a bag and added crocheted flowers as an embellishment. The bag was then returned again to the Cornish group who added a strap to the bag and you can see it being worn by the project lead, Clare Saunders. Around the artefact you can see some of the workshop participants, the spaces and set up of the workshops and the filming and photography processes that form part of the creative research process. This is just one of many artefacts that are being made within the workshops.













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Sustainability Symposium  
16<sup>th</sup> November 2018

# Delivering meaningful social engaged projects across an art school curriculum

Gavin Parry and Jacqueline Butler

## Abstract

Using the Ronald McDonald House Charity (RMHC) project as our case study, this paper will map out the challenges and strategies in working with Manchester School of Art Students, the curriculum constraints and the Charity's objectives. Whilst the project has been universally received as successful both in outcome and in process, this paper will be an opportunity to critically review and identify transferable strategies and learning that will help to further inform the delivery of future projects and partnerships. In addition to celebrating the value of such partnerships, the paper's purpose is also to scope out the territory, issues and challenges that such partnerships bring.

As we are both educationalists and practitioners, we understand the educational benefits for students to participate in socially engage practices

In Manchester, like most cities, the reasons and potential for students to engage with social issues aren't hard to find, for example, there are over 140 charities in Manchester working to address the complexities and issues around homelessness. How a creative practice can positively contribute on this, or other issues is, increasingly, part of many students' thinking and practice. Their experiences along the way enrich their specialism and develop those invaluable, highly employability-friendly attributes: sharing knowledge and skills; collaborating; developing professional and social networks, and along the way, maybe making the world a slightly better, more informed place.

The paper will consider how we can best shape/bend the curriculum, streamline protocols, to enable the most agile and flexible ways to initiate/respond and support social engagement partnerships.

## Paper

A reflection on running 'live' Socially Engaged Projects' and considerations on how best to navigate the time, resource and curriculum constraints to maximise the benefits for students, staff, University and external organisation/s

As both academic and fine art practitioners, we understand the educational and creative benefits when students participate in any external facing projects. In this article it is our intention to focus more specifically on socially engage practices by reflecting on a project we developed with The Ronald McDonald House Children's charity.

Over a number of years as colleagues in academia, we have developed many live briefs for our students, working with a wide range of partners from creative industries, mainly Manchester based. We feel this type of opportunity creates a framework for students to shift their thinking from away from a self-reflective practice, towards ones that both addresses the challenge of fulfilling a clients needs, and as well as giving a student a greater understanding of their individual creative voice. Engaging with opportunities that sit outside of the university institution is key to a student's development and understanding of themselves as a creative practitioner.

In 2012 Manchester School of Art were approached by The Ronald McDonald House, a charity that provides what they describe as '*a home away from home*': Free accomodation is offered to families whilst their child receives the hospital treatment they require. Each 'house' is situated within hospital grounds, there are currently 15 of these in the UK. The Manchester House contains 63 en-suite rooms over five floors and is equipped with everything a family needs to feel at home. On each floor there are self-catering kitchens and dining areas.

The Charity's initial request was for students to produce photographs of views of the city of Manchester that could be used to decorate the bedrooms in the House. This in itself was quite ambitious given the number of framed works we anticipated that would have to be produced. We felt we could take a more intergrated approach, both in extending the breadth of subject matter, from just '*views of the city*' to a document of the history and cultural identity of Manchester. We also proposed embedding the images our students made into the fabric and design of the building, thus shifting from decoration of space as images that orientate the users of the building.

We previously worked with a similar method in a student commission for Manchester International Airport, developing large-scale photographs to be sited in the walkways and stairwells of Terminal 1 arrivals. The photographs had to be stimulating and welcoming, and positioned in such a way that to view and read them better, one had to move through the space, and, in this way, help with the 'flow' through the terminal. The practical function of using photography here gave students an opportunity to consider the impact that the install had on how their images were experienced, and how 'site' and context shaped the meaning. The work was produced in 2010 and is still in situ in Terminal 1 Arrivals.

The Ronald McDonald Charity's Director positively responded to the suggestion that we approach the project using some of the thinking developed for Manchester Airport. It was agreed that our students would make images for the whole of the House. The photographs would take a functional role, to assist in navigating the temporary residents around the building. Each floor in the House would be given a theme, representing the stories and histories of Manchester. We would not only develop photographs for the rooms, but also the kitchen, dining areas, lifts and corridor spaces. The bedrooms were given names that linked to the floors themes rather than being numbered

(which everyone felt took away the 'hotel' feel). The intention was to offer the families some sense of an experience of the city as all too often the visitors did not have the opportunity to explore the city as so much of their time was spent to-ing and fro-ing from the hospital to the House. The end result, we anticipated, would be bright, positive, intriguing, informative, fun, and offer a level of escape for the families, many of whom were dealing with highly emotional and stressful situations.

Our students were immersed in all aspects of the planning and development of the project, they had to work in teams, prepare pitches to present to the building's architects and the charities board of trustees, they researched the history of Manchester and surveyed a wide range of locations to identify themes for the project. What was key was that they were working to, and for the building and the charities mission statement, the photographs had to be considered and constructed to fit to the space and the ethos of the charity. Pertinent to the project was to engage the students with the organisation's particular philosophy and principles. All involved had to learn to make time to listen, to slow down, to be responsive, to give time working alongside each other and to be flexible to the exchange of ideas. Discussion and feedback on the ways of looking and thinking about the work the students produced and how it would be 'consumed' by the users of the House, was an essential part of the process for all involved. Students were also encouraged to undertake some voluntary work for the charity.

In our dual roles as academics and project managers, our challenge was to keep the workflow of the project going, whilst breaking each stage down to fit in with curriculum content (learning aims and outcomes) and timeframe. Student assessments, term breaks and holidays all had to be taken into consideration and carefully managed. The practicalities of the academic calendar did not always sit easily with the charity's schedule for completing the work.

Since completing the project a period of reflection on the Ronald McDonald House project has given an opportunity to extract some key lesson from the experience. To consider some definitions and interpretations around Socially Engaged Practices that best suits our educational context, and to develop some protocols and principles that will help to frame future external facing project work.

For any creative practitioner, whether they define themselves as artist, designer, photographer, filmmaker etc., measuring contribution, and how this is articulated, is current to discourses around how creative practice is valued, supported and funded. Questions around impact, engagement, knowledge exchange, communities and partnerships are increasingly becoming more essential, not optional, considerations for practitioners who seek support from funding bodies, National Portfolio Organisation's, and Public limited Companies with social and community remits. How we engage positively to these agendas is both timely and pertinent.

We found these two definitions around socially engaged practice useful for considering the relationship between a student's creative practice, the subject, the client and the audience: *When considering how to define socially engaged practice one considers that this can include any artform which involves people and communities in debate, collaboration or social interaction*

Tate Definition <https://www.tate.org.uk/art/art-terms/s/socially-engaged-practice>

*Socially engaged practices have been developed and delivered through collaboration, participation, dialogue, provocation and immersive experiences. The organisation's focus on process seek to embed themselves within the communities among whom they work. This puts them in a position to respond to the specific needs and agendas of communities and hence to widen audience participation.*

New Model Visual Arts Organisations and Social Engagement

Professor Lynn Froggett

Psychosocial Research Unit et al 2011

7.40

Both definitions foreground the value of process over outcome, and the skills of listening, collaboration and participation over ego, artistic interpretation and self-expression of the creative practitioner. They act as invitations to students to expand their thinking around their practice, offering students a framework and approach that shifts their focus away from an *auteur* practice, towards one where the needs of an organisation are considered.

Since completing the project, the premise we now use as our starting point to negotiate and develop socially engaged partnerships is :

*To consider the student as primarily an independent creative practitioner, engaged in a knowledge-exchange partnership. To participate in project negotiation, and work using collaboration and co-production approaches, to the shared benefit of the students, the organization involved and its client base; the user experience.*

So what pedagogical value did this project have and how did our students benefit from this? We understand the huge potential educational value in developing opportunities and supporting students to be curious and confident in putting themselves and their ideas to the test on 'live' projects. The student's experience here helps to enrich their specialism and supports the development of invaluable employability- friendly attributes, with opportunities to evaluate their creativity in a professional external environment. Students share knowledge and skills, to collaborate and develop professional and social networks. This approach to study embodies deep learning through the student's engagement with professionals external to the University, in this case, with the Ronald McDonald House's director, the building's architects and the site managers and house service staff.

Working on live external projects with a partnership organisation is an invitation for a student to define themselves beyond being a student. The 'externality' of the practice acts as agency to help a student begin to define themselves, more seriously, as practitioner / artist / facilitator etc. Here 'externality' can be used to give students an opportunity to test the definitions of their practice, and to experience the soft, transferable skills of, for instance, time management; listening; communication; pitching; collaboration. How this deepens their understanding and value of their specialism, and of the professional/ graduate attributes they have experienced, can then be brought back into the curriculum and articulated through conventional means such as a written report/ presentation / reflective blog etc.

Key here also is the learning they gain from the communities they work with. Hopefully helping them to develop a greater sense of social responsibility and good citizenship will feed ambitions to make the world a better place (*sic*)

Pragmatically there is a strong argument for developing a small number of key long-term partnerships. Identifying key organisations as project partners to support both the ongoing development of protocols and of mutual understanding between the learning experience and growth of understanding. Often the success of these partnerships are predicated on personalities, certainly at the early stages of a project, where initiatives and ideas are driven by the enthusiasm and can-do attitude of one or two individuals. We have found that the value of identifying and harnessing the energy of the individual personality in a partnership organisation cannot be underestimated.

Developing genuine knowledge exchange partnerships with relevant organisations is time consuming. Often this work is speculative and potential projects can be discarded or unrealised for many reasons. Where opportunities are identified and followed up, the initial development / feasibility stage where project details, expectations, timeframe, outcomes, exchange of skills and expertise across the partnership, all require time and resources. Often this is not fully recognised or appreciated. This does need to be a managed process in order to ensure that these partnerships are of real value and that the voice and expertise of these organisations are most effectively used to support and develop opportunities.

To this end we see value in developing a 'socially engaged partnership hub', where an informal board of advisors could help shape up guidelines, and identify some shared generic objectives between education and industry. Where we can promote projects and initiatives, and develop the potential for future opportunities. This advisory board and hub could support the development of agile protocols and procedures for health and safety, safeguarding and ethics that meets the needs of the university and of partnership organisations.

To summarise what we learned from this process. We expected creative compromise, but discovered that the process of an engaged partnership, with initial compromise offers a holistic creative encounter for both student and client, therefore compromise shifts from a negative to positive experience. It can amplify creativity, resulting in more innovative and stimulating work being produced. Working with an open and responsive partner (the charity's director) was conducive to our growing ambitions for the project. Her willingness to engage and trust us, allowed us to encourage students to take creative risks, and gave them permission to take an active stake in the project. In the end, together - the charity, students and staff, produced work for the building that had a function beyond the illustrative, decorative or picturesque. The work encapsulated something fresh about the history, colour and vibrancy of the city of Manchester. Collectively we fulfilled the practical needs of the charity, to make a '*home away from home*' whilst satisfying the creative desires and ambitions of all involved.

### **The authors**

Gavin Parry is a Photographer and Senior Lecturer at MMU (Manchester Metropolitan University) UK. He works both as a freelancer and a 'gallery orientated' practitioner, and exhibits both nationally and internationally. Parry's practice evolves from a Photo Documentary tradition and has a preoccupation with Photography's relationship with the real'. His practice takes a liberal approach to Documentary Photography, maintaining a social and conceptual basis and a particular relationship to the subject.

Jacqueline Butler's arts practice sits within photography, video, printmaking and writing. Her artwork explores two distinct areas; a focus on family, exploring loss and female inheritance, and reflections on the illusory space printed matter offers, in virtual as well as physical form. She has

a particular fascination with archives and collections (both public and private). Currently studying at Glasgow School of Art, her PhD weaves old with new technology and reflects on the history of the medium. Jacqueline is currently Head of Media at Manchester School of Art, MMU and one of the Coordinators of Recall Collective (formerly known as Family Ties Network). She is on the Executive Board at Open Eye Photography Gallery, Liverpool and on the Advisory Board of The Image International Research Network. She regularly exhibits her work nationally and internationally and also outputs her practice through publication and conference participation (papers, workshop and artist presentation). Recent contribution to *Picturing the Family* (published in USA and UK through Bloomsbury Press, Feb 2018).



Sustainability Symposium  
16<sup>th</sup> November 2018

# Ego to Eco: Imagining, Experiencing and Interpreting Nature: a pedagogical case study

Joanna Rucklidge

## Abstract

How can learning experiences in art and design offer a shift from ego-centric to eco-centric behaviour? With an agenda of wanting to engage more visual communication students with issues around sustainability, we piloted a project using time in nature to connect students with a sense of stewardship for the environment, and, in turn, use this to create work to engage audiences with the same topic. We structured a series of interventions with a group of students. We collected data about their perceptions before, during, immediately after, and a year after the project.

Firstly, the students were tasked with imagining and visualising experiences of nature through writing and drawing. Secondly, the students experienced a one hour mini solo in 'nature'. During this time they were restricted to only using audio recording equipment, disarming them from their usual visual documentation tools, encouraging them to be more observant, mindful and connect with their surroundings. Finally, students were asked to interpret their experience by exploring avenues of research to deliver a piece of visual communication about human connectedness to nature.

Before and after the project, each student answered a questionnaire. At the start, only 35% agreed: "I have a deep understanding of how my actions affect the natural world". Following the project, 85% agreed with the same statement. At the start 73% agreed: "My personal welfare is independent of the welfare of the natural world". By the end 33% agreed. Throughout the project, the subject manoeuvred the students from a general ego-centric perspective (regarding the self as the centre of all things) to a more eco-centric one (people are inseparable from their natural environment). This was also evident in the way they chose to visualise natural spaces from memory, compared to how they visualised messages about nature from direct experience, and translating for an audience.

A year after the project students described emerging themes and ambitions as: employing visual communication practice as a means of benefiting community; a greater awareness of lifestyle and use of resources; an understanding that nature and self-reflection is good for health; and overall increased confidence and understanding of self. This evidence of "perspective transformation" has included a shift in psychology, conviction and behaviour.

This project begins to address ways to expand communities of sustainable practice, in particular with individual student engagement, “making-meaning” from an experience, then translating their view to communicate and influence wider audiences. We would welcome the opportunity to share this project and receive feedback, whilst networking with others interested in addressing responsibility, compassion and ecological awareness within art and design education.

**Paper**

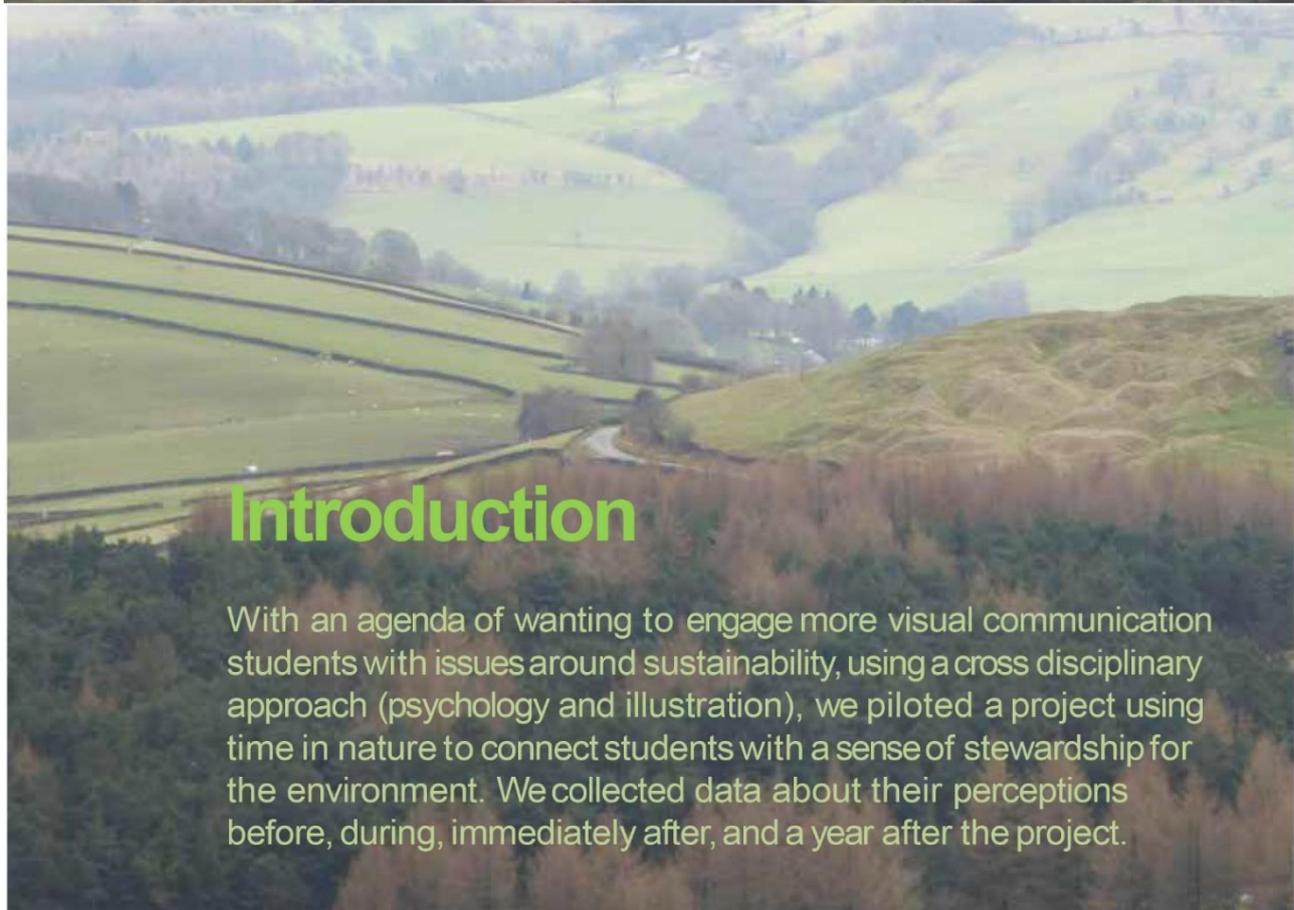


# Ego to Eco

A pedagogical case study: Imagining, Experiencing & Interpreting Nature

Elizabeth Freeman/EcoPsychology & Joanna Rucklidge/Visual Communication

Expanding Communities of Sustainable Practice: Leeds Arts University Symposium 2018



## Introduction

With an agenda of wanting to engage more visual communication students with issues around sustainability, using a cross disciplinary approach (psychology and illustration), we piloted a project using time in nature to connect students with a sense of stewardship for the environment. We collected data about their perceptions before, during, immediately after, and a year after the project.



## Collaborative Objectives

Working with students studying illustration:

To increase pro-environmental attitudes & behaviour

To increase their connection to natural environments

To motivate a creative response from a transformative experience

## Participants

- 15 x second year BA Illustration students (2 male, 13 female)
- General predisposition towards nature - did not 'feel disconnected from nature'. Personal history – mixed urban/rural living
- New to the illustration programme - narrow perspective of illustration
- Compulsory component of the curriculum

## Project Timeline

### Week 1

#### *Imagine*

Drawing & writing



### Week 2

#### *Solo Experience*

Audio (& image on return)



### Week 3, 4, 5

#### *Interpret*

Visual communication

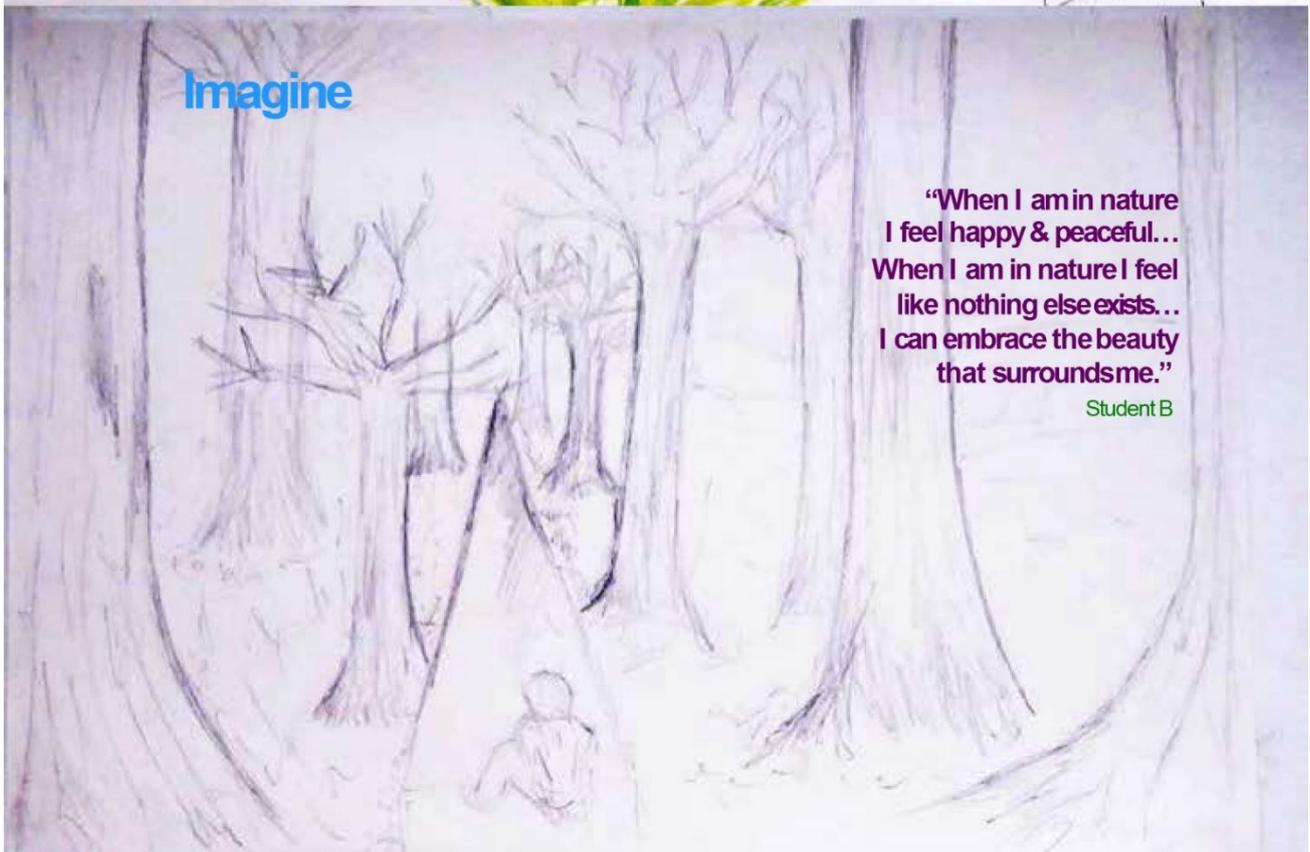


## Data collection

1. Pre-project questionnaire
  - a) Nature connectedness scale (Mayer & Frantz, 2004)
  - b) Pro-environmental behaviour scale (Lynn, 2014)
2. *Imagine* writing & image
3. *Experience* audio transcript & image
4. *Interpret* outcome
5. Post-project questionnaire
6. Interview (1 year follow-up) – expectations, experience & learning, perception of experience

## Data analysis

Thematic analysis (Braun & Clarke, 2006) and visual methodologies (Frith et al., 2005)



## Experience



No camera  
No phone  
No sketchbook  
No picnic

Dictaphone  
Emergency whistle



## Experience



## Experience

“Felt vulnerable and insecure... Cleared my mind and was alone with my thoughts...”

Student C



## Interpret

### Brief

What is your connection to nature?

Using the experience of your ‘solo’ time in nature as a springboard, you are required to express an opinion, agenda or perspective on nature, humans and wellbeing.

You must establish appropriate media & contexts to communicate your message(s) to a relevant audience.



## Hunting Helps Expand U.K. Wildlands, Study Says

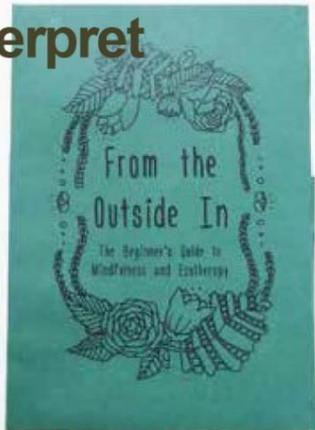
**D**ead trees and abandoned roads make an ominous, haunting scene in some of the most remote and rugged areas of the U.K. But a new study says that hunting and shooting can help expand the country's wildlands, a study published in the journal *Biological Conservation*. The study, led by researchers from the University of Exeter, says that hunting and shooting can help expand the country's wildlands by 10% over the next 50 years. The study found that hunting and shooting can help expand the country's wildlands by 10% over the next 50 years. The study found that hunting and shooting can help expand the country's wildlands by 10% over the next 50 years.

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**"I developed an appreciation for the natural world which I hadn't really thought about in depth before"**  
Student B

# Interpret



“Changed my opinions... now I use visual communication to help others...  
Student C



# Interpret

## Student Project Themes

- How human activity affects wildlife habitats
- Authentic versus artificial 'nature'
- Eco therapy
- Clean Air issues
- Crime reduction in green spaces
- 'Time out' away from technology
- Biophilia (affinity of human beings for other life forms)
- Humans as creatures within nature
- Butterfly conservation
- Light pollution

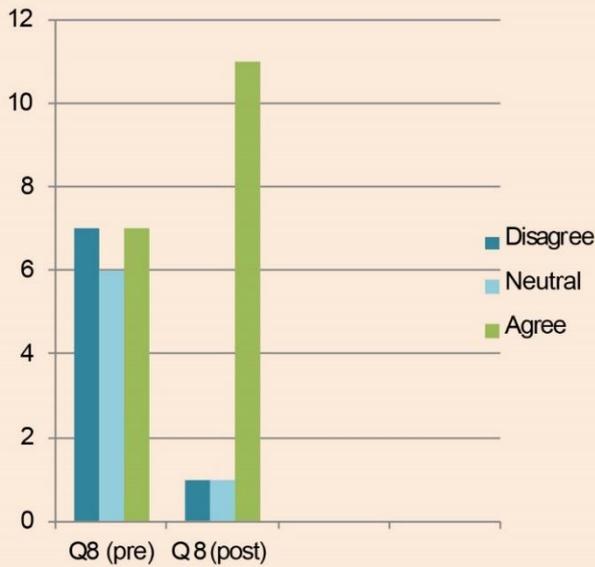
## Findings: (Pre & PostQuestionnaire)

From the Nature Relatedness Scale - assesses the affective, cognitive, and experiential aspects of individuals' connection to nature

**Q8:** I have a deep understanding of how my actions affect the natural world.

Pre: 35% agreed

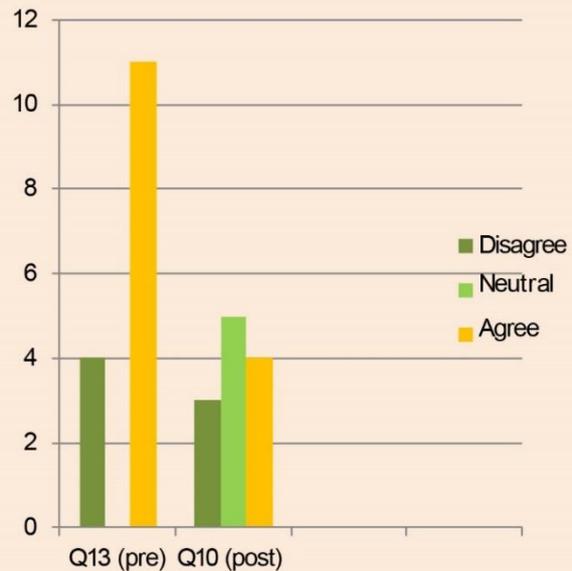
Post: 85% agreed



**Q13:** My personal welfare is independent of the welfare of the natural world.

Pre: 73% agreed

Post: 33% agreed



## Findings: (interviews)

Expectation	Gain
"Like previous experiences.."	Built confidence. Changed opinions. Now use visual communication to help others. Challenged to think differently.
"Thought about work and what we'd produce"	Understanding how people engage with things. Realised importance of self reflection.
"An enjoyable day out"	More confident, taking more risks, usually quite shy. "Making a change" - helping communities and giving them a voice.
"A topic I enjoy"	Greater understanding of benefits of protecting the environment. Nature helps the struggle with anxiety and realising why now. Going out more, using photography, listening. Feeling calmer.

## Findings: (image making)



**Ego-centric**  
regarding the self or the  
individual as the centre of  
all things.

## Findings: (Image making)



**Ego-centric**  
regarding the self or the  
individual as the centre of  
all things.



**Eco-centric**  
people are inseparable from their  
natural environment, placing intrinsic  
value on all living organisms.

## Implications for education

### Transformative learning theory–

the process of "perspective transformation":

- **psychological** (changes in understanding of the self)
- **convictional** (revision of belief systems)
- **behavioural** (changes in lifestyle)

## Implications for education

The theory is constructivist...

**“the way learners interpret and reinterpret their experience is central to making meaning; and hence learning”**

**(Mezirow, 1991)**



## Transforming learning experiences from ego to eco – centric:

- v Through human-environment interaction, novel experience in nature, and meaning-making using creative methods.
- v Zone of Proximal development (learning with guidance) and transformative learning.

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### **The author**

Joanna Rucklidge is a Senior Lecturer in Visual Communication at Sheffield Institute of Arts. She has worked in art & design education for over 20 years, consistently interested by how pedagogical experiences relate to environmental awareness. She studied BA Graphic Design at Glasgow School of Art and an MA in Visual Communication at the Royal College of Art. She also continues to work as an artist and designer tackling issues around waste, re-use and the value of resources.



Sustainability Symposium  
16<sup>th</sup> November 2018

# What may the realities of a sustainable creative practice mean to you?

Dianne Shillito

## Abstract

This paper is about making sustainable creative practice real and, more importantly, making it real to you. It may be real for me but if there is no knowledge exchange how can we understand and support each other to commit to maintaining a sustainable creative practice for ourselves? The paper begins by defining what a sustainable practice could be and moves on to discuss the challenges of a sustainable practice. I explore my own journey as a sustainable creative practitioner and other artists' views, including thinking from Lovelock, Bell, Sardello, Jackson, Goethe. I argue that: it is not only possible but essential that we ask ourselves questions about who and how we want to be within a sustainable practice. However this cannot be done in isolation.

The main focus of this paper shows that sustainability is all very well in theory but the challenge is for artists on the ground to translate it into a manageable practice to avoid becoming overwhelmed by the weight of sustainability and to progress in the practical, material, physical activities and embody sustainability in practice. The paper also recognises the agency of the matter we work with, our relationship with nature, that sustainability comes from seeing nature and ourselves as part of the whole, an entirety. As such through this embodiment we are almost automatically working sustainably. This is achieved by engaging with a practice based research perspective that embraces methods of reflectivity and reflexivity within it. Reflexivity recognises a 'circulating energy between context of researcher and researched' and that both of us have agency.' (Etherington, 2004, p.36)

I found that the significant finding was to consciously question: is this sustainable in the longer term. In my practice, referred to in this paper, this is easier because my materials are organic and I allow nature to take its course. I also found that by surrendering to the process you can be sustained by the process, of circulating energy, as nature gives generously back to you. Finally I recognise there are challenges and compromises about making photographic images using inks, paper which materially are less sustainable and that I continue to investigate alternatives.

## Paper

### In The Beginning

The definition of sustain is to provide for or give support to (Collins dictionary, 2018) The generic non-specificity of the term sustainability is too big and abstract to give relatable embodied meaning to many people and even more so for those engaged in a creative practice. It is acknowledged that whilst humanity cannot keep on its present course we are still working out how to respond meaningfully to the term sustainability amidst the confusion. I question our commitment to, and capability of, seeing our earth from a different perspective. Do we have the courage to participate in a new cultural paradigm that will create an inclusive sustainable world for future generations of human and non-humans? Can we, as artists, first explore what sustains us individually within our creative practice and then share it collectively to create a sustaining environment that supports our commitment to take the next steps?

Jackson (2017) believes that we have to commit to the possibility of living 'within the ecological limits of a finite planet' However, first we have to want to do it. This paper seeks to explore how we, as artists, can lead by example from the heart of being in a practice and become the change that we wish to be in our chosen field of creativity. I believe there is no one way for this to occur, each of us has a role to play and a path to tread yet, as a collective, we can weave a tapestry of possibilities for unique, authentic sustainable change for the future of everything.

'An artist is a communicator but to be an artist one must first be a human being: that is to say: whole, undivided if possible... From such a position there is no division between man, art, nature.' (Drury, 2004, p.6)

### What Lies Beneath?

'The body is where awakening happens. It is the medium of transformation.' (Viola in Morgan 2004, p.103) My first questions would be What does sustainability mean to you personally as a human being? Do you feel it or is it still a mental construct? Do you want sustainability to be integral within your creative practice? Are you willing and able to begin? As a process artist, one of my research projects explored the effects of decay on organic plant matter, layered between sheets of glass or Perspex and placed outdoors exposed to the elements, over 100 days. Daily witnessing and photographic capture of the plant matter illustrates the beauty to be found in decaying matter. I post images on Instagram creating a running hashtag narrative, which gives voice to the cause and effect of witnessing this process. This research is both reflexive and reflective. 'I wonder what happens if...' invites experimental creativity. This process sustains me and in consequence, engages a desire to be sustainably aware of the materials I select and use. My relationship with the plants used in this natural process engages receptivity of both nature and artist. This methodology has been an organic, synchronistic engagement with phenomena that I cannot consciously grasp.

I recognise sustainability within my practice, as a holding of conscious present awareness in the choices that I make, and a willingness to explore ethical, green, sustainable alternatives, whilst engaging in a creative practice that nourishes and sustains me. I realise that mine is a work in progress. It is impossible to answer all the questions and have all the answers immediately. It means that I am willing to try to question my use of materials, knowing that I will, at times, fail in my ability to be sustainable. I may need to make compromises, alterations or let go of a project that is unable to sustain me.

When I engaged in my creative practice in the early days, I had no declared commitment to sustainability as such but I was interested in how to develop it. I had respect for my environment inspired by James Lovelock's Gaia theory, which sees the earth as a living system. I recognised the agency of materials that I worked with and through. Theories like the Eocene were interesting constructs, but they didn't always translate into my practice. I empathise with Sardello's (2004) concerns, that we may lose sight of being present because we find comfort in the abstraction of theories. For me the reality is being on the ground, in my practice, trusting the process and engaging with it from the heart. I have always had an affinity towards the inter-connection of all things as energy matter. The organic matter and materials combined in this process to remind me that 'nature' has a language as an entity that is embodied in us. This enhanced recognition opened the door to questions. 'I am not aware of thinking, planning, envisioning - just feeling my way, sensory not cognitive, it is intuitive.' (Bell, 2013, p.244)

I endeavoured to use natural, re-cycled or up-cycled material from the beginning. However, I began to question my use of certain materials, investigating their sustainability. Was it ethical to use silk; was it sustainable? Is peace silk sustainable or any better to use? My decay installations had previously been constructed using recycled glass. However, for larger installations this is too costly and heavy. I research for lighter alternatives meant weighing in the balance how sustainable Perspex was compared to glass. I searched for a green version however; it was difficult to ascertain what was 'green' about it. Due to time pressure, I ended up installing the Perspex. This was when I realised the complexity of identifying sustainable materials.

More questions began to arise and it felt like I had opened a Pandora's box. I was overwhelmed. It was then that I realised that I had to step back and ask questions of myself and my practice. Did I want to be sustainable? Yes. Why was it important? Because, I believe, we have to be responsible for our behaviour, come down from our pedestal, acknowledge the value and contribution of human/ non-human otherness on this earth AND recognise that we are all made of the very same elements of the earth. It is our larger body. How would this manifest in my practice? Through open thinking, asking questions, researching and engaging our awareness, being the best example of a human being, making conscious sustaining choices as an artist, making choices, where ever possible to re-cycle, up-cycle and use ethical, green alternatives.

In addition, most importantly to engage in creative practices that nourish and sustain me alongside others who want the same. This journey is a progression that comes through the body senses with a willingness to be open, vulnerable and connected; it cannot be made in isolation. In my personal view, I maintain that my materials are fully aware of me at some level; they are responsive to me in our shared communication. This inter connectivity has generously sustained my creative journey to an end point and a new beginning. 'We create together with our materials and our bodies, not just our minds...the materials of expression will always reflect the quality of engagement with them.' McNiff (2009, p.30)

### **What Will Become of You?**

Through my practice-based research I have found that by trusting the process, it will give back to you and this can sustain you. However, we need to be receptive to the possibility of this happening. The limitations of practice-based research is that of being submerged in one's own practice, and forgetting to connect with others for feedback, comparison and sharing. There

are various ways of overcoming this by collaborating with others and translating ones practice from a different viewpoint or application. Another limitation can be the time it takes.

As artists who are on the front line, it takes time and energy to commit to a sustainable practice. If you place yourself outside the experience of living it - and say I want to be sustainable - where does that leave you? Who do you want to be within this paradigm? These questions are significant, assumptions and pre-conceptions can unconsciously influence the process. 'True researchers must observe themselves....so that one does not always rudely insist on one mode of explanation, but...select the most appropriate.' (Goethe in Buhner, 2004 p.232). My finding has been that when you have an embodied, empathetic experience of the significance of sustainability to you, you focus your energy on sustaining yourself in order to engage in simple steps of practical sustainable practice because it means something to you as an individual creative practitioner inside of the bigger picture. 'The world is not what I think but what I live through' (Merleau-Ponty, 2013 p.170).

There will be at times, frustrations and questions about materials, challenging your ability to be sustainable. You may need to make compromises, alterations or let go of proceeding with that project or change its direction. The survival of the lone artist who wishes to be sustainable is also dependent on having a community around you who are committed, supportive, resourceful and inspiring about sustainability. The sharing of knowledge and resources is vital to expanding all of our sustainable communities, saving time and energy. And energy is finite.

It may be that we all need to make less so that what we do make matters. Most of all I believe we all need personal sustaining daily practices that nourish and nurture our relationship with ourselves. 'Fresh perceptions of our mutual belonging in the living body of the Earth...bring unparalleled changes in the ways we see, think, relate.' Macy (1998, p.6). Sometimes we may need to stop being practically creative and be present to being still and silent, long enough perhaps, for the earth to whisper to us on the wind, of the future we wish for.

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### **The author**

Diane Shillito recently completed her MA in Creative Practice at Leeds Arts University. She is an investigative, process driven artist embracing sustainability within an ethical ecological practice. She has faith that through trusting the process within her practice, and by being engaged with materiality and matter as both significant other and as equal active participants in creation, a practice becomes sustaining and magic can happen.



Sustainability Symposium  
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# Cultivated Fashion: exploring the commercial viability of bioengineered fashion and textile products.

Marie Stenton

## Abstract

Due to the rapid pace in which it has increased, fashion has become a victim of its own success; creating tragic social, economic and ecological impacts. Clothing production has approximately double in the past 15 years, mainly due to the rise in 'fast fashion', a 21<sup>st</sup> century phenomenon with quick turnaround of new styles, increased number of collections per year, and considerably lower prices. The textiles industry also relies on 98 million tonnes per year of non-renewable resources including oil, fertilisers, and chemicals, and uses around 93 billion cubic metres of water annually. (Ellen Macarthur Foundation, 2017)

This practice-based design research explores whether manipulating living organisms has the potential to tackle major global issues for the environment and animal welfare, by offering a new way of designing and manufacturing fashion in the future. In addition, it explores how developments in biotechnology could one day rival traditional textiles and animal-based materials, and how the role of the 'designer' could change within this shift in responsibility.

The topic of bioengineered materials is a controversial yet growing subject amongst today's designers, and one which must be considered ethically. The project, 'Cultivated Fashion' explores how these findings can be used to increase corporate responsibility and change both industry and consumer perceptions. Today's decision makers within the industry should be challenged to show how ethical and sustainable methods of practice can be used to induce creativity, not stifle it.

**Key words:** Bacterial Cellulose (BC), Biomaterials, Sustainable Fashion and Textiles

## Paper

### Introduction

'Synthetic biologists are now in a position to code and re-programme life, and are beginning to create artificial living matter from scratch, they are on the verge of revolutionising the way we conceive, design and produce'. (Collet, 2012) Collet believes that a new panorama of possibilities is ahead of us, yet it is difficult to imagine how our everyday products could be enabled by such technology. In answer to this, designers will need to adapt to understand how to work with these new living systems.

Some designers are exploring this concept through the use of speculative design, imagining a hypothetical scenario with a relatable design outcome. Dunne and Raby (2014) state that to explore such concepts, 'a believable series of events that lead to the new situation is necessary, even if entirely fictional... Allowing viewers to relate the scenario to their own world and use it as an aid for critical reflection.'

Cultivated Fashion, stems from a speculative design brief considering a future where resources have diminished, and consumers begin to grow clothing using their own DNA, as a 'second skin'. This resulted in the cultivation of Bacterial Cellulose (BC) which raised issues as to how consumers feel about the origins of their clothing and animal-based materials, and how open they are to trying new, sustainable alternatives. Through both physical, material development and consumer/industry engagement, the aim is to investigate whether this is a path we want to take and reflect on the potential of speculative design to question this developing technology.

## **Innovation with Nature**

### *Biohacking*

Biohacking is commonly described as 'Do it yourself Biology'. This growing, social movement in which individuals, communities, and organizations study sciences and experiment with biological matter to create new ways of 'making' and 'doing' is widely contributing to the popularity of Biomaterials, and blurring the line between science and art.

Collaboration is a key factor in this movement, and necessary to the success of a commercial, bioengineered fashion and textiles market. This new, material revolution needs to be explored as an industry through collaboration and open source learning, creating a community of Bio Designers and Hackers. Artists, designers and scientist must face a shift in responsibility, and come together to share skills and knowledge.

Already, there is a growing global community, sharing ideas and resources through social media, exhibitions and workshops. The significance of this is the demonstration of consumer involvement. Information about how to grow and create new materials is available not only to designers, but to consumers and individuals looking to try such things for themselves. Realistically, commercial bio products will not be available to a wider audience for some years, so allowing consumers a new understanding of these processes and for them to test new materials themselves offers a new level of engagement within the fashion industry.

Taking responsibility away from designers and into the hands of individuals could be a solution to many issues surrounding sustainability. Giving consumers the confidence to create their own clothing and materials could potentially settle the urge for fast fashion by offering a new sense of ownership and pride in the wearer. Not only this, consumers will be more able to fix and recycle their garments towards the end of the products lifecycle. Allowing consumers this responsibility will in turn encourage designers to create fashion in a new light with a focus on DIY.

'It is estimated that more than half of fast fashion produced is disposed of in under a year... and the average number of times a garment is worn before it ceases to be used has decreased by 36% worldwide, compared to 15 years ago.' (Ellen Macarthur Foundation, 2017) In the case of fast fashion, one appeal of biomaterials is their biodegradability and in some cases such as BC, compostability. Garments could be grown, worn and put back into the earth as a source of nutrients, all at the consumers discretion.

### Circular Economy

Since biology naturally makes consumption useful, synthetic biology could set a precedent in manufacturing by taking control of the entire design lifecycle (Ginsberg et al., 2014) ‘For industry, synthetic biology could offer the opportunity to develop models that integrate material, energy, manufacturing and disposal.’

Hansell (2017) envisions a future where genetically modified cells produce materials of a certain colour, pattern and fibre, bespoke to a brand. These bespoke materials would contribute to the options of personalisation, allowing designers and consumers even more creative freedom.

In response to this concept and my own investigation, I have developed a product lifecycle envisioning an open source ‘Biohack’ model (figure 3) in which customers can purchase programmed cells/DNA to grow into a designed garment at home. This model would provide a more cost-effective alternative to purchasing pre-made garments. The Biogarments would have regenerative properties, inspired by the way cells regenerate within the body, and could be ‘healed’ if torn or regenerated to avoid biodegrading if the consumer wished to extend the products lifespan. Fragrances and antibacterial properties could also be programmed into the garment eliminating the need for washing or dry cleaning.

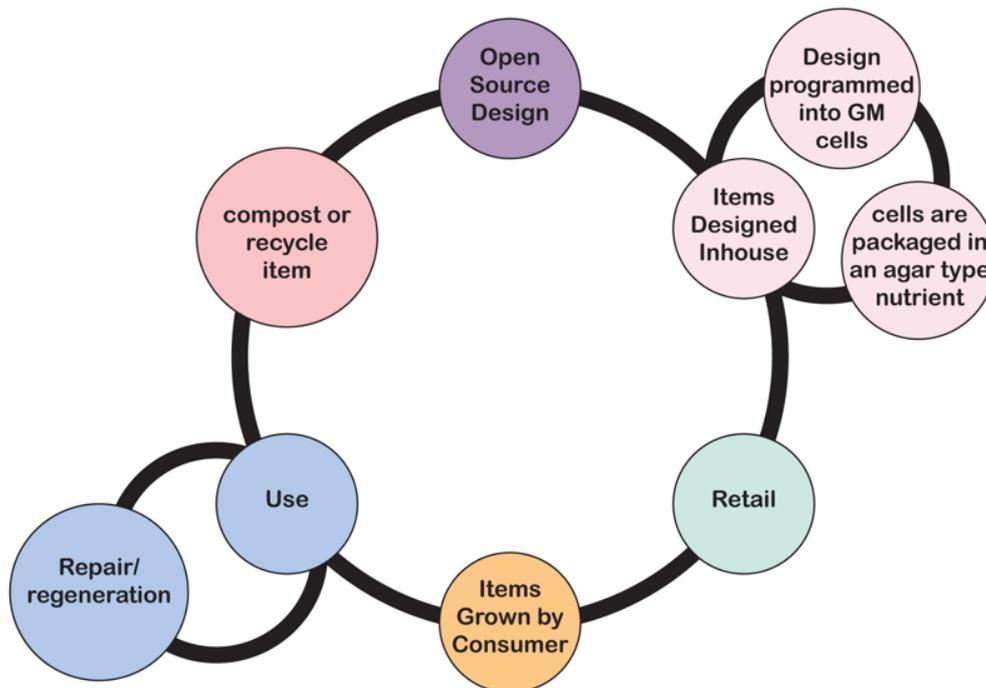


Figure 1: ‘Biohack’ Model: Open Source Design. (Stenton, 2018)

As a part of this investigation I created a speculative ‘Grow Your Own’ kit manufactured by hypothetical, Bio fashion lab, ‘Cultivate’. As discussed, the kit allows customers to grow their own fully formed accessory from a programmed design SCOBY (symbiotic culture of bacteria and yeast, used in the making of Kombucha Tea). The kit includes:

- 1 live design SCOBY
- 1 nutrients pack
- 1 cloth for covering the material whilst growing
- 1 guide/instruction manual
- 1 ‘healing’ gel which will repair the end product if torn or scuffed.
- 1 thermometer to monitor media temperature



Figure 2: Contents of the 'Grow Your Own' kit. (Stenton, 2018)

I also constructed a purse from Bacterial Cellulose demonstrating what the final product could look like. Emphasis ran on having a well branded product that could fit in today's fashion market, along with an educational booklet encouraging consumers to think more sustainably about how they can care for (and create) their own products. This response incorporates consumer education, sustainability and considers how we might actually begin to start designing with and retailing living systems as products



Figure 3: 'Grow Your Own' kit, allowing customers to grow their own accessory from Bacterial Cellulose.

## **Creative Concept to Functional Application**

‘Biologists working in the field of synthetic biology and genetic engineering are developing methods for ‘reprogramming’ organisms such as bacteria, yeast, algae, plants and proteins to produce bespoke materials, medicines and biofuels.’ (Hansell, 2017) Using these developed processes of fermentation and cultivation, a growing industry of designers and technology start-ups are collaborating to engineer materials with new aesthetics and functional properties, potentially recreating sustainable versions of existing products.

Collect (2012) speculates that ‘the new toolbox is the petri dish; the new programming design software is the DNA code... So, what becomes of the designer in this instance? Will the role shift to designing hybrid bacteria and plants?’ Although many technologies and raw materials have been explored at concept level, and some are currently under development to manipulate living organisms as a design tool, none are yet commercially available or viably scalable. (“Biosynthetic”, 2017)

Technology companies such as Modern Meadows and Bolt Threads are at the forefront of this research, and although they have recently released limited edition, bio products to the fashion market, they are expensive and unaffordable to the average consumer. Not only this, Modern Meadows ‘Lab grown leather’ uses collagen extracted from an animal host which still raises concerns of animal welfare.

‘Transforming the industry to usher in a new textiles economy requires system-level change with an unprecedented degree of commitment, collaboration, and innovation.’ (Ellen Macarthur Foundation, 2017) Interdisciplinary links between art, design and science is an important aspect of this community of practice. Few institutions offer the opportunity to collaborate on such an experimental level, so current education practices will need to be revised to cater for such collaborations.

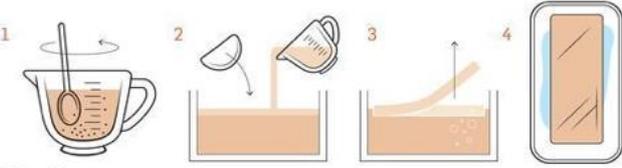
One example of this is the Burberry Material Futures Research Group, at the Royal College of Art London. In 2017, the Burberry Foundation awarded £3 million to the Royal College of Art to establish the group, with the aim to ‘inspire creativity and pioneer more sustainable materials and techniques in the UK creative industries.’ (Design Research, Burberry Material Futures Research Group, 2018) Over the next 3 years, the group will develop a research programme connecting students, designers and scientists working towards a sustainable future. Key areas of investigation are no-waste materials, growing materials, local materials and smart materials. Again, this investment shows the significance of biomaterials and the importance of a collaborative industry.

### *Material Development: Bacterial Cellulose*

First introduced to the fashion industry by Suzanne Lee, founder of BioCouture, Bacterial Cellulose is a biopolymer, currently used for a number of applications including food, biomedical, cosmetics, and engineering. ‘BC nanofibers are one of the stiffest organic materials produced by nature. It consists of pure cellulose without the impurities that are commonly found in plant-based cellulose.’ (Lee, Buldum, Mantalaris & Bismarck, 2013) Its unique structure and properties such as chemical purity, nanoscale fibrous 3D network, high crystallinity index and biocompatibility offer several advantages when it is used as native polymer or in composite materials, (Gullo, La China, Falcone & Giudici, 2018) and its renewability and biodegradability make it an attractive, sustainable alternative to materials such as leather. I first began to cultivate the material after discovering a recipe online:

## Grow Fabric in Your Kitchen

The microbes used to brew the drink kombucha can also produce a strong, leathery cloth—no cow required. Use Suzanne Lee's recipe to make your own.



**Materials:**

- 200 milliliters of organic cider vinegar
- 200 grams of granulated sugar
- 1 live kombucha culture
- 2 green tea bags

**Directions:**

- 1. Brew the liquid:** Boil 2 liters of water, and steep the tea for 15 minutes. Remove the tea bags and add the sugar, stirring until it's dissolved.
- 2. Prep the culture:** Make sure the liquid is cooler than 86°F, and then pour it into your container. Add the cider vinegar and the kombucha culture. Cover the container with a cloth.
- 3. Harvest the mat:** While it grows, the mixture should be kept at room temperature. First, the culture will sink to the bottom. You'll know fermentation has begun when bubbles and a transparent skin start to form at the surface. Over time, the culture will rise to the surface and accumulate in a thick layer. Once the mat reaches 2 centimeters in thickness (around three to four weeks), take it out of the container and gently wash it with cold, soapy water.
- 4. Dry the material out:** Spread the sheet flat on a wooden surface. When it no longer feels wet, you can cut and sew it like any other fabric.

**NOTE:** This recipe will produce a piece of microbial leather as large as 7 x 6 inches, and it will take the shape of the container you put it in. To grow a larger or smaller sheet, adjust the proportions accordingly.

Figure 4: Suzanne Lee's Microbial Leather instructions (Lee, 2015)



Figure 5: BC samples (Stenton, 2018)



Figure 6: Dried, BC samples (Stenton, 2018)

Although some of these properties may not be considered desirable for a fashion material, the ways in which BC can be treated can dramatically change its characteristics. I am currently working with the Biomolecular Sciences Research Centre at Sheffield Hallam University, to investigate new ways of cultivating the material suitable for a fashion market.

The material is cultivated through a process of fermentation, and grows on the surface of a liquid media, (known as a Herstrin Schramm Media,) meaning very little energy is required as it eliminates the processing stage between converting raw fibers to a finished material. The material will grow to size of the vessel in which it is grown, so can easily be grown to specific sizes and even shapes such as pattern pieces. Once fully formed, the material is harvested and dried. It is easily mouldable when wet, allowing new ways of creating shape and reducing waste. In addition, BC can be dyed with natural colourings such as food waste during growth meaning that no chemicals or additional water usage is needed once the material has formed. Textile dyeing currently accounts for 20% of industrial water pollution, (Noble, 2017) so adopting such

methods of pre-colouring amongst new varieties of Biomaterials (without the use of water or chemicals) could be revolutionary.



Figure 7: Layer of BC growing in media (Stenton, 2018)



Figure 8: Harvesting the material (Stenton, 2017)

### Ethical Investigation

Today, technologies to read and write new DNA from scratch are readily available, and programming codes are easily accessible with little restriction or legal formalities. ‘Although such ambitions are admirable in their cope, they raise many questions. What is the potential for unintentional or even intentional damage caused by biotechnologies?’ (Ginsberg, 2014). Hansell, (2017) states that ‘If we we’re going to work with life as a raw material and system, we need to further review how these methods will fit into design practice and what ethical implications this could have.’

Despite the potential, there are still many issues to be considered throughout this investigation. For example, how can we protect the IP of our designs when they are grown from living organisms? Furthermore, the lack of standardised life cycle analysis benchmarking for new technologies makes it challenging to compare and draw conclusions on the sustainability of biomaterials.

From an ethical perspective, little research has been done in this area to date. Although the aim is to create garments which are compostable we know very little about what effects this could have on the environment years down the line. Working with living organisms (such as bacteria) to create materials means that ultimately, those organisms will be introduced to the ecosystem through biodegradation, and what effects those organisms will have in the ground we simply do not know. These effects could take hundreds of years to become apparent, in which time the damage will have already been done.

Working with living organisms also poses the threat of contamination. Hostile species of bacteria thrive in the sugary conditions needed to grow Bacterial Cellulose and other forms of Biomaterials, and could potentially cause threat to the consumer if undetected. Bacteria, transformed into dormant spores, can survive and reproduce in extreme environments. The bacteria used to cultivate cellulose dies once it has been removed from its food and carbon source, meaning that the material itself is no longer living. However, if undetected contaminants survive the harvesting and manufacturing process, they could affect the environment and the wearer in uncertain ways.

Considering the way that food becomes contaminated overtime, Biomaterials could assume a 'sell by' or 'use by' date to avoid unintentional, future harm to the wearer. This would fit today's fast fashion system and desire to replace garments after a short amount of time. In this context however, is it responsible to encourage such a sense of disposability? In creating a new industry and new manufacturing methods, should we not look to improve longevity and appreciate our garments more?

#### *Another Quick Fix*

'Biology isn't inherently good, safe, or kind. By imagining that biotechnology will help solve socio-political problems, we risk missing the opportunity to identify big, systemic changes that may be a more appropriate fix.' (Chieza & Ginsberg, 2018) Large companies such as Adidas, Puma and Stella McCartney are just a few examples of large companies looking to harness biology within their collections. But while most focus on such methods of manufacturing and scalability, is it not necessary to consider real, long term social and environmental needs?

Biology as a manufacturing tool, has the potential to be much cheaper and efficient than our current systems through means of self-replication and fermentation, but does this mean that companies will continue to manufacture on the same scale? Overproduction from companies and factories directly leads to overconsumption, and whatever methods we use, our planet simply cannot sustain our current lifestyles.

#### **Conclusion**

The largest restriction with Biodesign as a commercially viable option for brands is that it cannot compete with our current systems. Today's manufacturing systems have been implemented for generations, so realising new methods capable of offering the same quality and consistency is a challenge. As discussed however, there is a larger need to use this emerging technology not simply as a means to produce *more*, more sustainably; but to question our entire outlook on 'fast fashion' and what we truly need as a society.

'Biodesign tools like synthetic biology afford humans immense opportunities to re-shape our natural world. As those technologies converge with others, like artificial intelligence, humanity holds an unprecedented amount of power over our shared biological futures. *Who gets to design life, and in what context?*' (Chieza & Ginsberg, 2018)

At this stage in the investigation, there are more questions than answers. But what is apparent here is an effort to answer those questions collaboratively, across disciplines and through emerging communities.

Bacterial Cellulose has the potential to be an attractive competitor in the race to create a viable biomaterial, suitable for the fashion market. It has the ability to significantly reduce energy

consumption and water usage, and eliminate waste and use of toxic chemicals altogether throughout the entire lifecycle.

As a raw material, BC is also much cheaper than the expensive genetically modified alternatives produced by high end tech companies, making it more accessible and therefore able to make the most positive impact within the industry. Its natural, regenerative properties and methods of zero waste/chemical manufacturing must be further investigated to fully understand its true potential, both as a material in itself and as a benchmark for new GM biomaterials.

From an ethical perspective, education is key. If this is to become a popular way of manufacturing for both designers/companies and the individual, we must fully understand the implications it could have in years to come, not just for our environment, but for the fashion system as a whole. Along with new ways of manufacturing, the fashion education system must find ways to adapt to these new technologies and inspire a new wave of designers to embrace sustainable ways of creating through Biodesign and protecting their creations through revised IP laws.

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### **The author**

Marie graduated from the University of Leeds with a BA in Textile Design and won the 2013 Clothworkers Award for her final collection. Inspired by biology and the natural world, she set up an accessories label with the intention of blurring the lines between science and art. Having worked with designers such as Alexander McQueen and Burberry, and running her own brand, Marie considered her values as a designer and realised that more than anything, she was passionate about the environment and the creatures that live within it.

Marie is now studying for an MA in Fashion Design at Sheffield Hallam University. Through a focus on Bacterial Cellulose, her research explores whether manipulating living organisms has the potential to tackle major global issues for the environment and animal welfare, by offering a new way of designing and manufacturing textiles in the future.



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# Embedding sustainability in design education: the case of design project on systemic changes for sustainable businesses based on upcycling

Kyungeun Sung and JungKyoon Yoon

## Abstract

Sustainable design education has become a prevalent practice in design education. Ramirez's (2007) worldwide survey shows that the majority of the programmes have either compulsory or optional modules on sustainable design. In particular, projects in sustainable design studio modules often deal with social or environmental sustainability issues with little attention to the practice of design for systemic changes for sustainable businesses. This paper aims to provide one such case: design project on how to scale-up sustainable businesses based on upcycling through systemic changes. A half-day student design workshop was co-planned and organised by De Montfort University and the University of Liverpool. Second-year undergraduate students in Industrial Design, University of Liverpool participated as part of Product Development 2 module. Throughout the workshop, participating students learned different approaches to sustainable design, production and consumption, challenges faced by upcycling-based businesses in the UK, and how to generate and develop ideas, concepts and system maps to resolve complex design problems involving multiple stakeholders.

Keywords: design education; scaling-up; sustainability; sustainable business; upcycling; case study; product service systems

## Paper

### Introduction

Sustainable design education has become a prevalent practice in design education. Ramirez's (2007) worldwide survey shows that the majority of the programmes (in leading industrial design courses from 221 schools around the world) have either compulsory or optional modules on sustainable design. In particular, projects in sustainable design studio modules often deal with social or environmental sustainability issues by design for community needs, regenerative design, inclusive design, service design, cradle-to-cradle solutions, reusable products, sustainable packaging and promotion of consumer environmental awareness (Ramirez 2007). Yet, relatively less projects to use design for systemic changes for sustainable businesses have been reported. This paper therefore aims to provide one such case: design project on how to scale-up sustainable

businesses based on upcycling through systemic changes involving multiple stakeholders. It is expected that the process and methods employed in the case can support designers to deliberately design for sustainable businesses. In addition, the identified challenges will help develop design (and education) materials that address the needs and expectations of designers in their attempts to design for sustainable businesses.

### **Upcycling-based businesses**

Upcycling is the creation or modification of a product from used or waste materials, components or products which is of equal or higher quality or value than the compositional elements (Sung 2017, Sung, Cooper et al. 2014). It is an umbrella concept incorporating 'creative' repair, reuse, refurbishment, upgrade and much more (Sung, Cooper et al. 2018). Upcycling represents an alternative that, in theory, reduces waste (Bramston, Maycroft 2013, Zhuo, Levendis 2014), increases material efficiency and reduces industrial energy consumption, therefore contributing to lowering greenhouse gas emissions (Allwood, Ashby et al. 2011, Sung 2017). Upcycling businesses have the potential to be financially sustainable (Han, Chan et al. 2016, Teli, Valia et al. 2014) and can create jobs (Cumming 2017, Palmsköld 2015). Despite such potential economic, environmental and social benefits, upcycling remains a niche practice. A process of 'scaling-up', whereby an initially unusual practice becomes mainstream (Van den Bosch 2010), is necessary in the case of upcycling in order to contribute significantly to the environment and society.

### **Scaling-up niche practices**

Scaling-up is often understood as the dynamic process of transitioning from niche to mainstream in transition studies (de Haan, Rotmans 2011, Smith 2007, Van den Bosch 2010). "Through scaling-up, a new or deviant constellation of structure, culture and practices attain more influence and stability and increases its share in meeting a societal need. [...] The outcomes of scaling-up are fundamental changes in the dominant way societal needs are fulfilled." (Van den Bosch 2010, p.68). Such transitions do not take place easily as the existing systems are stabilised by lock-in mechanisms relating to vested interests, sunk investments, favourable subsidies and regulations or behaviour patterns (Geels 2010, Unruh 2000). In order to overcome these lock-in mechanisms, both social changes and technological solutions are required (i.e. interrelated changes in behaviour, technology, environment, rules and regulations, financing systems and perceptions) involving various stakeholders (Geels 2004, 2010, Van den Bosch 2010).

### **Project background**

This project was based on the collaboration between De Montfort University (Product Design, School of Design) and the University of Liverpool (Industrial Design, School of Engineering). Collaborative planning and execution were made for a design project in Product Development 2 module for second-year undergraduate students in the University of Liverpool. A project brief was created on the basis of the research undertaken on challenges and success factors for scaling-up upcycling Small- and Medium-sized Enterprises (SMEs) in the UK. The project brief outlined stakeholder interviews with material suppliers, upcycling designers and makers, retailers and consumers.

### **Participants and project setup**

A half-day design workshop was conducted with 36 second-year Industrial Design students at the University of Liverpool in April, 2018. The workshop aimed to achieve the following learning outcomes. By the end of the workshop, students will be able to: a) discuss different approaches to sustainable design, production and consumption; b) explain challenges faced by upcycling-based businesses in the UK; and c) generate and develop ideas, concepts and system maps to

resolve complex design problems involving multiple stakeholders (scaling-up upcycling businesses in the UK) individually and as a team. For delivery, the workshop consisted of a series of activities including an introductory lecture, individual and group activities for solution ideation and development, and presentations of the workshop outcomes (see Appendix for detailed workshop schedule and procedures). The workshop was held in a studio with a cabaret setup. Students were asked to create groups of four (9 tables and 4 students per table). Papers and drawing tools were prepared for individual activities. Laptops were provided for group work (at least one per group). The workshop ended with discussion in which all groups openly discussed their learnings and lessons, and how the setup and contents could be further improved. After the workshop, the students filled out a questionnaire that assessed the contents, activities and resulting outcomes of the workshop.

## Results

Students generated ideas and developed concepts in order to provide innovative design solutions for scaling-up upcycling SMEs. The solution ideas were in various forms: products, services, product service systems (PSS), policies and regulations. It was observed that students presented more service or PSS ideas than product ideas. These different forms involved different patterns of ideas in terms of their goals and design strategies. Product ideas focused on how upcycling could become part of business-as-usual or mainstream companies. Examples included premium upcycled products by collaboration between upcyclers and high-end product design companies (e.g. Bang & Olufsen), and upcycled bag and other fashion items by well-known fashion brands. Service ideas tended to focus on awareness raising targeting the general public. Examples included: a) market day for schools (e.g. showing educational videos, organising creative workshops to make upcycled products, and selling the upcycled products made by school children and parents to the local community); b) Youtube documentaries (e.g. a life of an upcycled product) made by upcycling designers, makers and companies; and c) upcycling theme park named 'Upworld' - which could have, for instance, jungle zone, log flume, virtual reality adventure, petting zoo, interactive upcycling workshop, and upcycling furniture and product shop with café at the end. PSS ideas included: a) bartering and discount system (e.g. consumers donating their clothes to fashion upcycling designers and makers get a discount for new upcycled items); b) large manufacturing companies' product take-back scheme and upcycling remanufacturing (either mass produced or bespoke); and c) website and/or mobile application provided by upcycling companies to recognise any new products (by uploaded photos) and suggest upcycled alternatives available. Policy and regulation ideas included: a) tax exemption and relief for companies specialising in upcycling products; b) tax differentiation depending on the lifetime of products, components and materials; and c) labelling system to indicate environmental impact of all mass produced and upcycled products (cf. energy efficiency rating) (Figure 1).

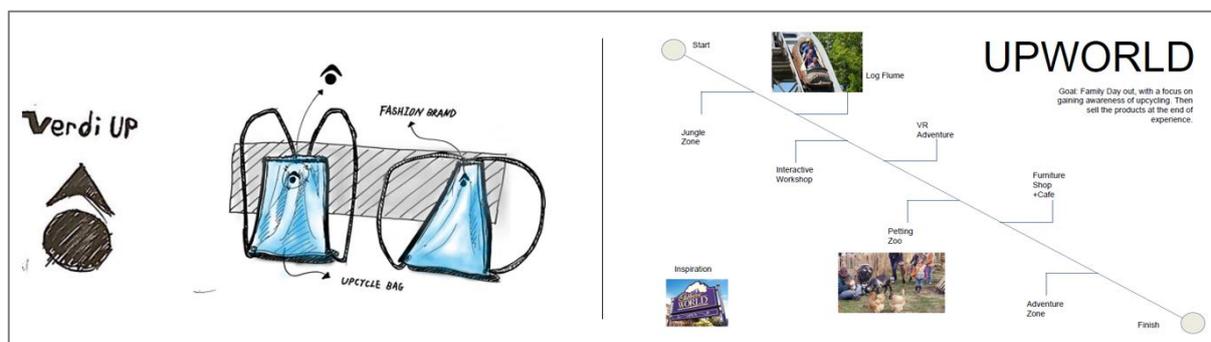


Figure 1 Concept examples

Students drew system maps to visualise how suggested solutions, stakeholders and potential outcomes were related to each other. Some of the students' system maps well reflected the complexity of the given situations and clarified resources exchanged and generated by the stakeholders whereas some did not come across as concrete and clear (Figure 2).

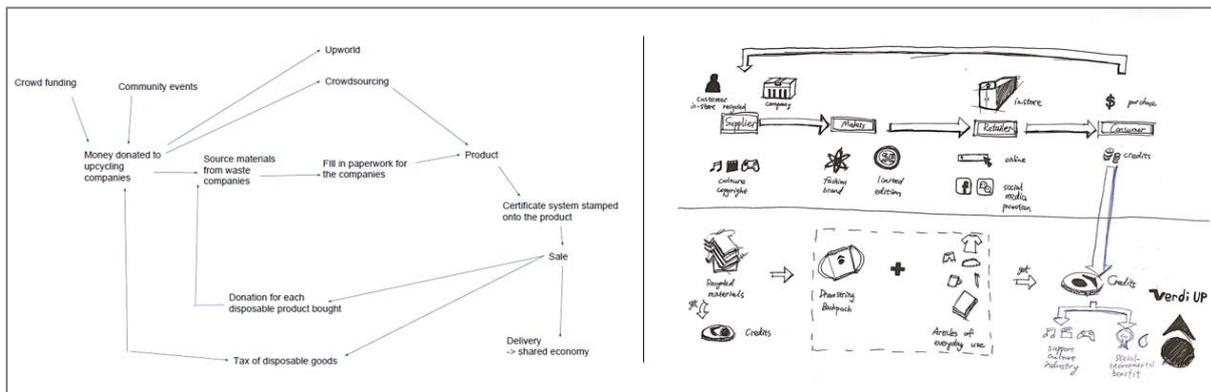


Figure 2 System map examples

### Discussion and conclusion

The results of the feedback questionnaire of the workshop showed that in general, most of students learned new and different approaches to sustainable design, production and consumption, challenges faced by upcycling-based businesses in the UK, and how to generate and develop ideas, concepts and system maps to resolve complex design problems involving multiple stakeholders.

Regarding each component of the workshop, the students were most satisfied with the lecture (57%) and group idea share and system design (57%), followed by individual ideation (43%) and individual concept development (29%). They were least satisfied with group presentations (14%). When it comes to the effectiveness of delivery, the students found the group idea share and system design activity most useful to achieve the learning outcomes (72%), followed by individual idea generation (57%), lecture (43%) and individual concept development (43%). The group presentation was the least useful activity (29%). Considering difficulty of each activity, the majority of the students struggled with group presentations (57%) and individual idea generation (57%). The students perhaps felt that 30 minutes was not long enough to prepare for the presentation. The authors also witnessed that most international students spent excessive time on reading and understanding the client brief and creating a mind-map. Some students found individual concept development difficult (43%) probably because most ideas were service or system design and these students were not familiar with them. A few students found the group idea share and system design activity difficult (14%) possibly due to the newness of the concept of a system map and challenging group work.

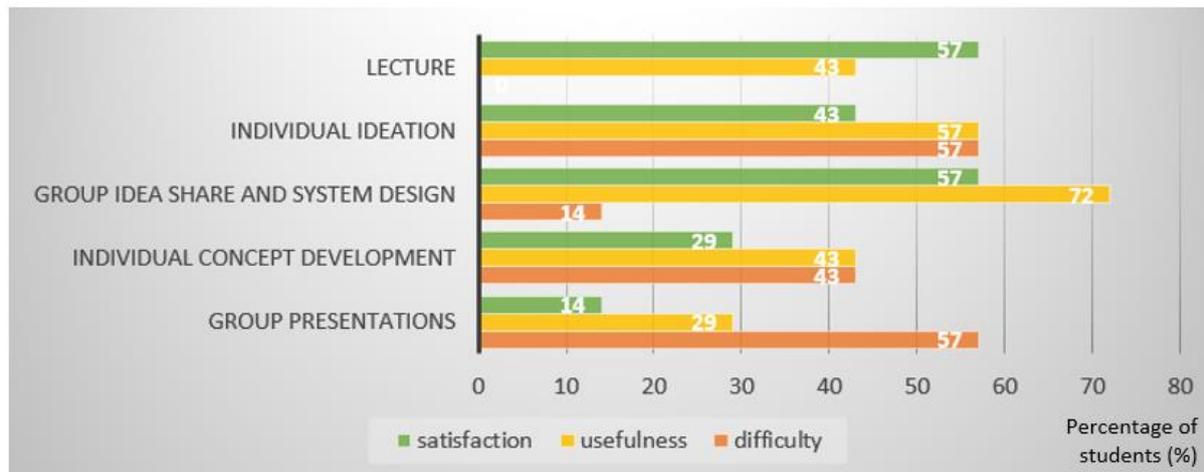


Figure 3 Satisfaction on, and usefulness and difficulty level of each workshop activity

Based on the student feedback, the following are the suggestions for those who are interested in organising a similar design workshop: a) exclude group presentations (due to low satisfaction, low perceived usefulness and high perceived difficulty); b) client/design brief distribution before the workshop (in order for students' sufficient understanding - especially international students' - and increased efficiency and effectiveness of the workshop); and c) extended lecture on service/PSS design and inclusion of a mini service/PSS design project (for those without any experience in service/system design).

Although this case study is limited (i.e. one project case with the limited number of students), this paper illustrated a good practice of embedding sustainability in design education as a form of collaborative workshop between universities. We expect that iterative applications of the workshop in various setups (e.g., in different higher education institutions and with design professionals in different business domains) will allow us to advance our understanding of how designers and design students can be supported to effectively address issues inherent in the process of designing for sustainable businesses, and improve the delivery of sustainable design education.

The paper introduced the topic of upcycling, upcycling-based businesses and the concept of scaling-up in transition studies as theoretical backgrounds of the project. It explained the situational background of the project and approaches (workshop setting, resources, schedule and procedure). It described the workshop results, discussed student feedback and made suggestions for future design workshops. We hope this paper could inspire and inform other academics in art and design so as to contribute to expanding communities of sustainable education practices.

### Acknowledgements

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### **Appendix. Workshop schedule and procedures**

A thirty-minute lecture was delivered. The lecture included rationale behind the workshop (e.g. United Nation's Sustainable Development Goals (UN 2018)), sustainable practices (e.g. policies, regulations, waste management, corporate social responsibility activities, sustainable design, sustainable consumer behaviour/lifestyle), circular economy (Ellen MacArthur Foundation 2016), sustainable design (e.g. evolution of design for sustainability) and upcycling (Sung 2017).

Workshop schedule was introduced and each activity was explained in detail. In the first activity, four different design briefs were given to students: each group had four briefs such that each student had a distinct one. Each brief described a client profile, problems and issues with direct quotes from the stakeholder interviews and the client's goal (Figure 4). Students were asked to read the brief thoroughly and carefully and create an individual mind-map for their own comprehension. They were then asked to generate a minimum of ten ideas (rough sketches and annotations) per person.

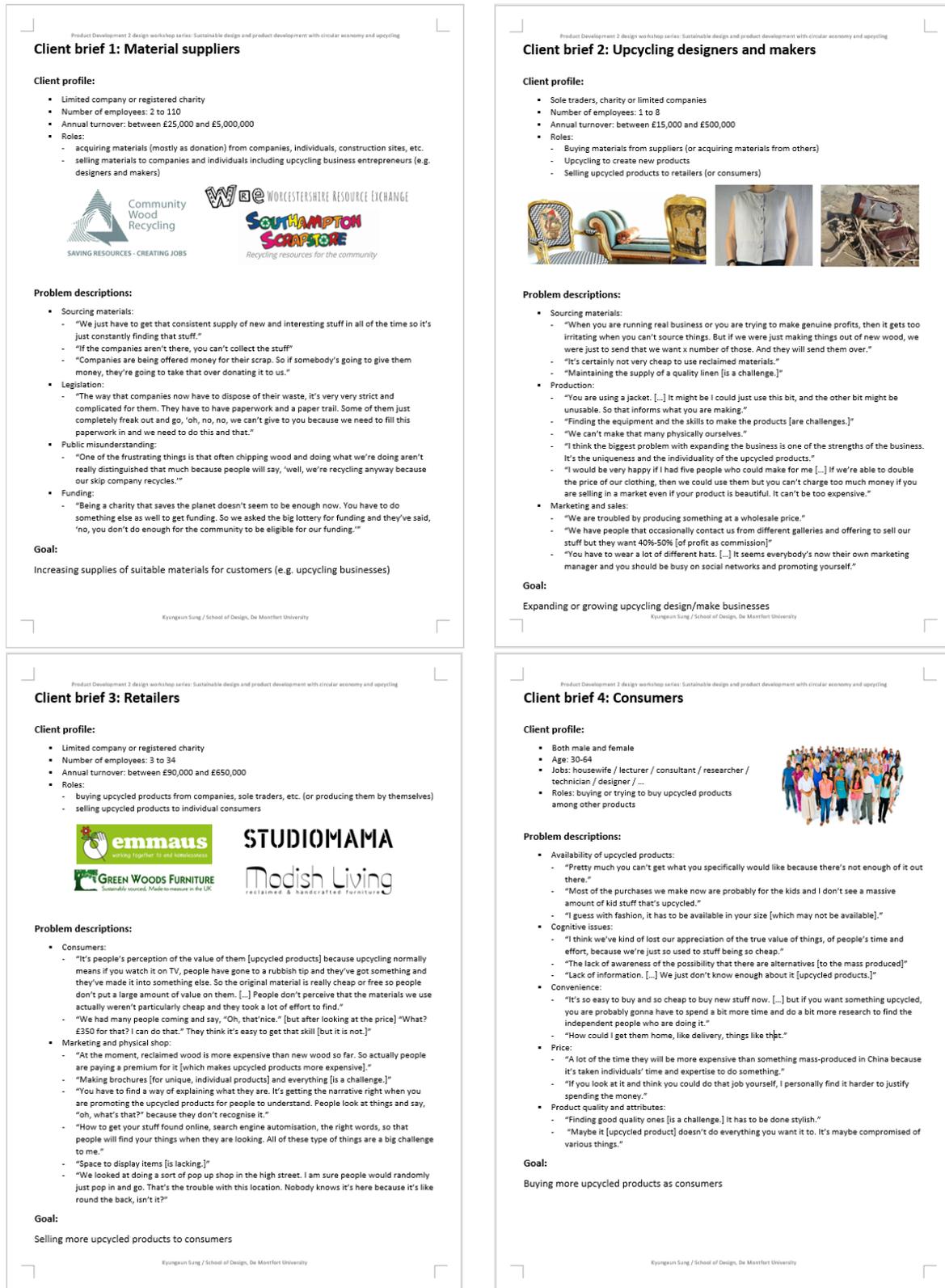


Figure 4 Four design/client briefs based on the stakeholder interviews

In the second activity, students were asked to share their brief and ideas in a group and select top three ideas per person based on group discussion or voting. As a group, students were asked to create a system map<sup>1</sup> (Van Halen, Vezzoli et al. 2005) to visualise all stakeholders and all selected

ideas, showing interrelationships, connections and flows between stakeholders, infrastructure, products, services, activities and information. Examples of system maps were provided as handouts (Figure 5).

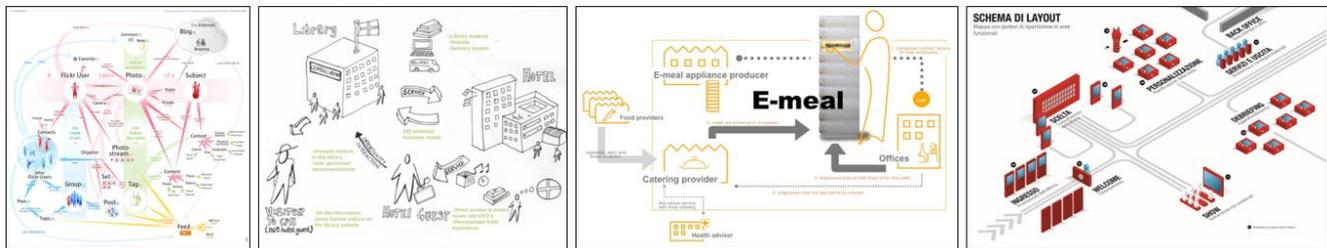


Figure 5 System map examples from <http://www.servicedesigntools.org/tools/28>

In the third activity, students were asked to create a minimum of three variations of each selected idea and develop a minimum of three ideas into concepts. Students were then asked to prepare for a five-minute PowerPoint presentation including mind-maps, selected ideas, fully developed concepts, system map and what they have learned throughout the workshop. Each group presented the workshop results. At the end of the workshop, a feedback questionnaire was shared with the students. See below the table for the workshop schedule and summary of activities and outcomes.

No.	Time	Duration	Activity	Outcome
01	09:00-09:30	30 mins	- Presentation on sustainable design, product development and upcycling - Q&A	-
02	09:30-09:50	20 mins	- Presentation on workshop schedule and activities - Q&A	-
03	09:50-10:20	30 mins	- Design brief comprehension - Individual idea generation	A minimum of 10 ideas per person
04	10:20-10:30	10 mins	Break	
05	10:30-11:00	30 mins	Group idea share and system design	One system map per group (including a minimum of 3 selected ideas per person)
06	11:00-11:30	30 mins	Individual idea development	A minimum of 3 variations per selected idea and a minimum of 3 (ideally fully) developed concepts
07	11:30-12:00	30 mins	Group presentation preparation	A group presentation ppt/pdf including one system map and a minimum of 3 concepts per person
08	12:00-12:30	30 mins	Lunch break	-
09	12:30-13:15	45 mins	Group presentation	5-minute presentation per group
10	13:15-13:45	30 mins	Feedback questionnaire	-

1. A system map supports the visualisation of stakeholders of product service systems, and facilitates material, information, and financial flow among them. It visualises the importance of flow and highlights which stakeholders are involved and how they interact to support a specific action of a stakeholder (Van Halen, Vezzoli et al. 2005).

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**Sustainability Symposium**  
**16<sup>th</sup> November 2018**

# Eating Mothers: Milk Matters

**Sally Sutherland**

## **Abstract**

Food is an embodied medium; rich in social paradoxes and entanglements. As such, accessing these complexities and nuances of food and eating requires innovative approaches to research.

This study is situated within the context of global food systems and their environmental impacts. It explores the intersection between human and non-human milk and its role in sustainable development. This workshop builds on food design as a critical medium to understand, dissect and reflect on milk in contemporary UK culture.

Participants will be invited to use design methods to critically evaluate milk against themes of 'embodiment', 'queering milk', 'scenes of milk', and 'milk values'. The workshop seeks to introduce and evaluate research methods designed to provide new insights into this complicated territory and identify opportunities for alternative futures of milk. During the workshop participants will be invited to explore milk by taking part in taste, smell, and tactile activities. A combination of cultural probes and sensory experiences will be used to facilitate deeper emotional and critical understandings of the identified themes.

'What if?' scenarios and problem statements will be used to trigger responses and develop ideas. The workshop will explore: the embodied dimensions of feeding and eating through consideration of spaces and bodily functions; 'Queering' milk, how heteronormative elements may be challenged; milk 'scenes', the normalisations of milk in society; and the economic and cultural values of milk(s).

This workshop is part of a programme of work that seeks to develop new insights into the use of milk in UK food culture to enable more sustainable practices. It acknowledges that urgent changes are needed to change the human impacts on the planet. Human breastmilk, powdered formula milk, milks from non-human mammals and plant-based dairy 'alternatives' present a complex set of challenges which need further examination, exploration and discussion.

## **Paper**

### **Introduction**

Milk is present in multiple forms in contemporary UK food culture. Examples of which include dairy milk, infant formula, human milk and plant milk. Each holds its own complex set of challenges and social norms. They are also profoundly entangled. Together they present a landscape which can be approached as a whole. Milk-related norms have developed in a way that supports some forms of milk much more than others.

Global dairy consumption has rapidly increased over recent years (Tirado et al. 2018, 47). In the UK, dairy milk is widely considered to be an essential source of nutrients. While there may be nutritional benefits to dairy milk, its status as an essential dietary component is often overstated and may overshadow the planetary health complications associated with its production.

Humans are the only mammalian species to drink milk during adulthood or to consume the milk of another mammal. In the UK, consuming milk from dairy cattle has become 'hyper-normalised' - it has become a commodity embedded and expected in everyday life.

In addition to the cross-species exploitation of milk, recent scholarly studies into the environmental impacts of foods (Scarborough et al. 2014), (Bryngelsson et al. 2016), and (Ripple et al. 2014) have illustrated that the industrial manufacture of dairy milk significantly contributes to the release of damaging greenhouse gasses. Furthermore, studies such as Springmann et al. (2016), Bryngelsson et al. (2016) and Tirado et al. (2018) identify that drastically reducing animal-sourced foods in diets is beneficial to both individual human and environmental health.

While dairy milk in the UK is considered a social and cultural norm, human milk has become controversial and taboo. Breast milk and breastfeeding have become unwelcome in the public realm. Despite the undeniable benefits of breastfeeding, sales of infant formula are rapidly increasing (Mason and Greer 2018). In the UK, formula milk has become the infant feeding norm, leading the UK to be among the lowest for breastfeeding rates in the world (Renfrew et al. 2012).

As with the dairy industry, milk substitutes for infants have significant damaging environmental and ecological impacts. These are, for example, through the production, packaging and distribution of formula milk (Rollins et al. 2016); and through the disposal of teats, bottles and sterilisers needed for the practice of bottle feeding (Brown 2016).

Frequently, the narrative of choice is present in discourses about food and breastfeeding. However, for a mother, feeding an infant is not always an open and unrestricted decision (Brown 2016). Breastfeeding practices are either mediated or compromised by a variety of determinants such as stigma (Grant 2016), spacial norms (Boyer 2012), and the organisation and structure of the material world through its routines, habits and norms (McInnes et al. 2013). The design of the built environments, and the social, cultural and environmental understandings of milk, are therefore significant to the future sustainability of milk and the practices of infant feeding.

## Workshop

This workshop has been developed to encourage focussed, in-depth, conversations about current UK perceptions of milk in physical, material, cultural and future contexts. The workshop positions design as a socio-material tool for inquiry that enables different ways to reflect and understand the world (Dilnot 2017); and utilises design probes to interpret and analyse understandings of milk. The session will explore four key areas:

1. The embodied experience of milk
2. The material matter of milk
3. The cultural knowledge of milk
4. Milk futures.

The workshop will,

- Examine how sensory interactions can allow a deeper understanding of the embodied nature of milk.
- Explore experimental uses of the material matter of milk.
- Seek to identify how design can be used to mediate the cultural knowledge of milk.
- Use participant-driven data to drive discussions, to speculate about future possibilities, dilemmas and opportunities for milk.

### 1. The embodied experience of milk - Corporeally 'felt' milk.

Milk is a food, but it also has a significant embodied dimension. Milk has a taste, a smell, it is felt, fed, it is sucked, licked and chewed. Workshop participants will be invited to explore designed interactions associated with milk. Examples will be through flavour experiments using the taste of human milk; the tactility of the body and nipple through a food-related artefact (Fig 1); and non-sexual touching and the chemical trigger of oxytocin through interactive stools (Fig 2).

Marketers of infant formula have successfully convinced parents that infant formula is a replica of human milk (Mason and Greer 2018). However, it is well established that this is not the case. The positive effects of human milk are not limited to nutrients and chemical composition (Pecoraro et al., 2017) (Rudzik 2015). Human milk as a product and breastfeeding as a process are intertwined. Design can be used to draw attention to the embodied interaction in the infant feeding relationship, elements that may not be usually considered.



Figure 1



Figure 2

### 2. The Material matter of milk - Milk as the object of inquiry.

Using the material of milk in design can allow a connection with publics through experimental uses of ideas and materials. Examples of probes will be used in the workshop that explore different milk as a commodity. The example in figure 3 shows a cultural probe that allows a tangible juxtaposition of different types of milk.

Mammal milk as a material is made into many things including plastic, fabric, paint and cheese. However, human milk as a material is not encountered widely in contemporary western society. Perceptions of human milk have become alienating and can create feelings of discomfort at the prospect of consuming or even touching it; this is in stark contrast to cow's milk, and milk alternatives, which are regularly consumed as part of everyday life. The workshop will introduce the material of human milk for use within design. Participants will be offered the opportunity to touch a bar of soap made using human milk (Fig 4), and to engage with a series of artefacts containing a variety of different types of milk (Fig 3). These material probes can be used to better consider milk as a product, how it is measured, valued and perceived.



Figure 3



Figure 4

### 3. Cultural knowledge - meanings - knowing food?

Cultural knowledge associated with milk are evident in customs, habits, and scenes. Visual methods including photography, illustration and drawing can allow a gathering and mediation of this cultural knowledge. Design will be presented as a tool to enable small-scale tests and a stepping out into the everyday.

Design is connected to the construction of cultural knowledge. Historically, design has played a significant role in the perception of dairy milk as an essential resource and service in the UK. This is through the design of the milk bottle, the float, the uniform of the 'milkman' and branding and advertising. The design of the infant feeding bottle has also turned into a lifestyle product (Ventura & Ventura 2017). The 'design' of milk, therefore, has significant behavioural and environmental impacts. Figures 5 and 6 are used in the workshop as examples of design that gathers and mediates these cultural knowledges through illustration and photography.



Figure 5



Figure 6

### 4. Milk Futures

Participants will be invited to engage with 'What if' scenarios and problems that draw on the three themes listed above. The questions will propose the idea of challenging this cultural knowledge. This includes ideas of 'queering' milk for example through designing plant-based milks and challenging the heteronormative discourses around breastfeeding.

The questions will be used as triggers to work through ideas. Insights will be sought through improvisational, speculative and participatory techniques allowing for concepts of uncertainty and possibility (Akama, Pink and Sumartojo 2018). Discussions will be routed toward enabling possibilities (Akama, Pink and Sumartojo 2018) and projections of progressive, transformative speculations.

Figures 7 and 8 are examples of how design can challenge milk discourses. Figure 7 shows a 'sustainable' designed milk developed with Brighton zero waste restaurant Silo. Figure 8 shows a Neon installation to probe discourse around recoupling milk with the human body.



Figure 7



Figure 8

### Theoretical background

Contemporary food anthropologist Emma-Jayne Abbots highlights the importance of the 'human eating body' as one of the factors that shape social understandings of food (Abbots 2017). Abbots calls for greater attention to consider assemblage thinking in relation to food. According to Abbots, three principal factors shape social understandings of food. These are the embodied experience of food and eating, the material matter of food, and cultural knowledge (Abbots 2017). Each of these factors is particularly relevant to the subject of milk due to the embodied interaction in the infant feeding relationship; the commodification of milk; and the connection to routines, habits and norms.

### Final Summary

This workshop demonstrates the way in which design can engage with the subject of milk, and milk futures. The workshop uses examples of how design can use embodied sensory interactions such as experimental uses of ideas and materials, and small-scale tests played-out in the everyday, as a tool for understanding. Design is used to translate, capture and communicate complex and nuanced insights that may not be achieved by other means. Design by its nature is future making. It allows different ways to reflect and understand milk, but can also push to creative ways forward.

Figures 1 - 8 are all work by Sally Sutherland produced between 2017 and 2018 on the Sustainable Design MA, University of Brighton.

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# Still Life, Vanitas and Commodity Culture

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## Abstract

The function of vanitas is to bring to our attention the finite nature of life, to remind us that our time is short, and our actions have consequences. In vanitas still-life paintings the food objects express symbolic messages of immoral pleasures; they warn us that a judgment is coming. We have a very different conception of vanitas today. Commodities are presented to us as objects that can save time, are transitory and easily discarded. We are trained to be wasteful and have an expectation of short-lived pleasure.

I will present a short introduction to the exhibition *Still Life: Things Devouring Time*. I will explain how seventeenth-century Dutch still-life paintings form an appropriate backdrop to discussions about the social and environmental impact of consumer culture today. I will also describe how contemporary and historical art can be used as a spring board to facilitate public engagement in discussions about sustainability, using different approaches including workshops and public domain interventions in advertising spaces and social media.

This presentation will take place in the exhibition space at the Stanley and Audrey Burton Gallery, The University of Leeds.

## *Still Life: Things Devouring Time*

Things made from non-biodegradable materials and the human inclination to collect possessions contradict the concept of *tempus edax rerum*, time as devourer of all things. *Still Life: Things Devouring Time* focuses on the visual representation of vanitas, symbolic objects that warn against excess and the shortness of time. This exhibition explores how those ideas inform the practice of contemporary artists, working in diverse media, who respond to consumer culture and the social, environmental and sustainability issues it produces today.

## Paper

### Introduction

*Still Life: Things Devouring Time* is a group exhibition that focuses on the visual representation of vanitas, symbolic objects that warn against excess and the shortness of time. The exhibition brings together a seventeenth-century painting by Willem Kalf and contemporary artists, working in diverse media, who respond to consumer culture and the social, environmental and sustainability issues it produces today. Objects made from non-biodegradable materials and the human inclination to collect possessions contradict the concept of *tempus edax rerum*, time as devourer of all things.

Vanitas paintings bring to our attention the finite nature of life, to remind us that our time is short, and our actions have consequences. In seventeenth-century still-life paintings the food objects express symbolic messages of immoral pleasures; they warn us that a judgment is coming. Today, we most frequently view still-lives in adverts. Commodities are presented to us as temporary possessions that are easily discarded. We are trained to be wasteful and expect immediate but short-lived pleasure. Jordan Seiler, the artist and activist behind the organisation Public Ad Campaign, says the ubiquity of advertising in capitalist societies is problematic:

By privileging one type of message over another we are, through repetition, setting the terms of our cultural and political discourse. Considering the great hurdles we face socially and environmentally, the commercial discourse we surround ourselves with not only ignores our current reality but actively works against it by distracting us from each other in favor of ourselves. (quoted in Anon., 2017, p. 28).

In this exhibition art works challenge the cultural and political discourse that dominates commercial visual culture, to bring attention to the human and environmental cost of our consumer habits. To complement the work installed in the gallery, a poster campaign will place art works from the exhibition in advertising spaces around the city. A series of workshops will enable members of the public to create still life objects out of packaging materials. The objects will be photographed and posted on social networking sites with hashtags that consider the social cost of consumption. It is intended that these interventions into the commercial domain will disrupt the repetitious order of consumerism, creating a space in which the public can critically consider advertising and the consequences of consumption.

In the fourteenth century the term 'consume' meant 'to destroy, to use up, to waste, to exhaust.' (Williams 1988, pp. 78-9). From the mid-eighteenth century onwards, the word became more neutral, meaning simply to buy things. Through the genre of still life this exhibition seeks to return to the earlier, more destructive notion of consumption. It brings to attention what is wasted, used-up, destroyed and exhausted by our consumer culture. The exhibited artworks also remind us that consumption has another destructive characteristic: what remains. Today, when we use commodities we discard large quantities of packaging, made from non-biodegradable materials that is transported to land-fill sites or discarded as litter. Natural resources and habitats are destroyed by this product of contemporary consumer habits. The artworks in the exhibition comment on the social and environmental impact of consumer habits through the genre of still life.

### **Still Life: Things Devouring Time**

The still-life genre began as a marginal artistic practice, denigrated because it does not depict 'the large-scale momentous events of History, but the small-scale, trivial, forgettable acts of bodily survival and self-maintenance.' (Bryson 1990, p. 14). Norman Bryson says still-life painting 'assaults the centrality, value and prestige of the human subject.' (1990, p. 60). Objects rather than people, take centre stage.

Bryson writes that one of the unique facets of still-life painting lay in the ability of the painter to change props rapidly to reflect the transformations in the culture around them. In the seventeenth-century Dutch republic, still-life paintings communicate a shifting relation to consumption and a nation becoming accustomed to material wealth. As consumer culture developed, the type of objects in the paintings also changed. (Bryson, 1990). Hal Foster writes that Dutch still-life paintings from the 1620s and 1630s predominantly depicted useful objects in a

straightforward manner. Later still-life paintings began to portray expensive, collectable objects painted in a dazzling way. (1993). For example, the drinking horn in *Still Life with Drinking Horn* by Willem Kalf (1653) is a unique and expensive collector's item held in the collection of the Rijksmuseum in Amsterdam. (Chong and Kloek, 1999). The painting is a celebration of expensive food and tableware from across the Dutch empire: the world of trade has recoded the table in the language of competition and prestige rather than domesticity and conviviality.

In contemporary consumer culture the still-life genre can also document rapid changes in the type and variety of commodities available to buy. Caroline McCarthy's *Humbrol* series (2009) brings together a variety of plastic containers in a way that resembles a cabinet of curiosities. However, these domestic objects are not unique, exotic or expensive. In *Ghost in the Machine* (2013) by Simon Ward, the books that are sometimes depicted on Dutch still-life tables to symbolise knowledge and intelligence have been replaced by kindle screens. The screens suggest the potential for knowledge through reading but the distorted frozen images on their screens also speak of fragility and obsolescence.

In the 1960s Eddy de Jongh, an art historian, used symbolism derived from emblem books to decode the 'original intentions of the artists' who produced still-life paintings in the seventeenth-century. (1997, p. 21). The objects express symbolic messages of immoral pleasures and dangers to the soul; they warn us that a judgment is coming. A soap bubble that could burst at any moment reminds the viewer that life is short, and rare porcelain dishes and fragile Roemer wine glasses are balanced precariously close to the edge of the table, teetering and ready to fall off. Expensive spices such as pepper are carelessly spilled across the table. The precarious placement of expensive objects suggests that wealth and the pleasures of consumption can be lost at any moment.

Ward's series *Signs* (2007) also present moralizing messages about wealth, and remind us that the pleasures of consumption are not enjoyed equally by all members of society. Small signs written by homeless people to request money might be overlooked by viewers as they walk through the city. But in the exhibition, they are transformed into large-scale, inescapable announcements of the inequality produced by capitalist societies. Like the valuable objects teetering on the edge of a table, *Signs* invite us to consider what is valuable and valued in society, and question the morality in which human beings can be viewed as expendable waste.

Ideas of waste and mortality are conceptualised in a number of pieces of work in the exhibition. *Vanitas* (2007) by Caroline McCarthy presents an image of a skull, an archetypal vanitas symbol, made from circles of black plastic hole-punched from a bin bag. The bin bag, installed beneath the picture, will leak if it is used, connoting waste and contamination. Death is eternal, and in this vanitas warning, death is made from plastic. The disjuncture between a transitory commodity and plastic packaging echoes one of the paradoxes encapsulated by vanitas paintings. The paintings depict a fleeting moment in which a candle is extinguished and fruit begins to decompose. However, these moments in time are frozen and immortalised in paint. They never end.

My series *Memorials* (2016) alludes to the disjuncture between the life-span of the consumer and the products they consume. The still life's look like party settings but the organic material in each photograph is beginning to decay. When commodities show their age they can be discarded and replaced but the consumer is unable to buy back time.

Dutch paintings warn their viewers of the damage to the soul that greed, excess and waste can cause. Today, vanitas might warn us about irreversible environmental consequences, caused by our dependence on plastic. Blemishes on the soul are replaced by materials that do not biodegrade: traces of our consumer habits that persist, filling up landfill sites, polluting seas, and killing wildlife. Nicole Keeley's *Tide Line* (2017) photographs remind us of the impact of our consumer practices. In a series of photographs of fish tanks marine wildlife have been replaced by polystyrene cups, plastic bottles and other litter gathered by the artist from UK beaches. *Tide Line* presents a warning of what will become of the oceans and rivers if we continue to pollute them.

For the *Relics* series (2017) I produced still-life objects using packaging from a wide variety of commodities, demonstrating the vast range of products that are available to buy today. *Relics* resemble devotional objects displayed in anthropology museums, implying that commodities are also powerful objects that are worshipped by consumers. However, these objects don't belong in a museum, they are not preserved because they are culturally significant, but because they will not biodegrade.

In vanitas paintings, the painted surface is rich and sumptuous like the foods depicted, but the emblematic interpretation warns against the indulgences displayed. The visual style of the painting contradicts the allegorical message and the viewer must determine which message dominates. This mode of interpretation is structurally similar to ironic interpretation, when the obvious meaning is undermined by the manner of depiction, impelling the viewer to conclude that the opposite message is being communicated. In eighteenth-century literature irony was often viewed as 'corrective' because the author is detached and objective, offering multiple points of view without adopting a position. The viewer is left to make up her or his own mind. Richard Harvey Brown describes irony as dialectical because it demands active participation from the viewer, stating that the author 'simultaneously asserts two or more logically contradictory meanings such that, in the silence between the two, the deeper meaning of both may emerge.' (1983, p. 544). Hayden White writes: 'they appear to signal the ascent of thought in a given area of inquiry to a level of self-consciousness on which a genuinely enlightened - that is to say, self-critical, conceptualization of the world and its processes has become possible.' (quoted in Brown, 1983, pp. 544-5).

The art works in this exhibition contain contradictions and paradoxes that encourage the viewer to engage in self-critical reflection. Ironic use of materials and juxtaposition of objects produce dialectical images that challenge the rhetoric and values perpetuated in consumer culture. Dr Sergio Fava's points to the dialectical potential of contemporary art in his essay in the exhibition catalogue:

It is time we give more importance to other modes of prompting immediate action and less to our endless craving for more information. Art has always been at the forefront of sharing new ideas and new worldviews. The still life work in this exhibition continues and develops this tradition [...] It does so without imposition, not inviting reflection based on yet more information, but asking us to consider the issues ourselves. [...] Art stands at a unique junction between affect, personal narrative, belonging, creativity and action. These continue to be part of the answer. (Fava, pp. 26-7, 2018)

In contemporary still life, objects are given centre stage to question the centrality of commodities as signs of value and prestige, and foreground the wasteful destructive consequences of our appetite for things.

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Dawn Woolley is a visual artist using photography, video, installation, performance, and sound. Woolley received a first-class degree in Fine Art Printmaking from Manchester Metropolitan University (2001). She completed an MA in Photography (2008) and PhD by project in Fine Art (2017) at the Royal College of Art. At Leeds Arts University, Woolley contributes to the institution's research strategy.

Woolley's research centres on consumer culture and commodification in advanced capitalist societies. Referring to Marxism and psychoanalysis she explores the relationship between people and objects, and the impact that adverts have as disseminators of social values. She uses photographs of objects and people to question issues of artificiality and idealisation.