

STEED, J., JIANG, Y. and CROSS, K. 2019. From augmented to authentic: weaving the past into the future. Presented at 2019 Shoormal conference: new coasts and shorelines: shifting sands in the creative economy, 18-21 September 2019, Lerwick, UK

# From augmented to authentic: weaving the past into the future.

STEED, J., JIANG, Y. and CROSS, K.

2019



# FROM AUGMENTED TO AUTHENTIC

Weaving the past into the future



<https://augmentedfashion.co.uk>



To explore ways to educate the consumer about the sustainability, craftsmanship, heritage and value of traditional fashion and textile products, using a variety of mediums such as film and immersive technologies



# PROJECT BACKGROUND



Stimulated by the fact that textile & fashion design represents an aspect of the Creative Industries that touches the lives of many on a daily basis. Not only does clothing provide protection and comfort, it is used increasingly to express creativity, convey identity and can have a psychological effect on the wearer influencing their perceptions of self-worth.





Current generations of consumers are now far removed from how their clothing is produced, often with little awareness of, or genuine interest in the sources of the materials and the manufacturing processes that generate them. 'Fast' and effectively 'disposable' fashion has seen clothing reduced to transient items, worn for a short period of time, often once and then discarded.



Fast fashion has pushed prices downwards, moving textile and clothing production to low cost labour countries and impacting on the traditional Scottish quality textile economy. The surviving Scottish textile companies find it difficult to attract young people to work with them, leading to a chronic skills shortage within the industry.





Fast fashion also drives consumer demand for newness, uses resources that are finite and potentially damaging to the environment, creating excessive and unnecessary landfill waste. Importantly, the pressure to move towards a more sustainable fashion and textile industry has grown.

TAKE



MAKE



CHUCK



Traditional methods of textile and clothing manufacture, using natural renewable sources that are inherently long-lasting offer a 'slow' fashion alternative.



*Mati Ventrillon*



China and the UK both have long histories and cultural traditions related to textiles and clothing. Scotland's tradition of tweed and tartan, cashmere and woollens continues to survive today, largely through SMEs producing luxury products.





A parallel can be drawn with China's rich history of cultivating and producing beautiful silk products such as the traditional dresses: Qi Pao, Han Fu and Song Jin, and to their position as one of the world's largest textile and clothing producers.





Fashion has embraced computer technology, with online sales continuing to grow and fashion film increasingly being used to market creative designs. This presents an opportunity to redress the balance by using technology to educate and shape an alternative and sustainable future for the fashion design of traditional textiles.



# AIMS AND OBJECTIVES

To scope out ideas on how immersive experience and techniques could be used to represent and preserve the history and heritage of traditional fashion and textile products, and transfer them into contemporary design to meet the current and future fashion trends.

To establish and enhance partnerships and networks among UK and Shanghai based researchers, creative businesses and organisations;

Develop a platform website providing integrated immersive experiences such as WebVR, to promote the sharing of best practice and knowledge exchange between UK and our Shanghai partners;

Establish long-term research collaborations between the UK and China, to build research and industry connections and cultural partnerships.



# OUR UK TEAM so far....

## **RGU Academics**

Yang Jiang School of Computing Science and Digital Media Karen  
Cross - School of Creative Cultural Business  
Josie Steed - Gray's School of Art

## **UK Industry Partners**

Margaret McLeod from Harris Tweed Hebrides  
Kirsteen Stewart, Orkney based printed textile designer





# OUR SHANGHAI PARTNERS so far....

## China Academic:

Professor Rongzheng, Donghua University, Shanghai

## China Industrial partner:

Shanghai Promotion Centre for City  
of Fashion





# ACTIVITIES (FEB – AUG 2019)

## **2 Trips to Shanghai ( April & July)**

Establishing partnerships in Shanghai

Understanding Chinese culture,

Heritage & contemporary lifestyles

Exchanging knowledge between

UK & China.

## **UK trips to Orkney, Harris & Shetland**

Building partnerships & research collaboration  
opportunities

## **RGU Workshop (May)**







**KNOWLEDGE EXCHANGE BETWEEN PARTNERS**



# WORKSHOP

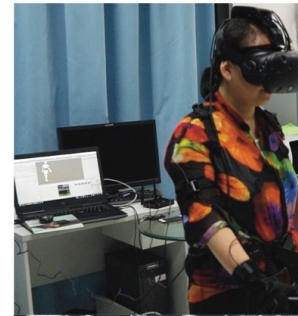


## From Augmented to Authentic

A UK-Shanghai AHRC-funded project

with Donghua University, Robert Gordon University and industry partners

Dr Yang Jiang, Josie Steed, Karen Cross

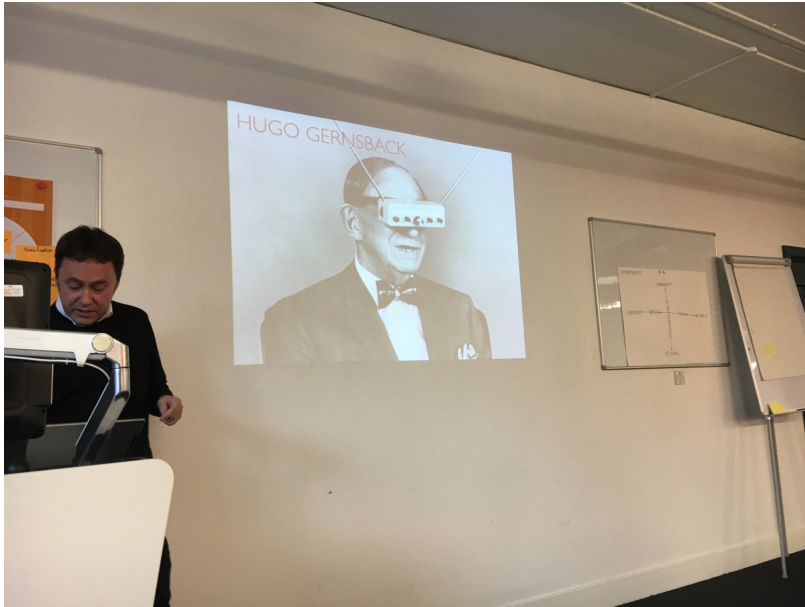


You are invited to a research workshop exploring the challenges that exist in the areas of **fashion, textiles and immersive technologies**. This project seeks to explore ways to educate the global consumer about the sustainability, craftsmanship, heritage and value of traditional, artisan fashion and textile products, using a variety of mediums such as film, Augmented Reality, Mixed Reality and Virtual Reality.





## Presentations and discussion for Knowledge Exchange







## 5 POINT Mapping Activities

**Problem**  
**Opportunity**  
**Insight**  
**Need**  
**Theme**

## 1 of 5 Aware of any Problems?

Why is there such a difference in price between Hermes and H&M? How do you communicate the added - **value** of a hand-made product when they can't see it being made?

Empowering people to make informed choices

Changes in consumer priorities:

PAST – make do and mend

80's - I want I get

NOW – too much choice

Articulating to consumers the **value** in quality making

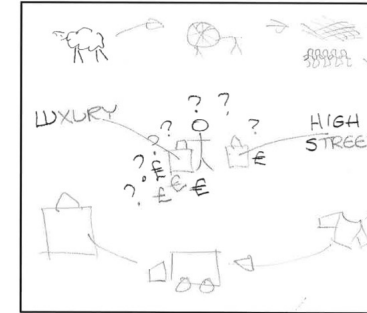
Key words:

SKILL – VALUE – PRICE - PRODUCTION - QUALITY

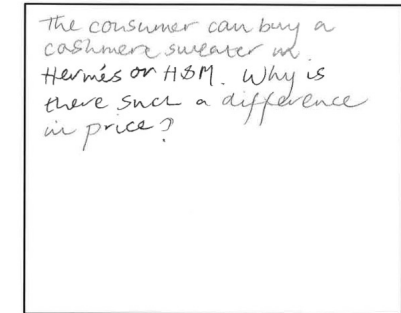
SKILL VALUE PRICE PRODUCTION QUALITY

1 of 5: Aware of any PROBLEMS..?

Describe a current **PROBLEM** with communicating to consumers the value of fashion and textile products.



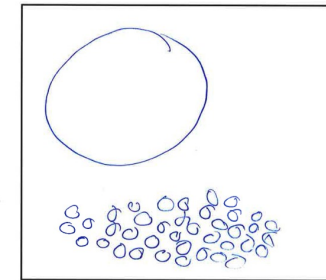
Draw a diagram or a picture that describes the nature of the PROBLEM.



Describe the PROBLEM in less than 30 words

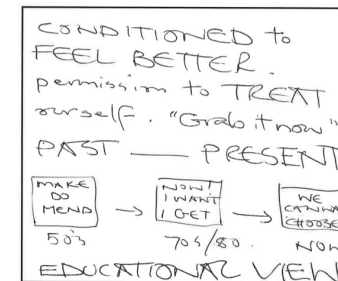
1 of 5: Aware of any PROBLEMS..?

Describe a current **PROBLEM** with communicating to consumers the value of fashion and textile products.



Draw a diagram or a picture that describes the nature of the PROBLEM.

QUALITY VERSUS QUANTITY ASPECT  
DISPOSABLE INCOME  
TIMEFRAMES



Describe the PROBLEM in less than 30 words

MINDSETS  
• personal priorities  
Fitting in socially  
versus  
being as sustainable as possible

VR EXPERIENCE

— some of the visual experience  
— some of the emotional experience tactile.



Augmented to Authentic Fashion Workshop  
Thursday/Friday 30/31st May 2019

empowering people to make informed choices





## 2 of 5 Seen any Opportunities?

Augmented Reality can be used to showcase archived work that are too valuable, fragile and delicate to handle.  
Communicate the journey from source to consumer 'sheep to shoulder'

Virtual design and prototyping – no waste

Components can be interchangeable

Communicating the brand's story/narrative

Products in action through VR

Travelling through time – experiencing cultural crafts from raw material to final product

Immersive technologies enabling interactive label to tell the brand's story

Key words: EDUCATION – INFORMATION –  
COMMUNICATION – ADDING VALUE – SUPPLY CHAIN

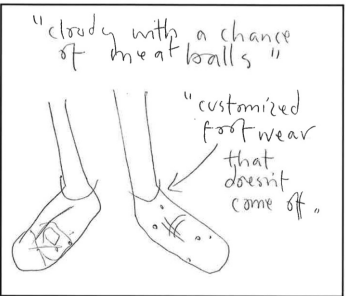
VR to try on – fit save scale

2 of 5: Seen any OPPORTUNITIES...?

challenge of manufacturing.

Describe an idea that you think might be a potential **OPPORTUNITY** for the use of immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies within the fashion and textile industry.

VIRTUAL PROTOTYPING = no waste



Draw a diagram or a picture that describes the OPPORTUNITY.

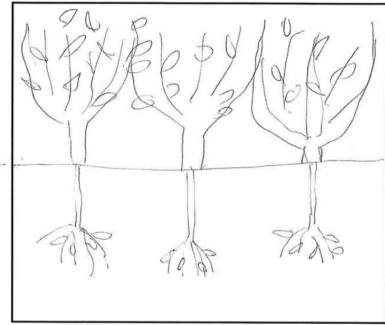
Personalisation of Consumption  
Design is done virtually – the components designed interchangeable

Describe the OPPORTUNITY in less than 30 words.

2 of 5: Seen any OPPORTUNITIES...?

Describe an idea that you think might be a potential **OPPORTUNITY** for the use of immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies within the fashion and textile industry.

FUTURE



Draw a diagram or a picture that describes the OPPORTUNITY.

The same thing travelling through time.

The experiences of travelling through time and experiencing how traditional crafts were made employed and executed by people within their respective environments + cultures – This could incorporate places in time, the growing of the fibres the tools that were used + the families that made them.

Describe the OPPORTUNITY in less than 30 words.

### 3 of 5 Had any Insights?

Differences between different immersive technologies and their purpose

When the technology is three-dimensional, an immersive experience for the whole body.

More on story less on technology

Technology that allows consumers to experience the haptic properties of textiles through touch, texture, handle & drape

Surprised by how much AR, VR & MR are already part of our everyday lives.

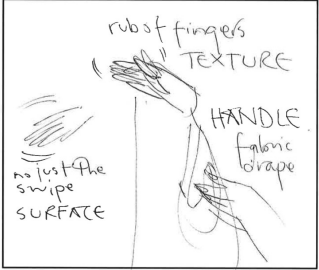
Key words: IMMERSIVE – STORY – HAPTIC – TOUCH – TEXTURE – HANDLE - DRAPE

3 of 5: Had any INSIGHTS..?

A **SURPRISE** or **INSIGHT** that you found out recently; about either the fashion and textile industry and/or immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies, that you didn't know before.  
Has someone else helped you see something that surprised /delighted/confused you.....

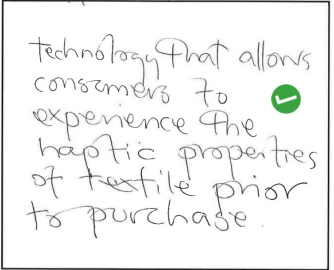
*Hem Change Makers Lab*

**HAPTICS of VR**



Draw a diagram or a picture that describes what the INSIGHT is.

**TOUCH** what can I



Describe the INSIGHT in less than 30 words

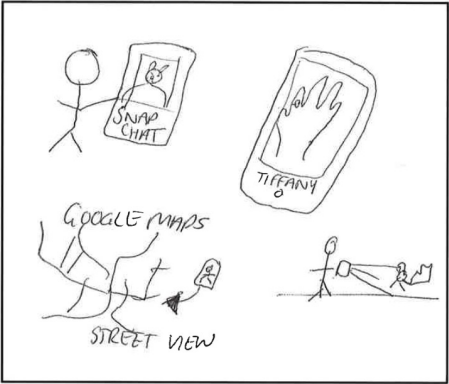
*Accurate fit Simulation Through Cloth Adaptation*

Logos: IIT Bombay, RGU, Sicsa\*

Augmented to Authentic Fashion Workshop  
Thursday/Friday 30/31st May 2019

3 of 5: Had any INSIGHTS..?

A **SURPRISE** or **INSIGHT** that you found out recently; about either the fashion and textile industry and/or immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies, that you didn't know before.  
Has someone else helped you see something that surprised /delighted/confused you.....



Draw a diagram or a picture that describes what the INSIGHT is.

Surprised how much AR, VR, MR is part of our everyday lives.

Describe the INSIGHT in less than 30 words



## 4 of 5 Thought of any Needs?

Wearable clothing with embedded technology to monitor the health and care of an ageing population.

Individuality.

'Joy' of imperfection

Hand crafted

Serious 'playtime' with technology

Capacity building and resources

Education tool to build skills, knowledge and expertise required within the textile industry.

Terms of luxury : non-luxury but highly valuable

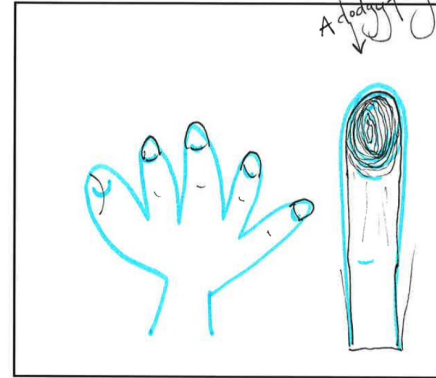
Luxury – vulgarity or greed versus 'lovely'

Key words: INDIVIDUALITY – IMPERFECTION – HAND-CRAFT – PLAY – EDUCATION - LUXURY

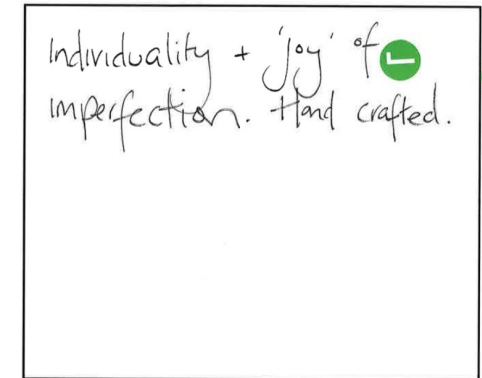
### 4 of 5: Thought of any NEEDS..?

Describe an un-met **NEED** that is not being addressed by immersive technologies such as Augmented, Virtual & Mixed Reality (AR,VR & MR) technologies relevant to the fashion and textile industry.

What is your analysis of this in terms of a requirement for action....



Draw a diagram or a picture that describes the nature of the NEED.

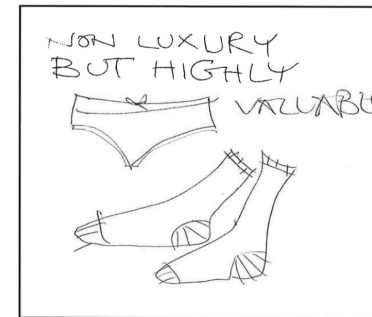


Describe the NEED in less than 30 words

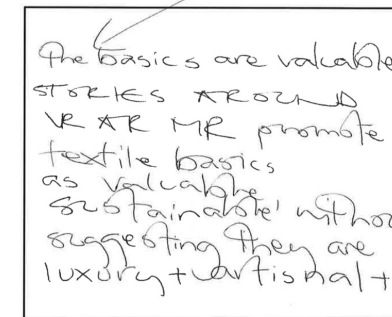
### 4 of 5: Thought of any NEEDS..?

Describe an un-met **NEED** that is not being addressed by immersive technologies such as Augmented, Virtual & Mixed Reality (AR,VR & MR) technologies relevant to the fashion and textile industry.

What is your analysis of this in terms of a requirement for action....



Draw a diagram or a picture that describes the nature of the NEED.



Describe the NEED in less than 30 words



LUXURY (+ vulgarity or greed) vs  
LUXURY (lovely) **Augmented to Authentic Fashion Workshop**  
Thursday/Friday 30/31st May 2019

## 5 of 5 What is a key Theme?

Relationship between innovation, 'rainbow of stories' and consumers

Authentic person-centred innovation based on heritage

Importance of contemporary interpretation – not perceived as 'old fashioned'

Opportunity to apply technology to simulate training esp. for rural communities

Technology needs to become more accessible to smaller businesses

People at the front of technology

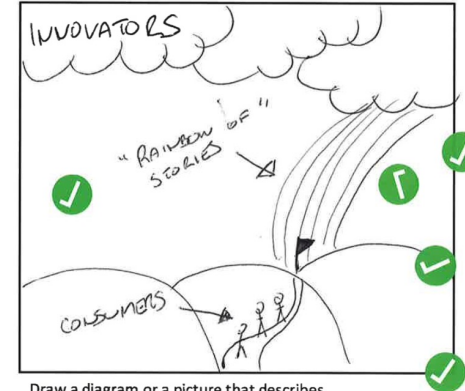
Storytelling, narrative and provenance

Experience of the whole process and product

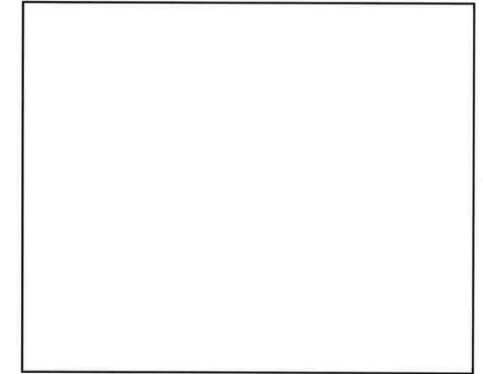
Key words: STORYTELLING – ACCESSIBILITY – AUTHENTICITY – EXPERIENCE - PROVENANCE

### 5 of 5: What is a key THEME...?

Describe a **PATTERN** or **THEME** that you see recurring in either the fashion and textile industry and/or immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies.  
What have you been seeing happening more than once – an emerging pattern or trend....



Draw a diagram or a picture that describes the PATTERN or THEME.



Describe the PATTERN/THEME in less than 30 words

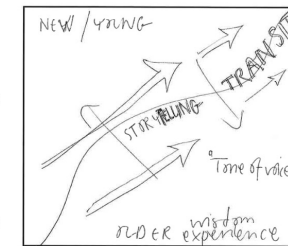
### 5 of 5: What is a key THEME...?

← tensions of young and old views of change →  
Describe a **PATTERN** or **THEME** that you see recurring in either the fashion and textile industry and/or immersive technologies such as Augmented, Virtual & Mixed Reality (AR, VR & MR) technologies.  
What have you been seeing happening more than once – an emerging pattern or trend....

CHANGE  
Survive & thrive.  
growth  
STORYTELLING + NARRATIVE  
PROVENANCE OF CONTEXT.

OLD + NEW  
YOUNG + OLD  
experience of the whole  
process + product

service and experience  
economies different values  
STARK / INVENTOR  
not replacing old model  
how it will enhance  
— technology support



Draw a diagram or a picture that describes the PATTERN or THEME.



Describe the PATTERN/THEME in less than 30 words

technology supports  
at the heart  
embedded

People at front



SURVIVAL / THRIVE

Augmented to Authentic Fashion Workshop  
Thursday/Friday 30/31st May 2019



## KEY WORKSHOP FINDINGS:

- STORYTELLING & PROVENANCE – THE NARRATIVE BEHIND THE OBJECT/PRODUCT IS FUNDAMENTAL.
- HUMAN INTERACTION & HUMANITY IS SO IMPORTANT IN THE NEW WORLD OF AI.
- TECHNOLOGY MERELY FACILITATES THE PROCESS OF COMMUNICATION AND INFORMATION
- AUTHENTICITY –COMMUNICATING THE PERSONAL INTERACTION TO APPRECIATE THE VALUE IN HAND- MAKING

# NEXT STEPS....

New grant application in progress for AHRC UK-China research funds  
**Augmented UK- China Fashion & Textile Heritage Alliance**  
(working title)

## UK Partners

RGU lead

Harris Tweed Hebrides

Kirsteen Stewart (Orkney Designer)

Look Again Aberdeen

Niela Nell(Shetland Textile Designer)

Shetland Museum & Archives, with Dr. Carol Christiansen,  
Lace Project (TBC)

Dundee V&A (TBC)

Soluis

## China Partners

Donghua University lead

Shanghai promotion centre for city of fashion:  
<http://www.spcfashion.net/nshj/index.htm>

Bailian Group: China one of the biggest luxury shopping  
mall and properties owner

Lining Group: Chinese Nike & Adidas

Moodbox: Luxury customized designer for Chinese  
celebrities

Cindy Soong: CEO of Cindy Soong, a big fashion brand

Uliaobao: POP company provide platform for textile  
industry and personalized training for company bosses

YanYue International Ltd. : the company provide  
international education and knowledge exchange  
consultancy in fashion



# LONG TERM AIMS

By involving the industry partners in the trip to Shanghai, this project gives them the opportunity to experience a different culture first-hand and to be involved in valuable networking opportunities.

This will provide them with the opportunity to explore potential new markets and gain an understanding of product adaptation required in order to export to into those new markets.

The success of companies such as Harris Tweed Hebrides (see the List of Potential Partners) in building a contemporary market for their traditional design woven products can act as a best practice example to those interested in preserving Chinese textile craft techniques and to smaller UK creative design enterprises.

The dissemination of immersive technologies and their potential for use in fashion film media can be developed into additional industry-academic partnerships.

The project team intend to develop research and industrial challenges in two key areas: using AR, VR and MR to communicate value to consumers of creative design products and to provide immersive cultural experiences in fashion exhibitions.

# WHERE WE ARE....

## Completed activities:

- Two Chinese Visits all finished;
- Meeting with all possible Chinese partners;
- Matched funding resources secured
- Workshop finished; Got £300 from SICSA to increase the impact;
- Orkney visit finished;
- Partnership with Soluis
- Shetland Visit finished

## Upcoming activities:

- Current dissemination of our project so far
- Building our website  
[www.augmentedfashion.co.uk](http://www.augmentedfashion.co.uk)
- Professor Rong Zheng's visit to Scotland for 14 days
- Large grant application to AHRC in October for 3 year research project
- KTP application with Harris Tweed Hebrides on New Product Development for new markets





# FROM AUGMENTED TO AUTHENTIC

Weaving the past into  
future



<https://augmentedfashion.co.uk>