SERVICE ECOSYSTEM: EMPOWERING TEXTILE ARTISANS' COMMUNITIES TOWARDS A SUSTAINABLE FUTURE

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ABSTRACT

The global economic and environmental crisis seems to be leading to the end of a 'linear economy' based on consumption and waste, while setting the ground for redistributed micro-productions, inspired by new ethics of sustainability and cutting-edge economic models. With this in mind, this paper is focused on exploring textile artisans' communities, bottom-up and human-centred aggregations embodying the craft atmosphere of a territory due to physical proximity and shared material cultural background. Such communities are engaged in giving form and meaning to local natural fibres and managing the process of making culturally and socially significant apparel. Literature on textile artisanship has shown the potential for the application of service design to empower collaborative communities and co-design relational services triggering holistic sustainability. Through participatory action research, this project intends to fill a gap within the strategic agenda, which could create sustainable interconnections within the patchy artisan landscape. Therefore, this paper explores possible ways in which service design could strategically contribute to encourage textile artisans' communities towards a sustainable future.

INTRODUCTION

We are witnessing an increasing interest in craft, yet there is still no universal understanding of artisanship and its overlaps with art, design and making. Most of the literature is still acknowledging the potential of individual artisans, who are many yet economically too small, to become a critical mass and move towards sustainability. For this reason, this research intends to contribute towards shifting the worldviews from individual practices to communities of practices (Wenger 1998) rooted in local contexts, weaving an enabling ecosystem of interconnected textile artisans' communities. Opportunities and boundaries for such communities in relation to sustainable futures will be explored, and collaborative services will be co-designed, integrating online and offline touchpoints between community members, artefacts and users.

ARTISANSHIP: ANTHROPOCENTRISM AND BEYOND

Textile artisanship is here considered as the human-centred economic activity of giving form and meaning to local fibres into aesthetic and utilitarian apparel (see Figure 1). Unlike the strong technological focus of most literature, this research aims to strengthen the human and social assets of textile artisanship, contributing to shape societies, as the artisan's identity, skills and quality are embodied within material artefacts, carving a man-made reality. There are no quantity restrictions in craft productions; however, the artisan's direct control over the manufacturing process usually implies limited editions of garments which are never identical one to another (UNESCO/ITC 1997). Therefore, artisanship can address the increasing demand for flexible and personalised productions, while connecting local realities with global markets. Beyond individual experiences, artisanship is a manifestation of community life, aimed at producing artefacts most commonly used in loco (Martins 1973). Artisans'

communities are bottom-up aggregations rooted in a territory, sharing material cultural background, and co-evolving in line with artisans' needs (Bettiol and Micelli 2014). By using local resources and aesthetic references, textile artisans' communities portray in their fabrics and garments socio-cultural traditions, representative of a particular region and passed down from generation to generation.

Figure 1: Human-centred framework of artisanship.

SUSTAINABILITY CHALLENGES

Within the artisan landscape, the greater potential for sustainable development has been identified in the textile sector. This is due to large availability of local fibres, high employment of skilled artisans (Crafts Council 2014), and wide range of application from furniture to consumer products to fashion, with ever-increasing consumption trends. Moving beyond fashion, often perceived as an unsustainable boost to consumerism, this research is focused on service design as a tool to empower artisans' expertise and build a relational infrastructure (of service providers and users) behind sustainable products. The textile sector is one of the most complicated production chains, involving different actors (farmers, manufacturers of fibres, textiles and apparel, and retailers), service sector and waste management (DEFRA 2011). The environmental impacts of clothing life cycle are well documented: volumes of garments, purchased annually in the UK, have increased by around one third from 2000 to 2006 (Allwood et al. 2006), resulting in huge carbon and water footprints (WRAP 2012). Dwindling of resources and re-localisation of urban manufacturing are making natural fibres expensive and unaffordable for artisans who have consequently turned to mass production (Scrase 2003). Many items once produced by skilled textile artisans have been replaced by cheap fast fashion, which means quick and low quality production of cheap garments. These fast consumption and disposal trends do not take producers, heritage and the environment into account, resulting in the parallel

emergence of "fast landfill" (Earley et al. 2010). Due to exclusionary policies, low investments, poor infrastructure and rapid urbanisation, many workers, lacking of formal education and organisation, have joined an informal economy, conducting low-quality jobs, not covered by social benefits and wage protection laws (International Labour Organisation 2014). Artisans are even more endangered in the developing world, where they face subjection to large monopoly businesses, market corruption, and lack of perception of international consumer trends (Nash 1993). Artisanship is also suffering a generational divide: as young artisans do not feel much motivated and inspired, fewer craftswomen carry on production of traditional textiles (Mirza 2015). To preserve traditional artisanship, government and non-government organizations are implementing top-down policies, but in the end they often fail in setting labour conditions, rights, quality standards and competitive prices for craft products (Scrase 2003).

TOWARDS HOLISTIC SUSTAINABILITY

In order to tackle the unsustainable development of globalised mass-produced garments, cutting-edge design approaches (towards flexible and redistributed manufacturing, circular and sharing economies, grassroots service innovations) are being explored. Ultimately, to achieve holistic sustainability, it is required to live responsibly in terms of environmental issues, social justice and economic equity (Bhamra and Lofthouse 2007). Textile artisanship can contribute to sustainable development, as it could potentially preserve cultural heritage, provide social employment, boost creative economies and enhance environmental stewardship (Figure 2).

Figure 2: Holistic contribution of textile artisans' communities to sustainable development.

The designer plays an important role to facilitate sustainable development. He/she is called to understand communities' creative ways of organizing, triggering social interactions and co-designing strategies for innovation (Meroni 2007). While many textile projects focus on reducing the environmental impact of manufacturing, designers' decisions at the outsets can

also improve environmental performances of products by up to 80% (Politowicz and Earley 2009). Building synergies between artisans and designers is therefore desired to address sustainability challenges throughout the textile value chain and establish long-term visions. Literature suggests that new strategies and methods should be created to assist design decisions regarding the hard (i.e. materials, processes, technologies, facilities, service platforms) and soft (i.e. life cycle thinking, fair-trade and ethical production, artisans' entrepreneurial skills, network of relationships) aspects of sustainable textile production (Earley et al. 2010). Finally, beyond the anthropocentrism, which has traditionally characterised design, it seems that a new bio-centrism should be reframed and the worldviews of the designer and audience alike should be shifted (Brass and Mazzarella 2015). For this reason, instead of developing technological and economic solutions to address human needs at the centre of the system, this research adopts a holistic approach, triggering sustainable interrelations between environment, culture, economy and society (see Figure 3).
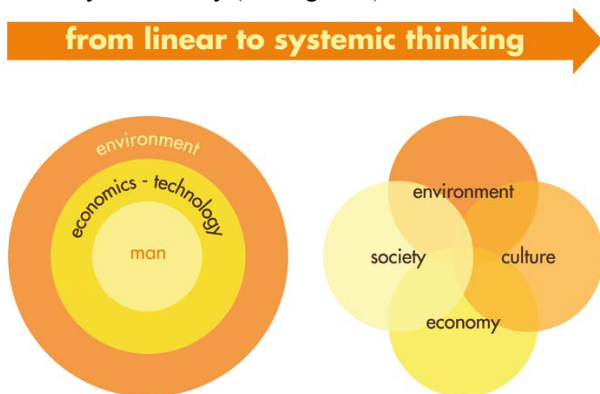

Figure 3: The shift from linear to systemic thinking.

In this way, for example, from an environmental standpoint, production processes could be optimised by lowering consumption of resources through zero-waste pattern cutting techniques (Aakko and Niinimäki 2013) or designing versatile fits and using single materials for efficient disposal of garments (WRAP 2012). Evidence suggests that artisans should use local natural fibres and avoid the use of chemical dyestuff and its discharge into water supplies. Producers may be encouraged to provide richer environmental information about the origin of clothes, addressing product traceability and transparency in the supply chain (Maffei and Villari 2011). Using a "Cradle-to-Cradle" approach (Braungart and Mc Donough 2002), wastes of a production system could become resources for another, giving new life to otherwise discarded textiles.

A possible way towards making textile artisans' communities resilient to the ever-changing consumer needs could be nurturing micro-economies and co-designing sustainable business models. Some communities may target market niches or implement flexible specialisation in manufacture (Wood 2000). Overall, the revival of developing countries could be in

localising production rescuing cultural heritage and empowering communities for local development through creative tourism (Miettinen 2007).

Designers are recommended to develop profitable products and processes but also boost human and social capital contributing to local economic development (Margolin 2002). Making could also be approached as a convivial activity, encouraging individual happiness, wellbeing, relax and memory (Griffin 2012). Bringing grassroots communities into the decision-making process, sustainable policies and services could be developed, implementing innovations that better suit the needs of local users (Forum for the Future 2015). It is worth exploring the adoption of a hybrid "middle-up-down" (Stakowszki 2010) approach (involving bottom-up engagement and top-down support), so that designers and public bodies could support innovation within textile artisans. At the same time, it seems that artisans themselves should be empowered, by gaining access to information, awareness of their roles, ability and independency (therefore, becoming less vulnerable and more resilient). Ultimately, for the success of social projects, Thackara (2005) advocates real-world context, service orientation, and a network of relationships among local participants.

Finally, literature suggests that designers should boost a systemic cultural change, transitioning the worldviews from a focus on quantity to one on quality as key driver for sustainable consumption (Fletcher and Grose 2008). Sustainable behaviours could be triggered by enabling mending of garments and providing platforms for sharing and collecting clothes for repairing, leasing, reselling, and upcycling (Chapman 2013). A stronger effort in environmental education is recommended, as well as suitable training in and through craftsmanship, boosting creativity, inventiveness, problem solving and practical intelligence (Crafts Council 2014). A possible way to revitalise the craft culture among young students and practitioners, could be developing a Craft Certificate boosting aesthetic record of practice, teaching skills, development of theory with academic value.

Although supported by holistic awareness of possible sustainable practices, this research does not intend to address all the above mentioned global challenges. Yet, participatory action research will aim to deeply understand the contexts of design intervention and elicit, together with specific textile artisans' communities, what issues to address, what strategy to adopt and 'how' to do so for the most likely adoption and sustainability of innovation.

SERVICE DESIGN FOR SOCIAL INNOVATION

To reach the above-mentioned macro-innovations and cause real-world change, designers have the responsibility to trigger micro-transformations,

addressing people's needs through sustainable design (Papanek 1984). Service design, due to its human-centred strength, relational and systemic nature (Meroni and Sangiorgi 2001), is here recognised as a key approach for boosting social engagement and shaping sustainable infrastructures to increase artisans' competitiveness. Service design is advocated as the process of "prosuming" (i.e. producing and consuming) services, which are based on intangible (i.e. social and cultural) frames and tangible (i.e. technological) interactions (Morelli 2002). By designing service systems of people, information and technology, this research project intends to co-create value while optimising the material consumption associated with production, distribution, use and disposal. To meet these aims, this project will adopt a participatory action research methodology; service design methods (i.e. shadowing, contextual interviews, co-creation, service blueprint, system map) will be used for collecting qualitative data, linking theory to practice. Through co-design sessions with craft producers and consumers, the system of artisans' communities will be mapped and sustainable challenges identified. 'Collaborative services' (Jégou and Manzini 2008) will be co-designed, as bottom-up solutions implemented at local scale and enhanced by digital technologies to meet material and immaterial needs, individual and social wellbeing. Such services will be prototyped as service blueprints to be used by the communities and support the theoretical contribution of this research (see Figure 3).
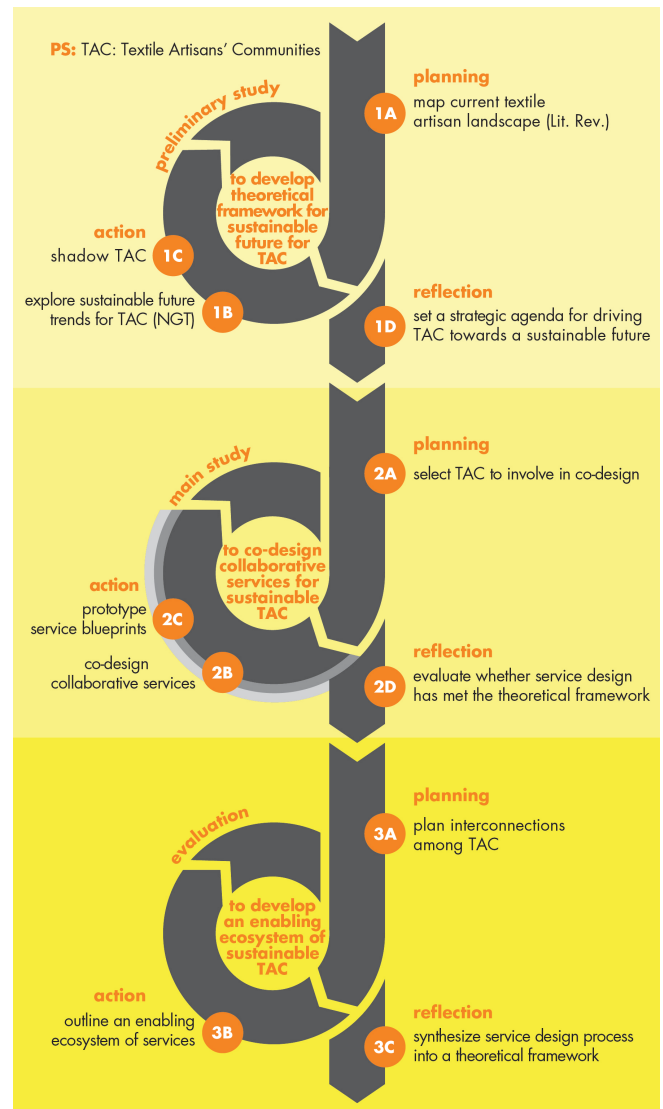

Figure 3: Simplified spiral of participatory action research.

It is envisaged that to maximise accessibility, sustainability and scalability of collaborative services, small and distributed initiatives will be connected within an enabling ecosystem. As services will tackle different issues in specific contexts, local solutions won't be replicated, yet inter-connected within a wider network to enable mutual learning and sharing of resources and successful practices. Such an ecosystem could include a platform equipped with tools for organizing and maintaining collaborative services. This could be designed in a modular and flexible way so that all its enabling solutions will share the same database and new modular services could be added as the system evolves (Voss and Mikkola 2007). This will require systemic design thinking, enabling engagement of complementary stakeholders (artisans, designers, local communities and policy makers) having common goals, such as shared use of space and time and social interactions at local scale. A fundamental requirement is the openness of the ecosystem in terms of balanced intra- and inter-relationships within an autopoietic community, that is to say self-sustaining and self-reproducing. Such an ecosystem may replace the

paradigm of competition in favour of peer-to-peer relationships, inspired by co-sustainment within natural systems (i.e. biomimicry), which co-evolve without affecting each other. The proposed service design model is expected to give birth to new forms of active communities, triggering new ideas of locality and a stronger sense of belonging and social responsibility (Figure 4).

Figure 4: Contribution of service design to textile artisans' communities.

CONCLUSIONS

This paper has reviewed the potential for service design to engage in new areas, such as redistributed micro-factories, boosting textile artisans' communities towards sustainability and social innovation. This research intends to overcome the shortage of literature on sustainable futures for textiles, especially focusing on the artisan and his/her social implications, at the small scale of craft production, where more scope for design intervention has been identified. Although this paper has suggested diverse design directions for sustainable textile artisanship, the focus of collaborative services to be co-designed will depend on the real-world issues that specific artisan' communities (still in phase of selection) will elicit during future participatory action research. Overall, this paper has presented a research proposal for the application of service design as development phase within textile artisanship and investigated methods for co-designing collaborative services. Finally, evaluative frameworks will be developed to assess the impact of service co-design in sustainable textile artisanship.

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