

Traditional Maker Practices and Sustainable Futures. The implications of expertise

Stuart Walker^{a*}, Martyn Evans^b, Louise Mullagh^b,

^aLancaster University

^bManchester Metropolitan University

*Corresponding author e-mail: s.walker@lancaster.ac.uk

Abstract: This paper considers the contemporary position of traditional maker practices and their relationship to sustainability. It outlines the basis of the approach and insights from the field, and offers a range of initiatives where design can make a positive contribution to traditional production. Traditional maker practices are in steep decline in the UK and internationally; the kinds of knowledge promoted and valued in contemporary society tend to be at odds with those inherent to these kinds of practices. The paper considers the inadequacy of purely theoretical forms of knowledge and demonstrates the importance of values-guided practice, experience, skills, and tacit and situated knowledge. It shows the important links between traditional practices, sustainability and place, and, by citing a range of initiatives around the world, proposes directions for a more constructive way forward for small maker practices rooted in tradition.

Keywords: Maker practices, tradition, sustainability, design

1. Introduction

Traditional maker practices are closely tied to community and place and, in a broad sense rather than a narrow monetary sense, to the development of thriving and sustainable local economies. Despite this connection to sustainability, most small maker enterprises struggle to compete against cheap mass-produced alternatives.

Significant gaps exist between contemporary and traditional practices; between mass production for global markets and local production at a small scale; between product production and product meaning. In this discussion we address these gaps while also acknowledging the important relationship between on the one hand, traditional maker practices and ways of working and on the other, the creation of sustainable and more fulfilling lifestyles. In addition, using the lens of the *Quadruple Bottom Line of Design for Sustainability* (Walker, 2011, pps.185-205; Walker, 2014, pps.7-23, 42), developed by one of the authors here, and drawing on insights from examples of local production in the UK, North America and China, we consider factors relevant to a transformative shift in how we address design for sustainability.

2. Theoretical Background

The search for knowledge, the development of theory, the need to classify, the formulation of models and systems, and the striving for innovation – these are the lifeblood of contemporary society and of the modern research-intensive university. But there are other ways of encountering the world and other ways of knowing that are supportive of more rounded understandings and more heuristic processes.

The approach discussed here draws on the insights of Gadamer (1989) and others to examine sustainability, its aims and what should be included for consideration under its remit. In summary, these considerations informed the development of the Quadruple Bottom Line of Sustainability, which is based in meaningful actions, and its relationship to human values. In turn, combining meaningful actions with an explication of values in the context of sustainability led to a design approach referred to as Progressive Design Praxis, whose basis for 'betterment' is grounded in actions guided by those broadly life-enhancing human values that have been espoused for centuries by the great philosophical and spiritual traditions. These factors, discussed in more detail below, provided a basis for engaging in and analyzing findings from the field, which yield insights into how design might make a constructive contribution to small maker enterprises in ways that are both respectful of their cultural context and traditions and in accord with sustainability.

2.1 Sustainability and Betterment

Two decades ago, in his Triple Bottom Line of Sustainability for business, Elkington identified three accountability factors: environmental, social and economic (Elkington, 1997, pps.69-90). Some years later, Manzini and Jegou similarly highlighted the environmental and social factors when they said, "bearing in mind the fundamental themes of sustainability (environmental and social), connectivity and globalisation, we will have to learn to live better consuming less" (Manzini and Jegou, 2003). Here, we also see a reference to that which is 'better', a factor often echoed by professional design organizations when they claim good design can make things better by improving customer satisfaction and business prospects.

First, we must ask if it is sufficient to assume that sustainability rests purely on the environmental, social and economic impacts of our actions. Second, we need to ask what basis we have for judging what is 'better' or 'improved'. In the quote from Manzini and Jegou there is the implication that sustainability and betterment are related to reducing consumption. The UN Sustainable Development Goals suggest that sustainability and betterment are about eliminating poverty and hunger, improving equality, healthcare, and the state of the environment, and also ensuring economic growth (UN, 2015). Rather differently, Thackara suggests that they may be more related to human values, relationships and trust, as well as going beyond our fetishization of economic growth (Thackara, 2006, pps.24, 42).

From another perspective, philosophical-theological sources tell us that there are three key elements to the human condition: we are physical beings that rely on the natural environment for food and other resources; we are social beings, we live and work in groups; and we are individuals with a distinct idea of self as well as an intuitively apprehended sense of the inner or spiritual person (Hick, 1989, pps.129-169). Comparing this with the earlier discussion about sustainability, we see that while many current notions of the latter include the physical/environmental and social facets, no mention is made of the individual. Moreover, the economic factor can be understood not as an essential feature of our humanity, but as a social construct that facilitates transactions.

Hence, the four elements of the *Quadruple Bottom Line of Design for Sustainability* can be expressed as *practical meaning*, *social meaning*, *personal meaning* and *economic means* (Walker, 2011, pps.189-190; 2014, p.93). The first three are on a par because they all essential human traits, the fourth is of a lower order – a *means* of enabling the other three. The four elements of the *Quadruple Bottom Line of Design for Sustainability* are shown in Table 1 (for a full explanation of these see Walker, 2011, pps.185-205; Walker, 2014, pps.7-23, 42).

Table 1: The Quadruple Bottom Line of Design for Sustainability

PRACTICAL MEANING	utilitarian needs plus environmental impacts
SOCIAL MEANING	social justic, equity, community, benevolence
PERSONAL MEANING	spiritual development & well-being, inner values, conscience
ECONOMIC MEANS	a means, rather an end, for ensuring the other three elements are fulfilled

(Walker 2011, 2014)

2.2 Meaningful Actions

For our actions to be meaningful, we perceive and interpret the world around us and act with discernment according to that interpretation. It follows that for actions to be *meaningful* they cannot be judged simply in and of themselves, they have to be regarded within the context in which they occur. To be *meaningful*, practical actions that provide human benefits – such as building a house or a road – must consider the physical and environmental implications. Actions that are socially meaningful must be sensitive to the desires and feelings of other people, and should aim to treat them not just in legally, but also in ethically, acceptable ways. Actions that are personally meaningful are those that we do in good conscience and that we feel are fulfilling and beneficial to our spiritual development and inner well-being (for a more extended explanation of the notion of meaningful actions, especially as they relate to the *Quadruple Bottom Line of Design for Sustainability*, see Walker, 2011, pps.185-205; Walker, 2014, pps.7-23, 42).

2.3 A Design Approach

To translate these ideas into a design approach it is important to recognize their implications in terms of what we regard as valid and legitimate. When we introduce values, we involve human and social ways of knowing and, as a result, depart from scientific ways of knowing, which are concerned with objectivity, prediction, control and repeatability. For this reason, it is entirely inappropriate to apply scientific approaches to values-based human and social activities because they do not consider the contextual, qualitative or tradition-based cultural-historical facets of human experience. Instead, interpretive methods are required that link values with actions. Furthermore, design itself can be understood as an interpretive discipline (Snodgrass and Coyne, 1997, p.12); it strives to interpret, understand and apply human values in ways that are appropriate to a given situation. Based on these considerations, the following design approach has been developed by Walker (one of the authors here) in which ethical behaviour and the pursuit of virtue are considered ends in themselves and require no further justification:

Progressive Design Praxis: a form of design practice that aims to change the situation for the better by striving to interpret, understand and apply the ethical values and notions of virtue found in the philosophical and spiritual traditions of one's culture (Walker, 2018, p.289).

This approach distinguishes itself from regular design practice in that it explicitly relates context-based values associated with culture and tradition to notions of betterment. It also recognizes that rational argument can only take us so far, and is often incapable of solving the kinds of contradictions inherent to the 'wicked problems' often tackled by designers (Rittel and Webber, 1973, pps.155-169). As a result, it downplays the importance of theory, which is abstract and generalized, by giving prominence to human experience and to actions that are context-based and guided by values. Hence, it raises the importance of situated practice, skill, and intuitive and tacit ways of knowing – all of which can be summed up by the term 'expertise' (Blackburn, 2008; Walker, 2018, pps.292-294).

These elements are inherent and critically important features of traditional modes of making (Bertram, 2017, p.11). They are also all vital ingredients of more holistic understandings of sustainability because they are tied to environmentally, socially and personally responsible meaning-making. It also becomes evident that there are important differences between the priorities of the modern research-focussed university and those of traditional practice-based art schools and apprenticeship programmes, the modes of learning favoured by each and the kinds of knowledge they value.

3. Traditional Modes of Learning

To acquire traditional craft skills, the novice aims to learn well-established techniques and ways of working that have proved their worth over time. By convention, this kind of learning is achieved not primarily through books and theory but via more heuristic methods. That is, methods in which decisions are made and ways of working are progressed based on experience and reasonable assumptions. The effectiveness of these decisions and practices lie in the result rather than in any prefigured theoretical proofs or models. Improvements are progressed over time by way of trial and error. Significantly, such learning is grounded in direct engagement with materials and tools, working alongside a master over several years, until a sufficient level of ability and acumen is attained.

Traditional and heritage craft practices tend to value continuity, constancy, deep engagement and a relatively slow pace of well-considered, incremental change (Sennett, 2008, p.20). From a modern perspective, steeped in scientific and technological progress and innovation, the predictability and stability of traditional crafts may seem uninteresting and uninspiring. However, if we are prepared to give greater consideration to the meanings and inferences of such traditions, we find something rather profound. There are connections to place, people and community and, hence, localization and roots that go deep. In a great many cases there is a resonance with the human spirit that is intuitively felt to be good and true. Also, there is often a highly synergetic relationship with the natural environment, which manifests as context-based 'response-ability'. All these are also fundamental ingredients of contemporary sustainability and, for this reason, warrant further consideration.

3.1 Resonance with the Human Spirit

The inner or spiritual self is that part of us concerned with purpose, meaning, ethics and values as well as intuitive apprehensions that reach beyond or transcend ordinary, mundane affairs (MacGregor, 2018, p.xii). With traditional practices, one is acting in accordance with that which has been handed down over the generations. Also, philosophical and spiritual teachings from all cultures

tend to espouse modest ways of living and the eschewing of selfish behaviours. Traditional craft practices and products generally align well with such teachings, not least because, instead of seeking praise for originality and innovation, craftspeople are conforming to that which has gone before. Conventionally, the work is not signed because it is the tradition itself and its continuation that matters, not any single practitioner. Hence, there is a downplaying of those self-regarding priorities and values that have become so prominent in modern times.

In addition, the many constituents of traditional craft-making become manifested through the rhythms of practice, which the maker carries out in a relatively 'unthinking' manner. Physical movements become so embedded into one's being that the intellectual mind no longer has to think through each step. This can facilitate a meditative-like state. One is performing the act of making through experience, skill and long-learned physical movements; that is, through an acquired expertise. And all the while one is in a state of being that is spiritually enriching. There is an important element of constancy and stability about such work. Recognizing and being part of this sense of timelessness is the heart of wisdom, which represents more than just knowledge. It combines knowledge with experience, intuition, implementation and prudent, well-informed decision-making.

3.2 Connection to Place and Community

It becomes apparent that traditional crafts are closely tied to community and place. The individualism that is such a large part of modern life yields to communitarian values, and one's sense of identity is formed by factors that extend beyond considerations of self alone. With their scepticism of innovation and, conventionally at least, their anonymous authorship, traditional practices and products are in many ways anathema to the modern sensibility. With this comes a sense of belonging, heritage, 'of placeness' and a sense of one's own identity forged by being part of something bigger than self. Because one's community includes those who have gone before and those who will come after, one's vista stretches back into the past and ahead into the future and this, in turn, encourages longer-term thinking. This, again, contrasts with the modern sensibility but this sense of continuity and continuance is vital for social and environmental sustainability. It is also related to our own peace of mind and well-being (Scheffler, 2013, pps.15-40).

4. Insights from the field

Our field research – conducted through semi-structured interviews with makers, gallery owners and others, as well as first-hand observations and informal conversations (Gray, 2004, pps.215-216) – has revealed the complex relationship between traditional and contemporary priorities and values and how these interconnect in the context of traditional and heritage craft practices. We have conducted research in various countries around the world and here will draw on examples from the US, China and the UK. Our methodology consciously avoids a more scientific, rationalistic, analytical approach to what is, in reality, a much more organic, interpretive and impressionistic or hermeneutical process (Walker, 2018, p.289) in which practices, ways of knowing, values, priorities and motivations are intermingled and inseparable. Insights are drawn from semi-structured interviews, informal conversation, anecdote, and observations of context-based practices, use of materials and understandings of heritage and provenance. On this point, as Nicholas has observed, we should be cautious about regarding methods that claim to be objective and quantifiable as being the only avenue to legitimate knowledge while dismissing traditional forms of knowledge as mere 'myth' because they appear imprecise, unfamiliar, and of no utility (Nicholas, 2018).

4.1 Santa Fe – The City Different

Santa Fe in New Mexico is widely recognized for the vibrancy of its traditional arts and crafts culture. In 2004 it was the first city in the US to be designated a UNESCO Creative City (Bol, 2018, p.255). With a complex cultural history involving Native Americans, Hispanics and so-called 'Anglos', Santa Fe became a city where remnants of the past interacted with the living realities of the present and promises of the future (Tobias & Woodhouse, 2001). In the 20th century, a tourist industry emerged based on interest in the Native American Pueblo Indians, the region's Hispanic heritage, and a growing arts and crafts culture. The city hosts annual Spanish-American (Hispanic) and Indian (Native American) markets over two separate weekends. Quality is assured through a carefully juried system, with only those craft makers who attain a high standard being allowed to participate. Competition for places is strong because the markets are a lucrative mechanism for income generation – resulting in up to 50% of a maker's annual income over just one weekend.. A complex interrelationship of various historical factors has been serendipitously and consciously shaped over time to result in today's successful arts and crafts culture.

Pueblo Pottery

Pueblo pottery is made almost exclusively by women who continue to follow customary practices. The pottery is decorated with traditional designs and for the most part, still ground-fired using local wood. It is all handbuilt, not thrown on a wheel which, given the quality and precision of the finished pieces, is a testament to the high skill of the makers. Rather than using glaze the shiny finish is the result of polishing a clay slip with a river stone or hide. It is only fired once, so all decoration is undertaken before firing.

The different clay compositions in the region mean the pottery can be attributed to a specific group, and in some instances to a particular family, and the decorative patterns distinguish the various communities.



Figure 1. Example of Pueblo Pottery from the Acoma Pueblo

Chimayo Rugs

Situated thirty miles north of Santa Fe, the town of Chimayo is a quintessential northern New Mexico settlement. It has a long-standing association with weaving. In the 19th century, when the Santa Fe railroad opened the region to tourism, the prototypical 'Chimayo Indian Rug' was developed to serve

this market. These rugs are handwoven on traditional looms but the yarn has always been imported from the north. The Chimayo style known today, with its red background and black and white pattern, can be dated back to 1898, when a company from New Richmond, Ohio started shipping yarn to the region. By the 1920s there were seven dealers who hired weavers outside their immediate family in order to meet the growing demand. The Chimayo styles began to be standardized so weavers could be paid fairly and the rugs marketed consistently. The Chimayo rugs produced today are characterized by a Pan-South West aesthetic with four main styles: *Saltillo*, *Chimayo*, *Rio Grande* and *Vallero* (see Fig. 2).

Weaving traditions were passed down from generation to generation through the family, and learnt at an early age. Our research revealed that weaving was often undertaken alongside other forms of employment, with one interviewee noting that his father’s primary income was from working in the nearby Los Alamos Laboratory. On retirement, he took up weaving full-time, as “this was his passion”. Nowadays, there is concern that young people are opting for more lucrative employment options. Despite initiatives to pass on tradition and expertise, a weaving programme at a local community college was recently cancelled due to lack of demand.



Figure 2. The four types of Chimayo style – Saltillo, Chimayo, Rio Grande and Vallero

4.2 Jingdezhen – The City of White Gold

Situated in the north-eastern Jiangxi province of China, Jingdezhen has a well-documented association with pottery and is recognized as the ‘Porcelain Capital’ of China (Jaffe, 2015). For many years the city supported a number of major state-owned ceramics factories but, since the opening up of the Chinese economy in the 1980s, all the factories have been closed. They had employed thousands of skilled workers who were specialists in particular aspects of the production process and

when they closed down (mainly in the 1990s), some workers set up their own enterprises, continuing to work in loose collectives. Because of this history, the city has a vibrant culture of making that has developed in response to market forces and government investment. Below are examples of individual elements of this culture.

Mr Sun, Ceramics Studio, Jingdezhen

Mr Sun is a master who has worked in ceramics since he was 16, originally in a factory and then as an independent ceramic painter. He learned under a master for three years. For another three years he went to 'occasional' college for further study in fine art and ceramics. He is now a provincial Arts and Crafts master whose works have been awarded many prizes.

Since becoming independent, he has had more freedom to change his designs and is better able to respond to market demands. His work is simpler than when he worked in the factory and primarily driven by his personal motto 'simple is better'. He employs and trains five to six people and has taught more than ten apprentices who, when they 'graduate', usually go out and set up their own businesses. His employees do the less skilled work (slip casting etc.) and Mr. Sun does the intricate drawings and designs 2D artwork, but commissions the mould from specialized suppliers. Some designs are based on traditional characters that have cultural relevance and links to tradition but others explore more contemporary themes.



Figure 3. Example of Mr Sun's Work

Pottery Workshop and Creative Market Area, Jingdezhen

Located in an old district of Jingdezhen, this area hosts a concentration of traditional ceramic retailers and manufacturers with studios, workshops and warehouses located alongside market spaces that have developed organically over time. This has resulted in an intricate set of interrelated spaces and streets that have a traditional feel without an overall strategy being imposed. Master craftspeople and their apprentices have studios alongside retail outlets and a night market where students also sell their work. One interviewee noted that while they are studying they can make

enough income to pay their fees. This ‘mixed economy’ creates a vibrant if somewhat chaotic feel but supports a range of makers and is popular with tourists and visitors from the region.

Taoxichuan ‘Creative Zone’, Jingdezhen

In 2014 the local government invested 600M RMB (ca. £70 million) to create a cultural demonstration zone by transforming the former state-owned ceramic factory into a creative hub. It now receives 7,000-10,000 visitors per day. The area includes galleries, cafés, restaurants, museums, a hotel and a Youth Zone – a collection of individual artisans’ stores under one roof. Built on a former kiln site, the Youth Zone provides young artisans with space to sell their wares directly to customers. The artefacts are generally contemporary in style – they respect traditions without being constrained by them. Some artisans have employed contemporary design not only in the artefacts they produce but also through packaging and branding.



Figure 4. Example of work on sale in the JDZ Youth Zone

4.3 Cumbria, North West England

Our research in the UK has concentrated on traditional maker practices in the rural county of Cumbria. This region, characterized by its mountains and lakes, is a major venue for tourists. The Lake District is in a National Park and in 2017 was awarded UNESCO World Heritage status. While Cumbria is home to many small maker enterprises, our research focusses particularly on practices in which making has strong links to the place itself – through geology, topography, other regional practices, or for some other context-based reason. This ‘located making’ criterion reduced the number of enterprises we would examine in detail but the ones that remained offer rich insights into the relationships between traditional making practices and place. The Cumbria project is ongoing and we are unable to document all the details of the interviews within the confines of this paper, but we will highlight some selected findings related to sustainability and values.

Important initial insights have been drawn from interviews with a small number of ‘located makers’. These include two traditional basket makers, a weaver, a maker of bags from local wools, an interior design company, and a fine-art paintmaker. Their responses helped reveal their thinking, priorities and motivations and are summarized in the following themes:

Located making: One of the basket makers said that he acquires all the materials he needs for his business within Cumbria. His main material is coppiced oak, which he plants and harvests himself. Similarly, the interior designer told us that their brand is all about quality, using local Herdwick wool, and ensuring everything is made as locally as possible. The fine-art paintmakers exclusively use locally found minerals as the base for their pigments and they also work extensively with local designers, schools and other businesses to provide the necessary expertise and hardware. *This theme relates to Practical Meaning as resources are local. Environmental aspects at the local level are addressed through, for example, replanting woodland, and reduced transportation and packaging. Local making also helps forge interdependencies and working relations with others in the locality, thus fostering community and furthering the Social Meaning element of Walker's Quadruple Bottom Line of Design for Sustainability.*

Thinking beyond self: One basket maker continues to plant trees although he will not see the benefit himself. He told us he was providing materials for the generations to come. The fine art paint makers explained that the small cooperative they set up within the local arts centre, to which they give their services voluntarily, was initiated as something positive after the iron ore mine closed. The interior design enterprise said they felt how they practise their business is a way of giving back to the community, and it comes from the heart. *Longer term thinking, as in the first case mentioned here, contributes to Social Meaning as well as notions of personal identity based in place and roots to place, which also contributes of Personal Meaning. In addition, 'beyond self' values are fundamental to the furtherment of Social Meaning.*

Well-being and Human Relationships: Many of the craft makers saw their work as spiritually satisfying, meditative and an expression of their identity. In some cases, even though it was demanding physically and in terms of time, the whole process – from gathering materials to finished product – was deeply fulfilling. However, a weaver explained that, even though she found the work creative and satisfying, handmaking alone did not pay as a business. In addition, though many small makers work alone, their relationships with other people are important. One said that most of the time he meets the end customer and he values this connection, preferring it to shipping the products off to shops. *Clearly, the findings that led to this theme relate to Personal Meaning, especially spiritual well-being and individual flourishing.*

Working directly and intuitively: many local making practices are based on experience, working directly with materials and with other people, and working intuitively – gauging what feels or looks 'right'. The bag maker runs the business and produces the specifications for the bags, which are made nearby, and she designs the products, despite having no formal training. Her skill is in recognizing what is good about a product and she always asks people what they like and don't like about the bags. *Working directly with materials in intuitive, creative ways has been widely recognized as being a significant contributor to an individual sense of fulfilment. Artisanal practices are also frequently associated with spiritual well-being (see above). Hence, this theme aligns with the element of Personal Meaning in the Quadruple Bottom Line of Design for Sustainability.*

Thus, the activities of the 'located making' small makers enterprises we researched in Cumbria align, in a number of ways, with the three primary elements of the Quadruple Bottom Line of Design for Sustainability. The financial aspects, while important, are generally secondary considerations and are the *means* for achieving practical, social and personal meaning. In doing so, we can understand the development of the products and services offered by these enterprises as examples of *Progressive Design Praxis* because they are forms of practice that change the situation for the better by being both ethically responsible and spiritually fulfilling.

Business Models:

We encountered a number of business models during these field studies, including:

- selling primarily at fairs and shows;
- selling via a website and through galleries in London and elsewhere;
- buying raw materials from local farmers and sending them to be processed within the region; prototyping by hand and producing some handmade stock; also sending the specifications to larger-scale producers in the region. This decision to branch into more commercial-scale production was taken because some customers were not prepared to pay the prices for handmade goods that would enable the business to be profitable.
- combining complementary skills. Business and finance experience together with making and design. The interior design enterprise sources local materials, and has them processed into fabric within the region. The materials are dyed using a palette of natural colours from the locality. They are then used in-house for creating furniture goods, sold as a fabric, and supplied to local artisans on commission, who create stock for the shop, including bags, lampshades and cushions.
- a part-time cooperative with local suppliers providing the packaging, the local high school producing small pieces of equipment, and working with other local businesses to produce associated products, branding etc.

5. Discussion, Conclusions and Future Directions

Our research has revealed a number of opportunities for design and creative thinking to add value to traditional crafts and in doing so connect to both traditional and contemporary priorities and values. Notably, we have found, in the context of craft/maker practices, that design, sustainability and ways of understanding become unified into a more holistic notion that can be understood as *modes of knowing-and-doing*. In practice, therefore, these various aspects are fully integrated and it seems to us to be inappropriate to try to impose more formalistic, analytical methods that would, in effect, separate out these elements, thereby giving the impression that they are distinguishable and can be considered independent and autonomous. This aligns with Polanyi's notions of tacit knowledge (Polanyi, 1966) as well with contemporary understandings of Traditional Ecological Knowledge or TEK, (Castree et al., 2013; Vivanco, 2018)

While the examples above have direct connections to traditional crafts, *we see patterns emerging of underlying trends around the world that value tradition while bringing a contemporary sensibility to handmaking, designer-making and repair*. The most successful examples are part of a larger vision of cultural recognition and affirmation that includes the creation of a vibrant 'place' – as we saw in Santa Fe and the Taosichuan 'Creative Zone', where craft makers, studio and gallery spaces, museums, restaurants and hotels all coexist to create a 'venue' where each of these independent enterprises relies on the presence of all the others. While the Cumbria context is more geographically dispersed, its recent recognition as a UNESCO World Heritage site and *recent initiatives in regional branding* help contribute, in part via design, to a similar 'place-based' sense of cultural recognition and affirmation.

We found that loose collectives and cooperative models can help maximize synergies and economies of scale. By bringing together individuals into a collective, there are opportunities to reduce the burden of increasingly weighty business administration while increasing the potential of place-based branding that foregrounds the collective over the individual. By considering the Youth Zone brand as

a destination venue, visitor numbers continue to rise and this increase in footfall benefits all artisans. We have seen that coordinated marketing and online presence, often context-dependent, can also enhance the collective profile of traditional crafts.

Thus, our investigations illustrate the potential for design and creativity to contribute to the sustainment of these crafts and reveal connections to contemporary understandings of sustainability, including synergies with place, community, and what is felt to be mindful of responsibility to past, present and future generations.

One route where design can positively impact the perceived value of an artefact is via contemporary product design. In the examples discussed above, and more widely in our research, the use of contemporary design principles, applied with sensitivity and consideration to the traditions of a particular craft, has great potential to update designs to suit modern consumer preferences.

Contemporary product design also provides the potential to embrace, where appropriate, opportunities offered by modern technologies e.g. in materials preparation, digitization etc. While there needs to be caution in such instances to ensure that the traditions valued in a particular craft are not lost, there is much potential for new thinking to help ensure the practices remain economically viable.

A third area where design has the potential to add value to traditional crafts is through awareness-raising to enhance the perceived value of handmade crafts through effective storytelling, information sharing and visualization. Such approaches can enhance market opportunities and boost recruitment of younger people to craft practices because they more readily see the value of engaging in these traditions. An important impact is to increase the perceived value and hence the retail price of handmade crafts to ensure a better return to the maker, thus enabling young people to view craft making as an attractive career option. The use of the Internet can also enable craft makers to exhibit their products, provide a background story and sell their products directly to customers, thus circumventing more conventional retail routes and their associated costs.

Finally, these more traditional 'other' ways of practising, that are, in many ways, reflective of self-transcendent values will be best developed and sustained not through the contemporary emphasis on university education but through the expansion and promotion of high-quality apprenticeship programmes and other 'learning-through-doing' schemes.

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About the Authors:

Stuart Walker is Chair of Design for Sustainability at Lancaster University. His research explores environmental, social and spiritual aspects of sustainability. His designs have been exhibited in Canada, Australia, Italy, and England. His latest book is *Design Realities: creativity, nature and the human spirit*.

Martyn Evans is Professor of Design and Head of Manchester School of Art Research Centre at Manchester Metropolitan University. His research interests explore strategic approaches designers used by to consider the future, in particular their ability to envision potential social, cultural, technological and economic futures.

Louise Mullagh is Research Associate for Living Design at Manchester Metropolitan University. Her research interests explore place, digital technologies and design. She is currently in the latter stages of completing an EPSRC funded PhD at Highwire Doctoral Training Centre, Lancaster University.