Sustainability of the Crafts as a Discipline?

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Introduction

This research explores the problem of sustainability of the crafts as a discipline. More specifically, its aim is to investigate how the crafts can respond constructively to the pressures of contemporary technical developments in order to be at the cutting edge and at the same time preserve its integrity. The argument is that current new technologies provide an opportunity to the crafts rather than a threat if the crafts are understood as experimental and not as a subsidiary to either fine art or design.

The aim and argument of the research is based on three assumptions, which are addressed in the following in order to provide a meaningful answer. The three assumptions are, firstly, a clarification of what we mean by 'craft' or 'the crafts'; of what we mean here by sustainability, and thirdly, of the impact that contemporary technical developments have on the sustainability of the crafts.

From the discussion, two aspects emerge that determine the further development of the research: Firstly, the problematic of rapid technical development for a discipline, which has remained reliant on manual working, material intelligence and sensitivity. Secondly, this raises questions how the crafts can adopt and integrate these new developments in the light of contemporary pressures.

In order to approach these issues, the inquiry uses conceptual analysis and comparison to understand the concept and idea of craft, and its sustainability. Following the discussion of the key concepts in section 2, the research proceeds through a an analysis of the concept of craft, its unique strengths and how they can be used to advance the crafts in relation to the emergence of technical developments and how these can be utilised to advance the crafts.

The conclusion summarises how the combination of technical and conceptual advances can be used to facilitate progress and sustainability of the discipline. As part of this, the study identifies how new developments or 'new avenues' in the crafts emerge.

Craft and Sustainability

Although craft is widely regarded as a discipline of its own, for example as regards education but also more generally as regards its paradigm of working and its classification as a separate art form (Dormer 1997: 18; Greenhalgh 1997: 21; Risatti 2007), in other respects the crafts have proven elusive, especially when trying to grasp the essence of the crafts.

The dichotomy between craft as a category and the crafts as a diverse array of practices and positions (Greenhalgh 2002: 1) has persisted for some time and has caused debate and uncertainty as to what the crafts represent, what their status might be, and what makes them flourish and survive (Greenhalgh 2002:16).

Greenhalgh (1997), for example, identifies the crafts on the one hand as an 'unstable compound' because 'the word is used to collectively describe genres and ideas that formerly were not grouped together and that grew from quite different circumstances' (1997: 21). He sees the crafts threatened because the

> 'fractionalised confusion of craft prevents those practices placed within its boundaries from forming a cohesive lobby. The commercial, institutional and creative survival of the practices held within its empire are threatened by its lack of clarity and confidence buried within the term itself.' (Greenhalgh 1997: 21)

On the other hand, Greenhalgh describes craft as a class, or even empire, of the late modern period, which sits alongside art and design, and which has 'never been in a healthier condition… poised for a radical new phase' (Greenhalgh 2002: 16), a view which is shared by Adamson (2007: 168) although he is ambivalent about the role of craft as concerns its traditional (p. 169) and more progressive contemporary forms (p.168). The official statement of the Crafts Council (2009: 3) further confirms the health of the crafts.

This shift between the two positions is telling, because it is well established that factors, which avoid definition such as variety and uncertainty facilitate change, development, and growth (Udall 1996). In contrast, classification provides certainty and helps grasp the concept of craft. Although this very certainty can also be static and averse to change and development, both aspects - the recognition of the ambiguity of craft as well as its identity as a category among other creative practices such as art and design - are important for the sustainability of craft because craft needs both external recognition, and internal development to be a healthy and sustainable discipline. 'Craft' is used here to denote the essential idea and concept of craft, 'the crafts' refer to the discipline in its multiplicity. 'Sustainability' is used here to refer to the development of craft as a discipline that encompasses both idea and practice and that advances itself and at the same time preserves its integrity in comparison with industrial forms of production and 'fine' art practices. In the following, I further reflect on what this means.

In terms of classification, craft is usually seen as a third category besides art and design (Greenhalgh 1997: 40; Niedderer 2005: 45; Risatti 2007). The comparison with art and design however raises certain problems. First, craft has to be defined, which – as we have just seen – is problematic. Then, it has to be compared to art and design.

In order to define craft, craft has been analysed from many different perspectives such as aesthetic, expression, function, technology, quality, domesticity, amateurism, museology, skill, and several more (Greenhalgh 2002: 4; Niedderer 2005: 45; Adamson 2007; Risatti 2007). Interestingly, many of these perspectives are shared by definitions and theories of art and design. For example, Carroll (1999) identifies aesthetic, expression, and the institutional theory of art as three prominent theories by which to define art, and craft could certainly be defined by each of these. Dependent on which parameters are chosen for the analysis, craft appears to fluctuate on a continuum between art and design.

Craft, as an object, has perhaps been analysed most extensively by Risatti (2007) where it is compared to both Art and Design in turn, and analysed according to function and aesthetics. Risatti discusses the 'craft's unique qualities as functionality combined with an ability to express human values that transcend temporal, spatial and social boundaries' (cover sleeve). Despite of this deep discussion, in the Postscript (p. 303), Risatti falls back to a comparison of what he now calls fine craft with fine art. However, when compared to art, craft is often perceived as inferior in

status, either subject to its economic value (Greenhalgh 2002: 6), or subject to assertions of lack of intellectual activity assuming craft as an activity of making that is devoid of conceptual aims (Dormer 1997: 19). Thus it is often simply regarded as supplemental (Adamson 2007: 11). Equally, when compared to design, craft has to compete in terms of the use of technology, mass-production and related economic value, and possibly functionality.

One might ask then what the unique strength of craft is? As mentioned above, Risatti has summarised it as 'functionality combined with an ability to express human values' (2007: cover sleeve). This is affirmed by Margetts (1991: 8) who sees craft as a 'free radical spirit which at the moment gives the work and its makers their remarkable quality" as well as by Britton (1991: 15) for whom the 'value of the crafts exist in their refusal to be completely one thing or another' and in their ability for 'subtle subversions of our expectations'.

In this debate, two things come forth: the aspect of human values which may be related to the intimacy of the craft object that evades either art or design because the former is usually for visual consumption and the latter is anonymous through mass-production. Although crafts are often exhibited in art galleries these days and thus removed from touch, their real strength seems to rest in the intimacy of handling, and their multi-sensory appeal including the visual, sound, touch, smell and taste. The issue of intimacy is also of interest in relation to mass-production. With the advent of new technologies, mass-customisation is becoming increasingly available, potentially competing with the traditional domain in the crafts, the 'Unikat' (a unique piece, or small batch production up to the number of seven). Here the second aspect that has been revealed through the debate becomes important, which is the unique position of the crafts to experiment and subvert. Its ability to combine function and expression liberally (art, it seems, is by definition excluded from drawing on practical function whereas design has to obey to practical function to be viable) and to use them together to create subtle subversions of human values is what puts craft in a strong position (Britton 1991: 15, Niedderer 2005)

In summary, in order to be sustainable as a category of its own, we must assume that craft must be equal in status to the categories of art and design, but also distinct from both and that to do so it has to shake off the image of inferiority as well as maintain its integrity in the face of technological developments. In this regard, we have discussed two essential characteristics of the crafts: its intimacy and affinity to human values, and the ability to experiment and subvert. These characteristics help to define craft and distinguish it against its neighbouring categories art and design. They also help crafts to maintain their intrinsic value and develop as a discipline. How they can do so, and how they can not only maintain their integrity in the face of technological developments but also develop new avenues, is the focus of the further discussion.

Craft, New Technologies and New Avenues

In the light of its recent audit, the Crafts Council has declared that two of the important areas for the crafts to stay at the cutting edge of technical breakthroughs are innovation and information technology including digital technologies (Bewick and Greenlees 2009). The relationship with technology is important because it can be beneficial but also potentially problematic. On the one hand, craft has benefited from technical developments, including anything from purely technical improvements such as pendant drills to new technologies, which offer new creative opportunities such as

electroforming and rapid manufacturing. On the other the emergence of design with its mass-production capabilities has occupied some of the space that craft and craft production previously had occupied, thus potentially threatening its existence as a discipline or at least questioning its nature as discussed above. Taking up on the call of the Crafts Council, this section analyses how the characteristics of craft identified above, that is intimacy and affinity to human values, and the ability to experiment and subvert, can not only help maintain the integrity of the crafts in the face of technological developments but also to develop new avenues. For this purpose, I first discuss the problematic of technological developments for the crafts before turning to its benefits and opportunities for progress.

Traditionally, the problematic of technology for the crafts is seen to hark back to the industrial revolution where design and industrial production replaced traditional craft manufacture. This replacement happened on several levels. The efficient process of industrial production resulting in lower economic costs was only one of them. Others were the quality of the goods produced, including perfect regularity of industrially produced goods, and 'optimised functionality'. Functionality refers here to the practical aspect of function in the sense of Ligo, such as a jug pouring well or a cup handling well (Ligo 1984: 21-75; Niedderer 2007: 9). Because of design's connection with industrial production, the use of technology in the context of craft traditionally raises questions about authenticity and integrity. These concerns are on the one hand related to the creation and on the other to the identity of the craft object.

The issue of integrity in the crafts concerns the relation between material use, choice and application of process, the function and aesthetic of the object, and also its concept. In the development of a craft object, these five parameters will be developed in interdependence with each other in order to achieve an appropriate use of materials and process in relation to the final form and concept of the object. A good example seems Chris Knight's 'Corked Flask' (Illustration 1) where function and aesthetic come together, supported by the choice of materials (silver and corks) to convey the concept, which subverts our expectations of what a flask is like, and at the same time invokes humorous reflections of social drinking habits and rituals.

Ill. 1: Chris Knight. 1994. Corked Flask. Photograph courtesy to Chris Knight.

In design, with its split between designing and manufacturing, this relation seems to a lesser or greater extent disrupted, potentially resulting in a loss of this integrity. The fear concerning craft is therefore that this integrity might be lost through the use of technology. However, there are of course also many (usually high-end) designs that do show this integrity, and this is expressed by talking of such objects as well-crafted even though they may be machine-made. Therefore the use of technology in itself cannot be seen to be a threat to integrity although it may have some impact.

To investigate this matter further, it seems that the judgment needed for creating the relation between material, process, function, aesthetic and concept, or short for achieving integrity, is based in skill that is the integration of theoretical and manual knowledge necessary to assess and realise all parts of this relation. This understanding of skill is quite different to an understanding of skill as merely technical perfection in that it combines mental and manual intelligence (Adamson 2007: 72). This kind of skill is developed and honed through experimentation with any of the five parameters: material, process, function, aesthetic and concept. A new technology in this sense constitutes a challenge to experiment with, which offers new opportunities. This view is indeed not new. It has been expressed by other craft people before (Adamson 2007: 81), and is realised by an increasing number of contemporary craft practitioners. Nevertheless, it is important to re-iterate this here to understand why and how the use of technology can be useful to the developments of the crafts in relation to the second issue at hand, that of authenticity.

Authenticity in relation to art and craft is often used as the opposite to imitation or (false) copy. While this may be implied, in the context of this discussion, authenticity refers to the uniqueness that owes to the manual or semi-manual production of craft and that embodies something of the personality of the maker. For example, Michael Rowe's series 'Condition for Ornament' is a strong example, where each piece conveys something of the makers mind (Margetts 1992).

To clarify, this authenticity has nothing to do with mark making and signature, either in the sense of art where the signature is used to claim authorship, or in the sense of the mark of the hand since a skilled maker might erase any marks from a piece that would distract from the concept of a piece. Instead, authenticity develops from the idea of integrity, i.e. the relationship of the five parameters of material, process, function, aesthetic and concept. In the undivided process of conceiving and making an object a great deal of care is needed to complete a piece of wok. Through this care, which is put into a craft object to achieve its integrity, we encounter something of the maker and of his or her human values, which also creates some kind of intimacy. I want to recount some personal experiences here: on three occasions in my life, I saw work by crafts people who I had not met before. The works seemed to communicate the values and personality of their makers so strongly that once I met the actual makers some time later it felt like meeting old friends. This intimacy is increased through the multi-sensual nature of many of the works, especially their tactility, with its relation to the hand and body.

I assert that it is this intimacy that creates the authenticity of any work of craft, and that it is difficult if not impossible to achieve this intimacy in a wholly mass-produced object. This intimacy rests partly in the uncompromising dedication to integrity, and partly in the ability to refine the work on physical as well as conceptual level through experimentation within and through the process. This does not exclude the use of technology, especially new technologies such as laser welding, rapid prototyping or rapid manufacturing, and is not necessarily tied to the manual production of craft pieces. Rather it is tied to the ability to experiment and explore human values to achieve the integrity and authenticity characteristic for the crafts.

New technologies are very interesting in this regard for two reasons. Firstly, they offer new technical possibilities, which require different/new ways of working. They challenge the relationship between material, process, function, and aesthetic, and thus require rethinking integrity in relation to the new process/technology. For example, laser welding, which is still manually operated and thus functions more like a traditional tool, offers a very precise means of bonding surfaces whereby metal is melted and bonded at the point of contact of the laser beam. Unlike soldering, in which a large area is heated, laser welding requires minimal heat application which allows the use of thin, flexible and hardened material. Because of its thinness, the joint cannot be butted flush as would be expected when soldering. Different ways of joining therefore have to be developed such as flanges, ridges, welding sheets flat together, or flat over edge in order to make the seams durable (cf. Colour Plate 1; Niedderer, Harrison, and Johns 2006; Niedderer 2009). These new ways of construction subsequently have to be integrated into the work to achieve integrity (cf. Colour Plate 2), and such new characteristics are sometimes introduced to older techniques in imitation of the new aesthetics. In this way, new avenues can be created through the use of new techniques or technologies. The notion of new avenues refers here to the internal development of craft through creating and making, guided by parameters of integrity and authenticity, rather than to external recognition of new avenues, which is usually retrospective through cultural, social or historical accounts.

The second reason why new technologies are of particular interest to the crafts is because of the possibility of mass-customisation. This is a possibility, which has been introduced with new technologies such as rapid prototyping, and more recently with rapid manufacturing, and which offers new ways of experimentation and refinement in developing unique work. This is interesting in several ways. Taking the example of rapid manufacturing, such as Direct Metal Laser Sintering (DMLS), which is an Additive Layering Manufacturing Process (ALM). In the DMLS process, layers of powdered metal are sintered by a directed laser beam, which makes it possible to create the final product without any intermediate steps, apart from cleaning up the final piece afterwards and giving it the desired surface finish. Here a large part of the actual production process is taken over by the machine, and the design is produced digitally. Nevertheless, the process requires a large amount of experimentation at the various stages, including the initial conceptualisation of the idea through drawing (by hand or digitally), the trials for production, as well as the finishing of the final product, in order to realise the work as well as achieve integrity. Not only does the process involve highly developed digital skills, which also may be seen as a set of craft skills, but also an intrinsic understanding of the tool and material to manipulate and produce the final piece. Once this is mastered, there is the possibility of using these skills to modify each piece of work to experiment, and explore the relationship of material and process, of function, aesthetics and concept.

Both, the experimentation with the physical process of production as well as the digital process of designing and redesigning the work thus offer exploring a work's integrity and authenticity. Furthermore, craft can play an important role in developing the technologies, e.g. for use with new materials and new applications, due to its experimental nature and in guided by its aspiration to integrity and authenticity. The use of technology in the crafts can thus offer new avenues both with regard to the conception (or the 'designing' and making) of individual works as well as developments in a broader sense that go beyond individual pieces of work.

Conclusion

In summary, I have argued that, under the pressures of technology, craft has developed and strengthened its identity. I have proposed integrity and authenticity as key characteristics of contemporary craft, which are based on its experimental nature and ability for subtle subversion as well as its affinity to human values and intimacy, and which help the crafts to develop new avenues and thus enhance its sustainability as an idea and discipline. In this scenario, the use of new technologies provides additional possibilities and opportunities in developing new avenues.

This discussion has further served to position craft in relation to the industrial forms of production intrinsic to design as well as to 'fine' art. The discussion has explained why and how craft can be seen as a category equal to art and design rather than as a subsidiary, while it has shown that there are also overlaps, e.g. in terms of integrity in craft and design objects. The relationship between the three categories may therefore be best described as a continuum, or perhaps a Venn diagram of three overlapping circles.

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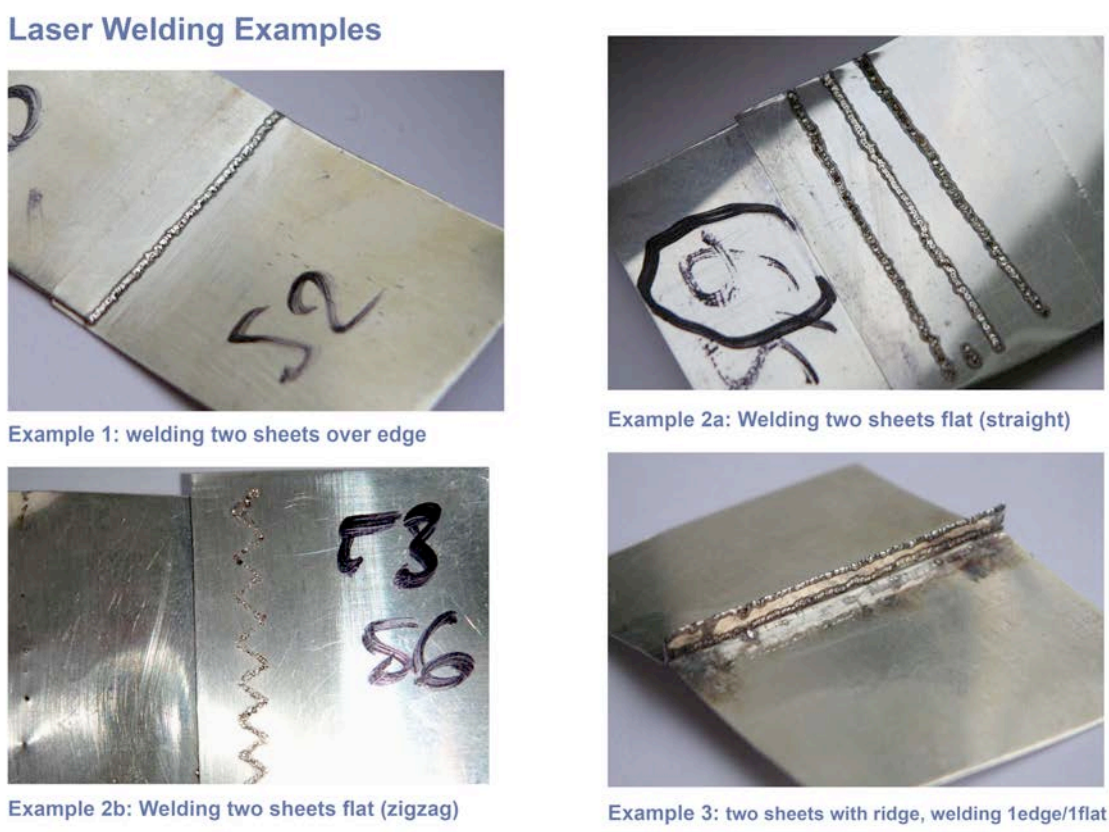
Colour Plate 1:



Photograph: Niedderer, K. 2008. Samples of laser welding with Argentium© silver.

Colour Plate 2

Exploring new ways of construction using Argentium silver and laser welding

The development of integrity in the craft process is demonstrated through the design of three sets of cups ('Duo', 'Trio1', and 'Trio2'). Like with paper-cut-outs, flanges provide space for the welding seams in 'Duo' and 'Trio 1'. At the same time, their extension provides the material for the handles. The thin hard material and straight shapes give the cups a technical feel, while the welding seams have the character of sewing or stitching. With the intertwining handles, the small cups convey a somewhat comic-strip-like character. The three different designs demonstrate the exploration and development of the formal aspects of designing with Argentium© and laser welding. While 'Duo' still has a traditionally inserted base, 'Trio 1' extends the idea of using flanges for both the functional purpose of joining the different parts and at the same time for creating decorative features. 'Trio 2' develops the decorative element further to provide a drinking lip.

Photograph: Niedderer, K. 2008. Exploring construction, expression and integrity. Laser welding with Argentium© silver.

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