Craft Connexity

Developing a Sustainable Model for Future Craft Education

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Abstract

"Craft is an anachronism – discuss …"

Some twenty-five years ago, on applying for a place at a college of art to study ceramics, Julian was asked to write an essay on the above topic. Naturally he was keen to impress so he responded to the question by declaring his enthusiasm for the craft of the potter. As far as he can remember, he expounded on the importance of striving for standards of fitness and beauty derived from tradition, quoting Bernard Leach. All his essay did was confirm his lack of contemporary knowledge and his anachronistic view of what ceramics could be. In the intervening years, critics of the crafts might well have responded to the question in the following terms …

Today's craft represents an unsustainable model of practice. Craft workers survive on poverty wages and indulge in unsafe working practices – often ecologically unsound, using potentially toxic materials and procedures, fundamentally inefficient, relying on extremely limited levels of output, unwilling to adopt new ways of working. Their designs are often lacking, using the excuse of a rustic aesthetic to justify poor levels of functionality. Modern craft workers are predominantly middle class individuals indulging in an expensive pastime producing vast amounts of unwanted objects d'art …

This paper attempts to address the potentially damning criticism of contemporary craft expressed in the previous paragraph. If this criticism were correct it would be hard to justify continuing to educate new craft makers. The recent decline in single subject specialist craft courses in the UK may be explained if the perception of contemporary craft matches the criticism above. The paper defines craft connexity in terms of a networking of socially engaged contemporary craft practice. The concept of "intelligent making" is examined. It will propose new models of craft practice, operating through sustainable environmentally sensitive working methods and materials. The model describes craft makers who are aesthetically aware, IT literate, sometimes acting as social critics and capable of developing new design concepts. The paper sets out the essential ingredients for a modern craft curriculum, which includes research skills, sustainable design practice, collaborative design practice, critical awareness, IT skills and business management.

The practice of craft has moved on since Julian's first attempt to respond to the question of whether or not craft is an anachronism. It is now time to re-examine and challenge the value of craft education. The authors propose a more sustainable model of craft education and practice.

Introduction

The traditional view of the craft maker is someone who is self-employed, running their own business responsible for the design, manufacture, sales and distribution of their work. In the 1970s and 1980s much of the teaching in Art and Design colleges was based on the implicit assumption that craft students would be setting up their own businesses to make work. How that work was to be sold was rarely explored as an issue. Very few courses included relevant training in running a business. The U.K. Craft Council published a recommended list of galleries in England and Scotland which specialised in contemporary applied arts. These galleries were presented as a model of how craft makers might successfully put their work in the public domain. However, for the vast majority of craft makers, even if their work was accepted by the galleries, this would not represent a sustainable source of income. At best they could expect to sell only a few pieces a year from such outlets. An insight into the number of professional craft people surviving from making alone can be judged from statistics quoted from Mike Press' paper 'A New Vision In The Making' (1997):

> "According to recent research, we have 25,000 makers in the U.K. of which just over half are full-time professionals. With less than half of these having actually studied art or design, our 700 craft courses have each produced seven full-time makers – that's not each year, that's in total" (Press 1997).

A research project undertaken at Sheffield Hallam University in 1998 reported the value of craft education, specifically patterns of employment among craft graduates in the U.K. (Press and Cusworth, 1998).

In 1976 the Craft Council published a report examining average incomes for craft makers in England. This showed that the majority of craft makers were earning substantially below the average earnings for that time period.

Over the intervening years there has been a growing disparity between the educational model with its emphasis on the self-reliant craft maker and the reality of changing economics, social values and the steady erosion of the value put on hand-crafted objects. This is reflected in a sharp decline of the number of single subject specialist craft courses offered by universities and art schools across the UK. In some cases, these courses have been re-named or combined with other craft areas to become more generic 3D craft/design courses. Statistical evidence on this is not readily available, however examples can be found in nearly every

HEI in the UK. As the educational model has diverged further and further from reality, young aspiring craft makers have become disillusioned with the concept of craft making as a sustainable career path. It is hardly surprising that a large number of single subject specialist courses have disappeared across the UK. The image of craft has taken some severe blows as levels of amateurism have grown. To many people, craft has become synonymous with the craft market mixture of hand-made objects sold on stalls on a Saturday afternoon.

This paper seeks to address the issue of why craft, despite its current lack of self-esteem, should be valued and how the new models of professional practice can be developed. As part of the paper, Professor Mike Press introduces the concept of connexity (Mulgan, 1997):

- growing connectedness is the most significant social and economic development of our age;
- 'connectedness' makes redundant most of the concepts of thought and action that have dominated our culture;
- 'connectedness' raises new moral and ethical issues and challenges.

Craft connexity is an acknowledgement that craft knowledge and learning:

- is connected with a whole range of activities that lie outwith conventional and traditional notions of 'craft practice';
- must be rethought and reconfigured in wholly new ways;
- has to embody a 'new politics of social-creative engagement'

A new networking, socially engaged logic must underlie contemporary craft practice, which acknowledges the 'Leachian/Pyeist' idea of craft as an individual striving for quality and workmanship, but places this in a connexive context.

Traditionally the definition of craft has revolved around the use of the hand. Only technologies which have been in existence for hundreds of years are allowed. We would argue that what is important about the craft-person's contribution to the making of an object is their creative input or intention, the realisation of a concept or set of ideas regardless of what technology has been used as part of the process to develop the work.

Aitken et al (1999) define craft as:

> "Where an 'object' has been created with the sole purpose of physically realising a visual, tactile and/or ornamental or functional quality, without external constraints being placed upon its conception, this object is likely to possess 'qualities' which are readily recognised and shared with 'craft' products."

Just as the potter's wheel brought about dramatic improvements in productivity largely superseding coiling as a way of making ceramic vessels, contemporary technologies may also be applied to craft making. Aitken et al (1999) put forward the view that the world wide web, together with computer aided design and manufacturing systems could provide a logical solution to both bottle necks in production of craft objects and to the problem of marketing craft by providing access to global markets.

The connected craft of pixel raiding

The Nature and Art of Workmanship by David Pye was first published in 1968. In a nutshell it argues why all that useless beauty that craft makers create is so vital to humanity, but it also gives us very useful concepts to understand what lies behind that useless beauty. Pye deliberately did not use the term 'craft', referring instead to 'workmanship'. 'Workmanship' and 'craftsmanship' are words that lie uneasily given their inappropriate gender bias. However, in the absence of better alternatives that are not inelegant, we will use them here.

Pye draws our attention to confusions in the definition of craft; does it mean handmade, he asks? No, he immediately answers as most things that craftmakers produce are produced with tools of some sort – not directly by hands. The few exceptions include basket weaving and slab building in ceramics. So he argues that whether things are made by hand is not really the point; rather, it is the type of workmanship, which we bring to any task, of which he argued there are two types.

The workmanship of certainty refers to the domain of industrial production and industrial design. It is about predictability. When designers at Richardson Knives in Sheffield design the kitchen knives we see above right, their concern is to design, prototype and test repeatedly until the product can be manufactured with 100% certainty.

The worksmanship of risk is a realm where individuals, not entire industrial systems, hold the key to success. When knifemaker Grace Horne is making her disc knives, shown above left, any momentary mistake on her part could ruin the

product. So, every new beginning, every new product is a risk. Pye's definition of 'craft' is not the extent to which an object is made by hand, but the extent to which it involves the workmanship of risk.

Peter Dormer introduces another way of differentiating craft from non-craft product, in his edited volume 'The Culture of Craft'. It is consistent with Pye, but extends the perspective somewhat. Dormer looks beyond workmanship to knowledge.

Dormer describes two types of knowledge – 'personal knowledge' and 'distributed knowledge'. His personal knowledge is much the same as tacit knowledge - it is highly individual – based on and arising from our experience. The student maker we see above left is in the process of acquiring that tacit knowledge – learning the feel of her chosen material and how it interacts with the tools she is using.

Distributed knowledge has two central ideas to it. First in our age today any single object requires many different knowledges to bring it into being. A person could probably learn how to assemble the computer shown above right, but to make one from scratch would require expertise in electronics, plastics technology, software design, materials science, etc. The list of specialist disciplines is almost endless. The second idea is that many products, like the computer, embody other people's knowledge. We don't need to learn typography, graphic design and photography to make a Powerpoint presentation, as the software embeds all this knowledge. What we do is to apply our tacit knowledge of how to use this tool to this piece of distributed knowledge, and hopefully produce something that engages an audience.

Craftmakers are (or should be) experts in two things: the workmanship of risk, and how to apply their tacit knowledge to tools, systems and opportunities created by distributed knowledge. Understanding the possibilities presented by

distributed knowledge requires a 'connexive' attitude, a technological opportunism that is furthered through networking, looking outwith the specialism and engaging in dialogue with specialists from other fields.

New Models of Craft Practice

It is important for new craft makers to adopt sustainable models of practice. The word 'sustainable' in this context includes cultural, economic and ecological sustainability. Paul Greenhalgh (2002) succinctly summarizes the two main approaches to economic sustainability open to the craft maker:

> "There are two ways to make money selling artefacts through exclusivity or quantity. The fine artist classically makes a living by selling a small number of handmade objects very expensively. The designer makes a living by creating templates for objects that go into mass-production."

If we accept this statement as broadly correct, craft makers can either make a few exquisite objects they sell for a considerable amount of money, or lots of repeatable objects produced in batch production sold for relatively small amounts of money. CAD/CAM technologies may provide opportunities for craft makers to focus on the former whilst being able to output work based on the latter strategy.

These technologies originated for rapid prototyping in the engineering field however they have now become part of mainstream manufacturing systems. As the technology becomes more accessible it is possible to envisage technology becoming more mainstream and being adopted at various levels by craft–makers (Woolner and Adams, 1995). If craft-makers are going to take advantage of possibilities offered by CAD/CAM technology, then craft courses will need to incorporate elements of CAD/CAM training into the curriculum. This is by no means straightforward. The current technology is not particularly user friendly and often requires a steep learning curve on behalf of the user. The introduction of CAD/CAM techniques into the craft curriculum would require to be done incrementally. Some crafts lend themselves much more directly to the use of CAD/CAM techniques such as jewellery, which can make use of desktop CNC milling machines and layered object manufacturing systems, laser cutting etc. Textiles can make use of digital fabric printers which allow images to be manipulated in Photoshop and output directly onto a variety of fabrics, CNC knitting machines can produce complex garments and CNC embroidery machines can also extend the opportunities for applied decoration. In other crafts the application of CAD may be more indirect, for example in ceramics, CNC milling machines may be used to cut extrusion plates or components for moulds. All of these methods can expand the output of craft-makers and offer a wide range of opportunities from one-off to batch production, and in some cases commissioning third-party manufacturers to undertake volume production.

Craft-makers have long been associated with a concern for issues affecting the environment. In the 1970s and 1980s many craft-makers were happy to adopt an image based on the rural idyll, craft was environmentally friendly and demonstrated that consumers of craft were adopting a healthy lifestyle, eating muesli from oatmeal glazed bowls etc. However, appearances can be deceptive and some studio practices have involved the use of toxic materials and processes, a lack of understanding of the consequences of using certain materials such as lead in glazes or petro-chemical compounds for screen printing and has in the past led to the release of unacceptable levels of pollution, albeit on a local scale. The relatively small-scale production means that these processes often fall outwith normal environmental protection legislation, which would outlaw certain procedures. Having said this, the Environmental Protection Act 1990 did raise the awareness of a lot of craft-makers to issues and alternative materials and have been actively explored by a number of makers, to include water-based printing and transfer technologies, lead-free glazes and environmentally sensitive methods for firing ceramics.

Salt firing kiln in action (left before salting begins, right during salting)
The clouds of vapour contain hydrogen chloride

The development of practice based PhDs over the last 10 years has very much assisted this process and researchers such as Malins, J. (1993), Pengelly, J. (1997), Bunnell, K. (1998) and Petrie, K. (1999) provide examples of how formal programmes of research have been addressing some of these issues. The value of formal research to the crafts is a key element in craft's future survival on two levels: research which is concerned with establishing the true economic value of crafts to society such as that carried out for the Crafts Council (Press and Cusworth, 1998) and research which is tackling specific issues to do with making. This may be looking at elements of sustainability or new techniques for making objects by updating old technologies or integrating new ones. The development of new research methodologies, which is also a key element present in a number of PhDs completed over the last 10 years in art and design, will also have an important impact on curriculum design for craft makers. The value of research in learning to be a new craft maker is an essential skill which allows craft makers to be adaptable to change.

Crafting the Future

The dilemma of craft educators when designing any new curriculum is to decide what to leave out. After all, to be an accomplished craft-maker requires above all practice and dedication to a particular skill. This is a time consuming process and if time is to be found for other activities such as business management skills, new IT skills and research skills, something may have to give. Learning and making crafts has been described as a form of intelligent making (in: Press, 1997) and reflection through action. The model of the intelligent maker is expanded in New Lives in the Making (Press and Cusworth, 1998):

> "We can identify a model of intelligent making that is reflective, integrative and interactive. It utilises a range of skills – technical/manipulative, theoretical, creative, judgmental and analytical. In representing the skilful achievement of relevance, intelligent making applies and creates different forms of knowledge, both tacit and propositional."

It is essential that craft making remains at the heart of a craft course. In order to develop a graduate with the ability to move between occupations and to respond to a fast-changing culture, it is necessary to develop some equally fundamental research skills. Many would argue that this has always been the case, equating practice with research per se. We would argue that specific research skills need to be taught which involve the ability to raise a research question, formulate a strategy for answering the question and developing analytical skills so that clear conclusions can be reached. If we accept the model of the intelligent maker described above, this includes core skills which are required to undertake research. All the attributes of the intelligent maker are also required by the active researcher.

So what would a modern craft curriculum contain and how would it be taught? Learning about making is an experiential process, therefore project-based teaching and learning to work collaboratively with others is an essential element in any craft course. Also the development of fundamental research skills and IT skills which go beyond the basic word processing to encompass CAD/CAM and web design would also need to be included.

Students also require contextual knowledge in order to position themselves relative to other practitioners and to understand the culture that they are part of, for example understanding the difference between a fine art model of contemporary practice and a design model can lead to the practitioner making informed choices about the way they practice.

The new craft maker is aesthetically aware, IT literate, possibly a social critic (as in the case of Grayson Perry, 2004 Turner Prize winner), or in some cases developing new design concepts which may find their way into mass production.

An interesting finding from the Press and Cusworth report (1998) shows a clear trend in craft graduates taking managerial roles within companies. This being the case, the new curriculum should reflect this by promoting managerial skills. This could be done by developing group projects with students, involving external clients. Students would take on various managerial roles within the projects to gain some experience in this role. Group projects develop skills such as time management, multi-tasking and a range of other key skills.

Since the Dearing Report (1997) there has been a move to introduce Personal Development Planning (PDP) into the curriculum through the introduction of 'Guidelines for HE Progress Files' (QAA, 2001). The PDP component is intended to provide structured processes to support students actively reflecting on, and evaluating, their own learning and progress; and to plan for their personal, educational and career development. Its intention is to foster independent and lifelong learners who have an understanding of how they are learning and who have the transferable skills required for continuing professional development.

Whilst there are guidelines, it is up to each individual HEI to implement the PDP processes according to their needs and in whatever form they consider appropriate, whether paper-based, on-line, face-to-face or a mix of these. However, these processes should be integral to teaching and learning, support should be provided and learning should be viewed holistically.

> "Introducing reflection into learning can be more problematic than would first appear. It is all too easy to introduce reflective processes which actually encourage a surface approach to learning and reflection. Boud & Walker (1998) propose that these processes require direction and need to be situated within the context of study. What is needed are reflective processes that are engaging, fit with the context of learning, and give real benefit to the student" (McKillop, 2004)

The PDP process encourages a reflective approach to learning and at the same time should address the students' future aspirations. The development of a portfolio of skills and competencies is an important part of the PDP and as it becomes more common for students to face multiple changes of job the portfolio takes on added levels of importance. The development of a portable, life-long learning document which reflects the concept of multiple employers is a concept which is increasingly being adopted (Ure et al, 2001). The ability also to return to universities at different times for the purpose of topping-up skills is becoming a much more common practice.

Future models of practice are increasingly going to depend on collaborative working strategies. Craft education often promotes a sense of isolated, individualised learning and practice that lies uneasily at odds with the nature of the world around it. The isolated craft maker often working in a rural context is

not only economically unsustainable but socially unsustainable as well. Prisoners have traditionally been punished by solitary confinement; it seems a harsh way to deal with aspiring craft-makers to confine them to long periods of solitary working in remote, isolated workshops. However, this is exactly what many traditional craft courses appear to set out to achieve. Collaborative forms of practice recognise the value of involving a number of individuals all contributing their own specialist skills in order to develop finished work. This strategy of craft-making is not one which is traditionally taught in schools of art in universities where the emphasis is on individual practice. Developing collaborative ways of working does not come naturally to many, it requires practice and often facilitation by others. These facilitators have yet to emerge but we predict that as with new forms of contemporary practice in fine art, which have seen the emergence of cultural intermediaries, craft practice will also require similar intermediaries to facilitate new collaborative strategies. Again, technology has an important role to play in this by providing web-based tools designed to support collaborative practice. It also requires imaginative strategies for assessment; the greater use of peer assessment and assessing portfolios of work are examples of such strategies which can help support collaborative learning.

Example of a potter's studio in a rural setting (left exterior, right interior)

So, our new curriculum now includes research skills, creative problem solving, visual thinking, collaborative practice, business and management skills, critical thinking and contextual understanding. We are also including personal development planning and strategies for career development. Teaching is based on both individual and group project-based learning, self-evaluation and peer assessment. Learning is experiential and teaching is based on a constructivist approach. Students are encouraged to develop new models of sustainable practice whilst having an awareness of the ecological and social impact of the work that they produce. To many this may appear to be a utopian view of craft practice. We would argue, however, that the romantic view of the craft-maker needs to give way to a more realistic and sustainable model of craft practice.

Conclusion

If craft education is to survive it is essential that it adopts new forms of educational practice and new topics are introduced to the curriculum. The emphasis on developing hand skills which take years of practice to develop needs to give way to skills which allow for future sustainable practice. These skills are based on an understanding and the ability to apply research methods, creative problem solving and visual thinking, the ability to develop a portfolio of transferable skills and competencies and to be able to evidence these to others. New craft-makers require high levels of IT skills to enable them to take advantage of advances in CAD/CAM and web technologies. Educators need to be willing to overcome craft dogma, to avoid being trapped by a false reverence for tradition. In addition they need to develop their own areas of new research conducted within formal frameworks, the outcomes of which can be used to re-vitalise the crafts in order to ensure their survival into the future.

> "Craft education as we know it is finished, but there are areas of excellence which should be recognised and supported" (Press, 1997)

References

Aitken, P., Bunnell, K. and Pirie, I. (1999) Taking Crafts into the Millennium: The Integration of New Media Technology in Craft Practice: Centre for Research in Art and Design, 1999

Aitken, P., Malins, J. and Pirie, I. (2000) The Global Gallery – from Studio to Cyberspace: Consuming Craft International Conference, Buckinghamshire Chilterns University College, May 2000

Boud, D. & Walker, D. (1998) Promoting reflection in professional courses: The challenge of context. Studies in Higher Education. 23(2), 191-206

Dearing Report (July 1997)

Dormer, P. (1997) The Culture of Craft, Manchester: Manchester University Press

Greenhalgh, P. (2002) The Persistence of Craft

Mulgan, G. (1998) Connexity: How to Live in a Connected World, Jonathan Cape

McKillop, C. (2004) 'Stories About... Assessment': supporting reflection in art and design higher education through on-line storytelling. In Proceedings of Narrative and Interactive Learning Environments. NILE 2004 Conference, 10-13th August, Edinburgh, Scotland

Press, M. A New Vision in the Making, in 'Crafts' July/Aug 1997

Press, M. and Cusworth, A. New Lives in the Making, Sheffield Hallam University Learning Through Making Research Programme, April 1998

Pye, D. (1968) the Nature and Art of Workmanship

QAA. (2001). *Quality Assurance Agency: Guidelines for HE Progress Files*. Retrieved April, 2004, from http://www.qaa.ac.uk/crntwork/progfileHE/contents.htm

Ure, J., Malins, J. and Juwah, C. (2001) A Portable Document for Lifelong Learning: Piloting a Web-Based PDP Tool for the Academic and Professional Design Community in: Personal Development Planning in Practice: A Series of Case Studies. C. Juwah, L. Stefani, J. Westwood, C. Gray and J. Drysdale, PDP in HE Scotland Network.
ISBN 1901 085 627

Woolner, M. and Adams, B. (1995) 'The Application of Computer Technology in Designer Maker Practice' Crafts Council

Bunnell, K. (1998) PhD Thesis: The Robert Gordon University: The Integration of New Technology into Ceramic Designer-Maker Practice

Malins, J. (1993) PhD Thesis: The Robert Gordon University: The Monitoring and Control of Specialist Ceramic Kiln Atmospheres and Emissions

Pengelly, J. (1996) PhD Thesis: The Robert Gordon University: Environmentally Sensitive Printmaking – a Framework of Safe Practice

Petrie, K. (1999) PhD Thesis: The University of the West of England: Water based Ceramic Transfer Printing - The Development and Creative Use of a New On-glaze Screenprinting System