DESIGN AND CRAFT – A CHANGING RELATIONSHIP AT THE HEART OF DESIGN EDUCATION

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ABSTRACT:

This paper draws on recent developments in pedagogic innovation for design education at the University of Brighton, UK. With a focus on the merger of the two previously distinct discipline areas of Design and Craft, it explores how curriculum strategies evolved as part of a broader analysis of transformations taking place around the design educational landscape and specifically, within industry. Extending beyond the context of local discipline-specific identities and the opportunities identified for pedagogic innovation, models for curriculum structure were developed which could be articulated across and ultimately shared between design and craft teaching, learning and research. This paper will consider this work, but also the other side of the spectrum, which is to synchronise the ambitions of design education with emerging developments in other disciplines (both creative and scientific) and the creative industries.

1. CONTEXT: DESIGN AND CRAFT

Underpinning the pedagogic developments in the design education is the awareness that contemporary design evolves from the intersection of different disciplines and technologies. Indeed, current definitions of the relationship between design, craft and industry denote synthesis as key characteristic (Lyon, Woodham 2009).

The disciplines themselves have changed significantly thanks to this symbiosis, and their underlying methodologies and values are now increasingly adopted by the part of the design world that deals mainly with industrial production. This conjunction offers the opportunity to create

hitherto unseen combinations of materials, techniques and technologies supporting product innovation, regeneration of urban or rural environments, and sustainable development. The transition from analogue technology and means of communication to the seemingly endless autonomy of the digital domain causes fundamental changes in both the influence design has as well as how its role is interpreted in society. There is an opportunity to re-design and re-think design process(es), but also to devise educational models capable of keeping up and pro-actively engaging with industry, where outdated systems of production chains are being replaced by new sequences and rules. This paper argues that one of the most interesting and important tasks of contemporary art and design education is to explain and re-define the range and limits of the blurred discipline fields around design and craft in the context of social priorities and changing industrial landscapes.

On the main axis of the intersection of different disciplines lies a territory where design and craft overlap. The identities of designer, artist and artisan are continuing to become increasingly fluid; the same goes for industrial, digital and craft techniques and methods that now form a symbiosis. The transformation of practices which becomes evident in the accompanying rhetoric and object narratives reflects changes in value systems, which relate to contemporary patterns of consumption, but also changes in the processes of designing and making objects.

In order to better understand the invisible connections across the timeline of approaches and methodologies of design and craft, it would be useful to approach the concept of the new and the old through a lens of cultural anthropology to be able to see and understand design actions and resulting objects as situated - embedded in society and culture (Ramshaw, Jackson, Moor, Kermik 2006). New has the potential to liberate design of everything old, including stereotypes from past decades, but through situated analysis and articulation it can also help us to understand the value and impact of particular circumstances and rules which inform the underlying principles of design decisions.

In the current age of technology, and framed with values of the contemporary society – the designer has to figure out how to approach the

conflict between continuity of traditions, technological advances and innovation and harness their combined energy for future generations. Perceived qualities of the machine-made have changed. The value systems promoted by the design profession and industry show preferences shifting from the ideal of Platonic perfection to the principle of uncertainty: 'The narrow channelling of the arts of design and architecture has broken out into pluralist flood' (Johnson, 1994).

Carried by digitally enabled technologies and a new set of problems with global existential dimension now drive new values through the expressions of narrative and tradition with an underlying aspiration to make design processes and thinking transparent. Much of the shift (in design thinking) results from the creative energy accompanying territorial re-positioning between design, craft and industry, which started to gather momentum in mid-1990s from within the shared middle-ground fertility of the hybrid relationship between design and craft. Designers representing this shift include Hella Jongerius, Jurgen Bey and Campana brothers. Craft, both in terms of the ground it covers and the depth of its timeline, is increasingly identified by designers as a depository and reliable carrier of information, techniques, values and meaning. Designers operating from this middle ground demonstrate that craft is not merely an elitist and alienated alternative to industrial production but can successfully contribute to reciprocal up-dating of emerging forms of design practice.

This transformation of practices through a fusion of processes and methods associated with the industrial, digital and the handmade is an inherent part of changes in the value systems that engage with environmental concerns, the habits of consumption and the way objects and artefacts are made and produced. There is a challenge for the design education to engage with the process of change and to make its existing disciplinary structures compatible with real world transformations.

2. OUTSIDE VIEW – INDUSTRY AND CHANGING DESIGN PRACTICES

The design process in general, but also the role of design education needs re-thinking in order to keep pace with manufacturing, where out-dated

principles and conventional production chains are being superseded by new rules and technological-geographical possibilities. Design analysts claim that as a result of designers' engagement with organisational structures, social problems, interaction, service, and experience design which involve complex social and political issues, 'designers have become applied behavioural scientists, but they are woefully undereducated for the task' (Norman 2010).

Transition from the analogue technologies to the unprecedented flexibility of digital domains is causing profound changes in the way we approach design and engage with the processes of design and production. Industry is going through its own pace of transformation and previously visible edges and protocols of engagement with the design community now represent a multitude of entry and output points. Design as an activity now represents a portion of the industry, which deals directly with production. This appropriation is taking place thanks to new technologies and modes of practice, which enable events and stages from the design process to feed directly into production (e.g. digital customisation and rapid manufacturing). Production systems in an industrial scale have passed the 'age of the factory' with changing perception of what a factory is, 'what it does, and who's inside' (Woodcock 2012)? For example, the Local Motors Labs, US start-up with 16000 strong community of co-creators, provides a platform to empower individuals and companies to work together to design, develop, build and modify new cars. Significantly, the bigger scenario emerging from this model of personal fabrication and co-creation is the future were products are 'tailored to specific uses, as directed by a community, and then built by that community, in that community' (Woodcock 2012).

The magnitude of change is primarily attributed to the arrival of rapid manufacturing technology, which is claimed to 'create the hinge point for a second industrial revolution' (Hollington 2007). The comparative evaluation of the two revolutions (first and second, regardless of their running order) with a focus on their impact on design opportunities, reveals universal strengths and freedom of design thinking in spotting and utilising new production cycle scenarios as well as new types of products, including limited editions and small production runs. We could take a look, for instance, at the successes and products of small design-led companies (Breuer – *Standard*

Möbel and *Isokon*; Aalto - *Artek*) that emerged in the 1920s and 30s and were active in the field of product innovation. They managed to use subcontracted industrial know-how very successfully in the then-progressive process of developing designs with new materials (Kermik 2004). This kind of product and design development model distinguishes innovation and progressive, more open design processes from the clumsy and predictable planning cycles of big industries. Interestingly, it shares many features with the concept of 'personal fabrication' based on digital technologies developed in the MIT FabLab (Gershenfeld 2005).

I would argue that the industrial design methods and the ideas related to product development and production, as interpreted by Modernism, have not been completely understood yet. For example, the possibilities offered by standardization and the ability opened up by digital technologies to revisit the connection between an element and a system have brought us to a new phase in the development of new materials and products. The real-time relations between a component part and a whole, a design process and a production cycle, have been made visible (and scriptable) in the digital domain. Old rules of the machine age should not be abandoned immediately because they can still function as very useful indicators in the appreciation of new meanings and in the qualitative comparison of the new products to old ones.

At the same time, in parallel to increasingly independent and digitally accelerated design and production processes, interest in the archaeology of industrial production examined through the overlaid lenses of design and craft brings the uncertainty of the hand-made, that Johnson referred to, even closer to the foreground. The opportunity to explore materials and to (re)discover their potential through traditions of making is now revealing the capability to evolve into interwoven clusters of hybrid disciplines of cultural anthropology, amalgamations of high and low technologies and ecologies of human well-being. Examples of processes and methodologies in design innovation include searches for objects capable of attaining an emotional value beyond utility, attempts to reverse rural craft processes made obsolete by the industrial systems. The machine-made, brought to life through a completely new level of the mind in engagement with technologies of

visualization, scripts and production, as part of the other side of this paradox, is now closer to the hand than a craft technique.

The products themselves, can be seen as examples of ideas and technologies inherent to our age and demonstrate that the culture of industry does not develop hermetically but adapts itself according to the surrounding environment. Responsiveness to particular cultural and technological conditions as well as contemporary social values is also key for the survival of sustainable design practice and production: 'an industry which is parasitic with respect to the intellectual, creative, and experimental forces of the society in which it exists, is already moribund' (Zorzi 1987). Will design and craft jointly have a solution to the reconciliation of the flow of ever improving product performance indicators and new forms of entrepreneurialism with the stability and the continuity of longer-term sustainable commitments?

3. INSIDE VIEW – DESIGN EDUCATION AND DISCIPLINE BOUNDARIES

How does design education respond to new opportunities and challenges of complex social, political and technological issues? How does it bridge the gap between the cognitive style of learning ringfenced in traditional design disciplines and more universal theories of design to capitalise on innovation in design as an interdisciplinary organisational resource? Design schools do not train students about these complex issues, about the interlocking complexities of human and social behaviour, about the behavioural sciences, technology, and business (Norman 2010). Prevailing educational models of rigid discipline frameworks with prescribed professional pathways are unsuitable to keep up with demands and complexities of the industry and limited capacity to contribute to the advancement of design theory and thinking (Kimbell 2011). There is a general agreement in design education to start addressing design challenges more comprehensively and work across disciplines: 'Students are beginning to move from solo self-expression to teamwork with emphasis on business knowledge, ethnography, technology and environmental science' (Peterson, Curedale 2012).

Parallel to this is the acknowledgement that the essential set of foundational skills in design needs to build on communication (both written, visual and oral), articulation of ideas and reasoning, 'including languages and storytelling. Innovation will increasingly become the most important driver requiring integration of design in the business process, from business model exploration to innovation management. Design thinking will be the enabler and will be combined with open innovation and crowdsourcing, and applied co-design as well as co-creation' (Peterson, Curedale 2012).

4. UNIVERSITY OF BRIGHTON (UOB) DESIGN & CRAFT: THEORY AND POSITION

Recent changes in the Design and Craft Programme (UoB), UK, aim to provide that kind of environment. As part of the decisive move beyond the disciplinary base, the emphasis is put on the balance of theory and practice. In order to develop compatibility and to benefit from truly interdisciplinary culture of exchange and optionality, its outward-looking curriculum promotes visibility and transparency to build a universal resource of articulated methods and processes.

At the Faculty of Arts (UoB), the tradition of designing and making goes back to 1859. Today design and craft have been brought together under one roof and they share a creative environment along with architecture, interior architecture, fashion, textiles, graphic design, digital music, performing arts and photography (Lyon, Woodham 2009). For the past 40 years, UoB's curriculum of craft was organized on the basis of material areas (wood, metal, ceramic, plastic). Design is relatively late addition to the curriculum and for about ten years it was taught as a separate discipline. In 2010, following a radical review and re-think of the curriculum and its relevance to REAL world, new merged Academic Programme of Design and Craft was established. The author of this paper became the head of studies in 2008, bringing about the unification of craft and design in joint curriculum.

The radical proposition of unifying and using the energy that design and craft embrace as disciplines both individually and in tandem raised debates around discipline boundaries and the compatibility of respective strategies for

teaching and learning. One of the focal issues of the debates surrounding the different rhetorical and philosophical positions of the two disciplines was terminological-linguistic: during the 1960s and 80s, *craft* became to be seen as elitist or something of low-value in the periphery of amateur-hobby culture – it had a negative connotation. Equally, the term *applied arts* was seen as non-identity because there was no longer a visible connection with industry. The past inability to find a conceptually positive programme that would rehabilitate the word and respond to developments in design and creative industries was gradually overcome in the last decade as evidenced by the international visibility of new generations of designer-makers with a mission and interest in industrial archaeology traditions of materials craft processes. Recent graduates from Design and Craft have been successful in contributing to the international discourse through invited residencies at the V&A and London Design Museum (Fig. 1).

Figure 1: Trimble (2012) Mouse trap.
Trimble explores themes of economy and resourcefulness in an object. Inspired by once thriving ceramics industry, he draws from the unused resources of Thames river clay to form a range of products to revive the history of ceramics in the area surrounding the Design Museum.

The central problem for Design and Craft programme is how to synthesize and modernize its curriculum so as to help the new generation of designer-

makers to define its own field of specialisms, creative profiles validated through methodologies and models of creative practice compatible with contemporary industry and responsive to the needs of society as a whole.

The most important task is to define the ground and open up previously blurred fields of specialist practice in the context of social priorities. Cross-disciplinary open learning environment will provide such a space to access and build on their respective strengths. This would also help define the position and the meaning of objects in relation to a current international debate in design and craft concerned with the future of making; from a perspective of creative dialectical relationships and encounters between different 'generations' of attitudes towards traditions, technologies, the meaning and the value of objects.

The main aim of the Design and Craft curriculum at Brighton is to create a model that would make it possible to (re)discover partly lost and invisible ties with the past, and offer a variety of professional scenarios for the future. For that we create transparency in pedagogical methods and synthesize discipline-specific processes and techniques. In order to promote critical discourse and debate between these two disciplines, it is important to compare their identities and to articulate their differences and their diversity.

Figure 2: Jones (2010) Flat Pack Rearranged (award-winner of the Tallinn International Applied Art Biennale) explores the limits of the ready-made and re-assembly.

Figure 3: Kim (2011) Milky Chair, experimental material/process using rice, milk and vinegar. Material innovation and application is an inherent part of Design and Craft studies.

Figure 4: Bitelli (2011) Rope Chair (rope impregnated with beeswax) synthesises ancient agricultural and current technologies of composites.

The joint curriculum of Design and Craft wishes to introduce students to a wider range of creative processes and methods and to turn them into 'thinking' designers and craft practitioners who would be able to make informed decisions. The programme gives them a chance to experiment with different materials and techniques, taking into account the traditions and intuitive use of material that is so common for the craft field, but also leaning on project briefs, development criteria and systematic methods that are normally associated with the field of design (Fig. 2, 3, 4). Instead of

moving along previously set paths and using professional stereotypes (‘here we do it this way – or the other’, depending on whether the professor is a designer or craft artist) the students get a more varied experience, an education that brings together studios and workshops, ideas and materials.

5. RESEARCH EMBEDDED IN THE CURRICULUM

Professional Practice, as a key-component of the pedagogic structure of the programme, is integrated into projects to enable the students to shape their professional profile and creative identity. This is underpinned by Research and Communication unit, a ‘theoretical machine’ where students debate the causal relationship between ideas, objects and systems and try to find answers to the ‘why’ and ‘how’ questions. Additionally, research projects run by the programme team as well as contacts with scientific and industrial partners provide opportunities to enrich the curriculum with live projects where the students can participate.

Research and the articulation of design thinking exercised through the practice of Design Synthesis aims to move progressively from internal and personal (hidden) to collaborative and externalized (articulated and visible) process: ‘There likely is not one single ‘design thinking’ toolkit … In general, we need to know much more also about the skills and know-how that designers apply to their challenges and which ones can and cannot be transposed into different domains’ (Hobday, Boddington, Grantham 2012).

The emphasis in the research-based curriculum development is placed on finding relationships and patterns between elements, such as images, spaces, objects, humans, and introducing or intervening upon those conditions (to identify a particular kind of knowledge practice that can be shared across design fields).

These are the keys for relating research to design – synthesis methods are the ways in which validated process and ethnographic insights lead to innovative, relevant and compelling ideas. Through ongoing enquiry, recording-archiving and formalized articulation of core processes of insight development, Design and Craft aims to develop an understanding of

principles and methods which are teachable, comprehendible and repeatable as 'creative activities that actively generate intellectual value, and they are unique to the discipline of design' (Kolko 2010). Driven by research and complemented by the engagement with external partners, the curriculum supports a distinctive and personalised student experience.

6. PEDAGOGIC INNOVATION: POST-DISCIPLINARY CURRICULUM

Whilst being informed by existing discipline identities, and drawing from their subject knowledge, Design and Craft shifts its educational focus to a post-disciplinary culture of design thinking. Design and designers are working in challenging new contexts, therefore the critical discourse, at the core of the programme, engages with scenarios of locating, articulating, and visioning the place of professional design in the world. Design and Craft draws its theoretical baseline above and beyond traditional discipline boundaries with situated learning as a pre-condition to the development of future design practice(s). Rather than viewing design thinking as a disembodied and a historical cognitive style, (Kimbell, 2011), Design and Craft aims to define its position, remit and scope by developing a framework in which knowledge and skills development is embedded in an embodied understanding of practice.

Central to the strategy of extending sites of design expertise and activity from the discipline base to the wider and open-ended range of thematic specializations including well-being, healthcare, manufacturing-marketing etc., is the way of closing the gap between traditional design disciplines grounded in cognitive methodologies and new evolving models of post-disciplinary design thinking (Kimbell 2011).

Pedagogically, the distinguishing element of the new programme, is to provide a dynamic and questioning environment that will build on the distinctive and integrative strengths of design education to develop new formations of knowledge and ways of learning and researching. Commitment to learning is communicated as a shared collaborative process that includes both students and staff. Design and Craft aims to equip students with the creative and intellectual independence to explore their chosen pathways and the interrelationships with other fields of knowledge within and beyond the

creative arts. Studio projects will explore models for design development and bring together existing and new forms of visual, haptic, visceral and cerebral knowledge and technologies drawn from an extended range of disciplinary expertise and experience across the university and externally.

7. CONCLUSION

In relation to industry and production, craft and design are making progress in the positive re-evaluation of their respective strengths and common priorities. Awareness of material histories and technique-based expertise continue to be prioritised but these are increasingly re-focused towards design process development and innovation driven and guided by relevance, judgement and social responsibility. In a changing world, design and craft take on meaning as an important carrier of tradition and understanding of the communicative aspect of inter-cultural exchanges between East and West beyond divisions based on cross-regional production costs and efficiencies.

As key players in contributing to the widening discourse around contemporary design education, design and craft have a special role and responsibility to carry on traditions and articulate their meaning and value in future scenarios for human well-being, the use of advanced technologies and sustainable resources. Not only is this partnership important as a source of knowledge and inspiration, but also in visioning the meaningful, relevant and future-proof design education, where the pedagogical balance lies in the accessibility of discipline-based expertise, shared in the environment of post-disciplinary openness rather than in the notion of professional education through a conventional (one-model-fits-all) single prescribed route.

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