

DESIGNING THE NEXT GENERATION OF DESIGNERS

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ABSTRACT

This paper proposes that a new emerging generation of designers – “polymath interpolators” - is needed to tackle the fresh challenges facing the design profession. These challenges are many and complex but they include 3 key issues – (1) changes within the design profession itself [discipline blurring], (2) changing economic factors within a global marketplace [employment and economic shifts], and (3) emerging rapid technological developments [most notably in information and computing technologies]. The notion of the “polymath interpolator”, as a new breed of designer, is explored further in this paper through describing a number of recent interdisciplinary design case study projects from both industry and academia that embrace the often fuzzy and dynamic space between and beyond the traditional categories such as product, furniture, and spatial design. The next generation of designers must become more multidisciplinary in

nature to exploit fully the opportunities presented to them from global, local, economic, social and technological perspectives.

1. INTRODUCTION

The first key issue facing the Creative Industries generally and the design industry in particular is the growing competitive threat to the UK design profession. The Cox Review states: *“What is impressive – and worrying – about the emerging economies is not where they stand today but how they are positioning themselves for the future.”* Cox goes on to state that the emerging economies: *“...are building up new technology-based industries and impressive capabilities in scientific research, and investing massively in education, technical skills and creative capabilities. As a consequence, it is now the high-skilled jobs in the hitherto leading economies that are coming under threat.”* (Cox, 2005). Second, in terms of the changes affecting the design profession, it is increasingly common nowadays to find new hybrids of designers working on projects. Designers no longer fit neatly into categories such as product, furniture and graphics; rather they are a mixture of artists, engineers, designers, entrepreneurs and anthropologists (West, 2007). Moreover, Richard Seymour goes as far to suggest that design is beginning to show signs of splitting into two new disciplines and ultimately creating two different types of designers – (1) the *“specialist executor”* and (2) the *“polymath interpolator”* (Seymour, 2006). Ideally, in a design scenario the polymath uses his or her experience and “broad bandwidth” to define the area where the solution might lie and the executor then implements it specifically within the format that is needed.

It is the notion of “polymath interpolator” as a new breed of designer that this paper wishes to explore further (Rodgers, 2006). Following on the conclusions and recommendations of the Cox Review, this paper will describe a number of recent interdisciplinary design case study projects from both industry and academia that embrace the fuzzy and dynamic space between and beyond the traditional categories of product, furniture, and spatial design. The next generation of designers as John McFall MP, Chairman of the Treasury Select Committee, has intimated recently in the Design Council Magazine: *“must become more multidisciplinary – e.g. tomorrow’s engineers will need a greater understanding of art and culture.”* (Simpson, 2006).

2. EMERGING INTERDISCIPLINARY NATURE OF DESIGN PRACTICE

There is emerging evidence that design is in the middle of a great transformation (Sanders, 2006). The market driven years of the 1980s and 1990s have given way to a more people centred era. Design is characterised today by:

People who are not educated in design are designing. For example, Hilary Cottam was somewhat controversially awarded the Designer of the Year in 2005, by the Design Museum, for her contribution to the regeneration of the Kingsdale building, once a rundown school in south-east London. Cottam, herself, admitted: *"I am not a designer by trade...My background is in social science. But I've worked for 15 years in regeneration and social projects, and during that time I have taken an increasingly design-led approach."* (Dunn, 2006);

The edges between product design and service design are increasingly fuzzy. For example, mobile phone companies now offer more than a mere physical artifact (*i.e.* phone). For instance, they offer users the opportunities to subscribe to their services of music and video downloads amongst many other things;

The boundaries between conventional design disciplines are blurring (Rodgers, 2006). For example, the work of design companies and designers such as Hella Jongerius (Schouwenberg and Jongerius, 2003), Ronan and Erwan Bouroullec (Bouroullec and Bouroullec, 2003), Marti Guixé (van Hinte, 2002) and IDEO (Myerson, 2004) often transcend historical disciplinary borders such as interior design, product design, and graphic design;

The focus for much of new product design is on the experiential rather than the physical or material. For example, many luxury brand retail outlets now offer an experience, as well as their products, to the customer. See, for example, the Rem Koolhaas, OMA and IDEO designed PRADA store (http://www.ideo.com/case_studies/prada.asp?x=1) in New York City. This store is seen as a working experiment and is a space designed specifically to accommodate change in the store's functionality, interactions, and content using the latest technology developed by more than 20 companies.

Key amongst these changes is the realisation that an indeterminacy of professional boundaries now exists and fluid patterns of employment within and between traditional

design disciplines is commonplace. Moreover, many modern day design pursuits can be viewed as having a core of designerly activity backed by other subject specialist areas such as fine art, technology, anthropology, computing and economics (Figure 1).

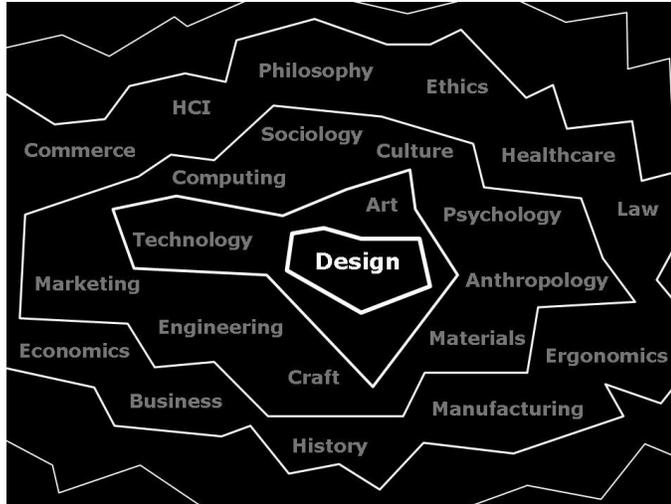


Figure 1 Design as a central component in modern creative pursuits

3. NEW DESIGNER HYBRIDS

Today, many design projects consist of teams that coalesce for a project, dissolve and reform with different personnel and expertise. Thus, the designers of today and tomorrow will need flexibility and great networking skills (The Bureau of European Design Associations, 2004). Tony Dunne (West, 2007), Head of Interaction Design at the Royal College of Art, London states: *“New hybrids of design are emerging. People don’t fit in neat categories; they’re a mixture of artists, engineers, designers, thinkers. They’re in that fuzzy space and might be finding it quite tough, but the results are really exciting.”*

Designer	Disciplines	Objectives	Outputs
Loop.ph	Technology Decorative design	Beginning a digital arts and crafts movement. Linking technology to nature	Environmentally responsive textiles. Electronic wallpaper.
Troika	Art Graphic design Product design	Socio-political interventions. Subverting existing devices.	Tool for armchair activists. SMS guerrilla projector.
Moritz Waldemeyer	Engineering Design	Exploiting technology to transform designed objects and spaces.	Robotic dress. Computer controlled

			chandelier.
Simon Heijdens	Art Design	Eradicating divisions between art and design.	Moving wallpaper. Ceramic tableware.
Greyworld	Spatial design Music Theatre design	Create works that articulate public spaces.	Interactive railings. Kinetic sculpture.
Daniel Eatock	Graphic design Art Furniture design	Documentation of everyday objects presented in a non-standard way.	Graphics. Furniture. Art.
Helmut Smits	Sculpture Furniture design Spatial design	Link things together to make strong, simple images.	Furniture Public art Lighting
Atelier van Lieshout	Art Design Architecture	The emphasis is on the work being produced by a creative team.	Sculpture Furniture Mobile home units

Figure 2 New hybrid design examples

Figure 2 (above) and Figure 3 (below) highlight the emerging interdisciplinary nature of contemporary design. This emerging hybridised design work is illustrated best by the following eight perhaps somewhat lesser known international designers and design teams.



Figure 3 Interdisciplinary design examples (clockwise from top left: loop.ph, Troika, Moritz Waldemeyer, Simon Heijdens, Greyworld, Daniel Eatock, Helmut Smits, Atelier van Lieshout)

The examples shown above in Figure 3 illustrate the range of creative projects or “*broad bandwidth*” as Richard Seymour (Seymour, 2006) calls it in today’s marketplace. From

electronic wallpaper to tools for armchair activists and robotic dresses to kinetic sculpture, designers of today and tomorrow are increasingly more likely to operate across and beyond the blurring edges of traditional creative disciplines such as product design, fine art, computing, graphic design and sculpture.

4. IMPLICATIONS FOR DESIGN EDUCATION

The emerging trend of the polymath designer with a “*broad bandwidth*”, demanded by industry, has some serious implications for design education. The Cox Review of Creativity in Business in the UK (Cox, 2005) goes as far as to propose that “*Centres of excellence should be established for multi-disciplinary courses combining management studies, engineering and technology and the creative arts.*” The review acknowledges that turning creative ideas into new ways of thinking and ultimately into successful products and services requires a blend of different skills, techniques and experiences. The Cox Review lists a number of model multi-disciplinary creative centres both in the UK and overseas including:

- London Business School New Creative Ventures – combination of University of the Arts with LBS MBA students in an elective unit;
- Formula Student – students compete to build, race and test a car developing skills in marketing, design, business and project management;
- London Metropolitan University Furniture Works – brings together designers and manufacturers of furniture and related products to work with SMEs;
- International Design Business Management Course, Finland – students are drawn from a number of courses to tackle a ‘live’ project commissioned by industry;
- Stanford D-School – views design as a fundamental discipline and brings together students with various skills to collaborate, innovate and create;
- INSEAD, France and Art Centre, Pasadena – MBA and design students develop a new product collaboratively and present their ideas to investors.

At the heart of these pioneering approaches lies a desire to view design as the principal factor in a more multi-disciplinary experience including, for example, the rich combination of management studies, engineering, technology and the creative arts. The aim is to prepare students to work better with, and understand, other specialists.

5. INTERDISCIPLINARY DESIGN EXPERIENCE @ NAPIER UNIVERSITY

Literally everything now depends on design. The role of design as a bridge between technology and art, ideas and ends, culture and commerce is vital. Because design can be a major player in shaping a world where a value-enhanced user-perspective is developing, cross-functional, creative alliances must be formed. Design thinking should, therefore, permeate the educational curriculum (The Bureau of European Design Associations, 2004).

Emerging research in design issues, with specific regard to design education, highlight a number of strong characteristics:

- Design students should not attempt to develop deep expertise in any one field, but, rather, take in information from many sources. Far from being a weakness this represents real generalist strength;
- Designing is no longer a localised activity. Every individual designer and design practice competes and has access to every level of practice and expertise;
- Designers need ever greater flexibility and networking skills;
- Designers must be comfortable working with others, and being skilled in managing the dynamics of group activity as it is rare now for design projects to be completed by an individual;
- Designing is increasingly about intellectual capital and less about delivering a trade or craft ability;
- Designers must be skilled in creating the right environment to promote creative thinking and design activity that develops vital intellectual capital;

- Designers must be able to trawl the vast seas of information and construct connections and thus create new and worthwhile knowledge.

The MDes in Interdisciplinary Design at Napier University encompasses broad-based project work, supported by up to date computing and information technologies as vehicles for investigation, modelling and communication in design praxis. The course directly addresses the increasing importance of, and demand for, formal training and education in the creative industries and equally it address the importance of allying these skills to a broader understanding of the creative and business history of the design industry and the acquisition of professional and entrepreneurial skills.

5.1 INTERDISCIPLINARY DESIGN PROJECT WORK @ NAPIER UNIVERSITY

The following projects, carried out at Napier University over the last couple of years, provide a good insight into the emerging nature of interdisciplinary design practice. The first project is the development of a range of clothing and accessories for Seasonally Affected Disorder (SAD) sufferers. SAD is a condition which is fairly prevalent in Northern European countries. At present the range of products for SAD sufferers are incredibly clumsy. There is a very large light box that you are meant to prop up on the breakfast table and eat your cornflakes which resembles a portfolio put on its end and beams a fairly substantial bright light at you. The other current SAD product is a baseball cap that you are meant to wear all day long. Similarly, this is a pretty clumsy and poor product. The proposition here was to produce a number of high fashion products including urban street wear – a 'Hoodie', a range of bags, and a range of umbrellas (Figure 4).



Figure 4 Seasonally Affected Disorder (SAD) Fashion Garment

One of the most interesting aspects of this project is that it was carried out in collaboration with a wide range of individuals including fashion buyers, pattern cutters, technologists and manufacturers. The project transcended many historical or conventional design boundaries including product, fashion, and graphic design and also moved into fields such as electronics, marketing, dress-making and branding. As we speak, considerable interest has been shown in this project from a couple of notable garment manufacturers in Milan.

The second project is all about “good deeds”. This project is loosely based on the book titled “Random Acts of Kindness: 365 Ways to Make the World a Nicer Place” by Danny Wallace (Wallace, 2004). The idea behind this project is to promote well-being and harmony in and amongst communities. The service is largely Internet-driven and the good deeds service encompasses voluntary action such as cleaning your bosses’ car (Figure 5), giving a stranger flowers, or taking your neighbours’ dog for a walk.



Figure 5 “Good Deeds” Design Service

Similarly, this project breaks a number of conventional design boundaries and disciplines including graphics, multimedia, product, and branding but also includes some aspects of business practice and entrepreneurship. One of the results from this project was a published book which was very successful.

The origins of the next project lie in concerns with the authenticity of food. Like the previous project, the genesis of this work is to be found in a book. The book is entitled “Authenticity: Brands, Fakes, Spin and the Lust for Real Life” by David Boyle (Boyle, 2004). This project’s concern was not just about the authenticity of food but about authenticity in life in general. One of the key aims in this work was to show where food was coming from and how it is authenticated.



Figure 6 Interactive Dining Table

The concept proposed here is an interactive table that lets diners know what food is available when dining, where it has been farmed, the reputation and provenance of the farmer and also the cost of the dish (Figure 6). Like the previous two projects, one can see fairly obviously that this project transcends many boundaries in modern design practice.

Finally, this next project is an award-winning Royal Society of Arts (RSA) project which transcends several conventional disciplines. The concept here was developed in response to the RSA brief which was all about “Water on the Go!” - asking people to consume more water. The proposal here advocates a dual branding approach which is fairly common in commercial product design activities (e.g. Sony Ericsson’s collaboration with mobile phones and Philips and Levi’s partnership in technological clothing). The idea here is that High Street banks would collaborate with water companies (e.g. HBOS and Evian). The idea is that just as you would go and top up your wallet with money then you would actually fill up your little water receptacle with water at the same time (Figure 7).



Figure 7 “Water on the Go!”

The dual branding of both bank and water company would be branded across both. The water receptacle folds up to the size of a credit card so that it can be easily carried on the person. So again, this can be seen as a very successful interdisciplinary design project.

These examples show that design now (perhaps necessarily) transcends many historic subject areas. This is not a new phenomenon. Design has always been viewed as a bridge between technology and art. However, designers have been adopting and utilising techniques and approaches that until very recently have been comparatively uncommon to them. One example of these techniques is the use of anthropological techniques such as ethnography. The investment that designers and design companies make in anthropology and ethnography is significant. Companies such as IDEO and Sonic Rim are front runners in the use of these social science techniques (Fulton Suri, 2005; Sanders, 2006).

6. CONCLUSIONS

From an economic perspective the Creative Industries, of which design is a key member, are one of eight sectors “...with the potential for strong growth...” (<http://www.scottish-enterprise.com/>). Moreover, research shows that businesses which harness creativity and design put themselves at the leading edge (Cox, 2005). The Cox Review has highlighted a number of areas where design can play a major part in the wealth and well-being of the

UK. One of the key recommendations of that report is the establishment of multi-disciplinary centres. This coupled with the changes affecting the design profession means that we as educators should look to produce new breeds of designer (e.g. “polymath interpolators”) that are able to exploit the often fuzzy and dynamic space between and beyond traditional discipline boundaries of product, furniture, and spatial design, for example.

To conclude, there are a number of issues that we as design tutors, researchers or practitioners need to consider. First, is the question of whether we wish to go down the path of specialisms or should we celebrate the generalist nature of designers? Moreover, we need to explore what is local and global and where does design wish to go? There are many convincing emerging arguments for keeping design local and craft-based.

Designers are regularly encouraged and frequently have demands placed upon them to be flexible and have greater flexibility in their working practices, but just how much flexibility can designers be asked for? There are also questions of intellectual capital versus craft ability and in recent years there has been an emphasis placed on the former to the detriment of the latter. As design educators should we be wary of prioritising knowledge over craft? Finally, designers are asked to trawl through vast seas of data, information and knowledge and help create even more data, knowledge and information. How best can we as design educators create environments to manipulate or utilise those vast amounts of data, knowledge and information in a creative way?

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