

# **“POLYMATH INTERPOLATORS” - THE NEXT GENERATION OF DESIGNERS**

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## **ABSTRACT**

This paper argues that a new emerging generation of designers is needed to tackle the many different challenges facing the design profession. These challenges are many and well documented in, for example, the recent Cox Review of Creativity in Business in the UK [1]. This include 3 key issues – (1) changes within the design profession itself [discipline blurring], (2) changing economic factors within a global marketplace [employment patterns], and (3) emerging rapid technological developments [most notably in information and computing technologies]. This paper explores the notion of the “polymath interpolator”, as a new breed of designer, who will be best placed to address these challenges. Using 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, for example, this paper will describe the role of this future “hybrid designer”.

*Keywords: Polymath Interpolator, Specialist Executor, Designers, Design Education*

## **1 INTRODUCTION**

The first key issue facing the Creative Industries 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.*” [1]. 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 [2]. 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*” [3]. 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 [4]. 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 “*must become more multidisciplinary – e.g. tomorrow’s engineers will need a greater understanding of art and culture.*” [5].

## **2 EMERGING NATURE OF DESIGN PRACTICE**

There is emerging evidence that design is in the middle of a great transformation [6]. 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.*” [7];
- 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 [4].For example, the work of design companies and designers such as Hella Jongerius [8], Ronan and Erwan Bouroullec [9], Marti Guixe [10] and IDEO [11] 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 in New York City [12]. 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).

## **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 [13]. Tony Dunne [2], 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.*”

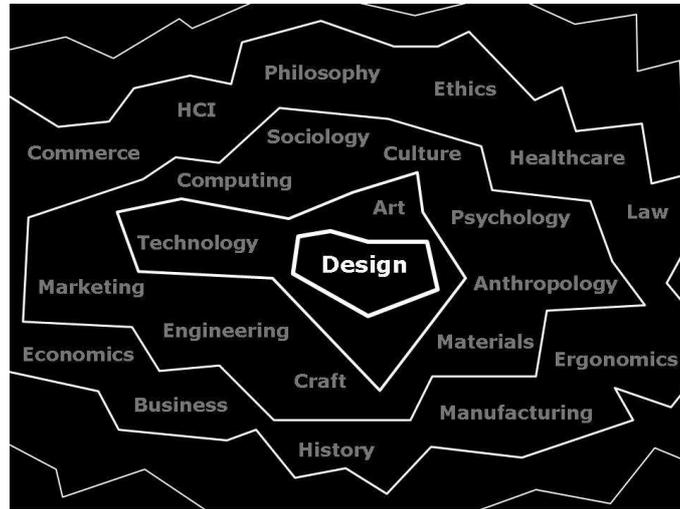


Figure 1 Design as a central component

Table 1 New hybrid design examples

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

Table 1 and Figure 2 highlight the interdisciplinary nature of contemporary design. This emerging hybridised design work is illustrated best by the following eight perhaps somewhat lesser known designers and design teams.



Figure 2 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 2 illustrate the range of creative projects or “*broad bandwidth*” as Richard Seymour [3] 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 [1] 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;
- 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**

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.

Emerging research in design issues, with specific regard to design education [13], 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 @ 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.

The MDes in Interdisciplinary Design brings together the demand for more flexible learning opportunities in design with the potential of information and computing technology applications to extend the reach and range of design practice skills development. Industrial change is placing a premium on the acquisition and development of skills in the creative and knowledge-based industries where design is central. The programme does this by cultivating a vibrant studio wherein graduates from disciplines such as fine art, industrial design and interior design co-create with others from areas such as business, engineering, computing. This coupled with the design and management, information and computing technologies, and applied social science research methods modules will help create a rich interdisciplinary culture which will ultimately produce the next generation of successful designers.

## 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...” [14]. Moreover, research shows that businesses which harness creativity and design put themselves at the leading edge [1]. 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”) who are able to exploit the often fuzzy and dynamic space between and beyond traditional discipline boundaries of product, furniture, and spatial design, for example.

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