



Design School:
The Future of the Project

Design School and the
Educational Turn

Design Museum, London

13 June 2016

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1. Welcome and Introduction

The Design Museum is delighted to partner with Imagination, Lancaster University and Charles Sturt University, Australia, in the research initiative “Design School: The Future of the Project” funded by the Arts and Humanities Research Council (AHRC).

Today’s summit, looking to the future and focusing on the educational turn of the Design School, is of particular significance as it is one of the closing events for learning and research at the museum at Shad Thames. The museum closes its doors to the public on 30 June, reopening in its new home in the former Commonwealth Institute in Kensington on 24 November 2016 with vastly improved facilities for Learning and an ambitious programme with the potential to reach up to 60,000 learners annually. Strength lies in collaboration and the museum’s learning portfolio will grow through powerful partnerships with educational organisations, design communities and funders, of which today’s summit we hope will be an exciting and inspiring case in point.

The first Summit of three seeks to address three overarching questions:

1. How can a Design School in the age of the Anthropocene best prepare future designers for the complex world we all now inhabit?
2. How can the Design School maximize the potential opportunities suggested by this future, uncertain world?
3. Having changed the planet how should the Design School react to the planet changing us?

This blossoming research partnership has the following objectives:

- To develop an international network and perspective on the state of the contemporary Design School.
- To explore whether the Design School of the future needs to be more "undisciplined" (not interdisciplinary) in its approach to increasingly complex global crises.
- To examine the conditions that are impacting on the Design School in ways that the history of the discipline has not traced.
- To review the effects of the shift from disciplinary autonomy to interdisciplinarity.
- To appraise the challenges for the future Design School and the practice of design from globalised information flows and the spectacle of image making.

This research network is proposed at a time when governments and markets across the world are actively reshaping the university and hence the Design School. What was a trickle of complaints about the domestication of the modern university has become a flood of books, reports, opinions and editorials, public admonishments, proposals and counterproposals. In this time of rapid and intensive change, the network established through this Summit series will foster new international relationships to debate the Design School of the future.

We wish all the Design School delegates and speakers a rewarding and thought provoking Summit and look forward to the day's discussion and debate. We would like to extend our warmest thanks to our many colleagues at the Design Museum, London, Imagination, Lancaster University, and Charles Sturt University for supporting this key project.

2. Speaker Biographies

Penny Sparke

Penny Sparke is Professor of Design History and Director of the Modern Interiors Research Centre at Kingston University. Since 1975 she has worked in the field of late nineteenth and twentieth century Design History and has lectured, curated exhibitions, broadcast and published widely in that broad field both in the UK and overseas. In addition to her numerous articles and book chapters her single authored books include *An Introduction to "Design and Culture, 1900 to the Present"* (2013), *"Japanese Design"* (1986), *"Design in Context"* (1987), and *"Italian Design"* (1988). In 1995 she published *"As Long As It's Pink: The Sexual Politics of Taste"*. A special interest has been the meaning of design within the context of consumption and its relationship with gender and identity and, from the mid-1990s, she has focused her attention on the subject of the 'interior'. In 2005 she published a monograph entitled, *"Elsie de Wolfe and the Birth of Modern interior Decoration"*, and her book, *"The Modern Interior"*, was published in June 2008. Professor Sparke has represented the History of Design on the Arts and Humanities Research Board. She also represented design in her role as a member of the History of Art, Architecture and Design sub-panel for the 2008 Research Assessment Exercise and the Art and Design: History, Theory, Practice sub-panel for the 2014 Research Excellence Framework.

Rachel Cooper

Rachel Cooper is Professor of Design Management at the University of Lancaster, where she is Chair of Lancaster Institute for the Contemporary Arts and also Imagination

Lancaster (a centre for research into products, places and systems for the future).

Her research interests cover design management, design policy, new product development, design in the built environment, design against crime, and socially responsible design. Between 2003 and 2008 she led 'Vivacity 2020: Sustainable Urban Design for the 24 Hour City', a £3m EPSRC funded project over five years looking at Manchester, London, and Sheffield.

She has authored several books including “The Design Agenda” (1995), “The Design Experience” (2003), “Designing Sustainable Cities” (2009), “Constructing Futures” (2010), “The Handbook of Design Management” (2011) and is currently the commissioning editor for an Ashgate series on Socially Responsible Design. Professor Cooper is President of the European Academy of Design, and Editor of The Design Journal. She was a member of the UK Research Assessment Exercise Panel for Art and Design in 2008 and in 2011 she was invited to be a member of the European Design Innovation Initiative Leadership Board that produces recommendations on Design for Prosperity and Growth for the EU.

Babette Allina

Babette Allina joined Rhode Island School of Design (RISD) in 2008. Since then she has combined her experience as an artist with her background in public policy to advance the national agenda for STEAM – adding art to the national emphasis on science, technology, engineering and math (STEM) education by raising awareness of the power of art and design to transform education, research and workforce development.

As executive director of Government Relations + External Affairs, Allina serves as RISD's primary liaison with governmental and other external partners, including leaders in the city of Providence, at the Rhode Island State House and in the US Congress. She also works closely with students interested in issues of public policy, helping them learn to harness their creative abilities to enhance communication and connect with decision-makers. Prior to RISD, Allina focused on developing funding for large-scale life sciences research at the University of Rhode Island, working with such federal agencies as the National Science Foundation, the Department of Defence and the Department of Energy.

Tim Marshall

Tim Marshall is Provost of The New School in New York. Before that he was Dean of Parsons School of Design from 2006 to 2009 where he led a major restructuring effort and developed an academic plan that emphasized stronger faculty culture and a more integrated and comprehensive suite of undergraduate and graduate degrees. He came to Parsons in 2004 as Associate Dean for Academic Affairs. Previously he was director of academic and international programs and chair of the School of Design at the University of Western Sydney, where he held a range of academic leadership positions over 14 years. He has written, lectured, and consulted internationally on design research and design education. He co-edited *Design Dictionary: Perspectives in Design*. Educated at the City Art Institute of Australia and the University of New South Wales, Tim has a background in photography and fine arts.

Alexis Georgacopoulos

Alexis Georgacopoulos is Director of Ecole Cantonale d'Art de Lausanne (ECAL). He initiated the participation of ECAL in important international fairs (Milan 2001 to 2007,

Cologne 2004 to 2006) and set up international exhibitions (Milking Stool, Conductor's Baton, The Festive Kitchen).

He has also fostered collaborations with major producers such as B&B Italia, Serralunga, Ligne Roset, Team by Wellis, Boffi, Christofle, Swarovski and Nestlé. During this period, ECAL has become one of the most acclaimed and influential in design education worldwide. In his own practice, Georgacopoulos works in the fields of product design, furniture and exhibition design and products like his "Blow" glass bowls for the French company ENO or his acclaimed exhibition design for the Swiss Federal Design Awards in 2009 have contributed in defining his own distinctive approach. His projects have been exhibited in major cities, design fairs and museums such as the Milan Furniture Fair, the London Design Museum and the Shanghai MOCA and have been published in various exhibition catalogues and books such as the "&FORK" book edited by Phaidon Press in 2007.

3. Position Papers

Babette Allina

What are the competencies needed for students to succeed in life and work? Risk taking? Imagination? At the level of discovery, are the methodologies common to the arts and science ‘tools for thinking?’ Making the case for creativity was at the heart of the RISD-led movement to promote ‘STEAM.’ It succeeded because it was driven by student interest, and by K-12 teachers throughout the United States and soon after in N. Ireland and the United Kingdom who knew that the practical application of interdisciplinary, project-based learning was a familiar methodology that worked. RISD’s advocacy platform reflected that grassroots knowledge – adding the “A” for art and design to science, technology, engineering and math to empower creatives and promote collaboration across the disciplines. STEAM continued to gain momentum due to interest from industry, and later, policy makers eager to develop a competitive, innovative workforce prepared to meet complex global challenges.

After four years of gathering case studies, proof points and speaking to countless U.S. Representatives, Senators and federal agency directors, STEAM found its way into ESSA (Every Student Succeeds Act), replacing “No Child Left Behind.” The Co-chair of the U.S House STEAM Caucus, Representative Suanne Bonamici (D-OR), introduced the legislation, that as described by Americans for the Arts “includes support to schools that provide a well-rounded education through programs that integrate academic subjects, including the arts, into STEM (science, technology, engineering and math) courses.”

The final language reads:

“(vi) integrating other academic subjects, including the arts into STEM programs to increase participation in STEM, improve attainment of STEM related skills, and promote well-rounded education;”

As with STEM, the STEAM movement called for increasing student engagement, particularly targeting youth-at-risk, promoting creativity in education and cross-disciplinary learning, and graduating a successful, innovative workforce (not just to the point of degree attainment). The policy objectives for RISD’s leadership of STEAM were to:

- Transform research policy to place art and design at the centre of STEM;
- Encourage the integration of art and design in K-20 education;
- Influence employers to hire artists and designers to drive innovation.

The argument that design distinguishes [US] products and humanizes technology was readily understood by policymakers – and as support for the STEAM idea continued to grow, at RISD we turned again to the student experience. A campus wide survey was conducted by RISD students, focused on the competencies and technical skills sought by their peers, their experience while in school, and the desired outcomes of a design school education. First, students surveyed were asked what they expected to gain from a RISD education. The strongest relationships were: cultural awareness, technical skills, critical thinking and social skills. In response to the question “Is creativity innate or can it be learned?” ‘innate’ outweighed ‘learned’ by a slim margin.

In terms of outcomes, 40% responded “always’ to “creating new knowledge in their field or other fields;” 7% responded

‘always’ and 43% ‘often’ to “creating economic value.” Finally, students were asked, “what about a RISD education is important to you?” The strongest relationships were: making at 44%, Liberal Arts at 37%, collaboration at 37% and critique at 26%.

The critical thinking and critical making skills taught at schools like RISD, transferable skills needed to innovate, are of key importance in a competitive economy. A recent Michigan State University study “Arts Foster Scientific Success: Avocations of Nobel, National Academy, Royal Society and Sigma XI Members” provides evidence of this:

- Graduates majoring in STEM subjects are far more likely to have extensive arts and crafts skills than average Americans;
- Arts and crafts experiences are significantly correlated with producing patentable inventions and founding new companies.

STEAM integrates the arts as an essential component of science, technology, engineering and math (STEM) education, thereby developing students’ creativity and critical thinking skills.

Another recent study, by Adobe “Creativity and Education: Why It Matters” (based on interviews with 10,000 US college-educated and full-time salaried employees ages 25) revealed:

- 85% agreed that creative thinking is critical for problem solving in their career, and 78% wish they had more creative ability;
- “Interestingly, math and science ranked nearly as high as traditional creative subjects in contributing to creative thinking.”

At the close of the RISD student survey, reflections on design education overall focused principally on the designer’s role in

society, and in relation to technology:

- “Either you design [government] or you’re a part of it. How do we as designers, address global challenges?”
- “Technology is changing at an accelerated rate. Our way of handling things hasn’t evolved at the same rate as the challenges we have to face.”

Not surprisingly, employers were quick to identify creativity as a desirable skill. The 2006 Ready to Work Survey commissioned by The Conference Board, Corporate Voices for Working Families, and The Partnership for 21st Century Skills contributed to the evidence that artists and designers are well positioned for 21 century careers. When asked to choose three qualities from a list of 11 attributes of creativity, more than one-third of corporate respondents characterized creativity in the workplace as “...the integration of knowledge across disciplines, the ability to originate new ideas, and being comfortable with the notion of “no right answer.”

These and many comparable studies provide evidence that supports the policy implications of STEAM to attain the shared goal of economic prosperity through improving education at all levels. Re-stated, the purpose for STEAM education policy:

1. Art and Design coupled with science, technology, engineering and math education (STEM) will encourage innovation and foster economic growth.
2. Art and Design can potentially enhance STEM learning by embracing cross cutting translational skills common to STEM and arts and design disciplines.
3. Broadening education with a focus on cultivating creativity will engage a more diverse population of learners, empowering them and creating a foundation for future success.
4. Art and design humanize technology and yield

innovation.

5. Creativity and imagination lead to discovery.

Rachel Cooper

A friend of mine, Chris Lewis of Lewis PR, has just finished writing a book he has called “Too Fast to Think”, he has turned to leaders in industry and government to ask them when they get their creative ideas and how, reflecting on the way the brain works and theories from neuroscience in relation to the fast pace of life; the short 140 character attention spans. This made me think about my design education of four years, 40 years ago; a foundation course plus a multi-disciplinary design degree. It was a ramble, exploring techniques and materials, generating problems and exploring solutions, in the final years it was unbounded the number of projects and time given to them was up to me, indeed what they were was up to me. What it gave me was a wealth of creative tools, and a deep curiosity for new knowledge and to see problems I could address. I remember saying later I would never have had time for that in the day job, but it provided me with a reservoir, that kept me going for quite a few years at the beginning of my professional design career. It gave me time to think, hone my visualization skills and learn how creative ideas came about.

40 years ago, design education was in essence a professional training and design research was undertaken to inform the design task. The only other design research one was aware of focused mainly on design methods, with just a few people, like Victor Papenek, thinking about bigger challenges. Since then, in the UK at least, we have had an explosion of design research and design PhD's, this has been fuelled by a growth of funding for design research.

Because the funding came from bodies who were concerned with national and global challenges, this meant design looked outside the discipline and worked with

other sectors to tackle complex, wicked problems in, for instance, advanced manufacturing, healthcare, sustainability and the environment. In essence applying design to social, economic, environmental and latterly political challenges. During this period user-centred design, design ethnography, design anthropology and other new disciplines such as service design and interaction design have emerged and our design researchers are pushing the boundaries of the field, pursuing design for policy, design for social innovation, co-design and design fiction.

However in design education I sense a tension between the professional training and the wider intellectual enquiry. Are our degrees delivered in order that our design industry as it is today can have skilled creative drafts/crafts people or are they to deliver the next generation of skilled designers who are confident moving beyond the realms of design practice, leaders of multi-disciplinary teams and organisations, public and private, i.e. they have value beyond the production of artefacts hard or soft. There are a number of levers in this space: (I am making a grand generalization here, that I am happy to be disabused of). The move in the UK to a cost/price based university education. Students and more importantly their parents want an education in a 'top' university and in a subject that delivers a career... a job!

Courses are a commodity, a service delivery, highly structured, measured and evaluated. And we are selling them globally but mainly in the far east. Industry and especially the design sector look for highly skilled drafts/crafts people, able to deliver an impeccable design to time and cost. Yet we follow this route at our peril... Yes there are private design schools that deliver highly skilled designers and we always need them. But I would like to think about design schools in the university system,

where design is as fundamental as mathematics, science and all the 'ologies'. Where courses not only provide the underpinning technical skills, but also cognitive and especially 'time to think' and move beyond the boundaries.

Firstly, I believe four years is necessary. There needs to be a balance of structured and unstructured education. The first two years the designer needs time to learn how to be, as Paul Rodgers puts it a 'cultural sponge', but also social, technological sponge, to take risks, experiment and learn to 'design' create and make. Year three is about understanding and experiencing the external environment into which design fits, and what their contribution can be and how to operate in that space ... interning on defined projects in business, in charities, in NGOs, public and private sectors. Year four is exploration tackling a grand challenge to display the force of designs contribution, either with external partner/s internal partners working in other departments and with other disciplines. But really understanding how to research the landscape, to understand what is common place, what is exceptional and where they position themselves and their work, finally exiting with a Masters in Design.

That might be content of a programme, and to some degree some schools are delivering a form of this. But what about the context, the design school in the university should not be just another building, it should be a facility for design, thinking and doing spaces, team spaces and for everyone a meeting space or something that brings people in a 'super centre', to enable design research and design practice to flourish, to enable other disciplines to enter conversations and to experience the creating and making process... it has to be a physical public design space and be mirrored by a digital public design space... that brings together other academics, other communities

from both inside and outside the university.

A design school without boundaries.

Alexis Georgacopoulos

In these fast-changing times, artists in the broadest sense have to play a part in our societies more than ever before. Indeed, creativity and innovation are often the last bastion against oppression. Located in the peaceful bosom of Mother Helvetia, ECAL/University of Art and Design Lausanne is thankfully not at the heart of violent conflicts, but everyone may still find causes dear to them and fight every day to make these evolve. One of the missions of a school of higher education in art and design such as ours is to give students the tools that allow them to translate their discourse into high-quality projects, by offering solutions to contemporary issues while remaining forward-looking. What skills will students need for their professional future? How can we give them a competitive edge? What projects, innovations and collaborations are likely to boost their career? In other words, how to prepare students as good as possible for working life and enable them to develop their creativity in multi-faceted professional outcomes such as art, industrial design, filmmaking, interaction design, type design, photography or graphic design?

Talent cannot be taught, but it can be nurtured. With this in mind we call upon many renowned professors and lecturers from across the globe. Along with their teaching duties, it is essential for these figures to continue to perform in their respective disciplines outside the school. They thus remain constantly aware of industry trends and build bridges between the professional world and our institution. Students are nurtured by their teachers' advice and real-world experience. The reverse is sometimes also true. This exchange breeds a virtuous circle which sparks the fire of creativity - as if by rubbing two flint stones together.

Although the knowledge imparted by practitioners is essential, theoretical training also plays a major role as it allows students to build a critical and personal discourse to support, strengthen and foster their artistic practice. Provided at ECAL in the form of lectures, workshops and conferences, this education serves to explore the history of art, photography, graphic design, industrial design and film, to understand contemporary stakes in these disciplines, to learn about major figures and to assemble a collection of reference works on which students will be able to rely when the time comes to create their own work. Building a career in art and design by staying alone in one's corner is a tall order. At ECAL, whether you are an aspiring filmmaker, artist, graphic or industrial designer, everyone shares the same building and facilities. Throughout their curriculum, students are frequently called upon to collaborate. Be it through cross-disciplinary workshops with their peers, productions with craftsmen or contributions for companies or cultural institutions, the notion of collaboration is central to ECAL education. Students learn to develop projects with other people in the field and face the realities of the market - from the design stage to communication of the finished product.

For three years now, ECAL's involvement in the Milan Furniture Fair has meant a wide combination of internal collaborations among different departments and partnerships with industry. In 2014, ECAL won the Milan Design Award for Best Exhibition with "Delirious Home", a cross-disciplinary project between Media & Interaction designers and industrial designers. The following year, productions around the concept of "selfies" were put in the spotlight by our Bachelor Photography and Master Product Design students.

Although this notion of experimentation met with great success and is now one of the ECAL trademarks, it is

important not to forget the more « classical » collaborations with the outside world. In this context, for the Furniture Fair, the ECAL has worked in recent years with such varied and innovative companies including Hansgrohe Axor, Camper, e15, Luceplan, Punkt. and Vacheron Constantin.

Tim Marshall

The prevailing institutional context for design education in the United States is the private, stand-alone art and design school. When design is housed in a university, it is typically within a comprehensive university that is dominated by engineering and technology. The United States has developed an extremely complicated and heterogeneous higher education context; it is therefore very hard to speak about it in summary terms, but the basic structure that is relevant to this paper is as follows.

The implicit reference for bachelor level education is the Bachelor of Arts (BA), or “liberal arts” degree. The liberal arts degree references a mode of learning motivated by intellectual curiosity and is popularly understood as the bedrock for democratic citizenship. A liberal arts course is defined as not being “pre-professional” and a liberal arts degree is defined by having no more than 25% “non-liberal arts” credits within the degree. All types of bachelors degrees must have a certain percentage of liberal arts courses. The dominant undergraduate degree in design schools, the Bachelor of Fine Arts (BFA), is required to have no less than 25% liberal arts courses within them. Masters degrees are structured with a similar logic.

How can one develop innovation and creation through the prism of academic research? Although the latter has long been viewed in an abstract way in the fields of art and design, today it plays a major part in how these disciplines evolve.

The New School – where I serve as Provost (Chief Academic Officer) and which is the immediate reference for this paper – was founded as The New School for Social Research in 1919. The New School comprises a

liberal arts college (Lang College) a comprehensive art and design school (Parsons School of Design), as well as a range of performing arts and professional degree programs from the Bachelors level to the doctoral level. The most unusual aspect of the New School is that half of the students are enrolled design degrees.

The institutional position of design education has rapidly expanded in the last decade for a host of reasons. Two recent trends are notable and indicate the emergent contours of design education:

- 1) A growing number of hybrid programs are emerging, bringing together design and other disciplines and professions, and giving rise to sub-genres, such as design anthropology, design psychology, data visualization and sociology, design management, design engineering and so on.
- 2) “Design across the curriculum” is an increasingly widespread approach focused on both human-centred teaching and project- or problem-based learning, often where no design school is present on campus. Stanford University’s D-school is the best-known example of this, but Princeton University, MIT, New York University and many others are developing this approach.

In sum, professional design education and design as pedagogy in the service of learning are now so broad that they require a well-defined context to have meaning. “Design education” is a little like saying “writing education” – both immediately give rise to a series of questions: What kind of writing? For what purpose and to what end: professional, creative, philosophic, legal, ethnographic, scientific, or journalistic? The extension of design as a general approach, or as a way to learn and to engage or act in the world has been driven, to a large degree, by the non-design community – from business

schools to the digital humanities to doctoral research in the social sciences. For the most part, design educators have been very slow to seize the opportunity this presents; and the rise of the “maker movement” and the “gig economy” have been a comfort to many design educators, since they seem to help maintain a kind of autonomy for design.

It is true that claims made over the past years regarding both the efficacy and strategic importance of design have succeeded, as many of us hoped it would. Businesses, and governmental- and non-governmental agencies now see the strategic importance of design with respect to their diverse needs. Indeed, the most dramatic shift occurring for professional designers belies the assumption that the “gig economy” and the “makers movement” are defining the future of design, since literally thousands of designers are being employed by corporations and institutions that are developing in-house design capacity and/or the aggressive acquisition of the major design studios and consultancies. Our design graduates will increasingly be reporting to the human resources departments of old and new industrial firms, banks, consultancies, old and new technology companies, and government departments, and non-government agencies. This is of real consequence as designers increasingly have to work with non-designers and, most importantly, they have to account for their approach, their methods, and their ethics and values; they now have to argue for the relevance of these practices and assumptions beyond the logic of the design studio. We are educating not just the professional designer but also the citizen designer.

The networks of collaborative relationships across design and non-design areas are an essential feature of how designers now have to work and how designers should be

educated. It reminds us that the verb, to design, indicates a fundamental human capacity that is not defined by the profession of design. This understanding will directly inform the future constitution of design education in the academy as it now presents a two-sided dilemma: on the one hand, there is the future of professional design education.

On the other hand, a well-educated and engaged citizen of a democracy needs to understand how design works in the world and how it structures our lives and interactions with things, institutions, systems and each other. The latter is now consequential and should be the subject of a broad liberal education. The social and political implications of design constitute a question as much for democratic citizenship as for experts and specialists – it is a literacy, a capability, and a specialism.

In this context, the professional designer is, or should be, the facilitator of the displacement and destruction of the division between various forms of expertise, such that there is a reversal in the acknowledgement of expertise both in the situation and in the outcome.

To enable this, we need to expose the workings and operations of design to broad-based social and critical debate. This should be taken not as a challenge to the hegemony of designers, but rather as crucial to the transformation of design from a closed guild profession to a fully implicated social and material practice – a way of thinking and making in the world, and a way of thinking and making worlds.

Where might this lead us if one were to accept that a design literacy is imperative to democratic citizenship; that design is the writing of making broadly defined, and that design is a diverse range of professional specialisms

that are both methodologically interrelated and procedurally particular?

The anxiety to define and create the model for design education may no longer be the point. In the context of the United States, this suggests that the industrial-era context for the extant degree structures (the BA, BFA, BBA etc.) are all but redundant. Is design preeminent or should all fields and disciplines be responsive to the demands and threats of the Anthropocene, such as climate change, forced mass migrations, and growing wealth disparities?

Ideally, then, design education would enable both the form-making expertise and the capacity to move across and between knowledge bases, skill sets, domains, systems or institutions of authority, and stakeholder interests such that the clumsy and necessarily compromised movement toward a sense of a “better way to be” can be given the best chance to take hold, or to stabilize as a given practice. A designer needs to know that people design in their acting with and on the object of design. It is here that the veracity of design can be understood and assessed, and it points to the growing necessity to use design methods to break down our own educational structures and boundaries.

Penny Sparke

As I am a design historian this paper will address the key paradigm shifts in the nature of the design school, and of design education, since the nineteenth century. It will also consider some of the factors that will influence its future, taking into account new developments in higher education and changes in the world of design practice.

Firstly, I would like to suggest that there have been three main models of design education since its emergence in the mid nineteenth century, the last of which is still in formation. The first developed from the need to improve the quality of mechanically manufactured goods in order to compete in the international marketplace; the second grew out of the teaching at the Bauhaus in Germany in the 1920s and the production-focused preoccupation with the machine as a metaphor of modern life; and the third, and most recent one, is linked to the impact of new information technologies, the advent of multi-disciplinarity, and the expansion and fragmentation of the concept of design.

The philosophy that underpinned nineteenth-century design education in the UK schools of art, which grew up in the major manufacturing centres, was rooted in the application of ornament, or 'art', to the surfaces of products. In his 1876 book, *Manual of Design*, Richard Redgrave, who had a long association with the schools of art, and whose views were broadly representative of those of many nineteenth-century design educationalists, provided an overview of what he believed should be contained in the design – or as it was called at the time the 'decorative art' - curriculum.

His aim was to 'lay down some general principles of taste in decoration' which involved looking back to the

achievements of Greece and Rome and to nature, without, however, directly imitating either. 'It is in this spirit of a loving study of nature, coupled with a due appreciation for art, that the courses in our public art schools are now arranged' he explained. He went on to explain that direct imitation was impossible because of the requirements of manufacturing. Citing the examples of calico printing, where 'relief is unattainable', and a garment, the folds of which conceal direct imitations of nature, he went on to discuss the 'proper use of materials' and the notion of 'construction truth'. He also claimed that 'utility must precede ornament' and explained that, 'Granted that "design" includes both construction and ornamentation, and that this latter should arise naturally out of the appropriate decoration of suitable materials, we shall arrive at a law of good taste'. (165 thistle image). He also considered it important that, while a designer was not an art-workman, he nonetheless needed 'such an insight into the processes of the workman or the machine as will enable him to fit his design to the difficulties of production'.

While the nineteenth-century approach to design education addressed the proto-modernist principles of 'proper use of materials' and 'construction truth', and acknowledged that designers needed some technical skills, its main emphasis was on appropriate ornament, seen as the essence of 'good taste'. The subsequent paradigm shift in the design school, as implemented by the teachers at the Bauhaus in Germany, moved radically away from that idea. Nor did it base its educational principles on the art of the past or on the natural world.

Although the new paradigm was still rooted of the era of mechanisation, by the 1920s the educational agenda was no longer based on the need to make tasteful objects that would compete in the international market-place but

rather on a more ideologically-driven idea about what it meant to live in, and design for, the modern world. For the Bauhaus teachers that meant developing a production-oriented approach to design that reflected what they believed to be the rationality and democratic potential of mass production. They required their students to reject the past and the natural world, and to embrace a new abstraction that was to be embodied in designed objects. The students encountered those ideas on the foundation course where they were taught by Wassily Kandinsky, Paul Klee and Johannes Itten, among others, and they went on to apply them in craft workshops where they were required to design a range of artefacts in a variety of materials, from glass to ceramics to wood to textiles.

I would like to suggest that we are still in the Bauhaus phase to a considerable extent (or even, arguably, in the nineteenth-century proto-modernist phase where certain approaches are concerned) and that, although new imperatives are clearly on the horizon, we have not yet fully understood how they will radically transform the design school. Rather, we are still predominantly driven by design values that were fundamental to the modernist ideal – truth to materials, form follows function etc. Although we are aware that we are on the edge of a paradigm shift we are changing our thinking incrementally rather than adopting a tabula rasa approach as they did at the Bauhaus.

The new imperatives are coming from several directions simultaneously: Firstly, inasmuch as the new electronic information and manufacturing technologies that have entered the design studio – in both the professional and the educational sectors - have dramatically transformed working practices and roles – the main imperatives are technologically-driven. Secondly, the concept of design itself has been transformed and it has become a much

more open-ended subject with increasingly porous boundaries. Recently designers and design scholars have been addressing new issues, new themes, and new sub-disciplines. They include design thinking, sustainable design, service design, design for well-being, empathic design, interaction design, social design, universal design, design activism, co-design, participatory design, critical design, design cultures, design anthropology, design writing, global design history and many more besides. Several binary distinctions have been eroded, among them that between production and consumption; that between the professional and the amateur; and that between materiality and immateriality. In addition, the split between theory and practice is no longer clear cut. As a result, neither of the earlier paradigmatic approaches to the design school have any relevance.

Finally, where the educational context is concerned, the emphasis on distance learning and modularisation in the university, the site of many design schools, mitigates against the training of the designer in the studio and the workshop, whether, as in the nineteenth-century, to draw from antiquity or from nature, or as within modernism, to create abstract forms and prototypes for mass production. The time has arrived, I would like to suggest, to address the implications of these multiple imperatives and to rethink the design school from scratch.



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Is design the best tool available to us to make sense of the contemporary, complex modern world? If so, how might a design school best prepare future designers for this world? Join academics, designers and museum professionals for three research summits on the future of the design school funded by the AHRC and in partnership with Imagination, Lancaster University, Charles Sturt University, Australia, and the Design Museum, London to explore these questions and others from the perspective of the changing landscape of university design education.

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