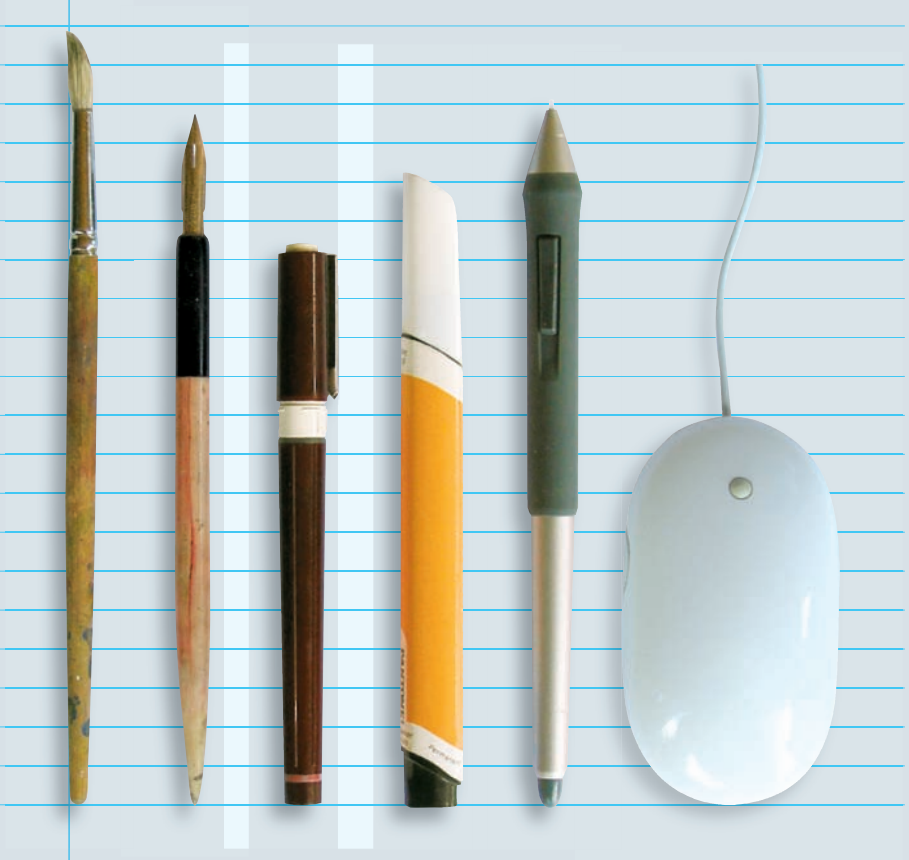
the designer



rosemary sassoon

half a century of change
in image, training,
and techniques

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Introduction

The idea for this book originated when I was asked to record what it was like to train and work as a designer nearly sixty years ago. It then expanded to include the views of friends and colleagues – those who work as designers, those who employ designers and those who train them. The changes in all aspects of our work and life between then and now, and our thoughts for the future, add up to a fascinating discussion.

It is difficult to separate the different subjects entirely as the contributions tend to wander across boundaries, so it is not always a straight line of thought throughout. The resulting tapestry of ideas expresses the feelings and ideas of three generations, with concepts explored from the practical to the complex, the basic to the academic.

Chapter 1

Changing attitudes, images and terminology

The image of a designer has altered markedly in the past half century or so. It is interesting to consider how changing terminology over that time has affected the public perception of designers. Inevitably, designers' perception of themselves, their job and their place in the hierarchy of occupations has altered as well.

In the 1940s graphic design was termed commercial art, with all the connotations that it involved. The year 1946 saw a turning point in the perception of designers with the *Britain Can Make It* exhibition which presented design as the saviour of industry. As Sir Stafford Cripps put it – prefaced by the comment that we were busy beating swords into ploughshares at the end of the war – in the foreword of *Design 46*: 'The improvement of British design is an important factor – a very important factor in our attempt to re-establish and increase our export markets'. Praise indeed, perhaps the first accolade for many years! We were recognised as vital for the economy by the President of the Board of Trade. The exhibitions officer of the Council of Industrial Design then described the exhibition: 'As if it were a book; of which the object was to explain the meaning and importance of industrial design'. But who were these industrial designers represented in this first post-war exhibition? Book designers, textile designers, designers of kitchen equipment, fashion designers, etc., were all lumped together in one category. I wonder how many book designers or fashion designers today would think of themselves as coming under that title.

'These are the designers for industry, from the professional man with his diverse list of clients to the young girl in the design room of a cotton mill. . . . These are the successors of Josiah Wedgwood the first, of Thomas Chippendale, of George Hepplewhite, of William Morris.' But not quite: 'For these men and women are designing – as Wedgwood was not and as Morris would have scorned to do – for prolific machines, automatic looms with an output of millions of yards, plastic or metal presses turning out myriads of identical parts' wrote S C Leslie, the Director of the Council of Industrial Design. Somehow it still holds an

echo of the Industrial Revolution. Designers were clever and useful in 1946 but not yet prestigious, nor anywhere near as respected as artists.

An attempt was made by Bernard Hollowood to define the term *design*. 'An industrial design (or an article designed for factory reproduction) is made in response to a known or anticipated demand; and the most important of several tests of its quality must be based on how far it satisfies that demand. A design has two main functions – to serve its purpose as usefully and efficiently as possible and to provide maximum pleasure to the mind senses by its appearance and form. Some would have it that function is in itself a guarantee of aesthetic appeal, but this view, though a healthy reaction to the dismal notion that beauty and utility are incompatible, is much too narrow.'

He was more interesting on the subject of taste and fashion: 'Your individual tastes, however different they may be, are attuned to a common denominator of contemporary style and seasonal fashion. Fashion is made to be flouted perhaps. Style breathes the spirit of an age and we cannot escape its influence if we would. . . . Functionalism, the character of the first half of the twentieth century, is an expression of our pre-occupation with ways and means. Designers create fashions: but style evolves almost in spite of them.'

Professor Darwin, in a section entitled 'Designers in the Making', opened with a statement that sounds incredible today: 'In this exhibition you will see for the first time the name of the designer or group of designers put alongside that of manufacturers of the article that they both helped to make'.

Those sentiments were all expressed about the time that I entered art school. No wonder designers were not held in very high regard. From early on I was conscious that designers were considered somewhat inferior to artists, although it may never have been put into words. This view was backed up by F H K Henrion in the introduction to John Brinkley's *Design for Print,* published in 1949 by the Sylvan Press.

He wrote: 'The first point I wish to stress is the attitude of the intending designer to the profession in which he (*note the 'he'*) contemplates a career. He must *feel* his vocation as a designer and not regard commercial art merely as a more profitable career than fine art. Neither must he imagine that it is second-best for those without the qualifications necessary for success in fine art (a most common art school delusion).'

Another unnecessary division came between designers and craftsmen. Craftsmen came next in the hierarchy after artists because they were perceived to design as well as craft their product whereas

designers were an adjunct to industry. William Morris has a lot to answer for in this respect.

The elevation of artists to a position over and above craftsmen and designers may well have its origins in the social climate of a couple of centuries ago. However, its relevance today is questionable and the whole idea of separating artists and designers from early on in their training seems destructive and wasteful. After all, we all start with the same set of skills – the ability to observe and draw, and the desire to create and bring our own personal vision into being in some form or other.

John Sassoon, who looks at the subject more as an educator, puts it this way: 'Every artist is a designer for part of the time, when he arranges his canvas or wonders whether the statue he has so grandly visualised will stand up; and every designer is an artist when he starts with a sketch of the setting for his project, illustrating the impression he is trying to create.

'Artist and designer do not describe different kinds of people, but different activities of the vast number of people who make things and have creativity in common. Every visionary is trying to give form to the mental image; so it may perhaps be worth a moment just to glance at what we mean by *visionary*.

'We all have certain faculties that we cannot define but we know we are always using. One of these is intuition, normally followed by its product, perception. They are very similar, and often overlap; and both together enable us to grasp a solution direct without reasoning it out. *The Oxford English Dictionary*, 1992, has a good definition for "perception": it is "the intuitive recognition of a truth".

'Logic is all very well if you are trying to argue a case; but if you are asking a question about the real world, logic may not lead you to the answer. Intuition and perception are about how we turn the fragmentary knowledge received direct through our five senses into an understanding of the world. Understanding is the product of our intuition and its perceptions, whose messages are personal to each one of us, can be known only to ourselves. Knowledge, even scientific knowledge, could not reach us without the help of intuition and as intuition is not open to scientific analysis its perceptions are not accepted as scientific. So right at the very centre of the learning process we are confronted by a gap between the world we live in and our understanding of it; and that gap can only be crossed with the aid of senses whose nature is a mystery.

'Artists and designers are among those in whom intuition and

perception are especially developed, either by temperament or training. To separate the training of designers from that of artists at one level, makes very little sense, since the qualities of mind and many of their actual skills are common to both. They are common indeed to a wide range of activities, not just art and design. That said, there does come a moment when these qualities will be stimulated more vividly if they are presented in a setting to which students find they are more responsive.'

Professor Robin Darwin in 1946 had tried to subdivide and define designers into categories: 'The designer of wallpapers or of textiles, of pottery, glass and many other things of that kind, must be more artist than technician, whereas the designer of articles which are made by highly elaborate processes or which have complicated functions to perform, must be at least as much technician as artist'.

Pat Savage trained as a sculptor at Goldsmiths and then at the Royal College. She writes: 'In 1948, when I started training, the first two years had a wide subject base and a strong emphasis on drawing. The subjects included life drawing, history of architecture with the study of local historic buildings, print-making using lino, lettering and the drawing of alphabets, the history of costume – drawing outfits from early Greek to the present day – and studying painting, sculpture and anatomy.

'This wide appreciation enabled the choice of the subject to be studied for the next two years to be made more accurately and whatever discipline was decided on, drawing still played a strong part in our studies. Because of the early balance of subjects I have never felt that fine art – painting and sculpture – was superior in any way to craft and design disciplines. I feel that those like myself, who maybe studied sculpture, should be able to decorate ceramics, create designs for embroidery and church furnishings, and illustrate books, all of which I have done when commissioned. Some institutions still (*in 2006*) have an exclusive concept when selecting for exhibitions. The Royal Academy will not accept batik and textiles, and other organisations still base selection on the concept that painting is an art but printmaking is a craft.'

Today, in the outside world, there is less distinction between the two careers. Designers have a higher public profile as the importance of design in our daily life is stressed all around us. The public perception of art may have altered somewhat at the same time with the advent of more conceptual art.

Changing perceptions in the second half of the century

Design in the middle of the twentieth century is conveniently typified by the Festival of Britain in 1951. A century after the Great Exhibition, the foreword to *Design in the Festival* proudly relates that the original exhibition failed in one of its important objectives: 'It did not lead to any noticeable improvement in the standard of the industrial art' – a somewhat questionable statement. However, reviewing the contents and reading the comments about the Design Exhibition make me question some of the grandiose claims. In the areas that most concern me, packaging and print, it is the packaging that seems to be of the highest standard that has stood the test of time, and the quality of book design that also stands out. Yet, in the section 'Tradition or Experiment in Printing Design' the comments are distinctly negative: 'Graphic design in this country is instinctively conservative and deeply rooted. . . . We lack for nothing in printing skills; we lack only, perhaps, a sense of adventure in design. The medial axis still dominates our typography and mise-en-page; critics familiar with European movements in visual arts deplore the inability of British graphic designers to experiment more with asymmetry and impressionism'. This is hardly encouraging.

I agree entirely, however, with the negative comments about textiles, or fabrics as they were then called: 'There are still far too few good contemporary fabrics or wallpapers'. This was the time when I was involved in designing textiles and can say with no exaggeration that there were both traditional and modern designs far more imaginative than those shown here. They seemed as if 'patterns' were imposed on the different textiles and wallpapers (other than those designed by the great Enid Marx), with little imagination or consideration to the material they were designing for. Much the same could be said of the ceramics, Although many examples involved attractive decoration designed by well-known artists, the patterns seemed imposed rather than an integral part of the product. John Sassoon adds to this sentiment: 'Decoration creates an interpretation within the context of the object decorated. It is original in two fields: in its interpretation of the object; and in itself as a picture. Decoration is always subordinate to the object it is decorating, and should not be given a life of its own'.

Times were changing. In many fields everything was coming to life after years of austerity. As Pat Savage said, designers such as Mary Quant followed them shortly after with fresh, exuberant ideas that influenced everyone's ideas. Dare I suggest that many of those who influenced the design world then were women?

A display of packaging from Design in the Festival. *HMSO, 1951.*

In 1972 a whole issue (no 4) of *Icographic*, which describes itself as a *Quarterly Review of International Visual Communication Design*, was dedicated to the subject of education. In an editorial entitled 'The education of graphic designers', the executive editor, Patrick Wallis Burke, echoed the contemporary views of designers. '*Visual Communication* is the latest title for the profession that is still called *Graphic Design* in most art schools, and *Commercial Art* by the majority of the lay public.

'It is a very young profession. Many of its leading exponents had little or no formal training for the business, they simply invented the job as they went along, altering or expanding their roles as the demand for their services grew.

'As a newcomer, Graphic Design was fitted uneasily into the traditional scheme of things. It started life by being thought of as some kind of aberrant art activity. To the artistic élite, of course, it could only be considered as a mediocre, second-rate artistic activity, since it was inevitably tainted by both technology and commerce.

'The whole concept of the role of designers has undergone radical transformation in the intervening years. Some may think it has gone too far and that designers in some fields now consider themselves more important than the public they serve. On the other hand the need to research the needs of the user is stressed today during training and surely it is paramount in the workplace.'

As far back as 1960 Misha Black, Professor of Industrial Design at the Royal College of Art and a partner in the renowned Design Research Unit, was well placed to comment on the balance between designers' desire to influence public taste and satisfy clients' financial concerns. In an article entitled 'Taste, Style and the Industrial Designer' in *Motif 4*, he had this to say: 'If what the designer wants to produce is different from what the public desires then he assumes that his taste, his appreciation of what forms properly reflect his period is more righteous, or at least more sensitive than that of the public for which he is working. . . . Every time a designer rages because a product made to his design has been a marketing failure, he is indicting society for not equalling in mass his own personal standards: he is adopting a position of moral self-righteousness no different from that of a sermonising total abstainer. And in fact the designer is sometimes right. If he is, in truth, more sensitive than many to the social movements which already await formal expression, he is justified in his moral stricture, in his arrogant assumption that he must persuade the public to like what he likes, hoping by infiltration eventually to change a world in which, for the first time in the history of mankind, those things made by man reflect mainly his decadence and, but rarely, his nobility'.

There is not much for the innovator and forward thinker in those words, which is surprising as Misha Black himself was a force for change and creativity. Professor Bonnie Sadler Takach, from the University of Alberta, writing in *Designing Effective Communication*, edited by Jorge Frascara in 2006, however, reminds us today of our basic function and responsibility as designers: 'We may perceive that our role is serving citizens and clients with varying degrees of awareness and knowledge about what we believe are the benefits of "good" design. Arrogance surrounds the commonplace notion of the need to "educate" the public about design, as if perhaps people might not comprehend, for example, information in a public service message or interpret the message in a poster. If a product of design is not performing well, then it is not the user who is in error, but the design'.

An international conference took place in Perth, Western Australia, in 2000, entitled Re-inventing Design Education in the University. In the conference proceedings, Ken Friedman, Associate Professor of Leadership and Strategic Design at the Department of Knowledge Management, in the Norwegian School of Management, wrote under the title 'Design Education in the University: *Professional Studies for the Knowledge Economy*': 'Design has moved on from a focus on signs, symbols and things, characteristic of the initial formative stages of graphic and industrial design, to a focus on human action and the environmental systems within actions take place. This is characteristic of the new domains of interaction and environmental design'.

To the question 'What must designers know?' he replied: 'The answer is that designers must be able to work with a far wider range of issues than any one professional can master. . . . In short a designer is inevitably a member of a team, and often its leader. A designer is a thinker whose job is to move from thought to action. The designer uses his mind in an appropriate and empathic way to solve problems for clients. Then, the designer works to meet customer needs, to test the outcomes and to follow through on solutions. . . . Whatever we call them, we need multi-disciplinary designers who recognise that giving a physical shape to an object is a small part of the design process.' What a change in fifty years.

As for terminology, this is what Gunnlaugur S E Briem, the Icelandic letterform designer, has to say: 'What is in a name? A hundred years ago we were commercial artists. Fifty years ago we were designers. Nowadays some people like to call the work information engineering. Little has changed. The illustrators still can't handle type. The typographers can't draw. Never mind. It's the same job. Only the tools have changed'.

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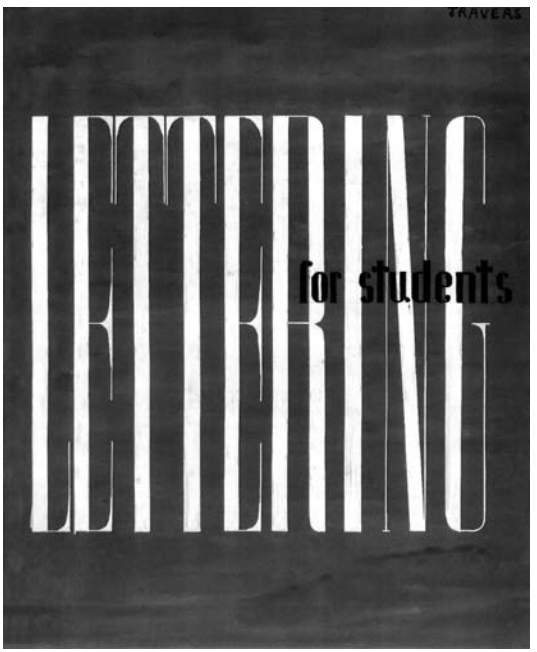
Chapter 2

The neglect of drawing

The decline in the teaching of drawing seems to be an emotive subject – in particular for those of my generation. The distress they feel is evident when noticing that even teachers of art no longer seem to be able to draw themselves, much less to value the skill to encourage their pupils.

Eva Travers feels the decline of drawing is a tragedy, and that it was a deliberate political decision to destroy what was seen as élitism. Now in her 80s, she was a student at the Central School of Arts and Crafts at the age of fifteen just before the Second World War. She believes that she is still the youngest ever student in the fine art department, saying: 'Lucian Freud came in the next year but he was sixteen. Only the silversmiths were younger. They started their apprenticeship downstairs in the basement at thirteen'. (The silversmith and designer H G Murphy was Principal at that time.)



Lettering by Eva Travers, aged 15, in 1938. She was told that it was good enough for a rough.

She regrets the passing of the rigour of the type of training she had. This small piece of her lettering illustrates the standard expected even of someone so young. She remembers the comment about the piece: 'That will do as a rough'. Two of the tutors at that time were John Farleigh and John Skeaping. They were two of the contemporary masters (along with Edward Seago) whose work I most admired and whose books I saved up for in my student days. Looking at those books now, over half a century later, it is not only the reproductions of their work but what they wrote that is of interest.

John Farleigh, who was renowned for his wood engravings, divided drawing into two main categories, saying in *Fifteen Craftsmen on their*

Crafts which he edited in 1945, published by The Sylvan Press: 'We have on one hand the drawing that can be called a record, and on the other that which can be called the expression of an idea. . . . When I say a drawing is good I mean that it falls into the category of creative drawing; that is, it has something to tell me beyond my ordinary visual experience. It makes me see something inwardly – it has a pleasurable and disturbing quality. We call it aesthetic excitement'.

John Skeaping explained in his 1940 book, *Animal Drawing*, in the Studio How to do it Series: 'There are three processes involved in making a drawing. Firstly, to see. Secondly, to think about what is seen. Thirdly, to draw the result of thought'. He believed that''The teacher's job is to stimulate the pupil to use his own intelligence, and to think things out for himself. This is the most any teacher can do, the rest must come from the pupil'.

Observation and drawing go together to develop visual memory. Encouragement is vital for the talented as well as the less talented as drawing, or the skill of draughtsmanship, can always be improved or even acquired through good teaching and practice. As Skeaping said: 'The best preparatory step in learning to draw is – TO DRAW'.

Leo Duff, editor of *Drawing – the Process,* published by Intellect in 2005, writes in the journal *IQ* of its relevance to designers: 'Each and every drawing that is made has a purpose. . . . From process to purpose is not such a long journey in drawing, it meanders through practice and perseverance, dashes through inspiration and expression and will lead to the destination, be it design of a coat, a car, a table lamp, [dare I add 'or an inscription'] or a piece of art work to absorb at pleasure. The artist and designer need the journey, and there are no short cuts'.

Rob Hillier adds to the discussion: 'During the past 22 years I have taught graphic design at National Diploma, Foundation, Undergraduate and Postgraduate levels. During the early 1970s a decision was made within the art school sector to abandon the teaching of traditional drawing skills in favour of conceptually driven teaching and learning. My philosophy to teaching has always been to encourage the students to communicate ideas in a clear and appropriate manner and to draw. The idea should always dictate form, and in order to do so, the ability to draw is extremely helpful.

'When I began teaching design, analogue technology was still being used as the primary method of design production. There were various stages to this process (as there still are). In publishing, for example, when designing an illustrated children's book the designer would

visualise each spread, commission photographers and illustrators in order to realise the vision, commission typesetters to produce the text and then paste up each spread. These layouts were then sent to the printers for reproduction. This process depended on the designer having good drawing skills in order to visualise the spread and commission others. Even though art schools had rejected drawing the skill within a design context was essential.

'With the advent of digital technology the designer became more personally responsible because the computer had the capability to deal with each production stage almost simultaneously. The process became democratic. The designer could do everything. Anyone could design. This led to a further rejection of traditional skills such as life drawing, hand-rendered typography and calligraphy, in order to concentrate on the students becoming computer literate. I would argue that the loss of such skills has had a deleterious effect on both the visual and conceptual development of contemporary graphic design practice. Design had become less conceptual and more technologically driven. Form was too often dictating the idea.'

Those who have spent their lives as designers, and those who seek to employ young designers, attest to the value of being able to draw. Ray Markwick believes that 'Real creative thinking happens directly between the brain and the end of your fingers'. He was trained as a sculptor and painter but had a successful career culminating in art editor for a major national newspaper. He added that the computer even slows some things down, and that drawing directly is much quicker. He also echoed what I have heard elsewhere, that at times the pencil alone guides you to the solution that you are searching for.

Paul Green-Armytage's background was in architecture, and design for exhibitions and television. For the past 30 years he has been senior lecturer in the department of design at Curtin University, Western Australia. He adds this comment to the discussion: 'My feelings here are mixed. I am philosophically convinced of the value of drawing while also recognising that you do not have to be good at drawing to be a good designer. I remember my shock at seeing a student project by one of my colleagues when I was working in an architect's office. The ideas were brilliant but the drafting was barely at first-year level. The person in question went on to be extremely successful in his own practice. I am sure that drawing helps a designer to generate and develop ideas. I also believe in drawing as a means of developing the ability to see.

'Photography is fine but if you really want to see something you have to draw it; and I believe in the value of seeing. The lack of drawing in

my architecture course is something I very much regret; my drawing skills are reasonable but were not developed very far.'

Not everyone has always agreed, as Simon Rees, a designer/illustrator, reports: 'I think that twenty years ago, when I was at college, there was a greater emphasis generally on the ability to draw and render rather than simply operate machinery. Although, even then, I remember a typography lecturer saying that being able to draw was a disadvantage to a designer as you would spend far too much time rendering your ideas rather than putting them into practice. I was mortified by this sentiment even then, and I still am twenty years later!' He added, however, a touch of realism when talking about the speed that designers are expected to deliver work today: 'Sometimes, what cannot be done by technology is ignored just because there is no time (or seen to be no time) to do it by hand'.

What do those who employ designers have to say? My good friends the Blacker family, who have designed this and many of my books for the past twenty years, have found it very difficult to locate suitable graduates, to work in their studio, who are skilled in both drawing and computers. A few years ago they attended several London graduate shows and failed to find suitable young designers. They eventually found two young men from a modest art school in northern England. Their comments about applicants for design jobs in their studio which specialises predominately in high-quality illustrated books, were that they fell into different groups:

1 Those trained as 'designers' but who cannot draw.
2 Those who are computer literate but hopeless designers, with no idea of presenting type or evaluating letter forms.
3 Those who have no feel for books and have no knowledge of typographical style.

The effects on letterforms

For views on how the neglect of drawing affects all aspects of design, here are two views on the particular effects on the design of letterforms. First, Paul Antonio who came from the West Indies, was already an accomplished calligrapher. He wanted to develop and widen his skills not only into the practicalities of his craft but into all aspects of letterforms. He now researches the history and making of letters from cuneiform and hieroglyphs right through to his particular speciality, copperplate. He writes:

'The situation of art and art teaching in this country has changed

quite a lot in the last 8 years. I cannot begin to imagine how much it has changed in the past 50 years.

'I was fortunate to have attended Reigate School of Art and Design when it was still a proper art school with all the necessary departments and the ability to move between areas and work on interdisciplinary projects. We were taught all sorts of things from drawing with pencils to drawing with brushes to quill cutting and leaf gilding. We also had to study heraldry and that was a good practice in looking and observing.

'The fields of calligraphy, gilding and heraldic painting forced us to work in many media and gave us scope to do many things. Things which the more one was able to do the more chance one had of earning a living. At the time I went there there was already this leaning towards the computer skills, in the other parts of the school, and our department was being encouraged to follow suit! Fortunately we were in the 2nd year by that time and so were allowed to follow the original "art school" system.

'So where is it going wrong? There are a number of issues which have arisen due to the changes instigated by the government. In the art school arena the lack of specific drawing skills and techniques has a lot to be blamed for. Students cannot seem to handle a pencil any longer, far less a pen, don't even dare mention a quill. It is all about computer technology. This is not restricted to art students! On the typography course for which I am a visiting lecturer, the students head straight for the computer to generate their type. This is an unfortunate situation. My suggestion to them is at least draw the bare bones of the thing by hand, scan that in and deal with the manipulation from there. If students had more training in the basic construction of letterforms, let's say, then there is less need to spend more time on a computer fixing problems. If you start off with a letter which is good there is less to do.

'Computer Aided Design should be just that – computer AIDED! All too often students do not know how to use non-computer tools. I have seen too many students, who are now professional designers, not be able to use a drawing board. Rulers, T-squares, set squares, French curves – the stuff of magic!

'It seems they do not know that the computer is not the easiest way sometimes.

'A poor understanding of drawing is a major issue. Drawing is not about reproducing what is in front of you, it is about looking and learning. Sensing what is there, looking for nuances and trying to find a way to represent them accurately. The skill one develops is not

something which is isolated and specific to drawing! It is something which can be applied across the board. This eye for details, for the ability to be meticulous, is sorely lacking in many fields. Drawing also teaches patience, something which can be added to the long list of necessary attributes designers must have.

'There must also be a need to learn, to want to learn, to love to learn. If one lacks these parts of the whole of learning there is little hope. This only leads to mediocrity!'

Goodbye analogue, hello digital!

Michael Harvey trained originally as an engineering draughtsman, before reading Eric Gill's autobiography and being inspired to become a letter cutter. He honed his skills while working as Reynold Stone's assistant in the 1950s, then established his own studio working on book jackets and other letterform designs as well as ever-increasingly prestigious commissions for inscriptions. Today he is equally well known and respected for his typefaces. He traces the influence of drawing from the Industrial Revolution to the present day.

'This facile title [*Goodbye analogue, hello digital*] obscures deeper facts. For analogue read drawing, the drawing of letterforms, type characters, now assumed to be a redundant skill since they can now, with software such as Fontographer and FontLab, be created digitally. Looking back before the digital revolution, to the nineteenth-century's Industrial Revolution and earlier, we can trace the crucial role of drawing as hand production changed to mass production. The same is true in today's digital revolution.

'With the rejection of Gothic architecture at the Renaissance and the passion for reviving classical styles, architects' drawings – plans, elevations, details of columns and capitals – were essential in the construction of public buildings and villas for the wealthy. The craftsmanship of stonemasons and carvers, which had shaped earlier buildings without the need for detailed drawings, was now harnessed by visionary architects whose drawings specified every aspect of their buildings. Likewise, in the nineteenth century, as iron and steel became a major construction material in the building of ships, locomotives and bridges, the work of the engineering draughtsman was a fundamental part of industrial production. Without their precisely detailed scale drawings the industrial revolution would never have been possible.

'In the twentieth century a drawing office was part of every large manufacturing company. Photographs show the typical drawing office filled with rows of drawing boards, the draughtsmen typically wearing

Harris tweed jackets with leather patches to protect elbows, apart from pencils their only tools a ruler, compasses, T-square and set-square. Every nut, bolt, flange, required a detail drawing, with sub-assembly and assembly drawings to ensure that the products met the company's specification. Whether the company made automobiles, aircraft or typefaces, the same need for precise drawings applied. Every stroke, serif, terminal, required an exact, large-scale outline drawing of each character in a type family.

'In the miniature world of type, the manufacturing process moved from hand-cut punches for each character (and each size of character) to making patterns allowing adjustable pantographic punchcutting machines to cut punches in a range of sizes. Drawings reconstructed the forms originating in the long process of translating written letters into steel punches fashioned by the engraving tools, steady hands, knowledgeable eyes, of engravers. From the woodcut-printed exemplars of fifteenth-century writing masters to the typefaces of the eighteenth century, two analogue skills, the scribe's and the engraver's went hand-in-hand. The individual letters of the roman du roi of 1702 were engraved on copper plates, on a field divided into a grid of 2,304 squares, exact renderings for the punchcutter to follow – each plate as detailed and precise as any architectural drawing of the period.

'The exacting kind of work described above was not the only kind required. Sketches preceded 'finished' production drawings, where the designer, a quite recent term in the history of manufacturing, sought answers, looked for forms that worked, whether for a yacht, an Austin Seven or a type letter, a functional solution that pleased the eye. If developing a typeface this process could draw upon the repertory of Western scripts, or seek some novel interpretation for a particular purpose. One could say that these two methods of drawing show the opposite ends of the draughtsman's art: seeking form through trial and error sketching, then applying the precision required by manufacture to make production drawings.

'The working practices of major twentieth-century type designers show a variety of approaches to drawing; the alphabets of Jan van Krimpen, apparently drawn without any sign of preliminary sketches, looking as if the pristine black roman capitals, lowercase and italic characters had arrived on paper direct from his brain without the intervention of hand, ink, brush or pen being involved. Re-touching is rarely found on van Krimpen's drawings. P H Rädisch, one of the few remaining punchcutters, worked from these drawings under van Krimpen's direction at the Enschedé foundry in Haarlem. Jan van

Krimpen was also an accomplished calligrapher. At the other extreme, Georg Trump's preliminary sketches show many scribbles, alternative forms, as he struggled to find shapes that pleased him. Trump's preliminary drawings show the type designer as an inventor, calling to mind the hoary image of scribbles on the backs of envelopes, examples of hand and head – right brain and left brain – working in unison. As F R Wilson has said in *The Hand*, drawing (among other manual skills) develops a part of the brain untouched by any other activity. The pencil is a thinking tool. Trump's finished drawings, which showed much re-touching, provided models for punchcutters at the Weber foundry. Both Trump and van Krimpen were employees of their respective foundries.

'Hermann Zapf, a consummate artist with pen and brush, was also an in-house designer, originally for the Stempel foundry where puchcutters engraved his designs. But his Hunt Roman was a freelance design for the Hunt Botanical Library at the Carnegie Institute in Pittsburgh. Here Zapf used his calligraphic skill in drawing letters for the making of brass patterns which enabled a punchcutting machine to produce a face in three weights. Frederic Goudy's drawings for typefaces, which he produced himself via a pattern-cutter linked to a matrix-engraving machine, show not only skill but a deep knowledge of type forms. In this he has much in common with van Krimpen and Zapf, and all were skilled at calligraphy, while Trump benefited from an art education that included drawing and painting as well as calligraphy.

'Eric Gill worked with Monotype and other foundries, although not directly employed by them. He was an early example of a designer working closely with a company to supply drawings which the in-house draughtsmen would redraw to suit their manufacturing processes. While not being strictly type drawings, Gill's beautifully executed alphabets for Perpetua show his mastery of drawing. Monotype's draughtsmen redrew his freehand drawings at larger sizes suiting their type-casting system. A comparison of Gill's and the company's drawings show many subtle differences.

'All these designers drew on their skills in drawing and writing letters, plus in varying degrees a familiarity with typographic forms and norms originating from the beginnings of movable type and the handskills of punchcutters. Type designers working today rarely have such skills, yet a designer with an understanding of typographic forms and history, for example Gerard Unger, may by-pass the drawing stage and create fonts on a computer screen. But without that background in type, or writing with a broad-edged pen, or hand-shaping letters in

some way a would-be digital designer of digital type would lack any understanding of letterforms and the hand skills that shaped them. He or she would not be able to guide the infinitely flexible bézier curves of FontLab's outlines to create acceptable type characters. Furthermore, the individual quality a hand gives to a drawn or written letterform will be missing if digital methods replace analogue. A scanned drawing is often the basis of a digital character. It is our good fortune that the individual quality in every letterform drawn by Eric Gill for Perpetua was largely retained through Monotype's draughtsmen's sympathetic recreation of his characters, first as metal type, then in film and finally in digital format.

'So, although my title may be facile, a closer look at what happens when skilled hands, informed eyes and minds are involved in making letters in the digital age, shows that far from the new technology replacing the old analogue skills, both need to be intimately linked if worthwhile designs are to be achieved. Without these analogue creations how can we create worthwhile forms digitally? The computer is nothing more than a smart tool with little to offer the type designer other than speed. If we replace the pencil and back of an envelope with a digital graphics tablet and stylus to explore ideas we are still drawing but using different media. Hand and mind are still engaged. The contribution of computers to the forms of letters is nil.'

A final word on the subject of drawing comes from the editorial of the Scottish publication *Artwork*, September/October 2006: 'Way back in the 1970s, art schools in England started to abandon life drawing and, for a while, the use of photography allied to painting became the vogue. At that time Scottish art schools did not follow suit and their adherence to one of the traditional ways of training painters [*and designers?*] seemed to be vindicated when the Royal College of Art in London re-introduced life drawing towards the end of the last century'.

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Chapter 3

Changes in the training of designers

Many changes have taken place in the training of designers in the past half century – some good but others perhaps counter-productive. Several issues stand out – first the neglect of drawing as a skill which surely is a prerequisite for a designer in any field of work and is discussed in Chapter 2. Secondly, with the introduction of a degree in art or design, most students are removed for far longer from the practicalities and realities of their chosen career. Then there is the influence of technology on the training of students and in design in general. Everyone I speak to, designers themselves, those who employ designers, those who teach designers, not forgetting the students themselves, have strong and sometimes varying views that all deserve to be heard.

Other arguments have raged just as vehemently over the years, such as the age-old problem, is it even possible to teach creativity? Another issue concerns what is the most suitable environment for the discipline of design within the educational system. There also seems to have been a fundamental difference, for many years, between those who train designers and those who employ them. In 1960, an article in *Motif*, by Maurice de Sausmarez, Head of the Department of Fine Art at Hornsey College of Art, contained this telling remark: 'It has long been known that the better commercial agencies and design studios prefer their recruits to have escaped an art-school training. One of the reasons is that commercial design as taught in many schools has succeeded in acquiring the sanctity of fine art'.

In 1972 Patrick Wallis Burke wrote: 'During the last decade, graphic design and some of the other industrial design disciplines have begun to move away from the applied arts toward the applied sciences. In graphic design there is now a vigorous minority who are trying to make the business more scientific. Certainly it could afford to be more rational, but can it ever become an applied science? And even if it tried, would not the scientific élite regard it as a suspect scientific activity when so many of its findings can only be based upon intuition or plausible reasoning?

'Ever since the various industrial design professions came into existence there seems to have been a sort of tug-of-war between the arts and science for their control. In Britain, evidence of this struggle is reflected in the various educational systems that have been set up to teach them. Some authorities were clear that design should be taught in art schools. Other authorities seem just as sure that they should be taught in the polytechnics. Few authorities seem willing, at present, to consider autonomous design institutions as an alternative.'

Elwyn Blacker, who has spent a long career involved in all aspects of publishing, typography and book design, trained at Cardiff just before the Second World War. He explains how he profited when the students and, more importantly, the tutors from the Chelsea College of Art were evacuated to Wales. His war service as a navigator in the RAF further enhanced his skills – the meticulous draughtsmanship and advanced mathematics needed for that job complemented the creativity of his student years with much-needed discipline.

He comments that, in the years that followed, the complaint was that there was too little technical training and now perhaps there is too much, adding: 'Moreover, when we both studied, such subjects as history of art and architecture were part of the syllabus from the beginning – but not so today apparently. None of those young designers that we interviewed for a place in our studio had knowledge of, or interest in, the history of art'.

Three generations of the Blacker family have now trained and work as designers. Together their experiences span well over 50 years, reflecting changes in the intervening years. Simon Blacker trained between 1976 and 1979. He says that 'The course was rather too practical with not enough emphasis on developing ideas and concepts. We had a good grounding in the history of art and design but we did not get any guidance on current trends, domestic or international. We missed what was taking place in the US, Holland and Germany. Students today have to learn a great deal more of the technical side. When I was at college we had access to typesetters, scanner operators, and film planners. Now designers are responsible for all these areas, the printers just print what they are given. Over the last ten years I have had to learn image manipulation, colour correction and creation of press quality PDFs'.

Elwyn's grandson, Alan, is a recent graduate of product design. He has said that the projects put forward in his course were more directed towards marks and a degree than towards developing potential.

Back to Elwyn's comment about the lack of knowledge of the history

of art, craft or design. Considering that history can provide inspiration and solutions to many problems, it is rather a deprivation. Is the student's lack of knowledge their own fault or is it something else? Perhaps it is not considered worth while to teach design students about the past, or do their tutors not consider history relevant? Recently, I went with a young product design student to visit an older designer in his one-man furniture workshop. She found what he had to say interesting but it was his extensive library of books on the history of his and other crafts that fascinated her. 'We have nothing like this in our university library. May I come back and consult your library when I start to prepare my final dissertation?' she asked.

An apprenticeship, a degree or something in between

So, what, out of the many options, would be the ideal training for a designer? How can one even define the work and, therefore, the skills needed by any particular typical designer, when so many levels and specialities are involved and come under this umbrella term? Craftsmen have always valued the apprentice system. As Lida Cardozo says in that invaluable book *Apprenticeship, the Necessity of Learning by Doing*: 'With apprenticeship we are talking about the accumulated knowledge of the past being handed down, and being handed down within a working environment. Learning is done on a real job: it's quite different from an art school, where what the student does is only there to be graded in the end'.

She made another comment that is relevant to this argument, many years ago when she contributed to my book, *The Practical Guide to Lettering.* Illustrating the point by showing pages of preliminary sketches made by her for her first assignment in David Kindersley's Workshop, she said they demonstrated that she was straight out of art school: 'It shows all the possibilities spreading over the whole surface rather than the deep digging you will do later on'.

Maybe this kind of knowledge and these skills will only develop on the job. However, today after three or four expensive years of art school or university the students surely consider themselves adequately qualified for real work. They will usually have had extensive training in computer techniques that may take much of the drudgery out of studio work, but at the same time can disguise many things (including lack of talent). They may have had considerable acclaim during this time, but are they likely to be much more use in a studio than someone who has come in at a much earlier stage and learned on the job? At an age where their peers may be earning a decent salary, these graduates, perhaps saddled by considerable debt, have similar expectations.

Grayson Perry expressed strong views on the subject in an article entitled 'Stop art schools turning into posh white ghettos', in *The Times* on 28 February 2007, saying: 'Students, or nowadays "customers", of universities, particularly from poorer backgrounds, want to know that their investment in education is going to lead to a lucrative job. Many art courses, no matter how glossy the brochure, cannot guarantee that'.

Are we perhaps training too many unsuitable candidates and leaving out many who are frightened off by the thought of a prolonged period of academic work. It has to be questioned whether a 'one size fits all' degree is the best way forward for training all designers. The highly talented, motivated and determined will always succeed but too many promising designers are lost because their expectations (not only financial) are not met. Other changes in the way students are trained would also affect their attitudes to work. That concept has altered with far more emphasis put on individual creativity, and far less on the tedious but necessary subject of considering the client's needs and views.

Before leaving the subject of apprenticeship, its demise can and should be considered within the wider sociological and economic shifts today. John Sassoon, who looks at the situation from a different point of view, adds that 'Apprenticeship has its roots in continuity. It is, therefore, particularly vulnerable to modern economic practices which include the buying and selling of whole industries, or the elimination of small and medium sized firms. The supreme value of an apprenticeship lay in the training of craftsmen, in the quality of the processes as well as the aims of production, and in the lifestyle and attainable ambitions it provided for the apprentices. The college (by which apprenticeship has been replaced) is no substitute, though the professional and social mobility they offer may well be more valued'.

This brings to mind a particularly talented young designer working his way up in a prestigious design unit. His parents persuaded him that no one stayed in their first job for long. He obeyed them and left. Maybe he got a rise in salary, but he later admitted the work was far more limited. Had he stayed in his original job he would probably have been a partner by now, with a good job for life – however unfashionable that might seem to his parents.

The changing face of design education

Neil Barnett, Course Director, FdA Design for Graphic Communication, London College of Communication, contributes his thoughts:

'It's twenty years since I began my Graphic Design education at Central St Martin's. There were sixty-five of us on the course. We all

had our photograph taken on the first day by a photography technician on a medium format camera and were shown round the studio and facilities. We were each allotted our own desk, chair and storage drawer in a wall of plan chests.

'Projects were set via briefs that were typed and then photocopied on to paper and our outcomes or mock-ups were discussed with tutors and fellow students at critiques at the end of each project. If one of these coincided with a Friday afternoon, it was "all down the pub" afterwards, students and tutors alike.

'As we moved into the second and third year, final outcomes were executed in ever more professional ways. Hours were spent under the hot lights of the PMT (photo mechanical transfer) camera, exposing and then developing bromides that would be stuck on to artwork that was pasted on to board and then copied or reproduced as finished pieces. We enjoyed limited access to the new "Apple Mac" with Mac Paint and Pagemaker programmes, again pasting up our print-outs from the PostScript printer. In the second year of the course "work placements" were the topic of conversation, but these seemed only to be given out to a small, select, group of students who were deemed "ready" by the tutors. I wasn't going to wait to find out if I was amongst the lucky few, so I organised my own two weeks at Ian Logan Design, a well respected packaging company.

'At the end of the third year I was offered a job at a large international design agency, Addison, and so began my venture into the world of corporate design, logos, strategy and implementation.

'The students I greeted at the beginning of this academic year at LCC (London College of Communication) have such a different experience awaiting them. Over one hundred and thirty of them make up the first year cohort, which in addition to the one hundred in the second year, make this FdA in Design for Graphic Communication a very large course indeed. The students' photographs were taken *in situ* on hand-held digital cameras, as they completed enrolment formalities.

'There are no individual spaces for students to customise or call their own, just a constantly rotating "hot desk" environment in a large studio space. Facilities for computing consist of open access rooms with technical support staff and three teaching computer rooms, where students have opportunities to acquire skills in up to eight software packages. The closest of these rooms is one floor below the teaching studio.

'The computer has had a pervasive effect on everyone's life, from student to practising designer. At LCC briefs can be downloaded from "Blackboard", a virtual intranet site that also allows students access to

web links, discussion boards and a plethora of constantly updateable information, all vital tools in developing community and communication. The course's community, which was formed exclusively as a result of the studio-based learning and teaching within college, can now take place outside the physical studio environment and outside its ever-shrinking timetable, thanks to technology! But is it really technology that's driving the changes in learning and teaching? Or is it the ever-increasing pace of life that technology is responding to, in order to help us cope with the time in which we live?

'It seems to me that the educational model that we still operate within is a long way behind the state of contemporary design practice, where open plan spaces allow designers face-to-face communication with each other, combined with shared computer access via networked and server-driven systems. The separation of technology from the community learning and interaction that takes place within the studio is a division that no longer serves our students for preparation in the world of contemporary design practice.

'The computer is the tool of our time, just as phototypesetting and letterpress were the technology of previous generations and it is only through better understanding and opportunity to practise within the studio environment that students will be able to integrate their thinking, application and graphic communication skills.'

Rob Hillier, now senior lecturer at the Norwich School of Art and Design, adds a similar story: 'Since I began teaching in 1984 cohort numbers have increased every year. However, despite increasing pressure from management, I have always managed to operate a studio system approach to teaching graphic design. The first group I taught at Epsom numbered 18 and my current group this year at Norwich is 110. This increase in numbers has been experienced across the entire art and design higher education sector (but is particularly marked within the graphic design area). In order to accommodate such numbers various institutions have adopted new ways of utilising space. The most popular of these schemes have been "hot-desking" coupled with "e-learning". These systems have been appropriated from universities and used at the expense of traditional studio art and design teaching. This I would argue has had a damaging effect on contemporary design practice in two ways. Firstly, because students are working in isolation and not learning from each other, experiences such as debate, the exchange of ideas and competition, as the studio system allows, is limited. Secondly, because the design industry cannot support the massive increase in numbers, more students are graduating with no hope of working within the industry.'

Having had a far from orthodox training and career path myself (chronicled in Part 3) and learned most of the necessary skills 'on the job', I wish that the present system could be more flexible. Susannah Rees reports that she had a two-year foundation course, but admits that it was a long time ago. An experienced graphic designer, she says she still benefits from the extensive drawing lessons and wide understanding of more art disciplines that she received from that time. She found the tutoring was varied in her degree course and that professional work bore no resemblance to the kind of projects they were given at university.

She adds: 'The degree shows now are full of work that on the surface looks very polished. On closer inspection the ideas are not new. The computer is a tool like anything else but is sometimes used to mask the lack of a good idea. We are wowed by the brightness of colour, the clever technical use of certain software. I consider myself to be lucky to have crossed the divide between "cutting and sticking" and the advent of the Mac. I use both techniques for my work'.

She returned to academic study after some ten years and reports that she chose a hand-drawn topic to research for her MA, combining it with new techniques to create the final piece. 'Learning research techniques as a mature student opened up the subject of graphic design for me. I am exploring new areas of communication and using knowledge and understanding from experiences that I had not connected to graphic design before, also I can teach more confidently now.' She has now returned to freelance work, teaching design part-time to students on a Btec course which she describes as a pre-foundational course with a mixed ability intake. This route might catch some who would otherwise find a training unobtainable. It concentrates on a basic understanding of typography and graphics, leading some towards a degree, some an apprenticeship or to work their way up in the workplace.

Other students tell me of the advantage of courses that include placement in industry for one year. When this entails an extra year, making the degree course four years altogether, it can place an even greater financial burden on young people. There is of course the HND (Higher National Diploma) which if well taught is a good qualification, is vocational and usually includes realistic projects.

Not much seems to have changed since F H K Henrion wrote in 1949: 'The inadequacy of training in the *craft* of design is a major problem – the commercial art training of the average art student bears little or no relation to the type of work he will be expected to do. One

only has to see the standard selection of the average art students' specimens to realise this. Design is not merely a question of a trained aptitude for drawing, that is only the beginning. To be able to grasp and assess the problem, to be a craftsman in the correct use of the designers' equipment, to have a wide knowledge of the mechanics of reproduction, to appreciate the significance of market psychology, these are but a few of the necessary qualifications of the successful designer'.

There are many different visions for the future of design education. Paul Green-Armytage relates how if he were a lot younger he could imagine trying to realise a vision for the future of design education which he once put to his colleagues. He was inspired by a passage from Terry Eagleton's book *Literary Theory, An Introduction*. Eagleton was discussing the rise of English as an academic discipline between the wars, and particularly looks back at the contributions of F R Leavis and his circle in between the two world wars: 'F R Leavis had migrated to English from history. His student, Q D Roth, drew in her work of psychology and cultural anthropology. I A Richards had been trained in mental and moral sciences. In fashioning English into a serious discipline, these men and women blasted apart the assumptions of the pre-war upper-class generation. No subsequent movement within English studies has come near to recapturing the courage and radicalism of their stand. In the early 1920s it was desperately unclear why English was worth studying at all; by the early 1930s it had become a question of why it was worth wasting your time on anything else. English was not only a subject of studying, but the supremely civilising pursuit'.

Paul continued: 'It struck me that the discipline of Design could be transformed in a similar way but it could go further: it can also offer the skills to materially affect our world for the better. However, Design still bears the mark of its origins as a technical college subject and attracts people who prefer to play computer games rather than to think, read or write. Design students prefer practice to theory. There is a movement internationally to develop Design as a true university discipline but it is an indication of how far we have to go that I am the only member of staff in our department since the foundation of the institution to have obtained a Ph D while being employed at Curtin. The least popular subject in our course is "Design in Context", which involves lectures and tutorial discussions and which requires students to research and write essays. Students are much more interested in the "How" questions than in the "Why, and for whom", questions.'

Paul added: 'A three-year university course is not long enough to produce the kind of design graduate that I would hope to see. Students

should be introduced to psychology, sociology and cultural studies (semiotics, etc!) as well as the how-to aspects of design.'

As it happens, I was recently given a copy of the reading list a talented and experienced designer was expected to work on before commencing a high-level post-graduate design course. It seemed to cover the subjects Paul suggested plus quite a few more. All this confirms what I believe, that there is not just one solution to the training of a designer. Moreover, there will always be a need for different levels of designers.

The effects of technology on design education

Looking more specifically at the effect of technology, Ian Mackenzie Kerr, who sadly died recently, started by describing what it was like to be a typography student when he started out: 'By the early 1980s everything had changed. Typographic design was considered a rather genteel occupation in my student days, at the Royal College of Art in the mid-1950s. The committed typographers were the ones who brushed their hair, had clean hands and occasionally wore bow ties. Their tools were pencils, rulers, layout pads and they carried well thumbed sheets of type specimens carefully arranged in order. They mostly kept regular hours and seldom got drunk at parties.'

During the transition to the technological age many who had trained in the pre-war craft of typography were going to find it difficult to adapt. Not Ian, as it happens, who had a long and distinguished career as a book designer. He embraced new technology, writing in *Typography and Computers 2*: 'Rough ideas for jackets which would once have meant hours of painstaking work can now be tried out and discarded in a fraction of the time with an image on the screen and a printed record of each stage. For the more traditional typographer there was a chance to experiment with nuances of letter spacing and the balancing of type sizes up until the last possible moment'. There was a word of warning: 'The means may have changed but the challenges remain, and the problems faced by typographers don't go away. Not all of them can be solved by machine, however sophisticated, although solutions may be reached more quickly'.

David Jury, head of Graphic Design at Colchester Institute, writes about education and craft during the last decade of the twentieth century: 'The last ten years in education have seen the best (and, admittedly, probably the most expensive) system of design education in the world decimated by three key factors: free market principles, severe financial cuts and the mismanagement of digital technology.

'In an effort to make design courses more efficient, specialist studio facilities (graphic, fashion, product design, etc) and workshops such as photography and print-making, came under serious threat. Indeed, I know that many colleges cut these human- and technical-intensive activities out of the curriculum. Measuring, drawing, cutting, creasing, folding, tearing, gluing, stitching, binding, mixing, printing . . . it is astonishing that these basic coordinative skills, and the understanding they bring to the basic materials we must all use, were so close to being entirely wiped from the experience of learning to design. How could such a ludicrous situation have come about?

'For those educated before the digital revolution, the college studio ethos was one of excitement, experiment and argument. It was where everything happened. Designing was an activity that was highly visible. It required space, time and care. There was plenty of opportunity for everyone to see what everyone else was doing and, naturally, everyone wanted to ask questions, criticise and test arguments. To enable these basic requirements to take place, each student had his or her own work space and access to specialist workshops on a "drop-in" basis. In this way, college was more conducive to the nature and practical requirements of designing than anywhere else, and so the college studio became a genuine second "home", a place where it felt quite natural to spend every week-day plus most evenings, and to do so willingly.

'The digital revolution evolved at the same time as art and design education began to be radically cut back. [Coincidence or opportunism?] Any designer aged over thirty will be astonished to hear that full-time design education today requires just 12 to 14 hours of tutor contact time per week, of which, perhaps, just six hours (one day) will usually be spent in the studio. (Many colleges have lost studio space altogether and just require the students to attend tutorial sessions once a week.) Compare this to my first teaching post where my HND course in 1980, required 34 taught hours a week: four studio-based days, one day shared between drawing and contextual studies, plus two evening classes.

'If you are wondering how this could have happened without protest then you must remember that whilst this was going on the nature of Higher Education was dramatically changing. It became a free market. Colleges and universities found themselves in a situation where they had to recruit ever-increasing numbers of students – so many, in fact, that today every Foundation student seeking a place on a degree course in art and design will surely find one. Yes, regardless of ability! The reason no one complains is because no one is willing to suggest, not for one instant, that their degree course is one of those caught up in the

spiral of increasing numbers of students whilst cutting back on teacher contact-time for fear that such criticism will adversely affect their ability to hit recruitment targets. Instead, we all fudge and fidget.

'The real world – the one where real things are made, held and used – needs to be brought back into the studio through projects that require a knowledge of materials and the hand-made skills to make such materials into a fully functioning object. For the typographer, real things are still predominantly made from papers available with a multitude of surfaces, textures, colours and weights, and a myriad of specialist printing inks and finishes. The printing press may be driven by digital technology, but, just like the designer's Mac, it is capable of infinite subtlety – if the typographer only knows what to ask for. And there is no better place to discover the infinite possibilities of photography and print than in the college photographic and print-making workshops. If the student is lucky there will also be wood, metal and plastics, as well as ceramics and glass workshops.

'Craft areas within studios – areas that demonstrate the importance of making "things" that can, in turn, demonstrate an object's value and its effectiveness for purpose, are, thank goodness, also making a come-back. The notion that the computer can do it all was always a naive dream of the opportunist college administrator who hoped to replace photographic studios, darkrooms and specialist lecturers with a ten-pack of PhotoShop. Next in line was the print-making workshop and any other "workshop" where students, apparently, get their hands dirty.

'So, the salvation of the studio ethos, will, and is, being achieved by giving those craft areas, which were once considered to be merely "supporting", a more central function. Computer-based work can be done by students at home. (It is no longer the "magic" box, but rather the workhorse it was always intended to be.) What brings students back into college, even outside taught hours, are the craft workshops that offer a learning experience that can not be achieved anywhere else. There is a new desire to structure timetables, modules and projects so that emphasis is placed upon creative endeavour and a knowledge of materials through making, sharing and doing. And, as long as the student recognises these as being driven from the graphic design studio, the result will be high levels of commitment, more peer involvement and work with which the student can feel is a more intimate statement of their intent.'

David Jury ends on a positive note, and I would like to add to that. It seems to me that everything goes in cycles. Look at what has happened in lettering. The real decline set in with the introduction of Letraset which was widely in use from the early 1960s. As David Jury said in

Computers and Typography 2: 'In many ways, with its flexibility of application, relative cheapness and its democratising influence, Letraset had many of the characteristics which computer technology would bring twenty years later'. Together they made hand lettering redundant – or so it was thought. Here we are over twenty years further on and what has happened? Suddenly those who commissioned high-quality graphics realised that the sameness of perfect computer-generated letters somehow lacked something – subtlety, perhaps, the beauty of irregularities and individuality. They looked around for the few remaining professional letterers and started a resurgence in hand-drawn work – and very expensive that is today.

Several of the contributors have mentioned the sameness of young people's work saying that they learn to press certain buttons and continue to press the same ones all the time. Let us hope that when the realisation dawns that computer programs cannot do everything, there will be enough people around to instill some of the benefits of the older typographic traditions (as well as the benefits of the occasional hand-drawn illustrations).

Will the same thing be happening with other areas of design? It seems so. In *The Times* of 21 July 2006 there is an article beginning: 'Eighty years after Walt Disney put pen to paper to create Mickey Mouse, his studio has abandoned hand-drawn animation'. The comments that long-serving employees had to say about this include: 'Animators using hand drawing were becoming a rare or extinct breed' and 'It's a talent. It's a skill. Once it's gone it's gone'. On the difference between computer-generated imagery and hand-drawn versions Tom Hignite said: 'It's not better or worse – but the advantage of hand drawn imagery is that it looks more human, more artistic. The human touch is so evident'.

Paul Green-Armytage considers computers to be a mixed blessing saying: 'I was lucky to have a short conversation with the very eminent designer Milton Glaser. While being immensely successful, Glaser also likes to teach. "I teach them to think." He said of computers that they are not fuzzy enough. I really like that. Computers make design work look too good too soon so that there is little motivation for pushing ideas further. Rough pencil sketches can suggest different directions and can lead to more radical solutions. Glaser also suggested that computers tend to turn designers into people who assemble from what already exists rather than people who develop new ideas.

'The Internet has made a new form of plagiarism very easy. I have been depressed by the way students will download images from the

Internet and incorporate them into their own designs. On the other hand, computers can speed things up enormously. One of our most capable graduates pointed out that the computer had enabled him to produce an amount of work that previously would have required several lifetimes. Computers also come into their own at the refinement stage of the design process. Several variations on a theme, different typefaces, different colourways, etc., can be explored very quickly and easily.'

Ray Markwick, talking from the view of someone who employed a team of designers, illustrators and those who might be called production artists, more technical staff, had this to say: 'The computer program leads the designer in a pre-planned direction which is often the wrong direction from the artist/designer's original idea. Because the finish is so crisp it can be very seductive – and again leads one away from, rather than furthering, the artist's thinking'. He also added to what I had already heard elsewhere: that a new graduate may well take a job on the production side, but subsequently may find real difficulty in progressing to, or even being considered for, a more creative position, such is specialisation today.

We need competent designers to work in our studios to undertake all the basic tasks in graphics and advertising, book production, textiles, furniture and the many other fields of design. Some of them will remain at that level, some will gain the experience to go much further, and still others will feel the need to undertake post-graduate studies immediately or after a few years of working experience. There will always be the high-fliers, the thinkers and innovators, who will reach the top and become influential in the international world of design – whatever training they may have had.

Gunnlaugur Briem has a final word of advice for any student: 'So you want to be a designer? There's a lot to know. Don't expect schools to teach it all. Look for it on your own'.

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Part 2
Wider perspectives

Introduction

In Part 2 the four contributors from around the world provide longer contributions, looking as much to the present and the future as to the past.

Jorge Frascara is an internationally renowned authority on communication design. He has been President of Icograda and Chairman of Art and Design at the University of Alberta, Canada, where he taught visual communication design. He has worked on film animation, advertising and graphic design. He began to teach in a graphic design college in 1963, in Buenos Aires, and has continued to teach in Canada, Italy, Guatemala and Argentina, for nearly forty years.

In Chapter 4 he writes about *Design education in the last fifty years: a personal perspective.* His contribution is concerned with shifts in the focus of design and the changes in his understanding of the role of designers.

Sharon Helmer Poggenpohl is Professor and Co-ordinator of Post-graduate Programmes at the School of Design, Hong Kong Polytechnic University, and editor and publisher of *Visible Language* since 1987. She was formerly on the faculty of the Institute of Design, Illinois Institute of Technology, and the Rhode Island School of Design. Her research interests include new structures for information delivery in digital media from a user-centred or perceptual view. She is also concerned with learning strategies in design and beyond.

In Chapter 5 she presents personal reflections and thoughts on the present and the future. She focuses on four themes: process, media, research, and teaching and learning which she views as an inseparable pair. In doing so she includes a valuable account of her involvement with Merald Wrolstad and *Visible Language*.

Paul Green-Armytage was born in England and studied architecture for three years at the Royal West of England Academy School of Architecture in Bristol and then at Kingston School of Art, graduating in 1964. He had some ten years' experience as a practising designer – as an architect, exhibition designer and set designer for television – before taking up a position, in 1976, as senior lecturer in charge of the first year programme in design at what was then the Western Australian Institute of Technology (WAIT) and is now Curtin University of Technology. Early in his time at WAIT he developed a research interest in colour and has been addicted to colour ever since. He has presented papers at national and international conferences, served as a member of the executive committee of the International Colour Association and as President of the Colour Society of Australia. After twenty years he stepped aside from his role as controller of first-year studies in order to concentrate more on research. Just before retiring from full-time teaching he was awarded his doctorate, the title of his thesis being *Colour, Language and Design.*

In Chapter 6 he writes on: *Reflections on design education in Western Australia during the last quarter of the twentieth century and beyond.*

Neil Barnett is the acting Course Director of the FdA (Foundation degree Arts) Design for Graphic Communication at London College of Communication. Neil's interest in pedagogic research stems from his desire to explore the symbiotic relationship between teaching, research and industrial experience, as ways of developing his teaching practice. His industrial experience includes work with multi-national design consultancies in the UK, Spain and Australia, while his previous research projects include an ARC-funded exploration of real-time information systems for Melbourne's public transport system and 'Making Language Visible', research into typography for children. He gained an MA in Graphic Design from CSM (Central St Martin's), which explored the relationships between typography and choreography as forms of communication, and has a teaching degree from Cambridge.

Darren Raven is a senior lecturer within the School of Graphic Design at London College of Communication. His pedagogic research revolves around developing creative and playful interventions to facilitate deeper engagement within students of design. He studied Graphic Design at Staffordshire University and obtained an MA in Illustration at the RCA in 1998. Darren is also a freelance illustrator with a

worldwide client base that includes the *Financial Times*, the *Guardian*, Microsoft, *Wall Street Journal*, MTV and Nickelodeon.

Their paper, in Chapter 7, is called *Oven-ready for employment? Can group- based projects enhance the work-based learning aspect of an FdA course?* This project was funded by a CLIP CETL research grant. It is relevant to the main theme of much of this book. That is: what is the best way to ensure that the training of designers fits them for the workplace? Neil Barnett hopes to follow up this work to investigate how many of the students find appropriate positions when they leave college.

Chapter 4

Design education in the last fifty years: a personal perspective

Jorge Frascara

A brief account of shifts in the focus of design

I began to teach in a graphic design college in 1963, in Buenos Aires, Argentina. Except for brief interruptions, I continued to do it in Canada from 1976 to 2005. In the text that follows I will try to summarise the changes I experienced in my understanding of my role as a designer, and those I witnessed in general conceptions of communication design that are of interest to me.

First stage: the form

I initially thought that designers were experts in form, in the visual aspect of things. I thought that their role was to apply their aesthetic sensitivities to the beautification and general formal refinement of objects and communications. I saw a very strong association between design and art, very similar to what had been seen since the times of William Morris. This conception had continued, in a similar way but with a different appearance, at Bauhaus.

I therefore saw my teaching as a process of leading students into the discovery of the ways in which forms, tones and colours can be organised. Helped by Gestalt theory and musical composition theory, I tried to teach principles that helped my students develop sensitivity for integration, segregation, balance, movement, rhythm, contrast, unity, dissonance and character. I thought that beauty was a universal concept, and I believed that my concept of the beautiful was shared by all people, some being more skilled at producing it than others.

Second stage: clear transmission

Some time later, around 1970, I began to see that my function as a graphic designer was not only to concern myself with the aesthetics of communications, but with communicational clarity. I studied semiotics, rhetoric, information theory and perception psychology, and had to become more aware of learning theories and content transmission strategies. It was useful here to have had formal training at the graduate level in education methods.

At this point I became more aware of the importance of content. As a designer I saw myself obliged to respond to two needs at the same time: beauty and clarity. I saw these two needs as a source of tension and, sometimes, as a source of conflict.

My teaching started to incorporate projects in which rhetorical strategies and experimental tests were used to introduce students to the complexities of communicational planning.

Third stage: content and context in communication
Cognitive and cultural styles

Later still, I realised that there was no universal way of making information clear, but that one had to vary the approach in each case, depending on the people at the receiving end. What could be clear for some people, would not be for others, not only because of levels of intelligence or maturity, but also because of cultural differences and personal traits. I began to understand communication as an interactive process. The notion of transmitter and receiver became inadequate for me to represent human communication: it had to be replaced by the idea of producer and interpreter. This opened up the problem of designing, from being concerned with being up-to-date in style and clear in content transmission, to having to put the centre on understanding the public's cognitive and cultural styles, a far broader field. I started at this point to look into anthropology, sociology, psychology and marketing as sources of information for the crafting of communications, as well as for the development of the students' education.

Fourth stage: generating a response

It was still later, maybe at the beginning of the 1980s, that I became conscious of the fact that 'public-centred communication clarity' was not the final aim of visual communication design, but that every communication came to exist because someone wanted a reaction from a segment of the public. When this became clear to me, I realised that I

not only had to be conversant with cognitive styles, but also with the complexities and uncertainties of human and social behaviour. The problem and the responsibility became greater, but far more interesting. I realised that, for example, when I worked on communications for traffic safety, my aim was not the production of excellent visual pieces, but the reduction of collisions and injuries; if I developed teaching aids, my aim was to improve the learning performance of the students. When I started to see this, it soon became apparent that design is not a discipline, but that every design project requires interdisciplinary work, and that its success in achieving its goals often requires participation of types of communication that exceed visual products. Thus, if the final product is to improve learning, I need teachers and students as partners in the project; if I produce communications for traffic safety, they have to be supported by legislation, education, enforcement and community support to achieve the final goals. This conception of visual communication as part of a broader communication strategy informs all my ideas about design education.

Up to a point, the process I experienced personally parallels the development of conceptions of the profession throughout the last fifty or so years.

Some basic concepts in education

Before discussing in some detail the ways in which my conceptions of design affected my work as an educator, I should outline some brief definitions that will help this discussion.

1 Teaching & Learning

Teaching involves the transmission of information. Learning involves the acquisition of information, but also the development of skills. The information must be up-to-date, rich, accurate, and relevant. The skills must be those relevant to the long-term educational objective.

2 Transmission & Discovery

Transmission is connected to teaching, discovery to learning. Both are fundamental in the educational process. Students should be taught, but they should also be taught how to learn on their own and from others.

3 Primary Learning & Deutero (secondary) Learning

There is a primary learning, that is connected to the acquisition of information, and is conscious; and there is a secondary learning, that

relates to the development of basic skills, and is an automatic and unconscious effect of primary learning. For instance, if I learn how to plan a project carefully, I also learn how to plan carefully anything. If I learn a foreign language, I also get better at learning foreign languages. This concept of secondary learning should serve as an engine for the design of educational programmes: it is necessary to identify the basic skills that the students should develop, rather than to mechanically line up a series of projects oriented to transmitting whatever information.

4 Informing & Forming

Informing is based on the transmission of information. Forming is based on fostering the individual's acquisition of basic skills and independent judgement. Without forming, informing does not make sense; informing prepares people to know how to do something but not why or what for. Informed people are followers and imitators, they do not contribute to the development of information or to new understandings of existing information.

5 Instruction & Education

To instruct relates to training. To educate is to foster the development of judgement, personal initiative and the adoption of values. This distinction is essential. In order to be a good designer, in the broadest professional sense, one has to be a good citizen, a socially responsible person. For this, instruction is not sufficient.

6 The College and the University

It is useful to be clear about the difference between training for insertion in the workplace (the role of the college) and educating for the advancement of knowledge in a field (the role of the university). Both functions are useful, as much to society as to the differences in ambitions and capabilities of individuals.

A rich society like ours should offer the possibility of forming students beyond the minimum requirements of the workplace. The success of a university programme in visual communication design should be based on providing enough to the students so that they meet the minimum requirements, while being also prepared for future learning, and happy with what they do. It should make sense to them, and they should be active agents in their educational process, that should help them contribute to the continuing development of the field.

Design education

I was at the University of Alberta from 1976 to 2005. When I refer to the University, I refer to that period. People come and go and so do ideas and approaches. I can no longer speak on behalf of that institution, since I am no longer there and things might be different now. Some began to change as soon as one year after my retirement.

I will now contextualise the previous general discussion of information transmission and skill development (or training and education) in the teaching of communication design. For example: an instructor can dedicate a class to typographic measurements, and that might be enough; or one could do a lecture about paper sizes, page layout programmes, binding technology, or research methods. All this is transmission of information. It is different to deal with skill development. A programme must have clear aims in skill development, and individual projects should be designed so that in the long term the identified skills are indeed developed to a satisfactory degree. In a design programme the students should develop the ability to organise a design process efficiently; to collect and organise information; to follow briefs; to evaluate alternative options for the solution to problems; to articulate ideas in a clear, precise and concise way; to work efficiently with others; to consider several requirements simultaneously; in sum, they should develop skills that are central for the work of the designer. Design education must attend as much to processes as to products.

Design fundamentals

An important area that clearly reflects the educational approach of a school is the first year. Further to my initiative, the Department of Art and Design at the University of Alberta introduced a modification in its first year studio course in the fall of 2003. What used to be Visual Fundamentals was split into two half courses: Art Fundamentals and Design Fundamentals. To guarantee grounding in both camps, all students willing to register in upper level courses in either art or design had to have credit in both half courses. The description of Design Fundamentals reads as follows: 'Design Fundamentals. Introduction to the conceptual and practical concerns of the design disciplines. Two- and three-dimensional design-related studies. Conceptualisation, visualisation, observation and analysis. Study of products, processes, contexts, purposes, methods, users, systems and information management'.

My main motivation to create a specific course on Design Fundamentals was that I see design as more than visual work.

The traditional courses in Visual Fundamentals, or however they could be called, followed too closely the legacy of the Bauhaus, centring on explorations of formal and expressive issues. In design, however, formal issues respond to users, contexts and contents, factors that unavoidably affect visual and physical product performance. Visual Fundamentals used to be taught in my university to all first-year students, whether they intended to pursue art or design. The rationale for this was that the visual language represented a common terrain for both fields. In fact, however, the approach was mostly related to art, and most sections were taught by artists (or graduate students of art), whose understanding of design was connected exclusively to formal issues. A split became indispensable to properly deal with design at the foundations level in a way that would present to the incoming students the wide scope of concerns that design involves – such as methods, users' issues, communication, human factors, etc. – instead of making them believe that the problem of the designer is just the giving of 'good' form to messages. Mandatory readings and analysis of existing design products became part of the course, as much as practical work. Formal issues were discussed hand in hand with users, content and context analysis. Visual production decisions became connected to awareness of visual vocabulary variations from segment to segment of the public, from segment to segment of product clusters, and according to communicational purposes.

Design methods

Design is purpose-oriented action. It is also oriented at the creation of products, communications or services. To achieve stated goals, design involves planning methods (for research and product development) before engaging in production. The design process must be well organised, so that the efforts are efficient and effective. Design aims at helping satisfy needs and wishes of people.

The language: Design, one could say, is bilingual. There is the language of form, visual and 3-dimensional, but there is also the need to verbally articulate the problems, the processes to follow, and the solutions. Designers normally work for people who are not designers themselves. When a client presents a problem, that problem is outlined in non-design terms. The task of the designer is to re-state the problem in design terms. When one develops a solution, it has to be articulated clearly, convincingly and precisely in ways that the client can understand.

It is, of course, indispensable to develop one's ability to create and organise forms. The designer must be aware of the developments that

took place in history, and in different places. One should avoid being locked up in one's time and culture, ignoring the myriad possibilities that a more extended knowledge can offer to the development of one's own visual vocabulary.

Tools

The tools of design are many, but today the most ubiquitous one is the computer. Designing is, in the main, an intellectual activity, but the creation of prototypes and final products require technical knowledge of tools and processes. One should develop the ability to visualize, that is, to rapidly sketch one's ideas on paper to help the conceptualization stage, to increase the possibilities for dialogue when designing in a team situation, or to discuss one's ideas with others (colleagues, teammates or clients). Sketching in the computer can be problematic. Unknowingly, one might get trapped within the mindset of the computer programmer that created the program one uses. When ideas are clear, the computer becomes an extremely useful tool that helps planning, refining, and preparing final production. Knowledge of production technologies is indispensable if one aims at the highest possible quality. One does not need to become a technologist, but working dialogue with technologists is necessary.

Systems: design products are normally part of systems. If we develop a chair, it will normally be part of a manufacturer's signature, and other pieces will be conceived to form part of a furniture system. If we design a logotype, many other graphic design pieces will form part of the visual identity of the client's organisation. For the students to develop an ability to design systems, teaching must frequently deal with the concept. It is not possible to teach the notion of system in one project. In design education there are certain skills that have to be constantly – or almost constantly – present in the assignments. Design is, by definition, opposite to chaos, and the notion of system is as much part of it as the notion of planning.

Contexts

Designers act in the most varied situations. The projects that form a course should introduce students to this variety, so that, in the end, students will have the necessary flexibility to face unexpected contexts with sensitivity, intelligence and efficiency.

Human factors

Since people always are at the receiving end of communication designs, the practice of design requires a good understanding of cognitive, physical, emotional, social and cultural human factors.

Coordination and management

The responsibility for the crafting of the design product rests on the designer as a key member of a team that conceives, manufactures, and distributes a product, or implements a system. This involves, depending on the case, marketing experts, human factors specialists, content specialists, and technologists. The designers' function is double: to use their specialist knowledge and to coordinate contributions by various experts in other fields.

Social responsibility

The objects designers create get produced by the hundreds or even by the thousands, and affect the knowledge, the attitudes, the feelings, and the behaviour of many people. This requires the conscious adoption of a responsible ethical position. A broad general education is therefore an asset.

Alert and questioning attitude

A designer always asks questions: Why? What for? For whom? How? Where? Every object must be seen and evaluated in connection with its purpose, its contexts and its users.

Form giving

Designers give form to things. To do this properly, they must have a rich visual imagination and sensitivity for content and context. Aesthetic concerns cannot lead to a universally valid way of doing things: each sub-culture has its own way of seeing and valuing things. The form of an object should be developed with due attention to what the object is, where it will be distributed and who are going to use it. A grade-one book cannot have the same visual aspect as a financial supplement of a newspaper. Good design can have many looks.

Form, colour and materials have to be studied systematically. There are in our culture long traditions for critical analysis of visual creation, that hinge on both art and perception psychology. A design fundamentals course should introduce students to those traditions and help them develop their knowledge and their ability to craft objects that use visual and physical dimensions with intelligence and sensitivity.

Undergraduate studies in visual communication design

Once a foundation is laid, and a basic understanding of the purpose of design and the factors to attend to in the design process are achieved, the students must concentrate on the development of systematic thinking, visual sophistication, cultural sensitivity and social responsibility, as well as the knowledge required by the industrial production of objects and the abilities necessary to interact effectively with others (clients, bosses, colleagues and public).

Being as it is impossible to teach every aspect of design in one programme, educators must make choices of focus. In my case, at the University of Alberta programme, the focus I worked on was on design for information, education, instruction, and projects of social interest. Design methods, effectiveness, and efficiency were discussed along with technical knowledge and practical applications toward an education of designers able to adapt to different situations and changing environments.

The courses dealt with principles for the organisation of images and typography in still media, series, and animations, and involved learning about research, theory, management, and methods.

The traditional Bachelor of Design programme is still available, but, since 1995, it is supplemented by the possibilities of the Bachelor of Design with Pathways, that integrates design courses offered by the Department of Art and Design with selected courses offered by the faculties of Business, Computer Science, Engineering, and Social Sciences, as well as by the Art and Design division of Print-making. The creation of these pathways stemmed from understanding the breadth of the design field, and the different abilities that it requires. It also capitalises on the possibility to accept students with different profiles, skills, vocations and interests. The Bachelor of Design with Pathways makes good use of the interdisciplinary opportunities offered by a major university context.

This programme emerged from my noticing that several design students would pursue a second degree after graduation with us, or would come to us already holding a degree in a related area, such as business, social sciences or computer science. It became apparent that very talented people come with different strengths, and that a narrow conception of what it takes to be a designer would leave many interesting people out of the picture.

Graduate studies in visual communication design

The design practice centres on the design of objects, but it has grown to also include the design of processes, services, structures and systems; in sum, a series of activities that could be defined as the design of the contexts within which traditional design operates. These contexts involve the critical consideration of social, cultural, economic, technical, and environmental concerns, and map out the broad terrain where designing and manufacturing activities operate. As far as types of projects are concerned, studies at the graduate level should be concerned with these kinds of problems, avoiding the continuation of a product-oriented approach typical of undergraduate studies. Graduate studies has to be a learning experience where the level of consciousness about the processes followed is substantially higher; where the verbal articulation of these processes leads to the creation of transferable methodological models, and where design decisions are as much as possible based on empirical evidence and supported by published research. A person with a Master degree should be able to perform at a high level as a designer, as an educator and as a researcher.

Within the Master of Design programme at the University of Alberta, before dealing with problem solving, my students dealt with problem-identification and definition. In this manner, students were equipped to be proactive in their profession, rather than being dependent on clients for the generation of opportunities for design interventions. There is hardly anyone better than a designer to discover where design can make a useful contribution to people's lives.

The Master of Design was conceived to provide people with a basis for continuing self-development, and for increasing adaptability and resourcefulness, on the basis of the acquisition and use of information management skills, interdisciplinary cooperation, thorough analysis of information and situations, technical writing, and systematic methods of work. The design projects chosen had to have merit, but they were secondary to the objective of equipping the students with good methodological models for design practice.

The direction I fostered in the graduate programme in Visual Communication Design at the University of Alberta was characterised by working on projects of professional and social relevance, and by using defensible methods. Projects always deal with the generation of new knowledge, and are developed in liaison with relevant agencies inside or outside the University. Active international connections with other design education centres and professional organisations, as well as a visiting lecturers programme, complemented the local resources.

These components seem to be necessary if one is to respond to the complex conception of design we have today.

A research community of almost 3000 academics grouped in some 80 departments supports interdisciplinary work at the University of Alberta. Some obviously relevant areas for design practice are Marketing, Psychology, Sociology, Anthropology, Engineering, Rehabilitation Medicine, Computing Science, Education, History and Library Science, but our graduate students have also worked with Geography, Pathology and Entomology, to mention just a few additional areas.

Thesis topics of former students have included teaching aids for dyslexic children, graphic symbols for industrial safety, orientation aids for the visually impaired, games for people with aphasia, English teaching aids for immigrants, traffic safety communications, and other topics centred on instruction, education, health, cultural activities and scientific communications in both traditional and new media.

Graduate studies in design are an opportunity for staff-student collaboration, where staff would contribute methodological knowledge, while students dig deep into a specific topic. The final result for the student is the development of a methodological model that can be used as a basis for future projects. The programme is not centred on the development of design products, but on the development of the students' ability to research and design complex and innovative projects.

In sum, the last fifty years represent the move of design from craft to profession, that is to say, from an object-making activity, based on knowledge of form and materials, to an activity centred on satisfying human needs and wishes and based on knowledge of planning, human factors and technology.

A last word on design education: the quality of an educational institution, and its impact on the whole of society, does not hinge on programmes, facilities or resources – which are very useful – but on the quality and the drive of teachers and students. Programmes have to be well planned and articulated, but the most important component of education is people.

Chapter 5

Musings about design

Sharon Helmer Poggenpohl

Not a history, this is a reflection on the present and the future; nevertheless a few mentions will be made to the past to ground reflections. The four themes I've selected reflect on my experience and the changing context of design: process, media, and research; these will be followed by teaching and learning as an inseparable pair. The themes overlap, influencing each other in various ways. The context for these reflections is the United States and now Hong Kong, and the years span the late 1960s to the present.

Process

Then it was about aesthetics and organisation, the ability to use typography well, work with a writer, mark up a manuscript to specify type, work with a typographic craftsperson, and a colour separator, work with a photographer and have an eye for a good photograph, and overall be able to synthesise information to make symbolic and spatial sense of things. Projects came in predictable formats: stationery, poster, book, signage, etc. Performance was largely unmeasured; there was talk of whether it 'worked' but that was only from a designer's perspective. Did anyone read it? use it? tell their friends about it? remember it? Did it sell? Who knew? Yes, problems of communication were at the core of the activity, but the solutions were limited to judgements made by designers and sometimes taken solely by the client. The people for whom one designed were invisible, not even ghosts, just non-existent. Communication seemed simple then – you crafted a message, pushed it through a channel, and people received it. The complexities of interpretation, selective attention, or feedback, to name a few, were largely unexplored.

More complete perspectives on communication developed from a theoretical standpoint after WWII, but they were slow to evolve into the realm of practice. But now we understand that people do pay selective attention, perform sometimes surprising interpretations of

information, and actively engage with their information environment providing feedback that is captured and reflected upon.

Now there is an endless array of stakeholders with multiple, and often conflicting, perspectives from which to examine a problem. And the solution and its success will be measured in terms of Web hits or sales or less obvious measures of satisfaction like loyalty and continued attention. The process has changed – designers are accountable.

But let's go back to people – as technology has become more reliable there has been a shift from people adapting to technology to the initially radical, but now more common, idea that people and their ways of thinking and understanding should come first with technology adapting to their habits and mental models. Called user-centred or human-centred design, it pushes design toward the social sciences with designers becoming field agents that observe human behaviour performing various tasks, taking pleasure in receiving a service, or functioning in a particular context, to name just a few examples. Often new insights result from such observational research, but that is not the end of it. Embedding the insight into a designed object or service in a convincing and useful way is essential. The intangible insight must be given form and this is where design judgement is essential.

Multiple stakeholders with sometimes competing agendas, and a social science perspective on real people as users and even co-creators, moves design further away from art and closer to science. Yet design will never be a science, as it is fraught with ambiguity and too many intersecting variables to offer up certainties. The designer needs to know when to tilt toward science or art. Most design education has an art bias, producing designers who lack an understanding and appreciation for science and its creative and substantial contribution to the world in which we live. I would argue that a designer needs a balanced foundation in both art and science and that such a balance is increasingly important today.

Communication design, the broad area in which I have worked, once depended on the relationship between content and form – much like architecture or product design had a function/form synthesis – communication design had its content/form synthesis. Always a reader and thinker, for me, the form emerged from understanding the content and its context of use. But now such design, given its more expansive technological context (software and web interface, interaction and interface for various equipment, games, remote learning, etc.), has obvious function also. This newer notion of function pushes communication design further away from being 'applied' art and redefines it in a more design-like way that takes into account action

and feedback; human usefulness. Certainly aesthetics remains important but it is not the only criterion on which to base work.

This more recently discovered functional dimension of technology-based communication delivery has given the idea of feedback renewed meaning. This too pushes communication design toward more objective performance measures. Let me give a humble example.

> *Around 1981 or so we bought a used Apple II+ that included much software. Our five-year-old son was fascinated with Breakout (an early interactive game, kind of like Pong) and some equally early educational software whose specific names I forget. In one software learning game you explore by trial and error the pecking order among fish – who eats whom. Beware the Dolly Varden! Another was Lemonade Stand in which the weather changed unpredictably and the gamer determined how much lemonade to make, setting the price, and seeing the financial consequences. Our son didn't read – we showed him how to play a few games, but we were unwilling to sit and read for him. He figured out how to turn on and operate the computer, insert a floppy disk, manage an incredibly crude interface, and play a game. The computer gave instantaneous feedback – in no time he was reading because he was motivated to play new games.*

Something may perform but be unpleasant, awkward, or ugly; so performance alone is not sufficient. This is where artfulness comes in – to render pleasure in the form, colour, sequence, and sensory characteristics of the performance – to render an interface and interaction that is not only understandable but a delight to use. At some point the designer has learned from the user what can be learned about their conception of an activity and their usual habits. Then the designer is faced with taking responsibility for integrating functional and formal characteristics for whatever is being designed, based on expert knowledge and experience.

The designer's process has changed to include people's everyday lives into their understanding and work. People are no longer just 'customers' to be persuaded or to be sold, who automatically and mindlessly receive the information as given or as intended; they are resources for more intelligent design development. Design is also more performance oriented now and its use and satisfaction marks its success. Yet another change that is taking place is collaborative work. The important work that needs to be done brings together many collaborators from different fields, consequently the heroic or romantic view of the solo designer in charge of a total creative process is either an image from the past or a contemporary aberration.

Media

Then there was print, television, a bit of film, signage; designers engaged primarily with words and images. Now with computers, the broadband Internet, telephones that do everything and tap dance, and an array of other devices in which information is at play, the medium possibilities are extended. The two most basic new aspects in communication design are time and interaction. Most communication design and its education have focused on singular time-limited events in two-dimensional space. Now time sequences, not necessarily a full-fledged film, are important; it becomes important to teach an understanding of time and to investigate how time is interpreted. Sometimes the sequence is about storytelling, sometimes it is about giving instructions, and sometimes it is about interpreting, comparing, and selecting things. Time can be stable, distorted, or outright confusing; it can also create tension and engagement, underscore a message, create surprise, or resolve a situation. It is a new dimension for designers to explore, understand, and use.

Broadband media and its time dimension provide sound. The old conflict between viewing images and reading text, both of which require different forms of visual attention, evaporates. A voice-over can supply language-based information or other cues to meaning. Now the quality or characteristics of a voice become an issue, its emphasis and rhythms replace typographic cues. Controlling sound characteristics, word and image relationships in terms of dominance, sequence or compatibility adds complex decisions to communication creation. What leads and what follows – does sound set the pace or images – are they synchronised or juxtaposed? New sensitivities need development. A lovely little book that explores time is *Einstein's Dreams* in which the author, Alan Lightman, imagined how Einstein went about thinking about time in thirty creative ways. This book opens exploration and creativity for thinking about how time can structure communication and understanding; it gets the reader beyond the conventional flow of time.

The other important dimension is interaction. Communication no longer just comes at one to be received or ignored; now it is solicited, controlled, and interacted with; it is also latent until accessed. Given the sea of information we negotiate on the Internet and in daily life, clarity of interface and its more dynamic realisation as interaction delivers pleasure and ease of use, or mounting frustration. Cleverness alone does not suffice in this environment; developing hierarchies, consistent use and feedback, while supplying support for the user's interest and goal, is essential. This applies to not only computer-based

interaction, but interaction with information embedded in the environment, or information needed to use objects effectively. Technology has opened many new possibilities that we are still trying to put into application and sensible use.

Human conversation is rich in interaction. We share information, take turns, give feedback intentionally and unintentionally, repair misinformation, provide context, and project emotion and mood. Such communication is multi-sensory, highly interactive, and engaging. In conversation we anticipate, rely on context, and interact based on multi-sensory cues such as eye contact, body language, gesture, tone of voice, silence, etc. If interaction is the future of communication design, then I believe human communication provides the best and most complete model. From this an understanding of human perception and even investigation of multi-sensory combinations for communication becomes important. Not only has technology opened new media possibilities with a shift from one-way transmission and reception to this more interactive push-and-pull situation, it also supports sensory dimensions that go beyond sight and sound. This is not communication design as usual.

Designers need grounding in perceptual psychology – how can we adequately design if we fail to understand how people perceive the world? Grounding is also needed in cognition – how people think – what limits their attention or memory. Such understanding opens doors for design research as designers will ask research questions that lead to action in design. And there are many questions to ask regarding time and interaction that will reveal useful principles and perhaps even design methods better suited to the available enriched media possibilities, and people's more limited time and attention.

Research

Then, research was something others did and it had almost nothing to do with the act of design. Now, design research in its many guises is developing internationally and in relation to design practice. I have waited a lifetime for this as I performed my first research long ago as an undergraduate, inputting data on punch-cards and waiting for technicians in white coats to return the analysis from a room in which banks of whirling tape drives signalled the future. As I mentioned, content/form relations were the prevailing notion of communication design then, but I wondered how people understood images and how they interpreted what they saw, and this led me to research and an early human-centred approach, though I didn't know it as such. People

are not mindless recipients of communication; they interpret, selectively attend to information, use it for their own purposes, share, and interact with it.

Now PhD programmes in design are turning out an increasing number of well-educated, capable design researchers. But the vehicles that report their work are few. Of course, they report their work in the journals of other disciplines, but this diminishes the impact of research from the design field itself, as it remains unclassified or is uncategorised in its attachment to design. This diminishes the significance of design research as it is lost in another's information space. This need brought me to involvement with the journal *Visible Language*. This inter-disciplinary journal, born in 1967 as the *Journal of Typographic Research*, was the brainchild of Dr Merald Wrolstad, a charming man who may have had one of the first PhDs in design (typography) in the United States. Let me tell you how I happened upon the journal.

> *I was a designer in Chicago, doing a project for a major educational publisher; the project was the first thesaurus created for 3rd and 4th graders. The editor wanted to use all the typical typographic conventions for discriminating among antonyms, synonyms, parts of speech, etc., used in an adult thesaurus. I argued that a child of eight or nine years would be confused or perhaps not even see the typographic coding. I argued for a clear use of space in which to locate the various language attributes related to the word at hand – a kind of language map. We argued and he asked if I knew the* Journal of Typographic Research*? I said no. He reached into his desk and snapped the first issue of the journal onto his desktop. I was now introduced. Little did I know I would contribute to that journal as an author, a guest editor, an editorial board member, and finally as the editor and publisher.*

Twenty years have passed since I took over the journal following Merald's untimely death. Journals such as this are a financial burden, and like needy children they can consume all the available time and then some. As I was making the decision to take this on, I was visiting a library at Pennsylvania State University. There on a shelf was twenty years of the journal – good, vetted, interdisciplinary information about typography, communication, technology, language, images, and other aspects of visible language. I decided it would be a shame to see the journal disappear; there were worse ways to spend one's time, and so I took it on.

The journal has been an adventure; working with its authors, editors, and designers has contributed to my world in many ways. I took it on as a greenhorn, armed with optimism, but with much to

learn. Merald told me that the journal had a way of getting under one's skin. The work that I thought needed to be done in design and design research went beyond the trade magazine perspective and needed many like-minded, independent people to contribute. The journal was a vehicle through which I with my advisory board and other valued colleagues could bring information to a more public arena. This has been satisfying as I have encouraged young writers, international authors working with English as a second language, and scholars investigating all the realms of visible language from Maya and Oracle Bone script to international signs, to the meaning of motion to word-image relationships, to spelling reform to typographic coding, to Fluxus and cultural dimensions of user interface – ideas and investigations too numerous and diverse to easily categorise. We live in communication and much of it is visible.

When I took the journal on in 1987, it went from a handcrafted paste-up, physically delivered to a printer, to digital generation. Now twenty years later the question is whether it should become an online journal – but somehow I resist this. I like the physicality of journals and books, yet I am not a Luddite. I like the tangibility of paper, the shelve-ability of books, and their look of promise as they await opening; their ready-to-hand-ness. I know the advantages of digital files – their search-ability, compactness, and even reproducibility – but they must also be filed, retrieved, and sometimes printed.

While watching over editorial quality, I have had to wrestle with the journal's subscription base and finances. Early on during my tenure, the Rhode Island School of Design befriended the journal and supplied administrative help and the vast proportion of graduate student designers for the issues. I am deeply indebted to this institution for their support and friendship. The Institute of Design at IIT also befriended the journal by allowing it to ride on its website. Graduate students here also designed issues. I am better at the editorial work than the journal promotion and I know the lack of promotion is to the journal's detriment. For me the editorial and planning work is more rewarding as it is about getting good information out into the world of design action. Yet the flipside of this, its distribution, is also critically important.

One of the issues that I found most rewarding was 36.2, An Annotated Design Research Bibliography: by and for the design community. Constructed by five doctoral candidates and myself at the Institute of Design (mentioned above), this special issue identified thirty books each under three categories: perspectives on building a

philosophy of design, perspectives on building a foundation for design research, and perspectives on building a discourse between design theory and practice. Design, and particularly design research, has no canon of must-read books. This project was less about building a canon and more about finding out what designers were reading and capturing their thoughts on these books. Based on books we, as a small research community, found important, we launched a Web list and invited people to indicate what they've read, adding new books to the list as necessary. We discovered that designers don't read much. This was a disturbing finding, especially when we live in such a richly informative environment.

> *I am reminded of the movie* Fahrenheit 451*, based on Ray Bradbury's book of the same name. Set in an unspecified future, there is a scarcity of books because they are burned in order to maintain social and political control. People who secretly acquire a book memorise its content in order to preserve its thoughts. I am also reminded of the progression from manuscript to incunabula to mass-produced book to digital library and the Internet. Never before has so much information been so easily accessible, yet many have sealed off their minds to the informative context in which we live.*

Since we failed to get good information from an open-ended request to the design community, we went after designers and educators that we knew read. If we were to do this project again, we would compile a list of writers on design because writers *read*. Now, more than four years later, requests for the issue continue. We may need to update the issue as the flow of new and important books continues in this changing field.

As a teacher of graduate students in masters and doctoral programmes in design, I *must* read in order to keep up with changes in the fields that impinge on design. I read research, emerging theories, and ideas in psychology, sociology, design, technology, cognitive science, and, yes, even art, while I try to stay broadly informed about the world at large. This doesn't always come easily. I have taught myself a discipline of reading, thinking, and doing. If I didn't read and didn't stay informed, I would be cheating my students; my commitment to information is just that direct. Here I might well lament diminishing readership, yet many people are perhaps reading more than in the past as they surf the Net in a focused way. The challenges to reading and processing information are different from what they once were. Technology mediates our lives – will mobile phones make men more communicative? Will e-mail and text messaging change written

language into something less formal? Will blogs and other open forums increase the transmission of misinformation? Will people develop more critical approaches to information over time? Questions regarding how we access and use information are endless; answers are mutable and evolving.

Returning to design research, what constitutes legitimate design research is unanswered. It isn't one thing, but its legitimacy rests on reasonable evidence. I would separate research and scholarship; both depend on evidence, but the nature of the activity and its evidence is different. Scholarship is about consulting others through their books, journal articles, conversations, or various kinds of archives to formulate a new analysis or argument that extends our understanding. The outcome may be historical, critical, or theoretical, based on written or physical evidence. Such work is often closely tied to the humanities in character and technique. In contrast, research in a formal sense asks an unanswered question and then seeks to develop an original research study to answer the question. Research data comes in many forms: textual, auditory, visual, experiential, and its analysis may be qualitative, quantitative, or comparative in nature. Research findings present new knowledge and hopefully knowledge that suggests and sustains better design actions. However, the edge between research and scholarship is not precise. For example, one case study may be scholarship, while an analytical comparison of many cases may be research. What is not research or scholarship is doing a design project and then justifying it through one's own perspective. This kind of personal navel-gazing has been in and out of favour in design. It is too insular and lacks the social context in which design operates. Such work also resists a performance evaluation of any kind.

I am a fan of what I call free-floating knowledge. This is knowledge that can be built upon, challenged, and recombined with other knowledge in useful and actionable ways. This is different from knowledge that is embedded in a designed object where it is often hidden and unavailable as such. Free-floating knowledge provides a platform, a leg-up on the next generation of investigations. Researchers need to know who their counterparts are and engage with previous work in a meaningful way to formulate their own work; they need to be readers and scholars. I have been fortunate to work with some doctoral students who were willing to take on basic research in communication design; for example, research into the meaning of motion on screen or the possibility of a gestalt of motion. Such research provides the free-floating knowledge that we need for further research and practical

development. But it is difficult to get funding for this work and the doctoral students need to be willing to take a risk. Applied research is much more common as design is directed to application in the world. I would argue, however, for design to make a more complete contribution to knowledge and even practical knowledge, basic research needs to be supported as designers will ask questions that others will not entertain.

Teaching/Learning

Then, I was first of all a designer, I never intended to be a teacher, but found professional design projects to be often lacking in challenge in my early years and I wondered why. After five years of practice I went to graduate school in design to challenge myself and answer some of the questions that had been brewing in my design experience. This was a luxury – to be a student again – to investigate the world of ideas. During this time I taught a little and found it satisfying – performing the teaching activity meant being a more sophisticated learner. Teaching and learning or learning and teaching (there is no hierarchy) are an inseparable pair. And yet I still didn't intend to be a teacher.

The problem with teaching is that unless one is reflective about learning, one teaches as one was taught. The tradition (whatever it is) continues. This is not so bad if the tradition is resourceful and open-ended, but if it is dogmatic it becomes a rote exercise for teacher and student alike. The social and cultural context in which we live and teach changes; new ideas emerge, new skills are sought, new problems arise and the old ideas may not be adequate to the changing conditions. This is actually exciting – it is a cause for renewal and learning. I was in and out of teaching, in and out of design practice over many years. Now I understand this variability was itself a source of renewal.

Feedback is another source of renewal – students' receptivity, engagement, and questions, and challenges, help to improve opportunities for learning (or teaching strategies) and they also become a source of inspiration. Research development and teaching are not necessarily disassociated, in fact, joining teaching with research is probably the most productive approach.

Finally, after wearing three hats for some years, designer, teacher, and journal editor, I decided to pare it down to two. The two that remained were teacher and editor. I was more interested in new knowledge and its application and more interested in the relationship between the changing technology and its impact on the culture of communication than anything else. In both cases I was engaged with

helping the next generation of designers find their way in a very different context, and yet I was still learning and changing myself.

Design has been a continuous thread throughout my life. When I was a student, I enjoyed the project-based learning aspect of design, and the fact that each new project offered a fresh start to explore something. As a teacher, I view myself as a more sophisticated student – always eager to learn new things, whether from my students, my colleagues, or life. Twice in my life, I have become a calculated learner in order to better understand the learning situation from either a psychological or cultural perspective. In both cases the activity was physical and could not (for me at least) be learned from a book. Let me tell you about them – first the psychological experience.

> *When I was a young teacher, I took up downhill skiing. I did not take to it easily – leaning downhill on a steep slope seemed an act of madness. I fell a lot and made a fool of myself I'm certain as I tried to master the basic moves. It was exhausting, physically challenging, and psychologically revealing. The lesson was conducted in a master-apprentice fashion. The teacher demonstrated physically – students imitated as best they could. There was some talk and discussion but the real learning took place through action. What did I learn from this? I learned to empathise with students' awkwardness, their need for persistence, and their need for feedback when they could act on it.*

Interpreting student understanding and problems with whatever they are working on is an essential attribute of teaching. Developing instincts for when to encourage, praise, or damn their performance, depends on reading them as people with all the foibles any of us has. It is about active looking, listening, and doing as a creative act of communication. My second, calculated learning experience was about culture.

> *Now I am an older and seasoned teacher. Over the years I taught many foreign students in the United States and I marvelled at the way they took on language and cultural challenges. When the opportunity to move to Hong Kong and teach design there appeared, I decided it was time for me to be the foreigner. As a way to develop better cultural understanding, I took up Tai Chi. I always admired the grace and elegance of the movements, but little did I know how difficult it was to perform correctly. Again I was learning something physical, taught in a master-apprentice mode. But unlike skiing where the mountain and gravity also supply feedback, Tai Chi movements supply no direct feedback; you become*

> *dependent on the master's criticism. Again it was about physical demonstration and careful imitation of movements. Again I was awkward, but now also forced to realise I had a poor physical memory, and was undisciplined in my approach. No doubt I frustrated the master and my classmates, but despite my discouragement with my progress I persisted – hoping for a breakthrough. When you are skiing well, you can feel it. I hope for a similar experience with Tai Chi – but so far it is elusive.*

How did this help with cultural understanding? While there are many forms of Tai Chi, I was learning a particular one and the tradition and correctness of the form were deeply embedded in the master's mind and body. I was dependent on him for feedback and this came in the form of correction – inadequate stance or balance, wrong hand or foot position, or poor integration of timing between complex movements. Most of this feedback was delivered physically through demonstration; to a lesser degree there was talk. Silence also has to be interpreted – it could mean 'good' or it could mean 'so bad' there was no remedy at this particular time. The process is about refinement. Once you have mastered the basic moves, then small adjustments make a large difference in the elegance of the execution. In this sense, it is analogous to form making in design – one needs to understand the principles and then patiently refine the results.

Tai Chi is integrative – mind-body, exercise-health, and offence-defence. I find my mind-body integration is lacking and I hunger for encouragement – a good word here or there that something I am doing is improving. I am learning something about another way of teaching and learning, and just how Western I am.

Teaching and learning is a social activity in which cultures are in contact or even collide in many ways – the university hierarchical structure, cultures of language and origin, gender presumptions, disciplinary cultures and more. Within this multi-layered social structure, learning activities are formed, their execution observed and adjusted to meet particular goals. Defining and adjusting these goals is a creative design-like activity. Here the problem is what is to be learned and through what method. This requires anticipating individual learners' constraints (previous knowledge and experience). In contrast to the master-apprentice model mentioned before, my own approach to teaching and learning is transformative. I do not expect students to closely model my work or behaviour even though I realise I demonstrate ideas, enthusiasm, and behaviours sometimes intentionally, and sometimes not. For me the issue is defining a

learning activity that supports the students' personal growth and is discovery-based. I do not tell them what to do, rather I set a problem or situation for them to explore with adequate, but not overbearing, guidance. While the learning objective is shared with them, the act of learning through their own explorations is unique to them and based on their own discoveries. Such individually based explorations enrich the experience of all participants, consequently the critiques are more lively with more viewpoints presented.

Design – itself

Part of my fascination with design has been my vision of the designer as a tightrope walker seeking the balance between artfulness and application of what facts or knowledge are available – using both brain hemispheres to create something satisfying, even wonderful. But this remains a minority vision – much of design disdains anything that relates to science – it remains solely in the arts and humanities. I've witnessed and sometimes participated in the method and intuition wars, the modernist, post-modernist debates, the art and technology partnerships, high formalism versus vernacular discussions, top-down and bottom-up processes, and still design is a field slow to emerge as a reasonable discipline.

But things are changing; some of these changes are based on technological pushes, i.e., the accessibility of information, the economic connections between technology, business, and design; some are based on social/cultural shifts, i.e., globalism and localism; some are based on daily life, our perception of time, and our limited attention. In such a shifting context, design cannot be practised as usual – it needs a new vision of its responsibilities and processes. For example, more work is done collaboratively in a multi-disciplinary way and this requires both communication skills and an understanding of other disciplines and their processes. How we understand situations, what constitutes evidence for success, how we mediate between conflicting process understanding and find ways to collaborate with others reveal our need for better epistemological understanding.

Intimidated by working with disciplines having well-grounded knowledge and methods, designers sometimes forget their strengths. Design has some attributes that are special in that it moves from ideas and vague concepts to prototypes that show in concrete terms what may be possible. It moves from many disparate elements into integrated wholes that reveal the contextual thinking that underpins the work. Yet, in general, designers are very good divergent thinkers too, able to

nimbly think around the edges of ideas, find unusual analogies, be playful and provocative. How to bring out the best of design thinking in concert with others remains an ongoing challenge.

I suspect design will remain a fuzzy discipline, its process remaining open and even somewhat ambiguous. Here I recall Michael Polanyi's book *The Tacit Dimension* in which he discriminates between what is learned experientially, what we know because it feels right, in contrast with what can be clearly articulated and understood. Some aspects of design will forever remain tacit; these are based on experience and sensibility. Yet other aspects can and should be articulated. Design is such a rich activity that demystifying whatever aspects can be clearly described will not undermine the whole, but will increase performance at the same time it helps us appreciate those ineffable moments of creative leap.

Even after all these years I remain fascinated by design and its possibilities to make a better, more humane world through supporting and synthesising ideas and things that count – culture, communication, education, and economic development that provides a better life for all, not just the privileged few. In closing, I will attempt a definition of the new design that is emerging and that will guide future education and practice.

Design is an activity that seeks to domesticate technology for human use by understanding people' needs and pleasures. Working collaboratively with other disciplines and ordinary users, it synthesises diverse ideas into a whole that encompasses a better opportunity or outcome. Designers mediate between people and environments, objects, services, communications, and ideas with a view to formal sensory, social/cultural, and technological resolution within an ethical framework that seeks to avoid damage in the largest sense. Designers operate in the present to serve the future.

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Chapter 6

Reflections on design education in Western Australia during the last quarter of the twentieth century and beyond

Paul Green-Armytage

Introduction

I will begin with a kind of lament for the old ways and my perception of how design education has come to a fork in the road, at least in Western Australia. I will follow that with an account of my philosophy of design education that I was able to develop in the early 1980s, a period I refer to as a 'golden age'. The next section is an edited version of an essay which includes a number of key ideas and which I called Mind Set for Design. I will conclude with a vision of what design education could be in the future.

From art school to university

As a student I experienced the studio model that was traditional in art schools at that time. We each had our own space where we spent most of our time and where we worked on design projects. Students discussed their ideas with each other and lecturers would 'shoulder hop', discussing work in progress on a one-to-one basis. Apart from studio time there were formal lectures on architectural history and building construction and 'crit' sessions where finished work was displayed for discussion. Students would explain and defend their ideas and staff would make comments, point out shortcomings and make suggestions for improvement. The corresponding university model was also well established. Students went to lectures, worked in laboratories, discussed issues in tutorials and spent most of their study time in the library. The university model did not need so many staff contact hours and had less need for dedicated accommodation.

Schools of art, architecture and design awarded diplomas; universities awarded degrees. If the diploma and the degree had been regarded as having equal status there might not have been the pressure for moving the art and design courses into the university sector. The first step was for the institutes of technology (equivalent to polytechnics) to award degrees. In Western Australia this was controversial. I remember my son's eye doctor expressing indignation and suggesting that degrees were devalued if you could get one from an institution that was not a 'proper' university. Another comment on degrees being awarded for an art course came from my colleague, Ron Facius. Ron drew a cartoon of a potter working at his wheel and wearing an academic gown and mortar board. The caption was: 'they're selling like hot cakes now people realise there's intellectual content'. The next move was for WAIT to legitimise its degrees by joining the university club. By act of state parliament the Western Australian Institute of Technology became Curtin University of Technology. The federal government, as the main source of funding, was not impressed. We were told that we could call ourselves what we liked, but should not expect any more money. At that time, institutes of technology were funded less generously than universities. However, the precedent had been set, other institutes of technology became universities and, in due course, more equitable funding arrangements were introduced. The downside of this was that the former institutes of technology increasingly adopted the university model for their old studio-based courses.

It was the studio model that was in place at WAIT when I began my full-time career in education in 1976. There was plenty of studio time and resources for employing a large number of visiting experts. Restrictions on the number of places in the course meant that the standard of entering students was very high and we had our own studios. Thirty years later, contact hours are less than half what they were, there is virtually no funding for the employment of visiting staff and entry standards have had to drop significantly to accommodate a four-fold increase in student numbers. Students no longer have their own studios; they use classrooms in various buildings across campus. Where the department needs to reserve space for its exclusive use, for dedicated computer laboratories, workshops and staff offices, its budget is reduced by so much per square metre, the equivalent of paying rent. Under these circumstances, studio spaces for each group of students were a luxury we could no longer afford.

As pressures on our courses had steadily increased we had been able to find ways to streamline our programs and teach 'better for less'. However, when a new set of constraints were imposed for 2006, which called for further revisions, I abstained from voting to approve the proposals put forward by my colleagues. This was not intended as a vote of no confidence in my colleagues. It seemed to me that we had been suffering death by a thousand cuts and we had just received the final cut. We could no longer deliver the kind of course on which we had built our reputation. Our old course structure could not fit the mould which the university was imposing. If the studio model was the best model for design education, and if that model does not fit the university mould, something would have to give. We had come to a fork in the road. I saw two possible ways forward, both of which would require a radical break with the past. I will return to this theme at the end of this essay.

A golden age

For me, the early 1980s was a golden age. With the support of my colleagues I had gained experience and confidence and I had developed a philosophy for design education. At that time I saw my role, as controller of first year studies, as akin to that of an impresario whose task is to assemble the best possible team to deliver the best possible show. We still had the resources to employ several visiting lecturers and, together, we developed a rich and varied programme with some very exciting projects. In a handout to new students, I listed 24 'Aims of the Course'. The following is a selection:

1. To present information that is helpful to you in the doing and understanding of your work.
2. To help you develop an awareness of yourself, society and the environment.
3. To foster your enthusiasm for your work.
4. To help you get rid of inhibiting preconceptions and develop an open-minded attitude.
5. To help you develop your critical faculties.
6. To help you gain confidence in yourself and to encourage you to take risks as a means of exploring and extending what you can do.
7. To help you develop self-discipline and efficient working habits.

8. To give you experience in the thinking and decision making involved in tackling a wide range of problems.
9. To help you develop your capacity for lateral thinking – approaching problems from different viewpoints.
10. To help you develop an awareness of the expectations and needs of the people who will be affected by your work.
11. To introduce a wide range of media – tools, materials, processes – and to help you develop sensitivity to the disciplines they impose and skill in their use.
12. To help you appreciate the role of presentation, presentation of yourself as well as of your work.

Students had regular drawing classes – life drawing as well as technical drawing. They were introduced to tools for working in wood, metal, and plastic. They had introductory exercises in ceramics, textiles, jewellery, and silk-screen printing. They did some lettering and a series of exercises to explore the fundamentals of design in abstract compositions. There were lectures and tutorial discussions on theories of visual communication and the history of design. There were also projects more closely related to the 'real world' for which solutions to practical problems were required. At that time we were a small department with considerable autonomy. We were not required to lock in timetables and publish course details several months in advance. Within a comparatively loose structure we had the freedom to re-invent the course on an annual basis. Staff were thoroughly engaged in this constant process of renewal and the spirit of adventure rubbed off on the students.

An exercise in practical problem solving

There is no space here for a detailed description of the course, but I would like to describe one project which I found particularly satisfying, not least because the idea for the project itself was the outcome of applying a particular approach to design which we called 'asking the problem'. If a design problem, with all the relevant factors, can be clearly stated, that statement of the problem can point directly to a solution. Because it is difficult to avoid being influenced by past solutions to similar problems we tried to set assignments for which there was no precedent so that students would develop this habit of thinking. On this particular occasion we needed a project that would suit a peculiar set of circumstances.

For a period of three years students of Design, Art, Craft and Art Education had a common element in their programmes. This was the 'Tuesday Workshop'. Students were organised in mixed groups to work on a series of projects planned to introduce them to central concerns of each discipline. Rather than repeat the same projects we devised a sequence of projects in each area for each group. For each workshop period the projects in the different areas were linked by a common theme. For Design the central concern was that designers work to solve problems for other people which means being able to appreciate other people's needs and desires. The series of projects for Design were based in the workshop where it was intended that students would be introduced to basic workshop skills. The theme for the first workshop period was 'the human body'.

For Design, therefore, we needed a project that would require students to consider the needs of others, that would require a prototype that could be built quite easily in the workshop, that related to the human body, and for which there was no precedent. These parameters led me to the idea for the project. I invented a disease which I called 'chronic lymphadenitis'. The disease was not life-threatening. The lymph nodes in the armpits would become inflamed so that any movement of the upper arm would be extremely painful. The task was to devise some kind of harness which would immobilise the upper arms in a position that would allow the wearer to carry out daily tasks with the least difficulty.

Before working on the structure of the harness the students had to consider what would be the most advantageous position for the upper arms if they were to be prevented from moving. When they had made their harnesses the students had to wear them at home for at least an hour and go about their business. A report on the experience of wearing the harness, together with the prototype harness itself, had to be presented at the final session. During that session I treated the students to coffee. One of my favourite memories is that procession of students in their harnesses going down to the coffee shop. It was a self-service situation and the students quickly discovered that pouring a cup of coffee was a two-person operation. One person could not hold the cup under the spout and press the button at the same time if their upper arms were immobilised. A simple example of what life might be like for a person with chronic lymphadenitis was reported by one student. When she had gone to comb her hair she had found it easier to hold the comb still and move her head. Our discussion of the project was enriched by the contributions of a colleague from the School of Occupational Therapy whom I had invited to attend.

Mind set for design

During the mid-1990s we were still able to deliver a rich programme. Reduced income from traditional sources was counterbalanced by increased income from the successful marketing of our courses overseas. We also considered the possibility of offering our courses by correspondence. We had the opportunity for a practical trial when one student, who had begun his first year, had to move away from Perth. Recorded lectures and instructions for assignments were sent by mail and work was sent back for assessment. In the event this trial was not successful, but it had been valuable in one respect. Lectures, which would have been delivered in class from rough notes, had been written down for the recording. One of these contains some of the ideas which I considered most important and I referred to some examples of past students' work to illustrate my points. The title of the lecture was Mind Set for Design. An edited version of this lecture follows:

Overview

The first part of the lecture is about states of mind or attitudes that can be helpful for designers where innovation is the objective. I will talk about the value of questioning assumptions, beliefs and conventions. Then I will discuss the value of making connections. I will use stories for illustration, some of the stories being about past students' work. The final part of the lecture will also include a story about a student's work from the past. This story is to illustrate the importance of being clear about the problem to be solved and the need to delay decisions until the nature of the problem is thoroughly understood. It also illustrates the sometimes antagonistic relationship between functional requirements – like a chair being comfortable – and formal requirements – like a chair being good to look at.

Questioning assumptions, beliefs and conventions

We cannot know everything from first-hand experience. We must often act on assumptions, on what we believe to be true. In design it can be fruitful to question our assumptions and beliefs.

At a workshop in lateral thinking for problem solving, Edward de Bono gave an example of the potential value of turning assumptions on their heads. The example he gave involved security and watchdogs. What are our assumptions about watchdogs? Watchdogs are aggressive and make a loud noise. Could there be an advantage in having a watchdog that was timid and silent? How might a would-be burglar respond to a sign saying: 'Beware – Silent Watchdog!' And couldn't it

be useful to have a dog that could be counted on to go to the back of his kennel at the first sign of an intruder. At the back of the kennel there could be a switch which would ring an alarm in the local police station.

Related to assumptions and beliefs are certain conventions or patterns, a pattern here meaning a particular kind of form with a typical arrangement of parts which has a name. These named patterns can be very useful, especially in communication, but they can also reduce the number of possibilities for new designs.

Most things that people make conform with one of these patterns and can be described accordingly. Something with four legs, a seat and a back would fit the pattern 'chair'. But there would be limits to what could be described as a chair, and a designer, asked to design a chair, can be imprisoned within those limits. A way to escape from such a prison is to ask the question: 'What are the problems for which a chair is a solution?' Students' answers to this question have included: 'Keeping clothes off the floor', 'Getting things down from the top of the wardrobe' and 'Taming lions' as well as the more conventional problems such as 'Watching television in comfort'.

When you recognise that the real problem is not to design something that will fit the description 'chair' but rather to design something that will support the body in a position that is comfortable and suitable for a particular activity you no longer restrict yourself to four legs, a seat and a back. It was this kind of thinking that led to the beanbag in Italy and the *balans* in Norway, neither of which would normally be described as a chair. A beanbag can certainly support the body in a position that is comfortable and suitable for conversation or watching television. And a *balans* can support the body in a very good position for working at a desk or drawing board.

So whatever the design problem, always ask the question: 'What are the problems for which a ... is a solution?' What are the problems for which a savage watchdog is a solution? Preventing burglars from stealing your valuables. How else might that be done? Having a timid watchdog that would retreat to its kennel at the sound of an intruder and so trigger an alarm in the police station. It doesn't matter that many of the answers to the question are ridiculous. This can be a variation on the technique of brainstorming, which can lead to radical design solutions – like the beanbag, the *balans*, and like the study chair designed by Curtin student Renée du Bruin.

Like most other students, Renée did her homework sitting on a conventional chair with her work spread out before her on a table. And like many other students she found that her neck would get tired.

She wondered if it would be possible to study effectively while relaxing on a couch.

Renée's solution was a couch with two additional features. One feature was a table like those provided for patients in hospitals. The other feature was a structure incorporating two mirrors mounted above the head. The mirrors would be angled in such a way that it would be possible to see what was on the table without lifting one's head. And to overcome the problem of seeing clearly when there was such a distance from eyes to mirrors to table surface, one of the mirrors was slightly concave so that it magnified like a shaving mirror.

So do not be imprisoned by assumptions, beliefs or conventions. Look beyond such surface problems as the design of a chair. Look for the underlying deep problems such as that identified by Renée: supporting the body in a comfortable position for study.

Making connections

For this section I will start with a story, or rather with a riddle. In this story you have to identify the characters, including yourself.

Whoever you are, you have two clients. We will call them client A and client B. Both your clients need the same thing – a particular service – and what they have to offer in exchange is a nourishing drink. There are several possible providers of this service, and all of them will be satisfied with a nourishing drink in exchange. You present your clients with a choice of strategy:

1. Produce a drink that will have general appeal – any of the potential suppliers of the service would be satisfied.
2. Produce a drink especially formulated for the taste of one group – say, one per cent of the total – so that members of that group would not be able to resist.

Client A chooses strategy 1, produces the drink and develops a point of sale display that is striking and decorative and likely to catch the eye of all. Client B chooses strategy 2. This time the point of sale display might strike many as bizarre, but it has unique characteristics so that members of that one per cent group would not mistake it.

Now here are the answers: Client A is a daisy. Client B is an orchid. The service is pollination which birds and insects are happy to provide in exchange for the drink which is nectar. And you are Mother Nature, or God, or the Process of Evolution, whichever you prefer.

This story was told by Jenny Henderson as her answer to a first year design project called Nature Study (1977). Students were required to

select something from the natural world and find out why it looked the way it did. Having established the role of a flower in attracting the attention of passing birds and insects, Jenny went on to make the connection with advertising. Some orchids take on the most extraordinary forms to make sure they will be noticed by a particular kind of insect. And the attraction is not always nectar. There is one orchid that mimics the appearance of a female insect which then acts as a magnet for any passing male. So we are not the first to use sex in advertising. But if we had not thought of it for ourselves we could easily have got the idea from this orchid. There are many more ideas out there in the natural world.

Victor Papanek includes study of the natural world as one of his primary sources of ideas for design. In a lecture at Curtin University (1991) he told how his ideas for drawing tape came to him from watching a spider. The spider spins its silk. Having anchored one end, it leaves a trail of thread behind it as it moves and it anchors the thread again at each change of direction. Similarly the drawing tape, which can be transparent or opaque, coloured, textured or patterned, is on a reel inside a plastic cassette. Like the spider's silk the tape is sticky. It is anchored in place where the line is to begin and as the cassette is moved away a line trails behind. The line is then pressed into place on the drawing.

Design solutions can come from connections with the natural world, but also from a great many other kinds of connection. Always be open to possibilities from connections. It can be fruitful to go on a journey along a sequence of connections. However unlikely some steps may appear on the way, the journey can lead in the end to very fresh and innovative solutions to design problems.

Being clear about the problem

Designers, being creative people, tend to have a whole lot of ideas pop into their heads when first introduced to a problem. This can be dangerous. It is easy to fall in love with a particular idea for a solution before all the implications of the problem are clear. It can then turn out that your 'solution' is not a solution after all. If you let yourself get married to your idea the divorce process can be painful and time-consuming. The following story is a cautionary tale:

Students were set the task of designing and carving out of polystyrene foam a prototype form for a shampoo bottle. One student, almost from the outset, fell in love with the idea of the ultimate, the perfect form – a sphere. Then, when he was firmly married to the idea, he considered the practicalities: how to make the sphere stay upright, how to hold it

with wet hands, how to get the shampoo out. The rest of us, one after the other, got sucked into his problem.

So that the sphere would not roll over it could be weighted at the bottom, it could be flattened slightly or it could have little projections. People were not convinced by the weight idea and both the flattened bottom and the projections would interfere with the perfection of the sphere. Similar difficulties were encountered with the problem of getting the shampoo out. An unsightly residue would soon build up around a small hole, and any kind of flip-top would also interfere with the perfection of form. A promising idea was to have the sphere come apart with only a hairline crack being visible when the bottle was closed. Once open, the most convenient mechanisms, such as some kind of pump, could be exposed. But how to grip the sphere in order to get the two halves apart? It would be difficult to grip, especially with wet hands. And once again, any ridges or dimples to provide a better grip would interfere with the perfect sphere.

In the end it became clear that the bottle could only be usable if it ceased to be perfectly spherical. The student abandoned the idea. The divorce was painful and there was little time left to develop an alternative idea before the project's deadline. He did meet the deadline but with a very conventional idea.

Instead of getting married to an idea at the outset it is wise to put first ideas on hold until you have a clear grasp of the problem. Then these ideas can be evaluated and only those which meet all the criteria you have established should be retained for further consideration. It can also happen that a clear statement of the problem can point the way to a solution and it can point in a quite unexpected direction. So this approach of 'asking the problem' can be another route to innovative ideas.

Form and function

The case of the spherical shampoo bottle is a good illustration of the kind of conflict that can arise between the demands of form and function. Each improvement in function was at the expense of form and there was a sliding scale. The larger the area of a flattened bottom the more stable the bottle, but the less perfect the form. Similarly, the deeper the dimples, the better the grip, but again this would be at the expense of the form.

One could argue that the appearance of a shampoo bottle is unimportant, that functional requirements alone should dictate the form. There are others who would argue that the form itself is

functional, that it constitutes a message to the user about the nature of what is in the bottle. And this was certainly something I wanted the students to explore in the exercise. Their task was to design a form for the bottle that would be convenient to use at the same time as it signalled the message the student had chosen such as: 'I am shampoo for the whole family – I am not expensive but will get your hair clean'. or: 'I am expensive, but I can give your hair body and make it glossy and beautiful', or: 'If you have dandruff your troubles are over'. (As an aside, we noted that bottles of medicated shampoo are small. This suggests two things, that the shampoo is potent and that it works fast – you will not need very much.)

So the designer has to be very clear about the problem and this can require some judgement about the relative importance of functional and formal requirements. To return to the example of a chair, there is a continuum from one extreme to the other. At one end there are chairs such as those for airline pilots where comfort and support are all that matter. At the other end there are the thrones that kings and queens sit on where it is much more important that the throne be magnificent to look at and that it convey very forcefully the importance and dignity of the king or queen sitting on it. In between these extremes are office chairs, dining chairs, and chairs for the lobbies of prestige office buildings. Where do people's priorities lie – being comfortable or impressing other people?

Conclusion

When embarking on a new design problem it can be very fruitful to programme your brain. First establish all the aspects of the problem, the operational requirements, the intended message of the design and their relative importance. Then, when you have opened up possibilities by using strategies for creativity such as brainstorming and force-fitting, load all this into your brain. Then pay attention. Possible solutions are everywhere if you are open to them and able to make connections.

Postscript

In another lecture, delivered from notes, I dealt at greater length with issues of form and function and made use of a favourite example – that of spaceships. There are two groups of people who design spaceships, those who work for organisations such as NASA and those who work for the movies in places like Hollywood. For the NASA group, function is all that matters. Appearance of a spaceship is irrelevant provided it

can land men on the Moon and bring them safely back. The Hollywood group do not have to worry about function – special effects take care of that. In the movies appearance is all that matters. The only concern of the designers is that their spaceships look convincing. From this example of extremes it was possible to move to other examples, such as that of the motor car, where the tensions between the demands of form and function can be illustrated and discussed.

The future of design education

In early December 2000, Cal Swann, Professor of Design at Curtin University of Technology, convened an international conference with the title 'Re-inventing Design Education in the University'. The conference proceedings were edited by Cal Swann and Ellen Young. In their introduction, Swann and Young state that:

'The aim of this conference was to re-evaluate the nature of undergraduate design education in the university context. The outcomes are intended to signal ideological changes that are desirable in terms of teaching and learning in design education within a university environment.'

One of the keynote speakers at the conference, Ken Friedman, saw the conference as particularly timely. Friedman pointed out how design programmes, developed according to the art school model, had been transferred to the universities with little change to the curriculum. In his view (Friedman 2000, p. 14): 'The content and practice of these design educations have not been reformed to university standards'.

It is sad to recall that the conference had little impact on the School of Design in spite of its being the sponsoring organisation. The conference came at the end of an exhausting year during which staff had had little time or energy for anything other than maintaining current programmes. Radical change might have been needed but all we had been able to contemplate had been incremental change. My view, expressed at the beginning of this essay, is that radical change cannot be deferred any longer. I referred to a fork in the road. Each fork leads to a different option for the future. The options are not incompatible.

Partnership with technical colleges

Our old courses had been designed to equip students for a career in the design profession. To be employable in a design office students need training. They need technical expertise – knowledge, skills, sensitivity and experience – the 'how' of design. To be members of a profession they need

education. They need to be able to think about their role in society and the consequences of their work – the 'what', 'why' and 'for whom' of design.

Training is best provided by the technical colleges, education by the universities. Since we can no longer provide adequate training as well as a sound education within current constraints we should stop trying to provide the training and enter into some kind of partnership with the technical colleges. So one option is to make a certain level of technical expertise a prerequisite for entry to our degree programme. This would allow us to focus on research, theory and ideas in relation to the professional practice of design. A student wanting a career as a design practitioner could expect that a certificate or diploma from a technical college would be needed at some stage.

New courses in design studies

The second option would be to develop a new kind of course in design studies which would treat design as the basis for a liberal education – education about and through design rather than education for design practice.

The two options are set out by Clive Dilnot, who was another of the keynote speakers at the Curtin conference (Dilnot 2000). Education for design practice is generally well understood. Dilnot focuses more attention on the possibilities offered by the second option – design as the basis of a liberal education. Development of such a course would take time, but Dilnot points to some pioneering examples.

A new vision for design

The two options could co-exist within our department with some common units and the possibility for students to transfer from one programme to the other.

Dilnot's presentation struck a chord with me. For my review session with the Head of School in 1996 I prepared a paper headed 'A New Vision for Design'. In my introduction I wrote:

'I would like to see the School take on a grander and more distinctive vision. We might develop for Design a vision inspired by the words that Terry Eagleton wrote in connection with the rise of English (Eagleton 1983, p. 31): "In the early 1920s it was desperately unclear why English was worth studying at all; by the early 1930s it had become a question of why it was worth wasting your time on anything else. English was … the supremely civilising pursuit…." Design could be represented as offering all that English has to offer and more. Design can be seen to be at the crossroads of communication theory, sociology,

art and engineering. It is not only a civilising pursuit but also offers the practical means to make the world a better place.'

Later in the paper I suggested that we might be driven to make radical changes by choice or by necessity. I quoted from a paper by Barry Jackson, subsequently published on the Internet (Jackson 1997): 'the time to change … is when things are going well'. In the mid-1990s it seemed that we were still in a position to choose; we could decide to jump rather than wait until we were pushed. I argued that economic pressures would soon force us to change: 'I suspect that trimming contact hours from an essentially unchanged programme may not be enough. I think we will be in a much stronger position if we jump; at least we can be in some kind of control of our directions'.

Looking back ten years later I can see that we missed the opportunity to jump and have now reached the point where we are being pushed. But even though we are being pushed we can still choose our direction. My own time has passed, but there is youth and energy in the department. While we may mourn the passing of the old model of design education and feel uncomfortable in this period of transition, it has become a matter of some urgency to embrace the new possibilities for design education while design still has some credibility as a university discipline.

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Chapter 7

Oven-ready for employment?

Can group-based projects enhance the work-based learning aspect of an FdA course?

Neil Barnett & Darren Raven

Introduction

The world of professional graphic design that a graduate will enter in the twenty-first century is very different to the professional design world of just a decade ago. Students are expected to be competent in upwards of four software programmes; generate ideas; be able to communicate those ideas – visually, verbally and via different technologies: print, PDF, screen, animation, website and moving image. They are plunged into the fast-moving world of visual communication with only a vague notion of what that world entails. They are asked to work within teams, liaise with clients and suppliers, produce print- or screen-ready artwork – all after as little as sixty weeks on a vocational course. A college education that gives students the time and space to explore their ideas, engage with technology and experience a slice of the professional design world, is an ideal that sets in motion the opportunity for lifelong learning and the chance to influence and be part of the ever-changing landscape of visual communication.

During this action-based research, a practical, group-based, work-related project explored the changing perceptions that a group of undergraduate students, design professionals and teaching staff possessed about the professional design industry and its relationship to education. This paper is concerned with the students' response to these issues.

Abstract

Background: FdA Graphic Design courses with large student cohorts are under constant pressure to deliver a quality learning experience. The staff are unable to spend as much time with individual students as they would like and as a result there is a greater need to improve the effectiveness of group-based learning.

Work Based Learning (WBL), which is one of the distinct features of FdA courses in the case of large student cohorts, can become marginalised and treated merely as a subsidiary activity in the form of an individual work placement at the end of the first year of study.

Aims: This action research project sought to:

- embed WBL as a central element of the course.
- investigate the student, staff and industry partners' relationships, their current understanding of WBL and build stronger links between the course and the creative industries.
- improve the vocational skills and facilitate greater autonomy and increased confidence in setting and achieving learning goals by the students.
- investigate and acquire teaching and learning strategies that can be applied to a large differentiated student cohort.

Methods & procedure: The project was divided into two parts: the studio project and the research project.

The studio project was based around a Problem Based Learning (PBL) model and asked students to work in small groups to design a series of magazine pages and spreads. Students worked together from the brainstorming of initial ideas to the actual production of digital, print-ready artwork. Responsibility for the generation of the visual and textual content was theirs as was the delegation of roles and responsibilities. The selected artwork was printed into an actual four-colour, 24-page, A4-sized magazine. At three stages of the project the industry partners came into the studio and worked with the students, critiquing work and offering advice.

The research project used Cowan's extension to The Kolb Cycle as the framework for the primary data gathering from the three parties involved: students, staff and industry partners. Cowan's model of reflection (on, in and after) provided a useful mechanism for collecting the assumptions and feelings of the three parties involved as the project progressed.

Outcomes & results: The majority of the students saw industry partners as being able to provide short cuts and advice on avoiding mistakes. They believed the industry partners could reveal and demystify what really occurred in industry. They also reported that industry partners could share their experiences of working in the 'real' world that could be useful after leaving college. Other common points were that the

students saw college as a stepping-stone along the way to the real world. They saw college as providing the facilities for practice and preparation before entering the imagined world of work, as an opportunity to learn from, and to work with, others. They also viewed college as a place where one would be taught the necessary skills and knowledge that industry wanted.

Conclusion: This research study demonstrated a successful method of embedding WBL as a central element of the course. It also made the industry partners more aware of the educational process and the differences between design education and professional design practice. As expected, group work proved problematic at the early stages of the project but eventually brought increased autonomy and confidence to those students that saw it through. The production of professional-standard digital artwork was difficult for students to achieve at their initial attempt. They required more time and instruction in order to complete this successfully.

Context

This research project was conducted with first year students and staff of a two-year, full-time, Foundation Degree (FdA) in Design for Graphic Communication in a London university, during the second term in the 2005/06 academic year. It also involved three Work Based Learning (WBL) practising designers who worked with the students as advisers on the group-based studio project.

The FdA programme chosen for the project had a large diverse cohort with over 100 students in each year group. The students came from a variety of different backgrounds, with over sixteen nationalities represented and age ranges from 18 to mid-50s. The main teaching and learning environment was a 'hot-desk', multi-use space, where students worked for short timetabled sessions and the staff student ratio was often over 30:1. This situation is not unique to the course that took part in the study, merely a reflection on the popularity of design education programmes in the UK.

Issues/Problem

There were two key issues explored in this action research project.

Firstly, with large numbers of students engaged in design courses of this nature there is a greater need to improve the effectiveness of group learning. The teaching staff is unable to see students on an individual

basis with the intensity that was prevalent on previous, smaller courses. Students need to be able to harness the power of the course, which is its student numbers, and turn this into a positive educational experience.

Secondly, Foundation Degrees were introduced to provide vocational, work-based programmes, which would provide and upgrade the skills requirement of associate professional and higher technician occupations. Put simply, FdAs are specifically about the world of work.

'The distinctiveness of Foundation Degrees depends upon the integration of the following characteristics: employer involvement; accessibility; articulation and progression; flexibility; and partnership. While none of these attributes is unique to Foundation Degrees, their clear and planned integration within a single award, underpinned by work-based learning, makes the award very distinctive.' (QAA, 2004; p.5)

At the time of the project's commencement, Work Based Learning (WBL) was treated as a subsidiary element of the course that was dealt with as a voluntary work placement during the summer break between first and second year. This is an activity that students undertake alone, which is the best way to experience life in a design company, because ultimately students need to prove themselves as individuals. But due to the short time frame, two to four weeks, and students' level of confidence and competence (only 30 weeks of study have been completed at this level), when placement is undertaken it is very unlikely that they will be involved in all aspects of a project from initial concepts to printed/published outcome or have the opportunity to become part of a team.

The work placement was also distanced from the main emphasis of the course, the studio environment, and the portfolio projects that the students carry out there and delivered as part of a Personal and Professional Development unit.

Aims of research project

- Embed WBL as a central element of the course.
- Investigate the student, staff and industry partners' relationships, their current understanding of WBL and build stronger links between the course and the creative industries.
- Improve the vocational skills and facilitate greater autonomy and increased confidence in setting and achieving learning goals by the students.
- Investigate and acquire teaching and learning strategies that can be applied to a large differentiated student cohort.

Research territory – theoretical framework

There were two main and two supporting theoretical models used to inform this project:

Problem Based Learning (PBL) and Cowan's extension of Kolb's reflective practice were the main theories while Lave and Wenger's theories on Situated Learning (1991) and Wenger's Communities of Practice (1999) provided valuable insight into how people learn, in groups, in a working context.

1. Problem Based Learning (PBL) was identified as a pedagogical concept appropriate as a model for the design of the studio project to use as the basis for this research project.

With PBL, students are supported and encouraged by the tutors in taking responsibility for organising their group, thus directing their own learning process. Tutors become facilitators rather than knowledge providers.

'The defining characteristics of a PBL are:

- learning is driven by challenging, open-ended problems.
- students work in small collaborative groups.
- teachers take on the role as facilitators of learning.'

http://en.wikipedia.org/wiki/Problem-based_learning (accessed 2005)

2. John Cowan's *On Becoming an Innovative University Teacher: Reflection in Action* was consulted for his theories extending on Kolb's modes of reflection. This was the framework for the primary data gathering from the three parties reflections: before, during and after the practical project.

3. & 4. Lave and Wenger's theories on Situated Learning (1991) and Wenger's Communities of Practice (1999). These provided valuable insight into how people learn, in groups, in a working context. They were used to identify possible and potential relationships between the three parties (students, tutors and industry partners) and suggest designs for facilitating greater group cohesion and deeper learning and engagement.

Literature review

The gap between existing research – justification

No research could be found specifically around the subject of WBL and FdAs within Graphic Design, and very little research involving PBL and group learning within the subject specialism currently exists.

Methods

What we did

The overall project was divided into two parts:

1. The studio project was designed and aligned with the mentioned pedagogic theories. The students were asked to work in groups of five or six to design a series of magazine pages and spreads. They worked together from production of initial ideas to the actual production of digital, print-ready artwork. Responsibility for the generation of the visual and textual content was theirs as was the delegation of roles and responsibilities. Each group's pages and spreads were presented to the rest of the year group at the end of the project and voted on to be included in the final magazine, by their peers. The chosen artwork was then printed into an actual four-colour, 24-page, A4-sized magazine. At three stages of the project the industry partners came into the studio and worked with the students, critiquing work and offering advice. The course tutors worked with the students as group facilitators, rather than telling the students what to do or leading the project as normal.

2. The format of the research questions. The researchers intended to complete a three-stage, qualitative and quantitative data-gathering procedure; before, during and after the studio project from each of the three parties (students, tutors and industry partners). This data contained each party's assumptions, reflections and opinions on the project in response to three questions.

The questions

The first question posed to each of the parties involved ordering a set of ten factors into an order of importance. These factors were gathered from the course learning outcomes and assessment criteria.

The second question asked how can, how are and how have (changing the tense at each stage) the industry partners helped the students gain the necessary skills and knowledge to complete the magazine project?

The third question asked how does, is and has (again changing the tense at each of the three stages) a college education equipped you to become a graphic designer?

Why we did it that way

Cowan's model of reflection (on, in and after) provided a useful mechanism for collecting the assumptions and feelings of the three parties involved as the project progressed.

Problems encountered

Data collection

Whilst gathering the three stages of data from the students was unproblematic (due to the use of questionnaires), tutor and industry partner responses were more difficult to arrange and gather. In the end only two stages of data were collected from them: before and after.

The design, facilitation and logo-centric nature of questionnaires are influential on the quality and validity of the data they generate. The range of questions obviously limits the range of responses. The time and space given to fill a questionnaire out and the requirement to translate thoughts, experiences or verbal opinions into written form dictates and may limit the level of engagement of the participants and/or the reliability of their 'answers'.

The interview method, using a range of questions to facilitate personalised responses, used with the tutors and industry participants, provided much more 'useful' insight. The negative side to this method is that much more time is needed in gathering and analysing the data. Meetings can be missed and cancelled at the last minute and the opportunity to rearrange is limited by people's busy schedules.

The studio project

'I like them as people, but I just can't work with them.'

There were two areas that were problematic for the students involved in this project. The first was the production of digital artwork. Because this is a technically demanding exercise, and for the majority of the students it was the first time they had encountered the rigours of print-ready artwork, virtually all of the initial attempts had to be re-presented to meet the standards supplied in the printer's specifications. A lack of understanding about image resolution and not embedding images within the document properly were the most common problems. The college is fortunate in that it has an on-site professional design studio, that was able to offer assistance to alleviate what would have been time-consuming and very costly mistakes.

The other problematic issue for the students was working in teams that were not self-selected. This was a very conscious decision that the staff took in setting the project parameters. It mimicked the situation in a design studio, where friends are not picked as work colleagues but where co-members of a professional team fulfil different roles amongst a myriad of personalities.

Findings

Question 1

Read the skills/knowledge listed below. Rate them in order of the importance for you to learn and improve upon, to best complete the magazine project. (One being the highest, ten being the lowest).

The complete list

Computer skills
Presentation skills
Communication skills
Ability to work as part of a team
Business skills (costing, client liaison, copyright, etc.)
Media skills (print-making, photography, etc.)
Drawing and visualisation skills
Contextual knowledge (design history, cultural theory, etc.)
Ability to generate ideas (lateral thinking, brainstorming, etc.)
Knowledge of design principles (colour theory, semiotics, etc.)

There was close correlation between students, staff and industry about what they perceived as important skills or attributes for a graphic designer to possess, that is, from the list compiled from the course learning outcomes and assessment criteria. All three groups returned their top three most frequent responses in the following way:

Students

Communication skills
Teamwork
Ideas

Industry

Ideas
Communication skills
Teamwork

Staff

Ideas
Communication skills
Teamwork

Staff and industry gave identical ranking order to ideas, communication skills and teamwork, while the students put communication skills top with teamwork second and ideas third. It would seem that at this point all parties are in agreement over what constitutes a graphic designer's key skills or attributes.

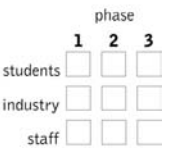
RESPONSES FROM ALL GROUPS

The responses for each responding group revealed the following ranking

Students
COMMUNICATION SKILLS
TEAM WORK ABILITY
IDEA GENERATION
COMPUTER SKILLS
PRESENTATION SKILLS
MEDIA SKILLS
KNOWLEDGE OF DESIGN PRINCIPLES
BUSINESS SKILLS
DRAWING & VISUALISATION SKILLS
CONTEXTUAL KNOWLEDGE

Industry partners
IDEA GENERATION
COMMUNICATION SKILLS
TEAM WORK ABILITY
DRAWING & VISUALISATION SKILLS
KNOWLEDGE OF DESIGN PRINCIPLES
CONTEXTUAL KNOWLEDGE
COMPUTER SKILLS
PRESENTATION SKILLS
MEDIA SKILLS
BUSINESS SKILLS

Staff members
IDEA GENERATION
COMMUNICATION SKILLS
TEAM WORK ABILITY
KNOWLEDGE OF DESIGN PRINCIPLES
CONTEXTUAL KNOWLEDGE
DRAWING & VISUALISATION SKILLS
COMPUTER SKILLS
MEDIA SKILLS
BUSINESS SKILLS
PRESENTATION SKILLS



Question 2

The second question asked how can, how are and how have (changing the tense at each stage) the industry partners helped the students gain the necessary skills and knowledge to complete the magazine project?

Phase 1 Assumption

At the initial phase of the project the students articulated the following assumptions about the role that industry could play in their learning:

"By imposing professional restrictions on us, letting us know how professionals do it, liaising with us for technical aspects, giving their feedback as professionals."

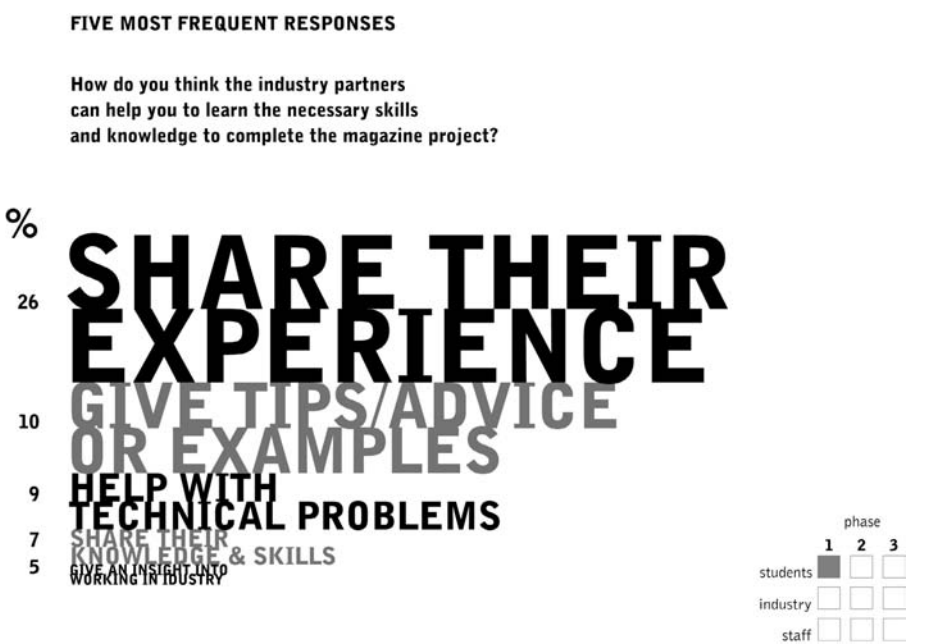
"Through their experience, I will be able to learn a lot. Not being involved in the industry, this experience will be valuable to me, giving me a head start and insight into the skills necessary."

"They give you a taste of the real world as they can pass on their knowledge and experiences."

"They have experienced all the troubles and problems we are about to come across in this project already, so they can tell us how they have overcome them."

"To pass on their experiences so we know what is to come in the real world."

"With their experience and familiarity of common pitfalls junior designers stumble into, I feel they'll be able to spot problems before they happen."



Phase 2 Reflection

At the second phase of the project the students articulated the following reflections about the role that industry could play in their learning:

"It has been good. Some advisers have supplied us with inspiration and others have spoken to us about details that will help us finish the magazine."

"They have talked about details that are important and also group work."

"He's helped me realise that all the work I produce at college should be good enough to use in the industry."

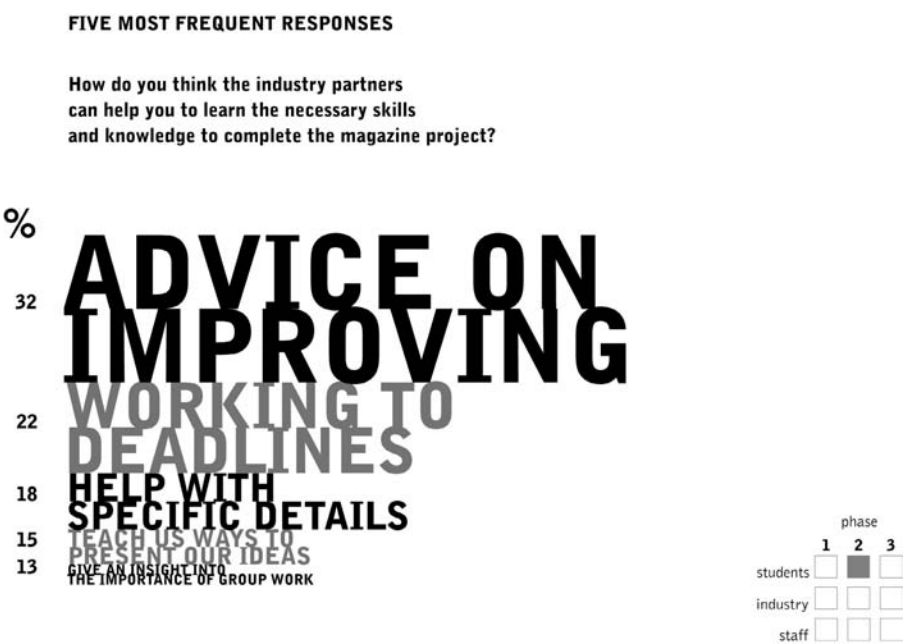
"They have showed us the 'business' of developing a magazine – deadlines, communication, team work…"

"I have got a lot out of the crits as the work is looked at from the view of the industry; how and what should be presented. Also helps me to develop a convincing way of talking and selling our work."

"I learned from the industry advisers that it is important to do work with groups."

"They helped us to know how to present our work to others/clients. And how we should organise time and how much we should allow ourselves to redo any arrears/mistakes."

"They have taught us exactly what the industry are looking at. They are also quite harsh compared to crits . . . this is good, because people listen."



Phase 3 Opinion

At the third phase of the project the students articulated the following opinions about the role that industry could play in their learning:

"They help by giving us a wake-up call on what industry is like and what industry wants."

"Talking through the design process and what's actually involved in producing a magazine."

"I have realised that you have to have extra time and patience when you work in a group."

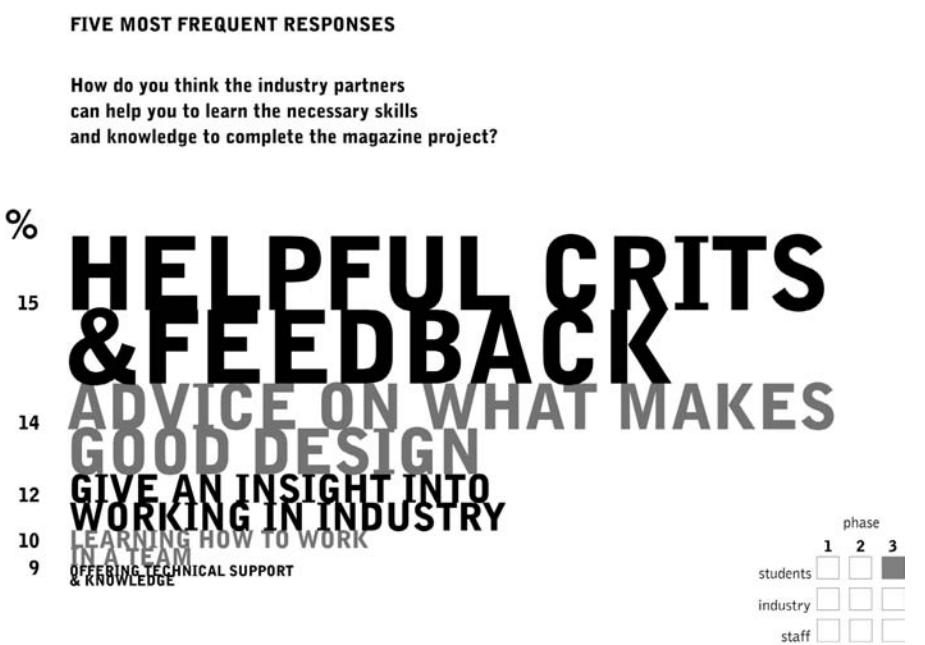
"They have improved our knowledge by showing us many examples of their own work, therefore broadening our knowledge."

"When they explain their process, I try to imitate it. It helps."

"Good feedback and gave us a good idea of the industry."

"They can crit the work with the view of industry. I can see what level I am at. Good points that they come across."

"By telling us exactly what needs to be done and how to go about it, also being cruel to be kind."



Question 3

The third question asked how does, is and has (again changing the tense at each of the three stages) a college education equipped you to become a graphic designer?

Phase 1 Assumption

At the initial phase of the project the students articulated the following assumptions about the role that college could play in their learning:

"It prepares you for the real world. You build up knowledge and confidence in your work that is invaluable. You also meet people at college (networking) who can become a great source of creativity and business in the future."

"By teaching you important skills and processes, such as the grid, type hierarchy, image application, etc."

"Teaches us the processes and techniques of how to design. Also the technical knowledge of how to use elements such as colour, type, image, etc., to create effective design."

"To talk to other graphic design students, and see designs work and to know that you can be a designer too."

"You get the chance to TRY different things; you force yourself to do stuff and maybe start pushing yourself more."

"With the FdA course the approach of the projects, and the projects themselves, enabled me to become familiar with typical professional situations and scenarios."

"Facilities, industry contacts, peer pressure, guidance by tutors, meeting like-minded people, industry 'etiquette' as opposed to self-teaching or learning 'hands on!'"

Phase 2 Reflection

At the second phase of the project the students articulated the following reflections about the role that college could play in their learning:

"They are providing me with tutors and experienced technicians and also the equipment for me to use has been readily available to me, helping me to further my knowledge."

"Computer skills. Encouragement to look at a lot of work."

"By learning how to present ideas and think out ideas visually."

"Gives you freedom to try new things and learn from them!"

"Experiencing projects like the magazine project prepares me for my future career."

"It gives us the chance of making mistakes without it being super critical."

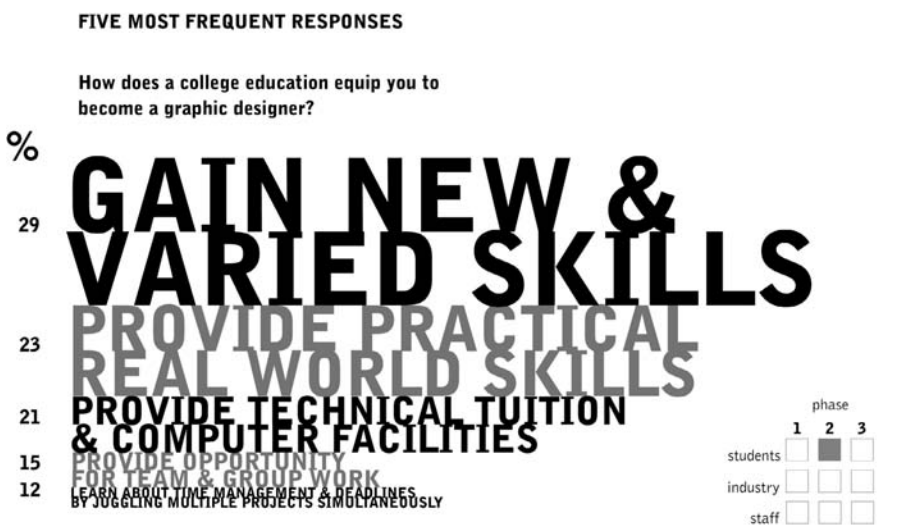
"It's giving me the design principles and contextual knowledge to start understanding how to break the rules."

"Team work is quite important in the future and the projects are preparing me for that."

"Learning basics/design principles. Team working. Presentation skills."

"Deconstructing the work we do in order to help understand problem areas, how to improve work. The practical experience of doing and making mistakes and learning from them."

"It's opening my mind to many new ways of working."



Phase 3 Opinion

At the third phase of the project the students articulated the following opinions about the role that college could play in their learning:

"Projects are preparing us for real work. The deadlines and skill spines for programmes."

"Design principles, a ground to stand on. Time to try ideas, get help with problems."

"Learning a diverse range of skills, using different media. Group work/presentations. Develop new and existing skills."

"With the other students I can see what they're doing and learn from them as well."

"New software packages have been useful. Practical workshops and ideas generation. Emphasis on typography and image projects is good."

"It's given me pressure and deadlines I will need to experience that's similar to a graphic work experience. Also can learn from mistakes made on computer programs."

"We get loads of projects to do simultaneously which is good as I'm sure it will be like that as a designer. Also good to chat about work."

"Good equipment and nice environment. Good teachers and friendly staff are helping us. There are lots of nice students' work shown around college and we can learn some new knowledge from there."

"Learning essential information about technical requirement, design requirements and generating ideas. Software workshop. Passing on knowledge."

"By teaching us technical skills, generating ideas, theory, and giving us crits. And be hard! It should be like the Bauhaus school."

"Teaching and learning important skills. Being able to make mistakes."

"It has equipped me with the knowledge and the skills to become a graphic designer, such as fonts, type, presentation, computer skills, grids, colour theory and the ability to work as a team."

"Providing realistic design situations. Constant contact with the industry. Structuring work realistically. Placing the responsibilities on you."

"Being able to express and create your ideas in a controlled environment helps a lot. I feel as a group we have all come a long way."

Conclusions

The findings from each party and stage provided useful insights and suggestions. The points below focus on the students' responses.

The reoccurring points made by the majority of the students were that they saw industry partners as being able to provide short cuts and advice on avoiding mistakes and what not to do. They believed the industry partners could reveal and demystify what really occurred in industry. They also reported that industry partners could share their experiences of working in the 'real' world that could be useful after leaving college.

Other common points were that the students saw college as a stepping-stone along the way to the real world. They saw college as providing the facilities for practice and preparation before entering the imagined world of work, as an opportunity to learn from, and work with, others and a place where one would be taught the necessary skills and knowledge that industry wanted.

At the second stage of the project there was a growing realisation or maturity amongst the students. As Stephen R. Covey puts it in his book, *The 7 Habits of Highly Effective People*, we move from a state of dependency, through independence and finally to interdependence, where we realise that we need to work with others to achieve far more than we can alone. This process of maturation is encapsulated in the project as a discreet outcome.

At the start of a university education students are totally dependent on the staff and the institution for information and learning strategies. As they develop, students become more independent as learners; the change between first- and second-year students in their approach to learning and self-motivated study is easy to identify. This is usually the point (as independent learners) at which the students leave the course, but with a WBL group project early in the course, students can experience interdependency: a skill which can be built upon as they continue to mature within the programme and after they graduate into the world of work.

WBL is a crucial feature of any FdA course; not only does it better prepare students for placement and then the world of work but it enhances learning and teaching possibilities through encouraging peer support.

WBL must not become marginalised within a course but should be placed at the heart of every FdA programme, no matter how large the course. With large student numbers this is a difficult task to perform well.

Industry in the form of WBL cannot provide students with all the skills and practical knowledge needed to become graphic designers. The college system provides time and a safe environment for students to explore ideas, and allows students to get it wrong and reflect on their practice. In industry, time pressure, clients, and the scale of projects means that a more surface approach to learning is likely to be encouraged if students learnt solely via an apprenticeship scheme.

Integrating a substantial WBL group project in the heart of the curriculum builds better links with industry, through their direct involvement with education. The industry partners are subsequently more willing to offer placements to students because they see first-hand the benefits of Work Based Learning.

If the goal of an FdA is the world of work and the world of work is undertaken, not in isolation as a solo endeavour but in conjunction with others, then one of the most valuable additions to the curriculum is group-based WBL.

The context for the project mirrors the competitive nature of the industry, in that all student groups pitch work against each other and vote on the most popular work.

Students also take the project from ideas to artwork, with a 'real life' printed outcome. In short, they follow the design and production process from start to finish, from concept to completed artefact.

Each group of students worked with, and presented to, an industry adviser/designer throughout the course of the project, which was a valuable learning experience for both parties.

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‘Design is not a thing you do, it’s a way of life.’ Alan Fletcher

Part 3
By accident or design

Introduction

This part of the book looks at the many things that have changed in the past half a century, as reflected in my own training and career path. It considers how the way we were taught affected our lives and perhaps the way we, in turn, taught others. The techniques I was taught to use are now archaic and part of history, and as such maybe are worth recording.

The title for Part 3 was chosen because the whole story of my career is a sequence of accidents, often influenced by circumstances outside my control. Time and again when I was desperate, or just in need of a change of direction, the answer to my problem was to be found in the media or some other coincidental circumstance. It has been an enjoyable fifty years – and more. A flexible and varied life that led me to believe that being a designer becomes a part of you in all you do. I agree with the philosophy of the graphic designer Alan Fletcher, as quoted in his *Times* obituary on 26 September 2006: 'Design is not a thing you do, it's a way of life'.

So much has changed in the last half century, that my experiences may sound improbable. It is unlikely that a sixteen-year-old would now be accepted by an art school. Master craftsmen are more likely to spend time (if at all) teaching older and more skilled employees their craft. The idea of apprenticeship, particularly in design, is no longer fashionable, either for the young person or the employer. Therefore, the opportunity to grow on the job, as I was able to do, has gone, and with it perhaps the satisfaction of doing real work at a young age. Such varied experience, doing all the jobs entailed in studio work in a direct and practical way, encouraged versatility, a useful quality when work is likely to be scarce. It enabled me to feel able to have a go at whatever was available, wherever in the world I happened to find myself – and not to worry too much if the commission was not prestigious, as long as it was real.

Chapter 8

Setting out

Why and how I became a designer was not a result of early artistic talent at all. It seems to have been the result of random outside influence. Firstly, my whole education was a war casualty, but in an unusual way. Sent to America during the Battle of Britain, several years at a good school in New York provided me with a wonderful mixture of knowledge but not what was expected of a thirteen-year-old in England towards the end of World War II. I could recite the dynasties of China and knew all about Aztecs and Incas, but little of the reigns of the kings of England. Worse still, I could not begin to understand long division or pounds, shillings and pence. The strange consequence of all the disapproval that I experienced on returning to my local school in early 1944 was to arouse my interest in lettering. I took refuge in the art room where the sympathetic teacher was, as most teachers were in those days, an accomplished letterer. It was an absorbing occupation for a rather lonely teenager in the final year of war, and it helped dispel the monotony of memorising the matriculation syllabus which seemed the easiest way out of this seemingly intractable situation. That passed – and in those days it might just have been enough to get me to university – the only thing I could think that might work was to go to art school.

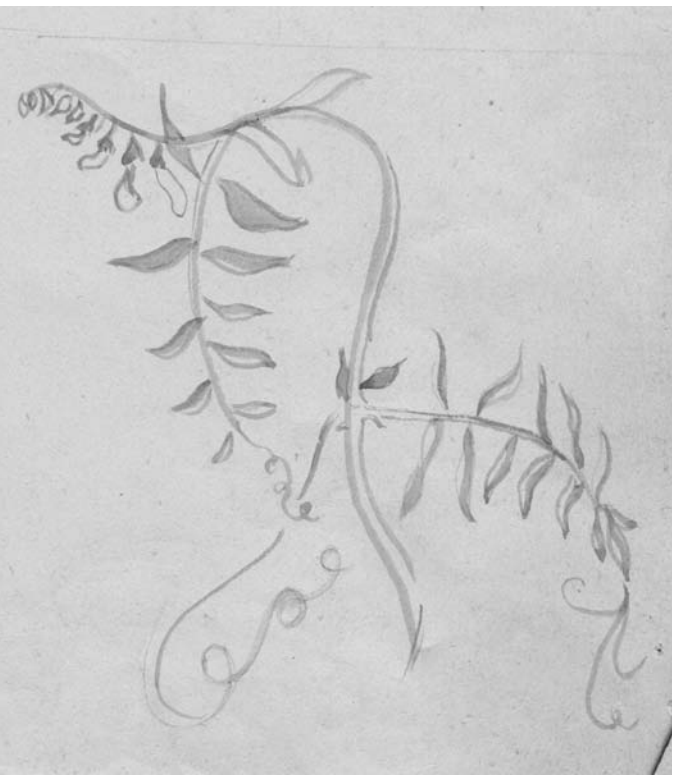
Art school

The nearest art school at Tunbridge Wells might well have been somewhat of a disappointment to anyone older then my sixteen years. There was nothing very glamorous about the tall, murky municipal building at the side of the town hall, which, incidentally, still houses the adult education centre. The Principal was a charming Welshman, E Owen Jennings by name. His old-fashioned, courteous manner seemed more suited to a smart prep school than an art school, even then. As for the students – the interesting ones were on demobilisation grants. They were serious about their work and were way above us in more ways than one. The qualification that everyone was supposed to be studying for was the ATD or Art Teacher's Diploma. In my youthful arrogance I had no intention of training to be a teacher. It was

designing or nothing. The only subjects that really interested me were textile design – I always had a considerable interest in flower painting – and lettering, of course. It must have been a nightmare for my well-meaning teachers. The other well-behaved Kent and Sussex boys and girls mostly conformed and did what they were told. However, of those I kept up with over the years, none of them took up a career in any branch of art or design. Most of them showed far greater artistic talent than I did, so maybe rebellion is a more necessary attribute for a designer than either obedience or conventional talent.

Flower sketches, aged perhaps fifteen years old.

As for the teachers – there was plenty to learn from them, but not perhaps what they intended. Take textiles – the dirndl-skirted miss, who the next generation might have described as a dolly bird, was clearly never going to teach me what I considered I needed. Her idea was to get us to produce childish repeat patterns of frogs on lily leaves. It was obvious that she had never been exposed to designing in the real world, and was hardly going to help me to achieve my ambitions. My concept of textile design

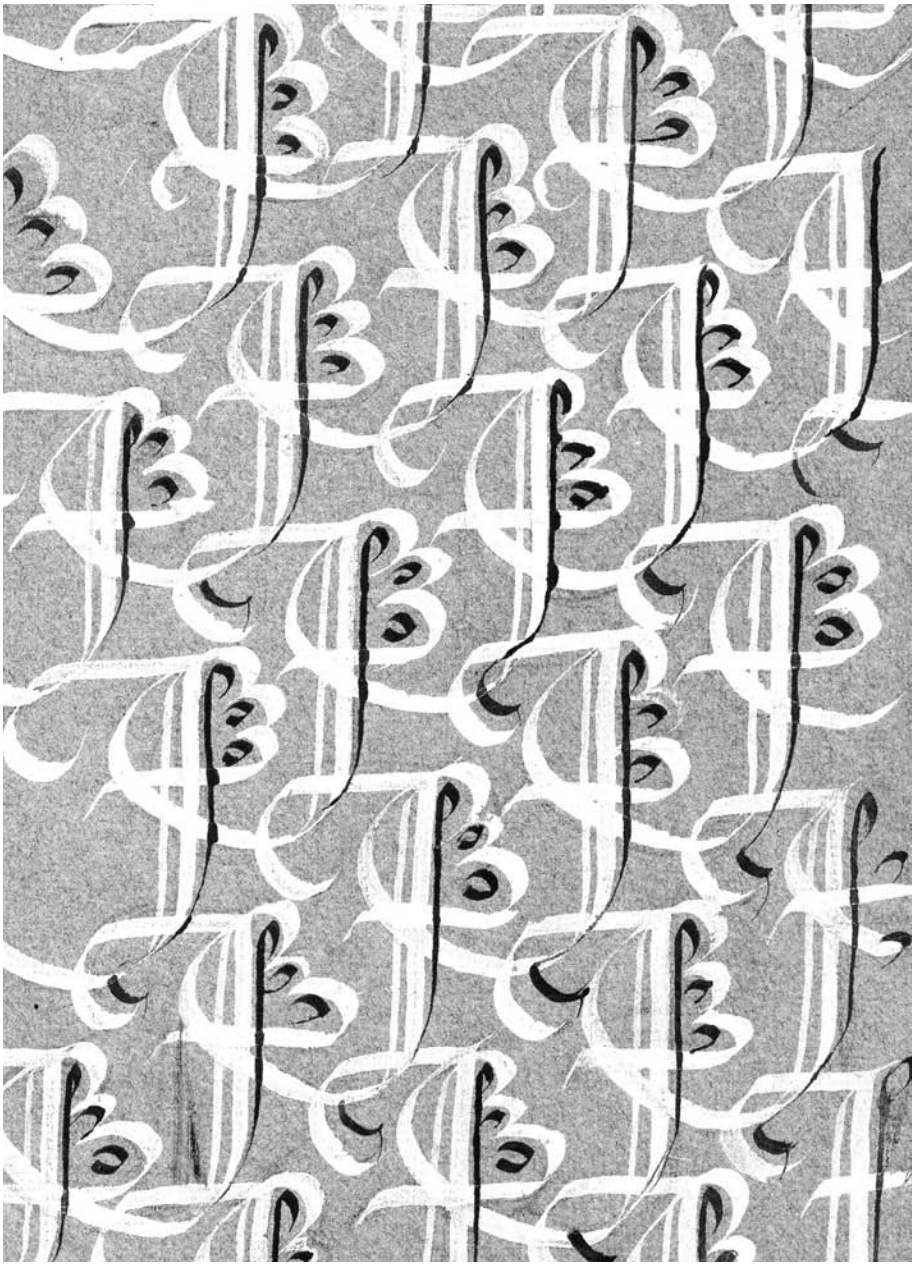


was already set in a vision of William Morris designs, traditional floral chintzes, or formal cut velvets, much influenced by the Victoria and Albert Museum displays and publications. Perhaps it is fair to explain my impatience at that moment. Everything was insecure, still upset by the war years, and in my family at least there was a feeling of the absolute necessity to equip us with the skills to earn a living. Needless to say my parents had little faith in my idea of making my living as a designer.

Life drawing was obviously a vital subject, but what my life masters taught me was again something different. I learned from them, at an early age, that teachers who made students copy their own techniques at all costs teach little of value. That was something to remember when I had my own students many years later. The Monday teacher was a fastidious, elegant man, famed for his bow ties and decorative waistcoats. His name has long been erased from memory but not forgotten was his insistence on everyone using a 6H pencil and carefully cross-hatching the shading on their drawings. On Fridays Mr Wiedman, an excitable, wild-haired, but much more interesting, teacher, equally adamantly insisted on the use of 6B pencils and the use of the thumb for adding shading and form. (I remember his name because many years later, when I taught lettering to adult education students in that same building, there he was, a much calmer elderly gentleman, beloved by his life class full of admiring, equally elderly, ladies.) Their techniques were the most important issue for these two men; maybe it was a matter of personal rivalry. Anyhow, between the two of them I had not much hope of getting any real help with life drawing.

Lettering was an entirely different matter and I am eternally grateful for all that Mr Holden taught me. He came from a family of Sheffield craftsmen, and had just graduated from the Royal College. He taught jewellery design and silversmithing as well, and his two days were, for me,

A simple textile design from art school days, aged sixteen or seventeen.



A calligraphic design from art school days.

the most important of the week – and not only me. He brought to the art school a much-needed professionalism into what was, in retrospect, a far too amateur and genteel atmosphere. He taught us to respect craftsmanship and respect the tools we used. He tried to imbue us with the necessary patience and discipline to accomplish whatever task was in front of us, and the discernment to judge the results. That was no easy job, with a group of mostly 15–17-year-old boys (and a couple of girls) in a crowded workshop, housing several baths of acid, but we all adored him.

The day came when Mr Holden said that he had taught me all the lettering he could, it not being his particular area of expertise. He suggested that I should study with M C Oliver, the master scribe who had taught him for a while. My parents had other ideas, however. They said that I should go and get a job and see how impossible it would be to earn my living as a designer – then I could train as a secretary like my sensible sister. Looking back I can think of no better motivation to succeed, but at the time it seemed more like a vote of no confidence. I still have some examples of work from those days and they serve to remind me how ill-equipped I was to set out on a career, compared with the polished portfolios of design students these days.

Chapter 9

Starting real life

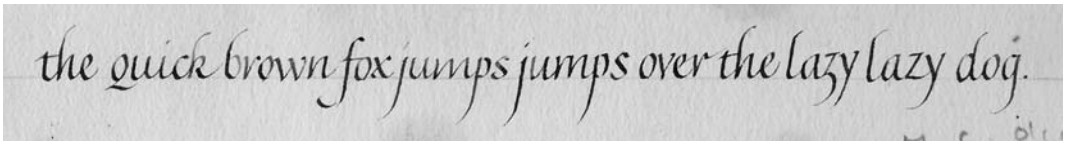
A family friend, Ernest Goodale, of the old establishd textile firm of Warner's, suggested a studio that occasionally took on apprentices. The work that I had taken to show him was so pathetic that I felt he was taking quite a risk with his own reputation. All too soon I found out that it was a somewhat Dickensian method on the part of the studio that he suggested, Haward, to try to obtain free labour for a short period under the guise of a training. But it was a start; so, with difficulty, one day a week was negotiated to attend classes with Mr Oliver. I think the studio thought that I was going to use that day to improve my flower drawing skills, but I had other ideas. Those Monday lettering classes were augmented by Saturdays at the Hampstead Garden Institute and occasional evenings at the Central School of Arts and Crafts where Mr Oliver also taught.

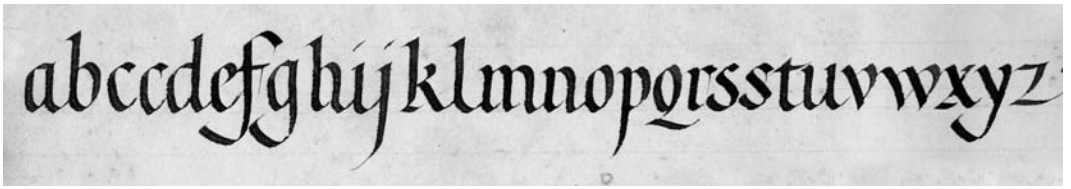
Lettering

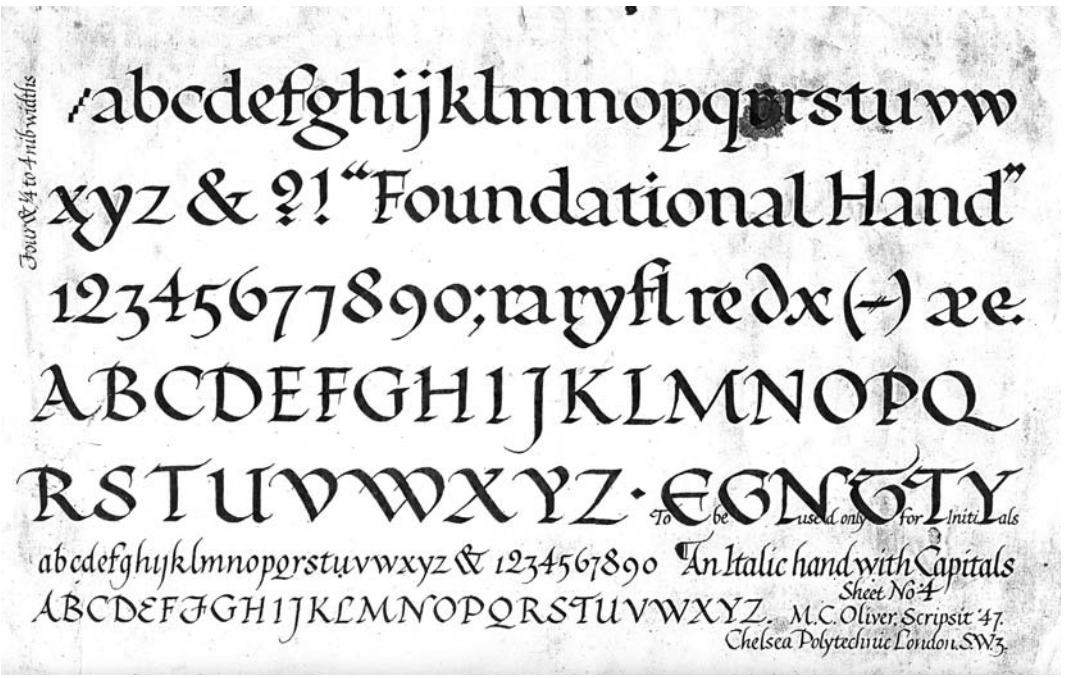
In the few small rooms at the Henrietta Barnett School, at the hub of Hampstead Garden Suburb, that were allotted to the Institute, Mr Oliver presided over his groups in much the same way that scribes had done for centuries. He retired to his room periodically, to get on with his own work, and emerged from time to time to look at what we were up to. He paid as much attention to what I then saw as old ladies, who were busy copying out psalms in rather shaky hands, as he did to any of the students and their important commissions. After all, it was an adult education class, open to anyone, and he was scrupulously fair.

He had a mild and gentle appearance, with his thick pebble glasses, and clad in the shepherd's smocks that were hand-embroidered by his wife. But he was a man of strong convictions, easily roused by anything he saw as shoddy – whether applied to craftsmanship or principles. I do not think he would have been happy in today's world. His favourite saying was 'You can always tell a craftsman from the way he looks after his tools'.

I still have the ink-stained sheet of Mr Oliver's foundational hand. We practised our letters using a magical brown ink mixed by our master, but when we graduated to finished work, of course, we ground







Examples of M C Oliver's lettering and his Foundational Hand exemplar sheet which we all used in our training.

our own Chinese stick ink. I was fortunate in having the grinding palette that my grandmother had used before the First World War, when she lived in Japan and took up flower painting. These things were difficult to come by in the years just after World War II. There was great excitement when someone produced some crystallized coffee sugar – the centrifugal sugar needed for making size. Gold leaf was almost unobtainable. The few sheets that I had found and could afford to buy, in a back street in Florence in the late 40s, were shared out. We knew the theory of size making and gilding but had few opportunities to practise those skills then. The only serious rivalry that I can remember was for where we sat. There was a high shelf-like desktop down one side of the room which sat about four or five students, in good light under the windows. The rest had to be content with leaning their boards against trestle tables. It was not always first come first served, because Mr Oliver was the final arbiter of who needed the high work surfaces most on any particular day,

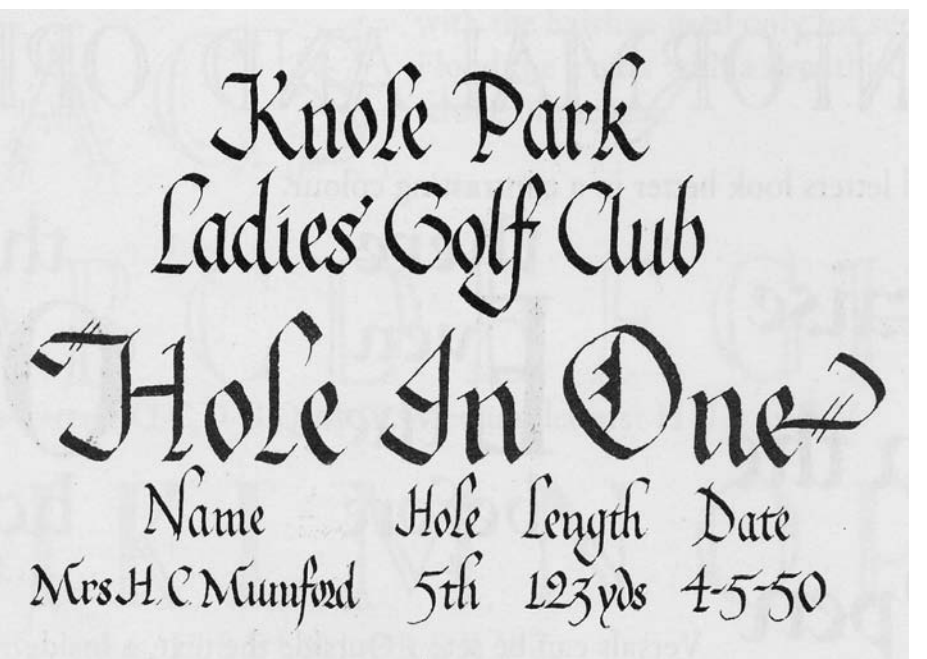
When it came to quills, special quill-cutting knives were ordered for us; they had bone burnishing handles and I still have mine. The blade has the name 'W Saynor, made in Sheffield', on it and I remember being told they were based on pruning or budding knives. All we needed then were well-worn old pennies to trim our quills on. Early Victorian ones, with the Queen's face almost obliterated, were the status symbol. Vellum was ordered in precisely measured pieces from H Bands of Plough Yard, Brentford and treated reverentially – not suprisingly, considering the price. I learned the effects of tension on letters early on. It is understandable that a poor student would be petrified when first putting pen to vellum for an important commission and it is not hard for an observant eye to detect that tightness in the first few lettered words. We became experts in scratching out errors with a sharp razor blade!

Our letters were restrained to replicate that of our master. It is surprisingly difficult to consistently eradicate any personal features, even in such a formal situation, but we took pride in it. It was only years after that I realised how strictly, therefore, we were all being

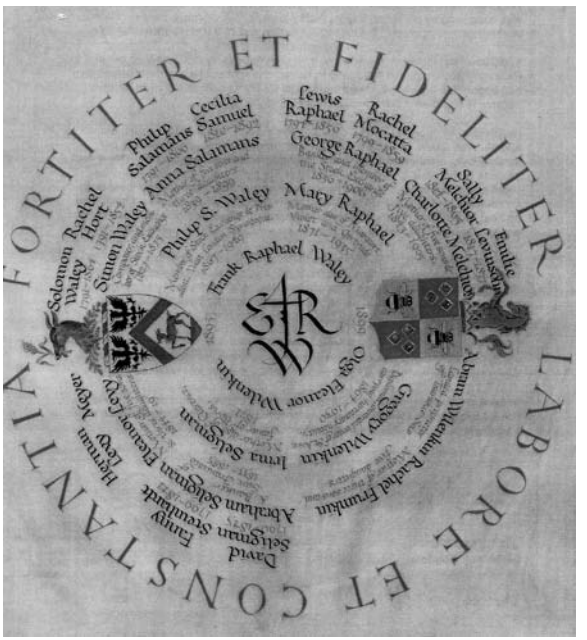
An example of my lettering c.1949, showing how we were trained in our master's hand.

programmed to use our bodies. Lettering is a motor skill, like handwriting, and a result of a precise physical action in exactly the same way. This training only became a disadvantage when we wanted to be more creative. But there was a purpose in it all, as there always had been through the years – because, when sufficiently skilled, we were permitted to fill in some of the straightforward parts of real jobs. As this was the time (1948/9) of endless books of memorial it became part of the training as well as being useful. This dedicated craftsman taught us far more than actual lettering. He instilled in us the concept that, as we were lucky enough to have a traditional training, we had a duty to pass it on to others. Furthermore, if we were lucky enough to ever have students who were better than their teacher, then we were fortunate indeed. He demonstrated that to help students to achieve their optimum they had to be exposed to real jobs. He passed on small commissions to those whom he considered ready to carry them out. These ideals seem to have been forgotten in the intervening years. People who themselves have had a only a short calligraphy course, start teaching. They would not dream of passing commissions over to their students and often seem to resent those who show more promise than themselves.

We were gradually brought up to the standard to apply for membership of the Society of Scribes and Illuminators. For this honour



The rough sketch for a golf club notice, dated 1950.



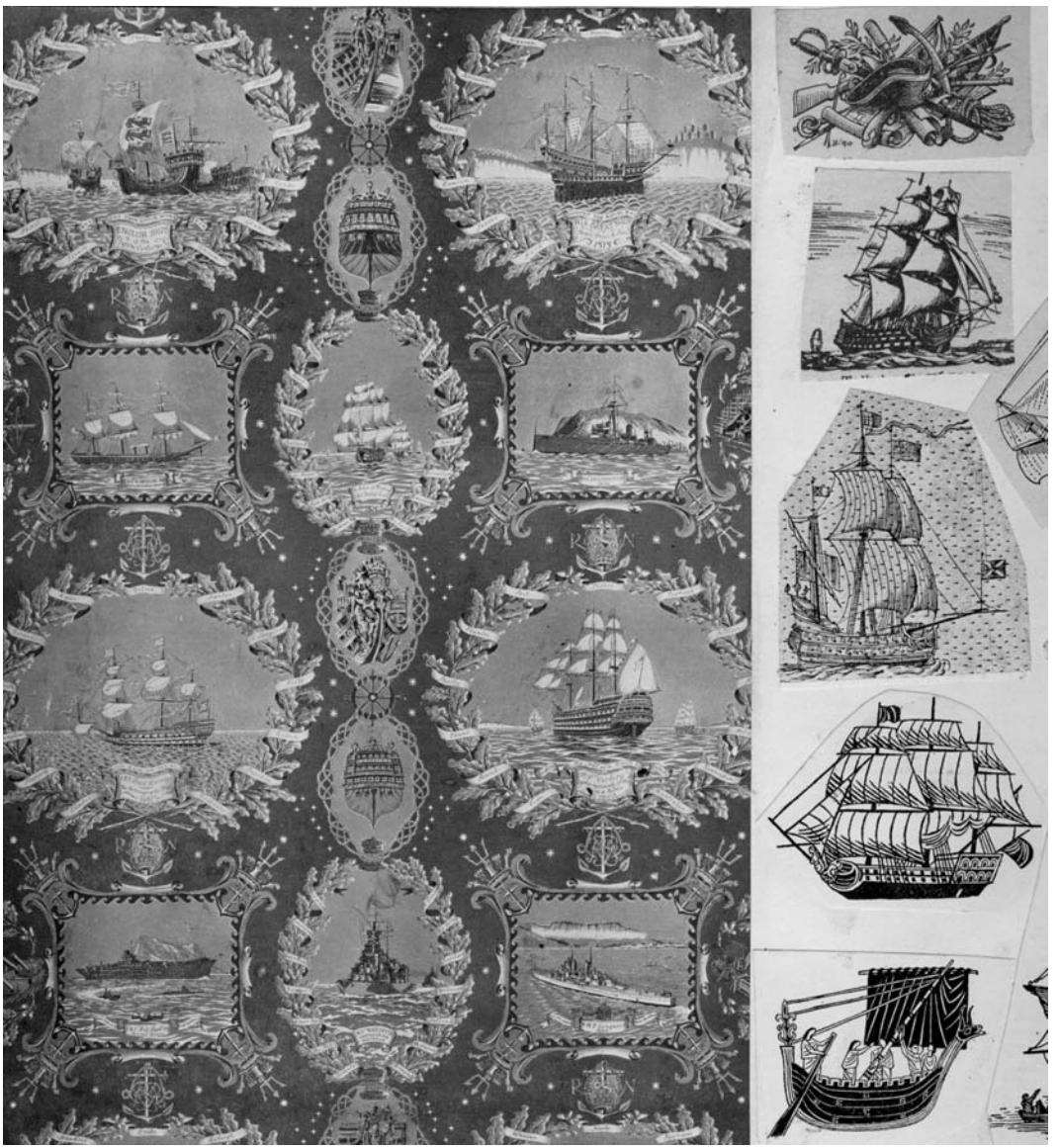
Family tree from Modern Lettering and Calligraphy.

we had to submit three pieces of work. It was thought to be a mere formality for Mr Oliver's students to be accepted if he recommended them. Another student, Barbara, and I proudly took our pieces to the British Museum where some kindly person was to stretch and mount our work. Then a problem arose. At the meeting before we would have submitted our work Mr Oliver's own daughter, who was a highly skilled scribe, was unexpectedly rejected for membership. We were incensed at this and, with the highmindedness of our eighteen-odd years, both decided on the spot not to apply for membership. I never regretted this and I do not think my companion did either – though there were repercussions years later when I wrote my first book. (see page 134)

I suppose some satisfaction was to be had when one of my presentation pieces was chosen to be reproduced in the book *Modern Lettering and Calligraphy* in 1954.

Textile design

So there I was, aged 17, travelling the 25-odd miles to London by train and then four mornings a week by Underground for another half an hour to the studio. Haward Studio was situated in Turnham Green, an early example of a garden suburb. It was housed in a three-storeyed, red-brick, gabled villa, a few minutes walk from the underground station. In years past the owners had been part of the Arts and Crafts Movement that flourished in the Chiswick area. Evidence of its illustrious past could be seen on the landing walls – framed examples of magnificent classical chintz designs, and if my memory does not deceive me, an original fragment of the work of William Morris. By the late 1940s the business had been inherited from the original owners by relatives from Darlington, where, we understood, they had run a furnishing store. That explained the not very respectful attitude of the burly chief designer, Mr Porter, who had been trained in the studio of Sanderson, the bastion of traditional textile design.



An intricate design produced in our studio (not my work) and some nautical illustrations used for one of my subsequent designs from one of my many scrapbooks.

The way we worked had probably changed little since the beginning of the century and would be hard to imagine today. Yet it was a good training for a designer in almost any field, and to me it was the real world at last. Perched at the top of the house, I shared the well-lit attic with two other girls. These two girls made a lasting impression on me, and amongst other things contributed to my scepticism of the benefits

of an extended stay at art school. Neither of them had had any formal training, yet they could both produce remarkable work. Enviably delicate floral designs and *toiles de jouy* or chinoiseries flowed from Rose's brush. Joyce was usually given more vivid designs to work on, reflecting her more flamboyant nature. Nursery curtains were one of her specialities, along with designs for bathrooms. The other members of staff consisted first of all of the chief designer who could magic a free-flowing design from any subject that was demanded. Flowers might be simply a design composed of geraniums or sweet peas or, at the other extreme, bunches and swathes that seemed to us to compete with Dutch flower paintings. He never needed to do more than sketch in a few charcoal strokes to indicate a bunch, and he was off. These were not only destined for textiles, many of these complex floral designs were sold for wallpapers. We were constantly reminded that to design a wallpaper was the real test of a designer. Any fault in the design would be repeated and magnified on a wall with no kind curtain folds to break it up. The next day he might be working on something quite different – coaching or hunting scenes and once a complex design of ships of the fleet, specially commissioned for some grand occasion. Versatility was his hallmark. It was also his job to supervise us and teach us what he could.

The second designer, Mr Russell, specialised in what were called needlework or tapestry designs. They were usually based on Jacobean designs and were very fashionable. They appeared no less expert with their intricate shading to replicate the stitching, but did not require the skill and flow that marked a floral pattern. He had been trained at the old family firm of G P Baker and Sons and our point of contact was that old Mr Baker lived near us in Sevenoaks and was a gardening crony of my father. He grew irises around his large Victorian house and had once invited us to visit the 'works'. It was quite an experience to see the printers at work on long trestle tables, handling the huge wood blocks, a dozen or so colours for each design, placing them with such accuracy at great speed. It reinforced my enthusiasm for traditional textiles. (I believe that G P Baker's are still preserving a little of that skill today.)

The third man was a shadowy, shambling figure, who was never seen without a cigarette in the corner of his mouth. He inhabited a smoke-filled room and had the unenviable job (to my eyes) of designing carpets all day. Considering what happened to me some years later I might have benefited from paying a bit more attention to how he worked (see page 116).

One of my watercolour sketches for a floral design. The finished drawing would have been produced in body colour. Unfortunately, we never saw any of the finished fabrics that we had designed.

My duties

One whole side of our room upstairs was taken up by a long marble slab. Underneath were tins of powdered colour and above were shelves that were under my care, as the latest arrival, apprentice or whatever I was supposed to be. They contained the jars full of ground-up body colour that was used for the finished drawings. There were about twenty basic colours that were in constant demand, that had to be kept fresh and ready for use. They deteriorated rapidly after about a week, probably owing to the gum that had to be added in just the right proportion each time they were mixed. That was a skill in itself. Too much gum and the solid background in particular came out all streaky. Too little and the paint flaked off after a few days. Slightly too little might not be noticed until a finished design had been rolled and sent off to the client and then there would be violent repercussions.

If the jars of paint were neglected too long their smell reminded you, even before an evil crust appeared on the surface. There were also the two gums, tragacanth and arabic, to dissolve and tend now and then. Grinding and matching body colours to the watercolour sketches was part of my job. It was quite a skill. There were often up to ten colours (therefore ten printing rollers), with each colour having three tones. Sometimes alternative colour schemes were needed, which proved a strangely difficult task. If you knew no theory of colour you soon learned by practice, and you soon wielded a palate knife with vigour.

One of our jobs was to prepare the blotches, the solid grounds used for finished work. As the repeats were often 36 × 24, the background, allowing for repeats, was sizeable. First the paper had to be cut from enormous rolls, carefully estimating the size, then the huge boards had to be prepared. Thick gum was plastered all round the edges and the paper roughly fixed, then dampened all over and hurriedly squeezed more firmly around the edges. Each stage was a menace for a beginner; too loose and the paper was left buckled, too tight and the tendency to split was exacerbated. Laying the blotch was equally nerve-racking, as again speed and smoothness were essential. The worst that could happen was to run out of colour in the middle and have to remix. It was almost impossible to match – just as often the wretched blotch deceived us and dried a completely different shade and failed to match the designer's sketch. That was nothing to the hazard of cutting off the completed design. Then there was a real danger of the whole thing splitting diagonally if you were not quick and confident with the Stanley knife.

There was also the job of repeating the older designers' work. That

would start with making your own transfer paper – rubbing some powder colour, usually umber, on to detail paper, then taking off the excess until it was just right. Tracing and transferring did not teach you much, but painting in the repeats certainly did. Although you did not put in all the three tones, unless it was a very special commission, you soon improved your technique, and there was considerable rivalry between the three of us for the best jobs.

A quick watercolour sketch for nursery curtains.

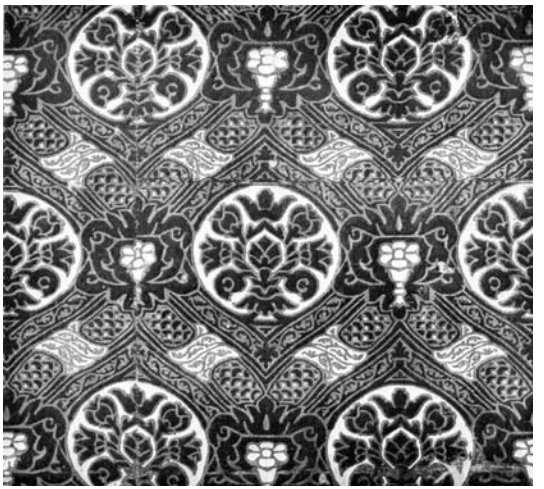
When there was enough time, we were allowed to work out our own ideas to contribute to the 'stock designs' that were taken around to show clients. Armed with a mahlstick, at an upright easel, we sketched in watercolour, feeling very professional. I remember the excitement that those occasions aroused. I used to sit in the Underground on the way home, visualising designs and colour schemes. Alas, my hand did not do justice to my ideas and the reality, the next day, was seldom as successful as I had planned. Anyhow it was a good way of passing that uncomfortable journey. The trains on the District Line had heavy doors in those days. They had to be pulled and pushed open and shut by passengers who were seldom bothered to deal with them on their way out. So you froze, as well as being in considerable danger.

The studio had a collection of folders of traditional textiles for reference and to give us some inspiration. Many were old French designs dating back a century or more, and this we augmented with our personal collections. These might consist of anything from a seedsman's catalogue to a useful find in a secondhand book shop. I remember a magazine story with a romantic heroine called Romneya. The illustration of the flower of that name gave me a good idea. A book entitled *Storia di Tessuti d'Arte in Italia*, found in the back streets of Florence, provided many more. Sometimes more modern or unusual ideas were called for, and a book on Pennsylvania Dutch decoration resulted in one I was particularly proud of. Sadly, we seldom saw any of our work produced.

After about six months, I was eventually deemed worthy of being

paid. The pitiful salary was only three pounds a week, so money was always short. To supplement this pittance there were usually small lettering jobs available, for instance, the local golf club liked to have its notices hand-lettered. Then a friend who was studying at the Royal School of Needlework reported that they needed help with designing in the workshop. It sounded very grand but my part was far from grand. The clientele at that time, apart from Queen Mary who had her samplers designed there, seemed to consist of retired admirals and generals who apparently spent their time doing tapestry work. These illustrious personages covered countless chairs and stools with mock Jacobean designs. What I had to do was to trace over the college's stock designs and adapt them for the different sizes and shapes required. This was not very difficult as it was just another version of what I was used to repeating at work – but it did not pay much either. All this must have been done on my only free day, Sunday. Every Monday morning I trekked over to Palace Gate, and up to the attic workroom, to deliver my tracings and collect another bunch before going on to Hampstead for lettering classes.

Despite the lack of money and the tiring regime, looking back it was a happy and satisfying time. It was a real shock when we were called in one morning, after about three years, given a week's wages and sacked. We discovered then, what I witnessed later on at first-hand, how insecure the textile trade was, with frequent slumps and equally sudden booms. I tried a bit of freelancing, but a slump was not the best time for an unknown to sell her designs. A kindly buyer at Liberty's bought a couple but that is about all. Lettering alone did not seem to offer quite the right career opportunities either. There were three of us called Rosemary in Mr Oliver's class. One went to work at the College of Heralds, but that quiet, semi-monastic existence did not attract. The other Rosemary went to work at Heal's where, in those days, all the notices and price tickets, etc., were beautifully hand-lettered.



A design for a traditional Italian cut velvet. This was the type of design on which we still based some of our designs for woven fabrics.

I thought of applying to Marshall and Snelgrove, another prestige store that used hand-lettering throughout (but not as good as Heal's), but could not see myself buckling down to a life as a ticket writer. Briefly I found a job at a pseudo aristocratic establishment in Knightsbridge. It was called, somewhat incongruously, The Ladies Work Society. Its clients and the design work were much the same as at the Royal School of Needlework and all went well for a few days. Then I was given a large Adams carpet design to paint on to canvas. No one told me that I should count all the little squares, and I thought that I was doing quite a good job until an irate honourable lady something or other strode up, claimed that as I had spoiled such a large piece of canvas I would forfeit my week's wages and I was sacked on the spot.

This was not very good for my flagging self-esteem – a term that was unknown in those days. A secretarial training loomed menacingly large. I sank my savings in one last holiday to fortify me for what was ahead. Skiing was my passion then, and in the post-war days of austerity, when currency regulations were very strict, we were only allowed to take £25 out of the country each year. The Swiss were keen to retain the British holiday market, so somehow that tiny sum became enough to provide an economy fortnight of skiing. That suited my slender budget pefectly. On the train to Dover I picked up a discarded *Daily Telegraph* and found just what was needed.

There, staring me in the face, was an advertisement. It read: 'Wanted, a designer with lettering skills and studio experience'. It did not specify that the lettering experience had to be in a studio, and what is more it said that the studio was in south-east London, which meant that it would be much nearer home. I cannot remember what I wrote in reply, but the job was kept open until I got back from holiday – from Adelboden I think it was. Luckily I had managed not to break any bones. I suppose my pen lettering looked quite impressive, anyhow it was good enough to get me the job.

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Chapter 10

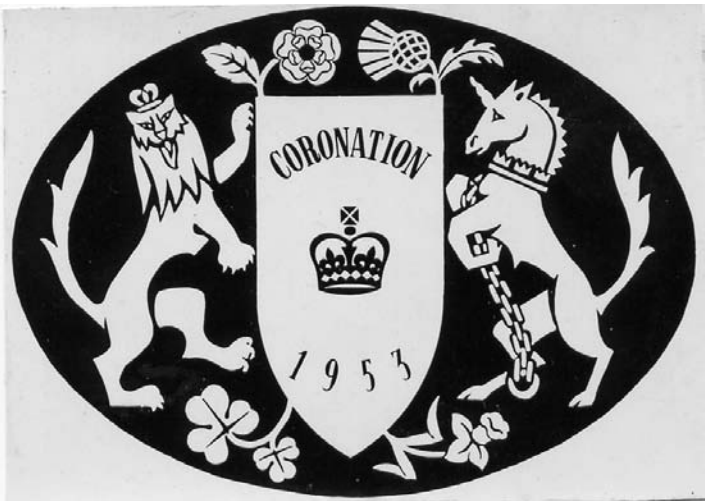
Packaging design

The job that I was offered, at the princely wage of £7.50 a week, was in the works studio of a packaging firm – rather uninspiringly called Waxed Papers Ltd. I soon found out that the commercial lettering needed for the new job was very different from my classical pen lettering. Any student newly finished at technical school in those days, was better qualified to produce drawn and brush lettering than I was.

The first job I was given showed up how green I was – and was probably meant to do just that – not by the kindly studio manager, Mr Ralston, but certainly Charles, the young man who thought he ruled the roost. (It was a rather insubstantial roost consisting of Hazel, who had trained as a cartoon animator at Hallas and Bachelor, a boy who had just left school and Joan who started the same time as I did and was even more inexperienced. Once again no one else seemed to have had any formal training.) It was 1952, nearly Coronation time, and everything had to reflect that. I was given a sketch of a wrapper for a confectionery bar, measuring perhaps 6 × 4, to develop into a keyed black-and-white finished drawing. It was considered entirely suitable for me with its heraldic connotations. I dutifully began to copy this, same size, which seemed perfectly reasonable to me, if a bit fiddly.

Eventually the joke had gone far enough and I was introduced to the latest technology, just one stage up from the pantograph – the

This design for a confectionery wrapper was the first job that I was given to do when I started work. It was just before the Coronation.



Another Coronation job.

enlarging machine. It was huge, took ages to focus and size, and then it only allowed you to trace through its ground glass top. After the keyed drawing was completed it had to be photographed. I had no idea what happened inside a camera. I possessed a box Brownie, knew how to put in a roll of film, take it out and take it to be developed. At that time the studio had an ancient plate camera which had to be carefully lined up to the work, which would be pinned on to an easel. Lighting was basic, but a formula for exposures had been worked out and that was not difficult to follow once you understood what all the bits on the camera did. A photographic plate was a mystery, likewise what went on in a darkroom. The first thing to learn was how to feel for the emulsion side so the plate could be inserted into the holder the right way round in the complete darkness.

The designing part of the job was relatively easy, much easier than textiles. The firm produced packaging for food and other products in various materials. Before the advent of plastic, bread was wrapped in waxed paper, soap in foil laminated to waxed paper, confectionery in either waxed paper, foil or film – cellophane. Just coming out of austerity, the idea of packaging being used as anything other than in a utilitarian way was unusual. The concept of using packaging to actively advertise their products was a novelty. As a work's studio the function of the design was to attract buyers for the paper products, so all artwork was free for the customer. Very soon we had to expand, and a new and larger studio had to be built. By that time Charles had emigrated to Canada. There were few experienced designers around at

that time, anyhow none who were attracted to a work's studio, so more beginners were employed and we had to teach them. By then it was easier. A new process camera on a fixed track arrived. A larger darkroom with double doors to prevent accidents, with red lights. A modern enlarger to replace the old beehive-shaped one meant more accurate prints. Having all this equipment to use after work was an impetus to buy a proper camera and even join the local photographic club and learn more. Just as well, as the directors, having spent good money, wanted something back – passport photos were the least of their demands.

People might think this kind of work not very satisfying for a designer, but to the contrary. The fascination for me was involvement in every stage from the original sketch to watching the design produced by the yard in the factory – and shortly after being able to see much of the work in the shops. I realise now what a lucky opportunity it was to be involved in so many processes, whereas now everything is so specialised. Designers were a novelty in themselves in those days, and people thought that we could produce wonders. The work soon became more fun as we became involved in working out logos, then slogans for clients who had never had need of them before. One confectionery firm wanted us to design a dispenser/measure, rather on the lines of an optical spirit measure. They found the large glass jars then in use uneconomic, and wanted to be able to turn transparent bags of sweets upside down and measure them out in ounces or quarter pounds for each customer. We played about with the idea for quite a while but it was a bit beyond us. You might think all this was good for business. It was for an initial order, but did not stop the customers passing on our ideas to other manufacturers whose paper was cheaper – no thoughts of copyright then.

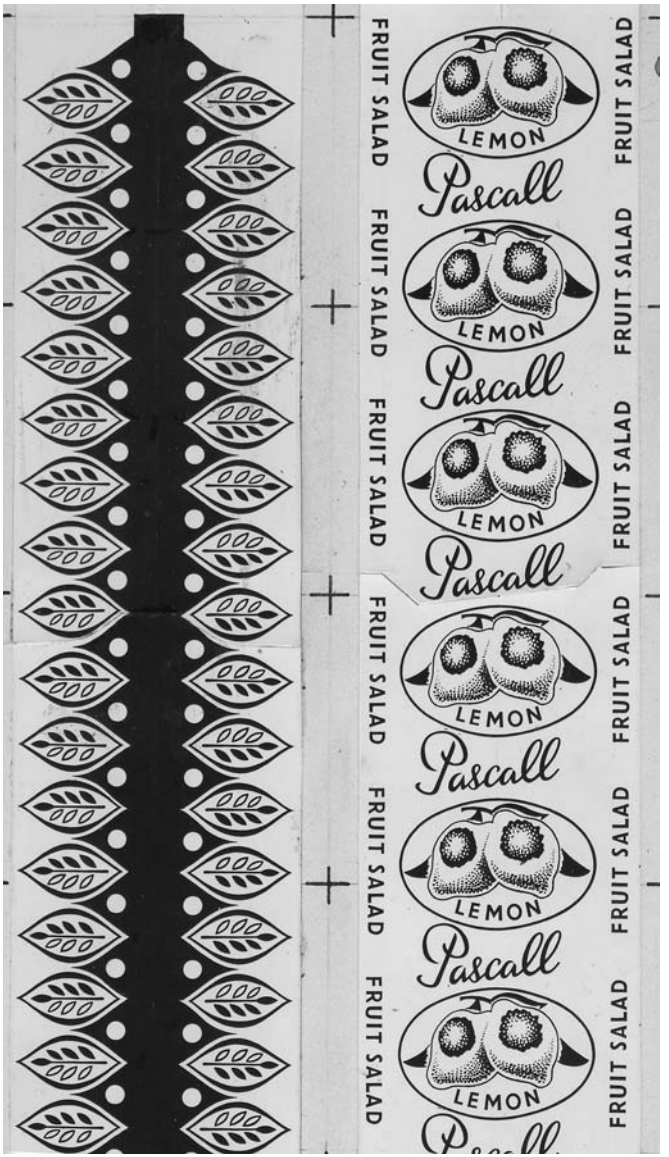
Creative lettering was more and more important as the designs became increasingly sophisticated, but it all had to be done by hand. It was several years before such inventions as Letraset came on the market. Brush lettering was fast and effective, and I soon developed several personal styles. A high calligraphic standard was not required for a sketch, but better work was needed for finished work. Cut-and-paste methods worked well with brush scripts which are difficult to do consistently over a sentence or even a long name. Sometimes broad-edged letters were appropriate; that was always easier for me, but occasionally copperplate was called for, and that needed more skill.

None of us knew much about type design. All I had to start with was a copy of the Central School's book of type, but there were typographic exhibitions where type pamphlets were available, and I still have some

of the beautifully designed ones from Stephenson Blake. We photographed and enlarged innovative typefaces wherever we found them, to give us ideas. It was no great problem to think up the designs, the skill came in keeping in mind the printing process that the client had chosen or could afford. The factory used three printing technologies. Photogravure was the best and most expensive. It involved copper engraved rollers and they could reproduce the finest of lines or halftones. Letterpress was far less expensive and provided a compromise in price and quality, but then came rubber printing. Grandly called flexographic, it was just like rotary printed rubber stamps, with understandably pretty crude results. This did not stop Waxed Paper reps, desperate for an order, from showing samples and promising gravure standard at rubber prices. Then it was up to us to design something that would look halfway decent. I remember one particular design. I had just been sent on a course on how to use an air brush at De Vilbis, the firm that manufactured these machines. (It was before they had engines and we had to pump them up ourselves each time before use.) Everyone knew that I could paint roses, so I was given the job and proudly produced a professional looking bunch, each petal carefully cut out with a stencil and subtly shaded. The first run was letterpress and that did enough damage to my roses and my ego, but it proved too expensive for the client and the next order was for rubber printing. My beautiful roses ended up as three messy, rose-shaped blobs.

The real trouble began when independent design studios started up. They charged exorbitant fees, calling themselves consultants, and presented expensive looking design ranges that certainly looked beautiful when hand-painted. They had no idea how these designs would be produced. Perhaps they did know, and did not care. These designs arrived on our desks with clients expecting the finished product to be like the sketches, but printed by the cheapest technology. There were some virulent confrontations with customers saying the finished product did not resemble the sketch, the so-called consultants blaming our finished drawings, and we telling them that their ignorance had caused the trouble in the first place. Our customers soon learned to avoid the design studios and I developed a hearty distrust of expensive, impractical design presentations that remains to this day.

All the work was rotary printed (in contrast to flatbed). The finished drawings had to be accurate in their measurement and appropriate for each process. Photogravure was the best and most expensive. The lettering and all line work had to be perfect to take advantage of the



This illustrates how finished drawings would have been prepared for printing blocks, before the advent of colour separation.

process; moreover any mistake would show up only too clearly. The advantage was that not many repeats had to be provided. The copper rollers were ordered from a firm called Dellagana and Denby and they would do the job of fitting the repeats round the rollers – we just had to be very careful because any mistake would be costly. Letterpress was used for less expensive jobs, mainly bread or soap wrappers. Printing blocks were usually ordered from a firm called John Swain. A matrix and then the rollers were made up in our foundry. Letterpress blocks had to be increased slightly in order to allow for

shrinkage during these processes. There was another thing to remember. The design had to leave spaces along the margins for the shaped plates to be bolted on to the letterpress rollers. Designs for bread wrappers had to take in to account the type of machine the bakery owned – side or end feed. Side feed would seem to allow solid coloured ends to the bread wrapper, so the client tended to object to intermittent white patches. This led to endless – and purposeless – arguments between the foundry and our customers – via us and the firm's reps who knew little about printing and cared less. When anything went wrong the foundry manager summoned our studio manager. He was a huge man whose staff (including several sons) went in fear of his rages. He was father of the chapel, a term that referred to his union. There were three separate unions, and when later on I had to deal with them I was warned to tread carefully – but found that particular ogre to be courteous and helpful in the extreme. I doubt whether he had ever had to deal with a woman before.

Flexographic or rubber printing was usually confined to the cheaper end of the confectionery trade. Finished drawings of small design units had to provide a length of ten or twelve inches of repeats. First photographed and printed, they had to be stuck down with a revolting substance called Cow gum (not nearly as clean as spray stick) and trimmed with a razor. If this was not neat enough, a shadow line appeared on the block. Plates for rubber printing had to be reduced slightly to allow for stretching, but no one could ever predict exactly by how much. That could cause an irate man, known as Rubber Die Davis, to appear in the studio and accuse us of inaccuracy.

It is interesting to reflect how, gradually, I came to the realisation that everything around me had been designed by someone. Whether you liked it or not, it was someone's vision. I did not have anyone to discuss such matters with, about what thrilled me or inspired me. Perhaps that was what I missed most by not having a proper training. I had to find my own philosophy. My way of thinking was totally incomprehensible to family and friends. Kind aunts gave me book tokens for Christmas and expected me to choose what they called art books. But what I chose were very different. It was not the nice book of the work of Augustus John that was suggested to me one year. What I chose always had a practical use, such as one of the Pennsylvania Dutch designs. I used motifs from it for several textile designs and many years later adapted one for calligraphic mats. In all fairness to my parents, they presented me with a fine adjustable drawing table that has served me well for many years. Also they gave me a battered and

much-trimmed Book of Hours. The gilding had long since disappeared but there are still some beautiful capitals. Just to handle it is a wonderful feeling and, to me, more inspiring somehow than much more impressive manuscripts behind glass in a museum. However, I infuriated my parents by cutting illustrations and lettering out of magazines, even though they would probably have only been on their way to the wastepaper basket. There was wonderful free brush lettering in those days used in magazine headings. Some of the many folders of reference have fallen apart with the passing of years, but those that were mounted in a series of scrapbooks remain as a pictorial history of lettering and packaging design in the 1950s.

All this was enough to keep me happy for several years, but it became obvious that this whole business would work much more smoothly without the interference of the reps. They told us what they thought the customers wanted and were often bad interpreters. I suggested that it might be better if I were to visit the clients and hear exactly what they wanted at first-hand. Common sense, really, and common practice now, but novel at that time outside London. I packed a bag with all that was necessary, listened to what the directors of the firm wanted – or thought they wanted – and produced a rough sketch there and then and wrapped it around their product. It was great fun for a while. In the south of England I dashed round in a recently acquired ancient Austin 10. Otherwise it was British Railways – which was pretty good in those pre-Beeching days – which took me to places that I had never had an opportunity to visit. It was as exciting as foreign travel would be to young people today. Directors of confectionery firms or large bakeries on the outskirts of Manchester or South Wales thought it was magic, but it was too good to last.

Gradually the kindly studio manager, Mr Ralston, came in less and less often from his home on the south coast. (I never found out what his real connection with the firm was, but he had told us that his grandfather invented waxed paper as a means of wrapping food to keep it fresh.) He had been unable to find a young man to take over his job – several inefficient, boastful eighteen- to twenty-year-olds came in, found they could not do the job and hastily departed – or were sacked. I had to do more of the running of the studio, keeping rebellious staff in order. It was a good way of discovering my lack of talent in what soon became to be called man-management. It also meant taking the not inconsiderable responsibility of ordering all the printing blocks. All this was not much fun. By Christmas 1957 I had started looking for a new opening. There were two interesting advertisements. One was for the

Design Research Unit, one of the largest and most prestigious independent studios. They were expanding and wanted someone who had packaging experience. I went to see them, but never knew whether I would have got the job or not because the other was the Council of Industrial Design. There was to be a world fair in Brussels and they were to design the British stand. Someone was needed to man it and represent British designers; but they needed to be able to speak several languages, which luckily I could – after a fashion.

This sounded glamorous and a real change. To begin with, my outfit was to be designed by the Queen's dress designer, Norman Hartnell. Probably the job would have been boring after a while, but I was not to find out. On the day that I went for my first fitting at Norman Hartnell's, my future (and present) husband, who I had only met the weekend before, proposed. A few months later I found myself in East Africa instead of Brussels.

Africa

The next three years were not very productive as far as designing was concerned; family matters took preference. I have only one reminder of the freelance work that I did there, a sketch for a logo for Uganda Electricity. I remember spending days on an order from an Asian biscuit manufacturer. In the 1950s biscuits were still displayed in shops loose in large tin boxes. He wanted me to copy the well-known Peak Frean's (or was it Huntley and Palmer's?) design for the wrapper that covered the tins. This I did, but adapted it to be appropriate with elephants, etc., to Africanise it. A furious client said that he had wanted a replica, only with his name on it, so I never got paid or got my design back – so much for being scrupulous.

It was a community where everyone was expected to use their skills, and a strange and rather wasteful situation had occurred. The University of East Africa divided its departments between the three countries concerned. The department of fine art was situated in Kampala. In a cotton-growing country, with

A rough sketch for a logo for the Uganda Electricity Board (on tracing paper).

its own textile industry, and where there was an obvious need for all kinds of advertising and graphic design, there was no provision in their syllabus for either subject. There were many talented students, especially those with an Arabic background from Tanganyika and Zanzibar. I was offered a part-time lectureship, to introduce both subjects into the training for all the students. This was probably because there was no one else suitable in the country at that time, and it was not considered important enough to bring in anyone specially from overseas. It was exciting to go into the university and plan for the future, but our own leave approached, after a three-year stay. As it happened my husband's career meant that we never went back. In all probability I was saved from an embarrassing situation because I was not really experienced enough to deal with students at that level – but it would have been a challenge, and I treasured my letter of appointment for many years. My only real regret was that I would have been working with an extraordinary young man. Even then, fresh out of college, his many talents were obvious – Jonathan Kindon, artist and world-famous naturalist.

Chapter 11

Branching out

From Uganda we ended up in Yorkshire – not the picturesque dales, but the gloomy outskirts of Bradford. We lived in a 1960s Wimpey semi and one day while engaged in a not very inspiring domestic task I was listening to Women's Hour on the radio. There, miraculously, was the well-known textile designer Lucienne Day, complaining that no young British designers were interested in designing for the woven textile trade. I was at the right place at the right time – in Bradford, the centre of the Jacquard weaving industry, just at the beginning of a boom. This was some ten years after the slump that had put an end to my brief career as a textile designer. I looked at the previous evening's local newspaper and there was an advertisement from a firm in Ireland for someone to design a range of laid weaves. Laid weaves are a bore to design. They mimic more expensive materials by having a one-colour weft (the horizontal threads) and stripes of different coloured warps (the vertical threads). A pattern that wanders across these different stripes gives the impression of being multicoloured. Anyhow, I whipped off about five not very inspiring designs on the kitchen table, and much to my surprise got a cheque back.

The Jacquard card cutters in Bradford were also advertising for designers. Theirs was a strange trade; they produced the punched cards that somehow strung the looms. If the industry still exists this process will have long been computerised. They also provided the designs, but whether they ran up small samples or not I never discovered. At that moment they had an insatiable appetite for ideas and there was not even time for me to repeat the patterns. I was asked to produce a dozen or so ideas each week, which was all I could manage with two young children. That usually meant working before they woke up or after they were asleep. The card cutters took on unskilled girls to do that chore and to learn how to design at the same time, so I was told.

After a few months of that regime either their girls could do the job – or I got bored with pouring out single elements of a pattern – probably a bit of both. At least one daughter had started kindergarten and it was not difficult to find help in the rather depressed town. Designing fits in well at this stage of life and I was feeling a bit more ambitious so I

I have no finished work from this time. This rough flower sketch would have been developed into a design for a brocade for wedding dresses.

decided to approach some of the textile firms directly, instead of letting the card cutters have my work. Getting into our breakdown-prone little Ford I set off over the moors to visit the various mills that were clustered in the villages around Keighley. The reception I got was amazing. Most mills were family concerns – the smaller ones were flattered that anyone should visit them and grateful that at last they could order designs direct and even have a say in altering them to suit their customers. But it was the bigger mills that were the most interesting. There was one combine, Fletcher, where several brothers controlled mills in different hamlets. Each one produced slightly different materials, one brocades for wedding dresses, another curtaining, etc. From them I discovered that all their designs had had to be bought at great expense from continental Europe because they could find no one interested in their work in England – Lucienne Day was right. It was also a moment of transition for the industry, more modern designs were becoming acceptable in what had been a very traditional area. Together with Fletcher's designer, a Swiss national by the name of Knopf, we worked out techniques which suited both of us. We found that I could work in dry brush work and they could interpret the technique instead of the time-consuming painting of the different tones that made the Continental designs so beautiful to look at, but also so very expensive. It was again a matter of getting involved in the process of manufacture and designing for it, in the most appropriate and efficient way, and for the first time I felt that I was making a real impact on a corner of an industry.

Another change was taking place in the furnishing textile industry. They were just starting to become like the fashion trade, having seasonal collections with gradually changing styles – something unheard of up till then. This worked well for me because, just as I was getting settled into a routine, my husband was offered a job in London and we were on the move again. For several years I made six-monthly trips to Yorkshire with a new collection each time, until it became time for another change.

Lettering as a decorative art

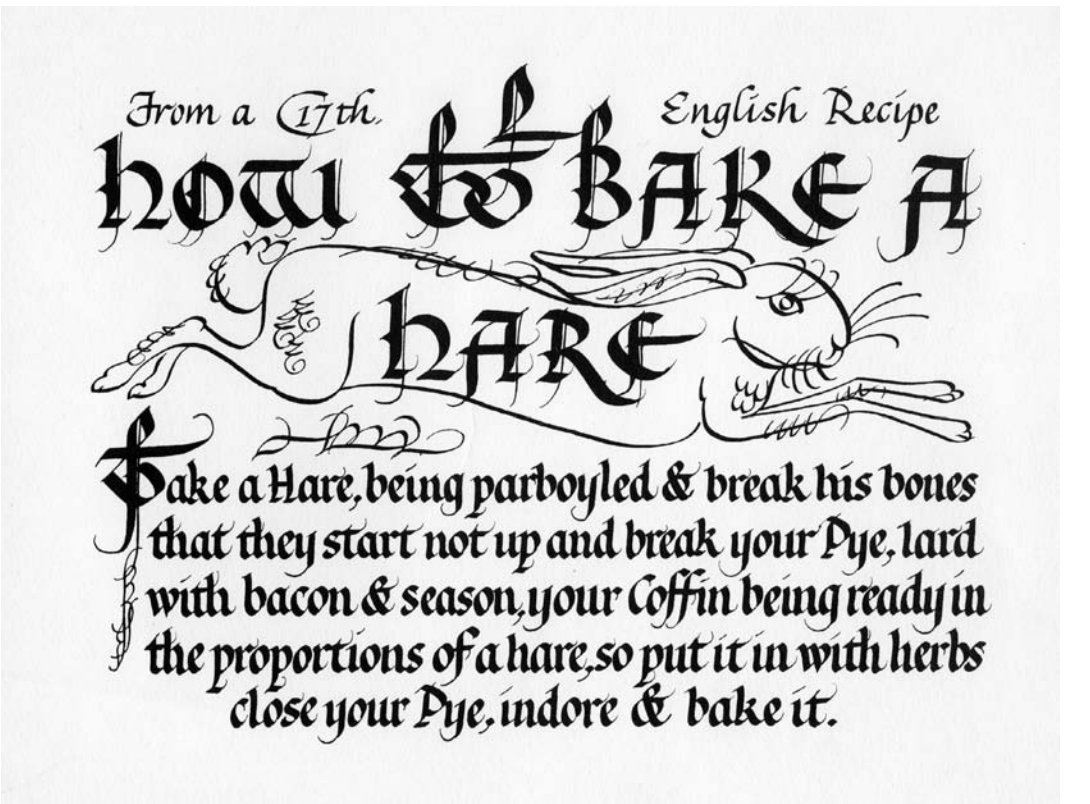
There was always the idea at the back of my mind that I should make more of my real love, lettering. One day I saw a highly critical report of an exhibition by the Council of Industrial Design. It had been about products for sale to the burgeoning tourist trade. I believe the most pungent criticism of the display came from Prince Philip. It seemed to me that there was a place here for lettering – either as original works or reproduced. I began working on a collection of pieces on different subjects – Shakespeare to sell at Stratford, interesting prayers for Westminster Abbey Shop, and ancient recipes, remedies or famous quotations framed for the various expensive shops that catered for tourists around London. It was time-consuming, and not very profitable, but it was a start.

The idea of designing products using lettering as a decorative art seemed a more practical way of helping to bring it back to public notice, but this time I would have to go out and search for markets. Lettering, or calligraphy as it had by then been renamed, was a forgotten craft in the 60s.There was little to be seen other than the high-level work that was confined to the Society of Scribes. Like many guilds, it seemed that they were more interested then in preserving the exclusivity of their members than in anything else. It seemed a good idea to introduce lettering or calligraphic designs on to textiles and other materials. It seems strange now, but I wondered then if it was quite right to use my classical training that way – was I prostituting my craft or something like that? I remember contacting that great letterer, David Kindersley, to ask his advice. He characteristically replied, very kindly and tactfully, not to be so stupid and to go straight ahead. Many years later I smiled when, as good friends of David and his wife, Lida, I saw his own imaginative alphabets reproduced on their living room curtains. (Now, some forty years later Lida reproduces them on beautiful T-shirts and tea towels.) From producing original work for sale, the next stage was to consider how such time-consuming work might be reproduced. I cannot put the projects into chronological order as I have long forgotten the exact dates.

Some of the projects over the next few years might be of interest inasmuch as they demonstrate changing attitudes and technology. None of them are particularly prestigious, but once again they show how anyone – a student or a busy mother of young children, like myself – can usually find interesting outlets for their skills. and it is impossible to tell what this will lead to. I approached a local firm, J Salmon, who describe themselves as Art Publishers. They are well known for the

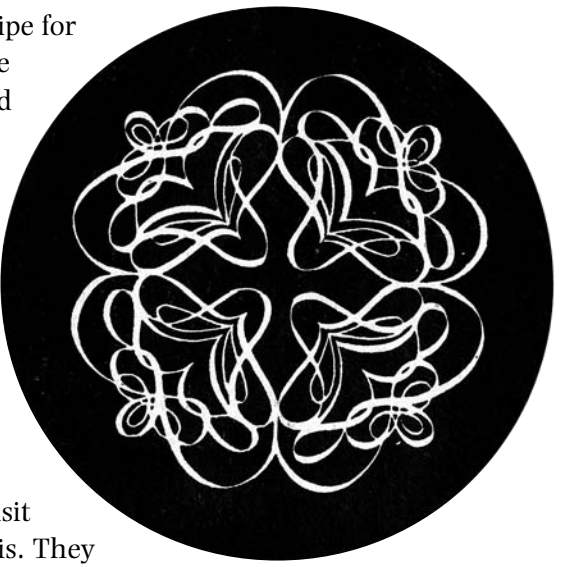
production of calendars (as well as their famous postcards). My idea for a calendar was to have a different appropriate recipe for each month. These were not to be modern recipes, but those culled from recipe books, several centuries old. I had already spent many happy hours in the North Library at the British Museum. Another thing that would seem unbelievable today is that I was allowed access to ancient original recipe books and herbals – no undue security, not even white gloves – they were just brought out for me to pore over and copy whatever I wanted. Now it is all about facsimiles or CDs. Only scholars, carefully vetted, would be allowed access to original volumes.

Reproduced by letterpress, in two colours, the designs were a combination of textile and calligraphic techniques. They had to be produced in a great hurry, every year for nearly a decade, as the content was only approved shortly before the finished designs were required. Nothing has changed about that aspect of work in the intervening years! Somehow the immediacy of it all added something to the overall simplicity and success of the designs but no one could call my hasty lettering 'classical'.



The British Museum provided material for these table mats designed for Harrods in 1972.

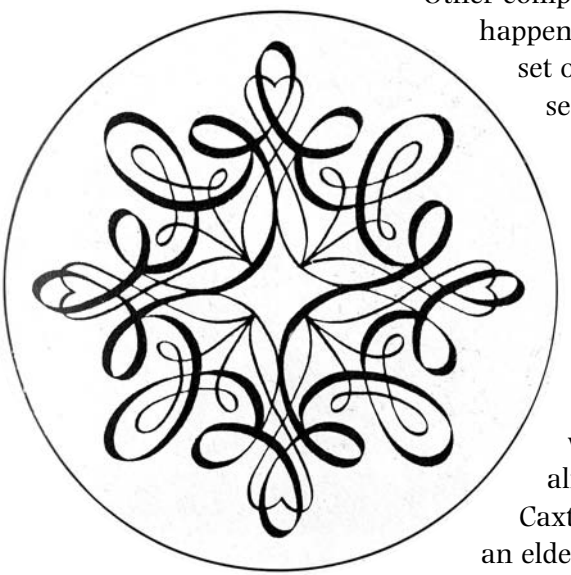
There were some failures. I put my heart into a job of designing a tea towel for a fundraising effort and produced a really polished finished drawing of a recipe for how to poach a salmon with appropriate illustration. I was to be sadly disappointed when I saw the product. At that time the firm, Ulster, a linen manufacturer, had their colour separation done by hand. By the time some unskilled Irish worker had painted roughly over the sharp thick and thins of my lettering it looked a mess – at least to me. Several more commissions came from them, but no more were designed with fine lettering!



Somewhat more successful was my visit to the textile design studios of John Lewis. They produced beautiful tea towels, quite suitable to use for wall hangings, as well as their usual printed furnishing fabrics. They looked at my work and, having enough textile designers of their own, gave me an introduction to their gift buyer. He commissioned some calligraphic designs for table mats. They already sold something similar, produced by the family firm Lady Clare. They had produced a popular set of mats based on the design of the wrought-iron gates on their ancestral estate, designed by the architectural designer Tijou. However, John Lewis wanted their own exclusive designs.

Willing to attempt anything, I went home and set to work. Those designs were the most difficult task I had ever tackled, and actually reduced me to tears at one stage. The mats were round and to be in two sizes, for plates and for glasses. The large size was bad enough. The perfection of pen lettering is to a large part an optical illusion, thin lines disappear. It may look perfect but if it is to be reproduced there is no room for optical illusions, every thin line must be firm and consistent. Nowadays you would do just one portion and then scan and repeat it. I had to letter all round the circle, turning it as I went. I had reckoned on reducing the large design for the smaller size, but that was not a success. There had to be a different but similar design – and again it had to be done same size. To reduce it would have made those wretched hairlines disappear. Anyhow I eventually got the hang of the technique and produced three sets. In the end all three were accepted. I used to be told that a designer only produces something worth while

when they have to dig really deep – maybe this job proved that is true.



Other companies took notice of what was happening. Soon Harrods wanted their own set of recipe mats, and Culpeper ordered a set based on ancient herbals.

I came across this same problem of fine lettering for reproduction several times after this. One such job was an advertisement for Barcham Green, who used to manufacture hand-made paper. Sadly they have now disappeared, but it was a wonderful experience to visit their works, seeing a procedure almost unchanged since the days of Caxton. They had originally commissioned an elderly scribe to do the work, but his quavery hairlines did not reproduce well. What was needed was a technique halfway between calligraphy and commercial lettering. They paid me partly in sheets of their beautiful hand-made paper. Some I used for very special jobs but it seemed almost a crime to write on them.

About this time I also became involved in exhibition design. An old friend, by training a stage designer, was setting up an exhibition for the Lewis Carroll Society. She saw the possibilities for hand lettering, and asked for large banners with quotations from *Alice in Wonderland* in a size that could only be termed 'mock copperplate'. They were meant to be displayed to add atmosphere. At the same time she wanted longer pieces in a more realistic copperplate size to be framed and put in strategic positions. Copperplate was never my best alphabet but it was gratifying to hear that several of these pieces were stolen. At least some members of the public must have been misled into believing they were valuable. That exhibition's success led to a second one that was much more my subject. The year 1976 was the 500th anniversary of Caxton's introduction of printing into England. It appeared at several different venues, sponsored by the British Council, two of them being in Belgium. I went along and wrote out the legend for the various parts of the exhibition in Flemish. The somewhat bastardised alphabet that I had concocted to resemble Caxton's fonts looked strangely appropriate in that language. I cannot see hand lettering being used like this today. The few who could do the work would charge far too much and would

not enjoy the necessary improvisation, as well as the inevitable compromising on the standards. There was never enough time or money to do a very polished job. I can remember, with amusement, the horror of one curator in the Midlands when he discovered that we were actually sleeping in turns on the museum floor, working in shifts through the night to get the exhibition up on time. Working with stage designers was a new experience. The men cut wood as I would cut paper, then painted polystyrene and fashioned it into lifelike figures all at a great speed.

Today, few designers are likely to have a job for life. Whatever we might do, there would be an expectation of going onwards and upwards. For many of us there would be a period, at least, of freelancing. It can be tough. You either have too little work, and worry about that, or too much. Then the worries are about how to meet deadlines, and having to work all hours of the day and night. Substantial commissions are unlikely until a designer has become well known. So what can we do, and what should students be prepared for?

It seems to me that you have to be, at a certain stage in your career, a mixture of opportunist and entrepreneur. It is at that stage that it is an advantage having a mixture of skills, as several people have mentioned in the discussion early on in this book. It is vital to have a belief in yourself. A young designer needs the confidence to try anything, and be tough enough to survive the inevitable setbacks. Life is hard out there and today there is so much competition. Is this kind of attitude instilled in them during their training? I am not so sure. They may leave college after a final show, happy in the success of their projects that have taken unlimited time to hone to perfection. I wonder, however, how much they have learned about business acumen – how to work out an estimate or have an idea of time management.

Chapter 12

Writing, teaching, research and typefaces

Many of my design colleagues, at some time in their careers, have decided to write a book, teach or undertake serious research into some subject that interests them, as well as perhaps producing one or more typefaces. Somehow it seems a natural progression as we strive to use the whole of our selves and whatever talents we may possess. For me, most of these opportunities occurred pretty much simultaneously, leading to a rather frenetic period in my life. They are chronicled here to illustrate how a design training can lead you into many different areas.

I have always believed that everyone has one book in them. For me that always would have been one about learning calligraphy. I had kept all my work throughout my training and rough copies of many of my commissions. That was as far as it went until I took out a book entitled *The Delectable Past* from my local library. It was a history of cookery books written by an American author, Esther Aresty, based on her own collection, and full of interesting recipes. I had never before sent any kind of fan letter, but I felt that I must write and tell her how useful I had found her book in my work. I enclosed a copy of one of her recipes that I had lettered and used in a design. Some time later she phoned from London and asked if she could come to visit me. One of her purposes was to bring a message from her own editor to ask if I would be willing (or able) to write a book on calligraphy. It seemed an incredible idea. Sadly the editor, Evelyn Gendel, died shortly after, but by then I was well into the planning stage. Esther did much more for me. She showed me how to prepare manuscripts that were fit to submit to publishers, but she gave me a stern warning. She said that once you started to write you would never be happy unless you had another book in preparation before you finished the first. It proved an apt forecast – but how to get a first book published?

Just then a director of A P Watt approached me to commission a piece of lettering to present to one of their clients, the poet Robert Graves, so I asked his advice. He gave me an introduction to a publisher who seemed enthusiastic, but I was very naive. They sent my idea out

to a reviewer who happened to be the secretary of the Society of Scribes. She suggested that my project should be given to a member of her organisation. The next thing I knew was an old friend, a well-known calligrapher who was the only person who had seen my manuscript, rang me to say that she had been commissioned to write a book that sounded just like mine. It was. Justice was done in the end – that publisher went out of business and my book, *The Practical Guide to Calligraphy,* was accepted for publication by Thames and Hudson and remained in print for over twenty years

For the next fifteen years I kept up an average of one book a year. Since then production has slowed to more like one every two years. That has led me to believe that being a designer becomes a part of you in all you do. You can get the same satisfaction in visualising and designing a garden or even a meal as you can from a far grander project. As I have turned to writing more than actual designing of late, my attitude to planning a book is the same as planning a complex textile design. When I am planning a book I sometimes feel that I am moulding a three-dimensional object, shaping it this way and that. The thrill for me is in that visualising and the hard work is in the completion.

Teaching

At more or less the same time, a friend from school days contacted me (there were three of us who went to art school from my year). She had been approached from the Adult Education Centre at Tunbridge Wells to start the first calligraphy courses in Kent. She, however, already had a full-time teaching job, so gave my name to the centre which, as I have already said, was housed in what had been the old art school.

Teaching would enable me to develop methods that were more suitable than the way we were taught. We were supposedly students with trained eyes and hands, and here were members of the public who wanted to try out this new craft that was suddenly becoming popular. This development of a simpler, more analytical, method would give a purpose to the book, and in the end this was to lead to a whole new career. I had always felt that teaching a craft should be based on reality and the skill should have an end product in sight. Therefore, the designing of products using lettering as a decorative art would fit in to both teaching and a book. As it turned out, few of my students showed the right qualities needed for a scribal career, many more were attracted to more practical uses of lettering.

The method that I evolved for teaching pen lettering was really very simple. After introducing the students to the implements and materials,

I started with patterns, similar to those in children's handwriting manuals, to accustom them to keeping their pen at a consistent angle. Then they progressed to patterns of letters with similar strokes – straight letters, round letters, arched letters and diagonal ones. It was a revolutionary idea at that time when all would have been taught their letters in calligraphy classes as we were, in alphabetical order. Now, it is often taught that way. Although I started from the basis of a classical training, I was gradually more drawn to teaching students to develop a more personal style of lettering. I soon switched to my local Adult Education Centre in Sevenoaks, where a dedicated room was available that made it possible to display work from the afternoon and evening classes that soon developed.

Then something occurred that illustrates how little people understood about letterforms. My county educational authority approached me, asking that as I was teaching lettering, would I now teach teachers how to deal with handwriting and the problems that were becoming all too evident in schools in the late 1970s. That seemed rather distanced from teaching formal lettering but, as I could find none of my many contacts in the least bit interested, I started looking into this whole question. My first observation, when making preliminary visits to schools, was a vision of pain as I saw children, sprawled in all kinds of odd postures, trying to write. My second was amazement when, having noticed their letters formed in any direction, I found that the teachers did not notice the faults in movement (ductus) as long as they could read what was written in immature print script. My early notes for training sessions turned into another book, *The Practical Guide to Children's Handwriting,* and I was launched into a quarter of a century researching and writing about handwriting.

Into research

About that time one of my children was seriously ill in Great Ormond Street Hospital. Parents were turned out after lunch so that the patients could have a rest. For a bit of distraction I decided to visit the library of my old haunt, the Central School of Arts and Crafts to give it its full name (now the Central Saint Martin's College of Art and Design), which was just around the corner. There I was lucky enough to run into Nicolette Gray. Quite naturally, she wanted to know who I was and what I was doing in 'her' library. Characteristic of the wonderful person she was, she listened to why I was there with sympathy. When she heard what I was trying to do about lettering she made the suggestion that I got in touch with the Department of Typography at the

University of Reading. At that time the department hosted the occasional multi-disciplinary meeting on the subject of letterforms and communication in the widest sense. I attended several meetings, sitting meekly in the back row, until one day it was suggested that it was a pity that no one taught lettering any more. I could stay quiet no longer.

My first suggestion was that they contacted Ann Camp. She had trained with M C Oliver, before going on to the Royal College. In the course of her lettering career she had published an excellent book, *Pen Lettering*, and had just launched a new lettering course at Roehampton College. She started off on the given day with a beautifully illustrated lecture which fascinated the audience. However, in doing so she took half of my allotted time a well as her own. All that I had time to do was to place my examples down and say this is how I teach and this is what I have observed while teaching.

With inexperienced members of the public I was beginning to notice some unexpected things. Some pupils could master the slant and proportions of the letters of the foundational hand that I preferred as a start for everyone. Some, however, always had difficulty with it being upright and having rounded proportions. They did much better when they could progress to the narrow, forward slanting italic. In some cases I allowed students to start with that model. That was only when their difficulties were too much for them to overcome. It all seemed to be bound up with the slant and proportion of their personal handwriting. This seemed strange to me, as they were engaged in a formal exercise. There was another thing that puzzled me. If students were absolute beginners and had never used a broad-edged pen before, and followed the exercises closely, they could attain some really good letters very quickly – perhaps even on the first day. However, if the students had played around first by themselves it was quite a different matter.

I do not think that this interested the venerable experts who made up most of the audience, but one visitor certainly took notice. Alan Wing worked at the Medical Research Council Applied Psychology Unit in Cambridge. His research at that time was concerned mostly with motor movement (a term that I had never heard of in those days) and hand movements. Handwriting came into his field of interest. He asked me to join him in some of his research – yet another giant leap forward. He was, however, going off on a sabbatical and set me a project which I suppose was to see what I could do. Given a choice of working with children (which I was already doing) or adults, I chose the latter. The subject was to concentrate on those who had lost the use of their natural writing hand. This led me to all kinds of medical conditions

but above all stroke patients. When finally this work was presented at a conference in Cambridge it had other consequences – but more of that later.

We went on to undertake several joint studies, and to publish and present at conferences around the world, the first of which was an analysis of pen holds. As a result I became schooled in research techniques and learned how to tabulate my data with the help of my basic BBC Acorn computer and the mainframe monster in Cambridge, which took up a whole room.

I learned an enormous amount in those years, and can only be grateful for this. To meet some of the scientists who regularly congregated to discuss important issues at the MRC (and occasionally take part in these discussions) was a mind-stretching experience, making up, in part, for my lack of formal education. Somehow they seemed to think that the lateral thinking of a designer was useful in their highly disciplined fields.

Through those meetings at Reading, I met the Icelandic letterforms designer Gunnlaugur SE Briem, who was also to have an effect on my subsequent life and work. He was about to embark on an italic handwriting scheme for Iceland, at the same time as I had been asked to write a book for adults in the *Teach Yourself* series. The publishers stipulated an italic model so it seemed a good idea to join forces. Briem taught me many other things, from how to lay out and design a book, to the use of photography and how to present my work at conferences. He also brought me, as he did many others, into the mainstream of letterforms and typography. He introduced us to ATypI, the international forum for typography, and I know several well-known designers who also owe a great deal to Briem.

One day, as he was working on one of several jackets that he designed for my subsequent books, Briem suggested that I worked up my handwriting research into the form of a Ph.D. At first this seemed ridiculous. I had left school at fifteen and had no first or second degree. I soon discovered that it was quite possible, as several institutions offered me a place. My books counted as equivalent to a first degree, and the MRC research was actually classified as being of post-doctoral standard. The obvious place was the University of Reading's Department of Typography and Graphic Communication. My thesis was given the rather specific title of *Joining Strokes in Children's Handwriting – The Effects of Different Models and Methods*. It developed surprisingly fast as much of the observation had already taken place. It was not the hurdle that I had expected and the whole enterprise lifted the subject of handwriting into a different level. It was aimed at the

National Curriculum Council but the copy they were sent got lost. It was not until many months later that I met the relevant person at a conference where I was talking about educational typefaces. That is how I became handwriting consultant for the National Curriculum, not that much notice was taken of my suggestions.

The opportunities for mature students in this country should not be ignored. Twenty years ago neither handwriting nor my last major design subject, typefaces for children, were considered as worth while or suitable subjects for research. It is quite different today and many of the researchers who come to see me, or e-mail me from all over the world, are mature students. They may have their own children whose problems have highlighted the subject, or their studies have led them there. Some are progressing towards doctoral studies. It is often a matter of finance, and whether they can afford the fees or the time off from their work in design or education.

Medical aspects of handwriting

Everyone needs mentors and I have been very lucky – from M C Oliver to Alan Wing and Briem to another man, in quite another field. When my first book on calligraphy was published I received a polite and beautifully written letter requesting a sample of my italic handwriting. That writer got an equally polite reply, but not written in italic because that is not my natural style of script. As often seemed to happen in my life, one thing led to another. Some years later I was at a meeting of the Italic Handwriting Society, where a friend was giving a talk, when I was approached by someone who identified himself as the person who had written that letter to me. Richard Lansdown explained that he was head of psychological medicine at Great Ormond Street, the world-famous children's hospital. He invited me to work with him there, dealing with those who had complex handwriting problems. If there is a lesson to be learned, it is that authors should always answer their letters. The consultancy that I held was honorary, as so many other jobs were, when handwriting was not considered a proper discipline, but the lessons that I learned from him during the next few years have proved invaluable. I still see many desperate children (and their parents) and remember Richard's techniques when I say to them: 'You are the expert. It is your body. You tell me what the problem is.' The answers that I get are often shocking and have been missed by a host of 'experts' who prefer standard tests to sensitive questioning. He taught me the value of paying careful attention to young children's views, something that proved very important shortly afterwards.

What possible connection is there here to being a designer? I am often asked why I can solve these children's problems when other medical professionals are mystified. I go back to techniques that I used when I was designing packaging and tried to think of an appropriate design for some product. The easiest way for me was to become that tube of toothpaste or whatever, and to feel what it was like and what was needed. One way to solve a writer's complex problem I often find is to imagine what it is like to be that person and feel how to help. To work this way is tiring, and quite unlike any medical training. It seems to me that this is just another manifestation of problem solving which is at the core of the way any designer thinks or works.The work with children was extended to the related adult problem of writer's cramp when some parts of the Cambridge project were presented over twenty years ago. Work at a major London neurological hospital, and an ongoing contact with the Dystonia Society, still ensures a steady stream of patients with writer's cramp. More recently the load of stroke patients has increased after I had a stroke myself (useful experience) and wrote a book on the subject – *Understanding Stroke*. This work is often concerned with letterforms and writing posture. To make your mark, even if it is only a signature, is such a basic human need. Using your skills in this way somehow feels as if you are using every part of yourself.

In these years of dealing with problems I learned how valuable my early lettering training had been. The emphasis on the hand, how to hold the pen, where to place the paper, is so much a part of a scribe's training, as well as the visible signs of tension in your own work. All this alerted me to matters that no one seemed to be thinking about. It led me to observe and then consider the way Biros, and other modern writing implements that had come into use, frequently distort the traditional pen hold. They work best at a different elevation to pencils and fountain pens. As a consequence fingers or thumb have to exert extra pressure on one side or another to get them into an upright position. This often causes pain as well as inviting castigation from teachers who tend to see unconventional pen holds as some form of rebellion. Was this the result of neglect in the research that should be undertaken during the design process before launching such a new product? Nowadays I am sometimes involved in advising on new projects concerning writing implements.

I learned from children in a school for the partially sighted how they changed the colour of their screen to suit the light and their individual needs. I have never found any research into that area. In the same way, children classified as problems sometimes told me that their real difficulty

stemmed from being unable to see the blackboard. Now I wonder at the proliferation of the latest classroom equipment – computer-linked whiteboards. I get involved because some of the manufacturers ask to licence my typefaces. I wonder if anyone has researched the effects these boards (that might be better described as screens) might have on children's eye fatigue or vision? Should not all this also be part of a designer's job? Physiological factors need to be considered along other aspects of design and an understanding of vision is a vital factor in any aspect of legibility research. There is so much that needs to be done and the advantage of getting older is that there is often the opportunity to guide young researchers into some of these vital areas.

Typefaces

In the end everything comes back to where you started. A designer cannot escape from being a designer, even though it sometimes makes life complicated. I never intended to be, or expected to be, known as a type designer. I discovered, however, during the time that I was preparing my thesis for Reading, that no one had thought of consulting children about the kind of letters that they found easiest to read. I was told categorically that reliable data could not be obtained from children. It was a challenge I could not refuse, being, as I have already explained, somewhat of a rebel and not inclined to accept received wisdom that, apparently, is not research based. The research into children's preferences took over a year with the help of teachers.

This project, now extending over twenty years, has resulted in a family of typefaces originally meant for young children's reading books. It has developed into fonts suitable for various ages, both for reading and for teaching handwriting. A friendly, non-menacing atmosphere was built into the design as well as an enhanced word shape which is the result of slightly lengthened ascenders and descenders. This has worked just as well for the more adult variations, and they perform well on the screen in particular.

Summing it up

All this demonstrates that no experience need be wasted. At the same time it seems to illustrate a quality that I see as important to designers – a flexible attitude to work and life. Without a training in letterforms the handwriting work would not have been sufficiently informed from the start. Involvement with children and education and learning research techniques all played a part in the suitability for purpose and the success of the typefaces. Now the Internet facilitates contact with

Some examples of the Sassoon family of typefaces.

designers, educationists and publishers, not to mention students, all over the world. This enables me and many others to extend our professional lives and interests far beyond the retiring age. All in all, after working for nearer sixty than fifty years, I can say that, although it may not make you very rich, designing provides a full and satisfying life at any level. Whether the kind of training you have or have not received makes a great deal of difference, I find it difficult to judge. Luck seems to play a part, as does hard work, especially in the early years – and determination to succeed.

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Index

the designer

half a century of change in image, training, and techniques

by **rosemary sassoon**

the **designer** is an essential book for anyone interested in, or involved in, design – from those who teach and employ designers to those intending to train in the field. Sassoon surveys fifty years of change in the world of design, covering a wide variety of aspects – from the skills that have been lost and the new techniques that affect our everyday work, to the different methods of training and whether they prepare the student for the work place.

Sassoon provides a fascinating account of her own career from her beginnings at art school and an apprenticeship, with accounts of long-forgotten techniques of the art. This is an important study of design as an art and a skill – a practical tool with a rich past and relevance for the future. **The designer** demonstrates how flexible attitudes and several lines of expertise work well in an ever-changing world. Sassoon weaves these ideas into a unique history and looks ahead to an age of changing terminology, images and attitudes to drawing and design. The book also includes contributions from professionals in the field, focusing on the present and future roles designers play in society.

Rosemary Sassoon was awarded a PhD from the Department of Typography and Graphic Communication, University of Reading. She was the contributing editor for *Computers and Typography*, her first book published with Intellect, joining an established list of books she has either written or edited during her career. Her other Intellect titles include *The Art and Science of Handwriting*, *The Acquisition of a Second Writing System*, *Signs Symbols and Icons* (written in conjunction with Albertine Gaur) and *Handwriting of the Twentieth Century*.

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