



**CODEX**

**The aim of this paper is to set the scene for a debate in graphic design teaching, which we feel is necessary. The objectives are to develop a continuum of teaching strategies and pedagogies to span the gap that exists between old and new technologies. This is not intended to be an in-depth analysis of the historical development of the subject, but instead addresses current themes that are related to the teaching of craft skills required by bodies such as Central Saint Martins Bachelor of Arts (Hons) Graphic Design.**

## **The Codex Project**

The Codex Project was initiated with the aim of focusing on the predicament facing graphic design education, in particular the design strategies employed by graphic designers in the advent of the technological revolution.

A number of practising graphic designers, journalists and educators associated with the course were invited to contribute to this debate. As a result, a series of in-depth interviews were carried out, in the initial phase of the project, identifying a range of issues that were felt to be significant. The aim was to question how the introduction of the computer in the 1980s has effected the teaching of graphic design and subsequent effects on the practice of design within the design industry. In some ways, this is an impossible question to answer, and many times we were faced with the rejoinder “revolutionised!”. However, after some debate a number of issues began to emerge that are of paramount importance.

Most of the designers we spoke to reiterated our belief that there is a strong relationship between graphic design education and subsequent professional practice. Many designers recognised that they are practising in an environment where constant re-training is required of them throughout their professional lives. This ongoing process of education is not limited to skill-based training (such as learning about new programmes and technologies), but includes

extending the ability to investigate the world and to maintain creativity. The insatiable curiosity for the 'graphic environment' is fostered at art school. For example, information gathering, often involving the collection and archiving of visual materials in sketch books or collections of ephemera, are part of a series of visual skills, often regarded by more academic disciplines as eccentric. Yet, these techniques form the basis for a type of learning experience which carries on throughout the working life of most designers.

These learning process were juxtaposed, for many of the designers we interviewed, with more formal learning encounters. When questioned closely about formative learning experiences, those interviewed referred to times where they had come into contact with craft-based media, such as silk-screen, etching and above all letterpress. These responses were not merely expressions of nostalgia for a tactile practice in an age where the digital dominates, they reflected a need for tangible insights and a real understanding of what is best described as the 'physicality' of the craft of design. The expression of these views corresponds with our experiences at CSM, where in recent years the teaching of letterpress has become a significant learning tool, which complements computer based design education.

These initial researches generated such strong interest amongst those participating that we decided to expand the debate. As a result, this paper aims to act both as a primer and a catalyst to a wider discussion about the future of design and graphic design education. Though it can be accepted that many developments in society will influence the future practice of graphic design, the most overlooked and significant factor is the role of the individual designer and how they will interact with their industry in the future. In order for us to examine the future role of the graphic designer, it seems logical to re-examine previous pedagogies developed for a past age, and formulate new models that relate to our needs today.

In the Codex paper we describe the teaching of letterpress at CSM. Our aim was to examine this teaching model and its relationship to creativity and play. As a result, we were able to establish a basis for the examination of the medium of computers as a design tool.

The following designers were interviewed for the Codex Project: Phil Baines, Geoff Fowle, Vince Frost, Alan Kitching and Graham

Wood, all of whom have engaged with the idea of craft in design through their practice.

## Preamble and Impending Dilemmas

“When I first went to use a computer, I found it easier because I had learnt to use letterpress before. When using Freehand I was able to work in a similar way to when I was using letterpress. It wasn’t until after I had been using the Macintosh that I found that I could change the type faces in the same way I could when using I was using letterpress! I didn’t realise that I could use 21 pt. and I could re-scale everything. I was working using the same methods as I did with letterpress.” **Graham Wood**

Having been enchanted with the capabilities of technology over the past twenty years, especially the developments of the personal computer as a design tool, the time has arrived to ask ourselves some challenging questions pertinent to our times.

In some ways it is a fortunate time to be a graphic designer; there is a thriving industry, an abundance of clients, expanding markets and new technologies making it possible to create and be creative in ways that would have been inconceivable a few years ago. Yet, there are a number of issues that designers and writers on design are finding difficult to address. Is graphic design rising to the challenge of the Information Revolution? Has it, as an industry, displayed an understanding of the significant change that our society is undergoing? What direction will it take in the future? How can graphic designers conceive of appropriate forms of “good design” when we are being faced with a deluge of information? These and many other questions are often addressed in specialised publications about graphic design, but the debate needs to be broadened.

The newly defined ‘generation Y designers’ are aiming to differentiate themselves from the previous generation, who were interested in the ambiguity of design and the possibility

of deconstructing the structures of language. Ironically, this generation is looking for an orthodoxy that can supply them with rules for the practice of 'good' design. This generation is characteristically unenamoured with technology due to familiarity. This familiarity has inculcated into their belief systems an assumption that technology and science are not expressions of a cultural form, but are objective activities. As such they look to science to supply them with fundamental 'truths'.

A cohort of gurus have recently arisen responding to this phenomena. Rallying under the banner of 'usability' they have begun to define a series of precepts that demean the richness and complexities of visual communication. Their popularity seems to have been triggered by the excesses of graphic design in the 80s and 90s, which promised much to industry in terms of outcome but delivered very little in reality.

**“In written English the construction of essays – the rationales, the formality is established. There is an evident setting out of the parameters, a developing argument, a proposition and so on. Yet in design the unpronounced stab at some visuality and a grab at some fashionable graphic seems to do. Even the critique can fall into a trough of ‘like it – don’t like it fancy. Thus ‘graphics’ equals the trite, the inconsequential, the fluff of commerce. But so called commercial art has come a long way and further too than mac jockeying.”** Geoff Fowle

In order to challenge these assumptions, at CSM BAGD, we initiate an environment of creativity, through which creative solutions are sought. This emphasis on creativity enables students to find unique solutions to the uses of programmes, instead of accepting blindly the pre-ordained procedures that many programmes provide. For example, students are encouraged to keep sketch books and to experience hands-on ways of working i.e. printmaking, experimental photography, drawing, letterpress etc. At the same time they are introduced to technology through various workshops, from Photoshop to Dreamweaver. This combination of methods

leads students to be innovative in their approach, creating designers who feel equally at home working with their hands or using computers. Thus, we do not put an emphasis on the sole benefits of either craft or technology. Rather our emphasis is on creativity. We celebrate the incorporation of both modern and traditional technologies, not only in working processes, but in the finished product.

As part of the dilemma presented to contemporary society by the information revolution, graphic design is being challenged to find models for effective communication. We believe that through creativity and the production of creative designers, as part of contemporary design culture, some solutions may be at hand. As an industry we have been unreflective in finding solutions for the digital environment. The lack of alternative metaphors and models needed to address this question has meant that previous models are being employed wholesale and merely transferred to the digital environment ie the unsatisfactory web 'page'. The drive to transfer information and content from print to new media has meant that scant attention has been paid to the potential that exists. The new forms of digital communication have led us to question whether the graphic designer's role is as an interpreter of information, ideas, values and concepts or is there a profound challenge awaiting the profession; that of leading the development of new strategies for communication in the digital era. Finally, there is the more worrying alternative; will graphic design itself face extinction if it is absorbed by technology.

**“I think that all craft based media should be kept within design education; letterpress, silk-screen printing, etching etc. It is best to have those options, it's very good education. It has to be kept, otherwise art schools will just become empty shells.” Alan Kitching**

## **Examining Pedagogic traditions**

Art schools have supplied generations of young design graduates to the graphic design industry. As each era has demanded of its young graduates an understanding of new technologies and contemporary tastes, graphic design departments have reflected these issues in their pedagogic criteria. However, since the introduction of the

computer as a design tool in the mid 1980s, the disparity between the influence of new technologies and the aspirations of graphic design education has been magnified. Initially, educational establishments were slow to implement the computer as a teaching tool, mainly due to financial restrictions. However, as colleges are compelled to keep up with industry standards, the introduction of new programmes and upgraded computers have taken a heavy financial toll. While the fast pace of this change is of paramount importance to industry, it is swiftly leaving behind an education system that traditionally broke new ground. Moreover, in addressing this issue a debate has arisen in some design departments over what computer programmes are able to contribute, in real and educational terms, to the students creativity and understanding of design.

In the past, art school education and more specifically graphic design departments created a forum in which the ‘craft’ of design was learnt and design students were afforded the opportunity to question previously unchallenged ideas, whilst developing skills for their immediate future.

Graduates rounded off their education with a period of apprenticeship in a design company, (though this model was not always adhered to, it was often the route followed) and young designers would develop disciplines, such as typographic design, editorial design, art direction etc, as well as a wider understanding of the commercial culture. These disciplines had a distinct relationship with the craft of printing, which meant that a clearer set of roles existed for the design graduate. These established routes distinguished graphic design as a ‘craft’ and prescribed the transition from education to industry.

## **Central Saint Martins Bachelor Arts Graphic Design (CSM BAGD) as a model and starting point for discussions**

The changes that have taken place in the last twenty years in the industry and the dismantling of these established routes has coincided with the increased number of graphic design graduates leaving art schools. It is against this background of structural changes that a number of staff at CSM BAGD began to look at how the future of graphic design education should be addressed.

It became necessary that the relationship between creativity, old and new technologies and theoretical material used in our teaching strategies were examined in some detail.

It was felt that in an era when design education is becoming specialised, one of the great strengths of the CSM BAGD is its great diversity and creativity. The course has a long standing reputation for producing generations of graduates who are at the forefront of their industry and are often leaders in their area of practice. This success is due to the combination of the profiles of students and staff alike, the course philosophies and being located in central London at the heart of the graphic design industry. The students who are chosen for the course come from a wide a variety of backgrounds, age groups and nationalities. Many of the staff are practising designers and have a long-standing relationship with the design industry. Both staff and students alike are concerned with developing new creative strategies and solutions to the practice of graphic design.

It is important to note here that CSM BAGD is a non-modular course. This means that students are encouraged to learn through a series of experiences which are:

- **comprehensive**
- **experimental**
- **conceptual**
- **contemporary and historically based**
- **lateral**
- **multi-skilled based**

They build towards outcomes which display thought processes and skills that they have acquired during brief based projects. The course exposes students to a large variety of different subjects, ideas and opinions relating to the different areas of graphic design, gradually leading the students to the development of their own independent study. However, the central ethos of the teaching practice is a concentration on creativity, and the activities through which it can be developed. Indeed, creativity is considered to be so fundamentally important to the individual that it is viewed as a precursor to any understanding of technology.

With the introduction of new technologies, graduates are now expected to acquire a larger number of core skills, ranging from traditional print to an understanding of the new media,



during their three year course. This increase in the skills demanded of students and the overlapping of the roles of technician, programmer and designer (as required by multi-disciplinary practice) means that less of their time is spent developing their individual creativity. Hence, we are in a situation where students unquestioningly assume that solutions to design problems can be solved through technology rather than through their own knowledge and skill. It has become the responsibility of graphic design tutors to encourage students to find creative, skill-based solutions and to facilitate the exploration of creativity through play.

## **Creativity and Play**

In design terms creativity is the operation of a mode of thought and its interaction with the physical world. It is fundamental to good design and is needed to execute innovative and effective communication.

In recent years the huge increase in the amount of designed material has seen a comparative demise in creative solutions to graphic problems. This is in part due to the rise of consumerism which has created the need to capture the attention of consumers through the media of television, print, the web and advertising and has demanded of the graphic designer work that is not only 'of the moment', but also strikingly visible. This 'high volume attention' requirement has on the whole resulted in the subordination of content over style; our consumer society has come to understand that 'style' sells. Indeed, this is one of the dilemmas of the postmodernist age. The marketing obsession with 'style' pays scant attention to the truly creative potential of the new media, and to some extent it is the responsibility of educational establishments to address this dilemma.

In the pursuit to market 'style' many people in the design and corporate identity industries are disseminating various ideas and theories about creativity. Ironically, they are unable to define creativity within their present terms of reference. They are caught in a paradoxical situation in which they seem unable to distinguish between novelty (applying to a product style without a rationale) and creativity. Novelty results when creative solutions are demanded by businesses which do not acknowledge that to be truly creative you have to risk failure.

In fact intuition and creativity are two skills that are rarely allowed to operate in society at large, but have traditionally been fostered by the art school system. It has previously been difficult for design educators to locate, identify and endorse these skills as part of a pedagogy. However, new research emerging from the field of cognitive psychology (the most notable of these is the work of Professor Guy Claxton) has begun to shed light on the mechanisms behind these forms of thought and lends support to the importance of promoting intuition and creativity. The principal mode of interaction emerging from these findings has been the importance of play in the learning process.

Play is important to the creative act because it invites participants to find new paradigms and develop skills which are gained cumulatively; they have to be nurtured and allowed to grow.

Play as an activity has a number of qualities it:

- **signals a suspension of the ordinary rules of day to day life**
- **implies that for a period of time, rules can be manipulated**
- **allows for a fluidity of interaction between people and objects, people and people, people and ideas**
- **builds a bridge between the problem and how it may be understood**
- **creates new frameworks and allows for metaphors and innovations**
- **enlarges concepts**
- **breaks conceptual boundaries**
- **builds trust between players and can give individual players confidence**

Increasingly, as a society we are realising that the old solutions are not working. Creativity must be nurtured in order for us to deal with the demands of the future.

## **In Context**

In order to set the role of letterpress at CSM into a context, we have sketched out an overview of the rise of technology over the past fifteen years and the subsequent position graphic design is occupying in contemporary society. We have commented on the information revolution and how it has challenged us as a society, indicating that our present models of communication are ineffective. This has meant that a generation of up and coming young designers are in need of new concepts that will provide them with strategies to deal with the above demands.

It was at this point that the role of education was considered and how educators are obliged to promote ‘new’ strategies in their teaching. These strategies must be in tune with the demands of our age and generate creative problem solving that will be effective in the educational environment and beyond. We have used CSM as our model to examine the relationship between teaching pedagogies, creativity and play. We now go on to talk about how the use of letterpress as a teaching tool promotes the creative imagination and an understanding of design. In recent years at CSM BAGD we have made a concerted effort to counterbalance the teaching of technical skills in computer based design and thus have found ourselves re-evaluating the use of letterpress.

At the beginning of their course students attend tutorials on the use of a number of programmes and then they go on to learn how to implement them in a creative way. This is achieved by setting briefs that stretch their abilities and make them question their pre-conceptions about what graphic design is and can be. Students often assume that when they learn a programme, they are learning to design. As we enable them to make the distinction between ‘tools’ and ‘ability’, we also encourage them to make their own decisions about what design is and to be questioning about the capabilities of the tools that they use. An effective means of guiding them through this transition is the use of letterpress. This traditional method of composing type and designing layout demonstrates the ‘first principals of design’ and often acts as a seminal learning experience for graphic design students who had previously only laid out type on the computer screen.

## **Does form follow function or does form follow tools?**

“One of the first things that I was conscious of when I first started teaching was that I wouldn’t tell people how to do it or what the solution should look like. I tried to be very open. When it came to letterpress, all I tried to do was show them the basics of how to use the equipment and what to do with it, then let them do exactly what they wanted to do.” **Phil Baines**

There are many different approaches to the teaching of letterpress. At CSM BAGD it is taught throughout the course especially in the study of Typography, and more recently in areas such as Illustration. The staff not only introduce students to the basic principles of setting metal type, but also involve them in experimentation and play. For some design students the initial introduction is followed by a more in-depth exploration of the conventions of letterpress, it is at this point that students realise where terms like ‘leading’, ‘spacing’ and ‘baseline’, come from and what they actually mean. This phase is also characterised by learning the fundamentals of typography and layout design, though it must be acknowledged that many students go on to challenge these conventions.

The processes involved in the setting of type and image in letterpress are slow and allow students to ruminate and expand their imaginative faculties. The physical interaction with the medium creates an opportunity for creative and inventive thinking. We have identified four main processes of engagement:

- **The physical interactions**
- **The abstracting of pictorial space**
- **The active imagination**
- **Creativity**

The physicality involved in the setting of type allows students to acquire new insights, utilising different learning skills which have a more direct physical impact on the student’s imagination and memory. The metal type has the distinctive tactile qualities of weight, texture, and smell, and forms the basis of a multi-sensory learning experience. The knowledge gained from handling and setting metal (and also wood) type, which has passed through many hands, introduces learning styles that cannot be accommodated in the virtual typesetting and design environment. The tactile sensation of setting type allows for a range of intuitive investigations leading to experiential learning.

“I often choose to use letterpress as opposed to digital type because of its historical and tactile value. We are all being enticed into instant results. As the big computer companies make our lives easier with new programmes and inexpensive hardware we loose sight of the craft of our

profession. I believe that printed material has an aura and the more well crafted a piece the more it glows”. **Vince Frost**

Students are compelled to abstract pictorial space due to the process of setting type in negative, as opposed to positive and in reverse; from right to left, and upside down. Because of the resulting complexity in legibility the imagination transforms the set metal type (in the tray or on the composing stick) and internalises them into pictorial elements. These pictorial elements are internalised and enter into the realm of the imagination. As a result, students can conceive of both text and image in abstract terms and thus form a more unified understanding of pictorial space. These insights illustrate the complexity of the process of composition in design through the relationships of size to scale, form, shape and rhythm. Hence, all mistakes in composition, layout and the setting of type enter the student’s visual imagination and seem to have a direct physical impact on their intellectual understanding of the fundamentals of design.

This process of abstraction of pictorial space and the labour intensive and repetitive processes of setting out type and composition combined together engage the students active imagination. This in turn has a knock on effect onto the students creativity which is encouraged to grow owing to the stages through which they pass in decision making when they work towards a final outcome. In letterpress the entire image is ever present, therefore, the development of the design is more tangible for the student.

To compare the above processes with those undertaken when designing on the computer, we see how letterpress can act as a complement. As an example, it is interesting to compare how the difficult task of setting seven point type on the computer screen and setting seven point metal type in letterpress, engage the physical senses. Whereas, in letterpress the compositor’s capabilities are refined by the physical decisions taken during the setting of metal type at its actual size; reading the text, the awkwardness of handling, making judgements about page layout the computer engages us on a more detached level using the aid of a magnifying tool.

Furthermore, the kind of visual memory developed through the use of the computer as a tool, does not refer to the senses, as all interaction takes place through the screen there is no tactile experience. Moreover, the computer offers a range of design options and outcomes that are 'held' in the computer's memory through the 'save as' function, which has become a means of creating many different variations. This can be a liberating experience, but it denies younger designers both the opportunity to hold the image in the imagination and to visualise an outcome. The use of these virtual functions promotes a reliance upon the prescribed routes that have been conceived by the programme's creators. This abdication of responsibility for the image means that feedback is either on the screen or as a print out and thus the understanding of scale and size is lost due to its lack of physicality.

On the screen we layout from left to right and because this is closer to the process of reading and scanning pages, students are less inclined to conceptualise the virtual pictorial space in abstract terms. The relationship of image and type remains separate. By contrast, a level of abstraction is inherent in the technology of letterpress – and it is this distinction that is fundamental to the creative process.

Though, in terms of result there are differences between final proofing in letterpress and the print out from a computer, the fundamental difference is process; the route taken through the use of computers does not stimulate the contemplative imagination needed during the design process.

## **Conclusion**

Through this essay we have hoped to illustrate that both old and new technologies have their distinctive qualities, which in educational terms should be held in equal esteem. New solutions for new circumstances do not necessarily require the employment of new technologies. Our position is not that of the Luddite, we are fully aware that the future is reliant on the digital and we embrace and celebrate new technology. Though letterpress is a technology of the past and commercially has little validity, we have shown that its intrinsic qualities are of direct relevance to the teaching of computer aided design. The qualities, implicit in the use of the medium itself, promote the cognitive skills needed by students and act as a bridge to the active imagination.

In conclusion, we have discovered that through the teaching of older technologies we are able to challenge students to be more questioning about their use of new technologies. The teaching of letterpress, as delineated above, demonstrates the processes of play and creativity through interaction with the physical medium. This physical interaction with the medium, as part of the creative process, redefines established solutions and promotes the development of the imagination. This we feel is essential to the future of graphic design.

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