REDEFINING THE PLURAL DOMAINS OF GRAPHIC DESIGN AND ORIENTATING THE SUBJECT TOWARDS A MODEL THAT LINKS PRACTICE, EDUCATION AND RESEARCH

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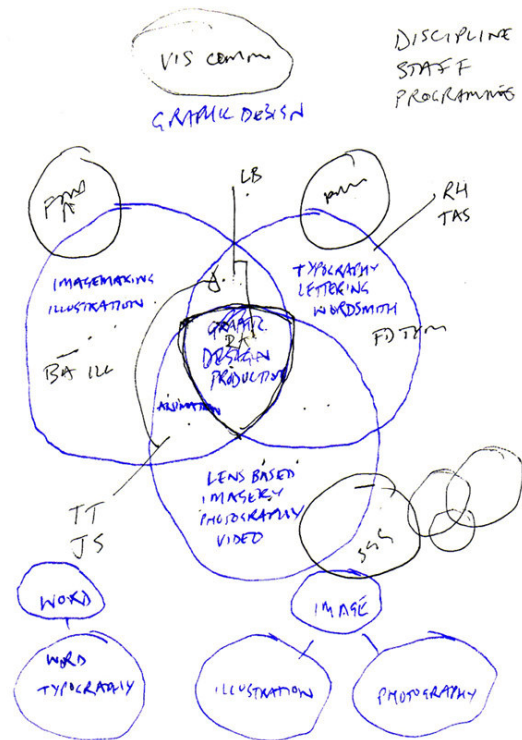
ABSTRACT:

This paper outlines work in progress about the development of a diagrammatic model for graphic design that attempts to bridge the 'intellectual chasm' between practice and research in the subject. Historically, practice is acknowledged as having led the way. This research places education at the centre of the challenge to face a unified future, and examine the intricate relationships that have developed within and without the subject. It considers traditional definitions of the subject and reviews these in a contemporary context, interweaving the critical dimensions of graphic design as a 'thinking' and 'doing' activity in diagrammatic form. The paper confirms that these dimensions are interdependent, and vulnerable to individual and collective actions. The research attempts to build theory about graphic design.

1.0 INTRODUCTION

This paper reports on work-in-progress about the development and use of diagrammatic representation for what is described here as the critical dimensions of graphic design. The initial intention in using diagrammatic means was to stimulate personal thought about the relationships that contribute to graphic design (Fig. 1).

This began during a transition from full-time graphic design practitioner to full-time academic. Although diagrammatic representation evolved from the desire to identify general principles and core beliefs, it has developed further through a series of stages as an aid for teaching undergraduate graphic design students, and recently as a stimulus for discussion with educators, researchers and practitioners.

Fig.1. Initial sketch attempting to outline
the domains of graphic design. 2002

The initial intention was to assist first year undergraduate students understand the role of typography in graphic design (Fig. 2). Later versions of the diagram have been used as a teaching aid to help students define their relationship to the subject, and their place within it, as they progress from year two to year three. At this point students are encouraged to be independent learners and take responsibility for their programme of work. Diagrams are used to help them

identify what aspects of graphic design leads their learning. For example, students are encouraged to ask themselves whether they are more word or image inspired; are motivated by an interest in new media; or consider themselves to be generalists rather than specialists. Additionally, diagrammatic representation has been used in a research context to explain graphic design to academics who teach urban design, architecture and planning. Most recently, this approach has facilitated informal discussion with graphic design practitioners and academics for use as a possible model to link practice, education and research.
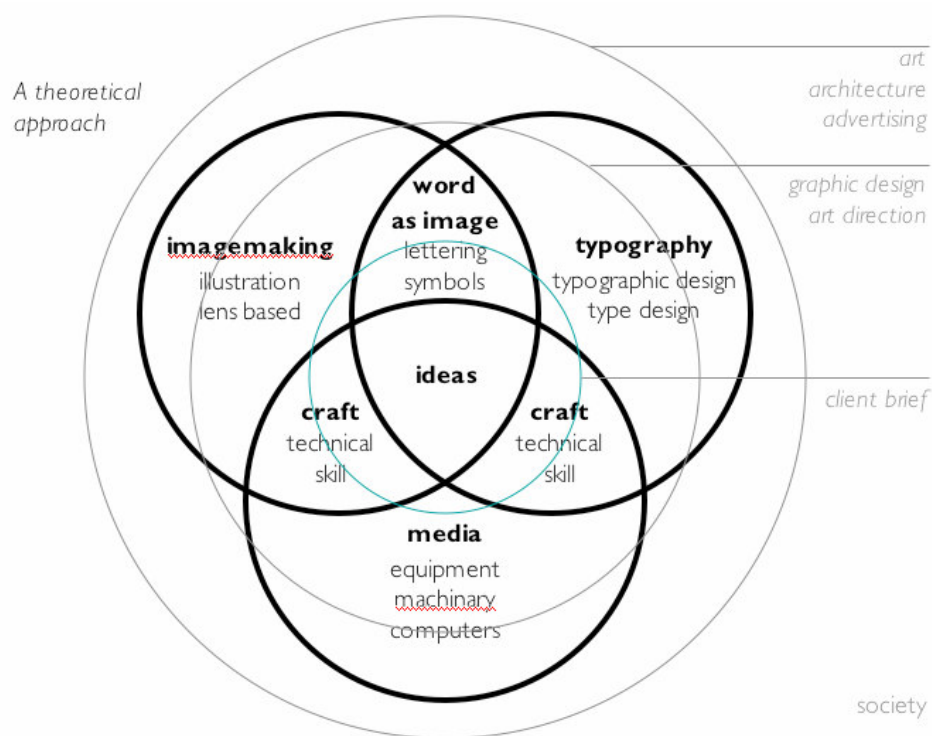

Fig.2. Diagrammatic teaching aid to explain the relationship of typography to graphic design. 2004

1.1 DIAGRAMMATIC REPRESENTATION

The use of diagrams as devices for disclosing visual thinking to others has been well researched. Referring to the earlier work of Enrick (1972), Dondis (1973) and Lowe (1993), Crilley, Blackwell

and Clarkson (2006, p. 346) suggest that 'effective graphic representations are capable of providing concise visual summaries of data, concepts and relationships … consequently, communications on many subjects are clarified by presenting diagrams of the subject matter involved'. With the use of diagrams, this paper reports on progress about attempt to 'model' the critical dimensions of graphic design in such a way that takes into account its relatively short history, its formative grounding in practice, and orientates it towards a future that embraces research. This has been driven by a preoccupation with what form such a diagram might take.

2.0 THE PLURAL DOMAINS OF GRAPHIC DESIGN

Describing graphic design used to be relatively simple and could be drawn from the sort of general definition found in the Compact Oxford English Dictionary (2003). This reads 'the art of combining text and pictures in advertisements, magazines and books'. But if we look towards the subjects own attempt to 'stabilize language', it is described as the generic term for the activity of combining typography, illustration, photography and printing for the purpose of persuasion, information or instruction (Livingstone and Livingston, 2003. p. 90). (See Fig. 3).
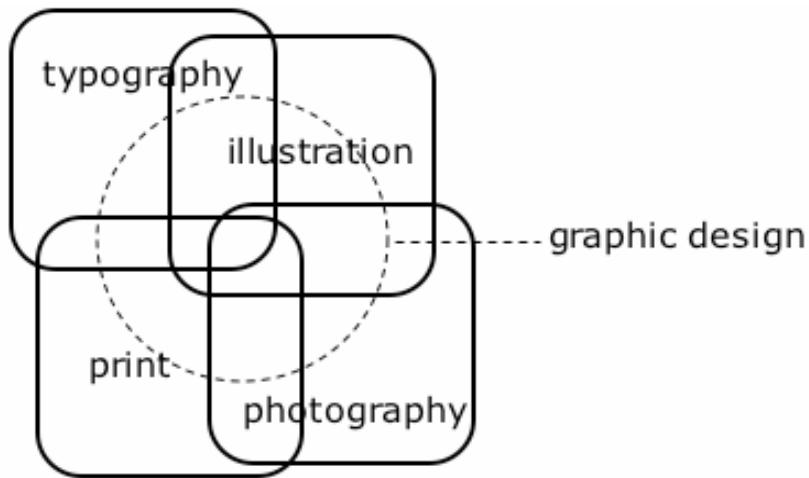
Fig. 3. The traditional domains from which graphic design established itself

This intelligible and pragmatic definition reflects the popularity of the subject as it developed during the middle of the Twentieth Century. But, for some time now this has not reflected the breadth of graphic design practice and the influence that graphic design has had in facilitating modern life in developed countries. Defining the plural domains of graphic design has required more specificity. Other explanations identify graphic design as a unifying process and expert arrangement of signs, symbols, words, and images for 'public exchange', as part of the field of design (Aynesley, 2001, p. 6), and it is recognized as ubiquitous and conspicuous in several types of media, often in tangent (Helfland, 2001, p. 137).

2.1 SEGMENTATION, DISORIENTATION AND SHIFT

Simple definitions are increasingly evasive for a field that Milton Glaser describes as having become highly segmented (Heller & Petit, 1998, pp. 149–155). This is visible in the wide range of formal educational experiences that feed into and crossover with the subject. For example, in the United Kingdom (UK) the number of different undergraduate programme titles that reflect exhibiting courses at the Design and Art Direction (D&AD) New Blood

Exhibition in London, 2006, had no less than 35 different names that can be grouped into several categories (Fig. 4).

Fig. 4. Programmes exhibiting at D&AD New Blood Exhibition, London, 2006. (number of exhibiting courses with same title in brackets).

Art & Design Design (4) Art & Design (Graphic Design) (1) Design & Craft (1) Design & Craft, Visual Communication (1)	Graphic Design Graphic Design (33) Graphics (1) Graphic Design & Illustration (4) Graphic Design for Print and New Media (1) Graphic Design & New Media (1) Graphic Design: New Media (1) Graphic and Media Design (3) Graphic Arts and Design (1) Graphic Design/New Media/Illustration (1) Graphic Design and Graphic Fine Art (1) Graphic Design & Advertising (3) Graphic Design & Visual Communication & Marketing (1) Packaging & Graphic Design (1)	Communication Communications (1) Graphic Communication (7) Visual Communication (4)
Illustration Illustration (7) Illustration and Animation (1) Information Illustration (1) Scientific and Natural History Illustration (1)	Photography Photography x 1 Wildlife Photography x 1	Media Multimedia (1) New Media (1) Digital Media (1) Design for Digital Media (1) Multi-Media Design (1) Moving Image Design (1)
Advertising Advertising (4) Creative Advertising (1) Advertising, Graphic Design, Illustration, Multimedia (1)		

McDonald reflects this stating that 'Both graphic design and professional practice is in a state of flux. A maturing field, rapid changes in technologies, and an increasingly global marketplace have led to further specializations and liaisons with allied disciplines' (Bennett, 2006, p. 354), But we should be careful not to assume that graphic design has not always been in such a state, or is the only subject that is forced to question itself. It is, perhaps, more to the point that any upheaval in graphic design is simply what Friedman (2005, p. 3.) describes as

a shift 'marked by a transformation from the rough, ambiguous territory of purely practical application to the development of reasoned, systematic inquiry'. This shift is acknowledged by Bennett who suggests that 'graphic design is at the crossroads', referring to a past based on 'intuition' and a future 'engaged in a process where research is integrated into the design of objects and experiences for and with the audience' (2006, p. 14). But again, on a cautious note, we must be careful not to assume that 'research' has not featured in the graphic design practice. It is possibly more likely that graphic designers have not reported on it.

3.0 REDEFINING THE PLURAL DOMAINS OF GRAPHIC DESIGN

Moving beyond the traditional domains graphic design is now recognized as being more than simply a process of organization (though this is still an important aspect). It has been further defined as language, elements, artifacts and activities. Recent attempts to clarify its role encompass information, persuasion, decoration, magic, metalinguistic, and phatic functions (Barnard, 2005, pp. 14-18). It has been discussed in terms of vocabulary, grammar, syntax, rhetoric (Newark, 2002, p. 50) and as having elements such as space, unity, page architecture, type (White, 2002), harmony, balance, colour, light, scale, tension, form and content (Helfland, cited in Shaughnessy, 2005, p.18). Poggenpohl states that 'Graphic design is a part of your daily life. From humble things like gum wrappers to huge things like billboards to the T-shirt you're wearing, graphic design informs, persuades, organizes, stimulates, locates, identifies, attracts attention and provides pleasure.' In fact, the subject is represented through a wide range of applications (Fig. 5).

Fig. 5. Some definitions and applications of graphic design

Barnard (2005)	Newark (2002)	White (2002)	Helfland (2003)	Poggenpohl (1993)
Function	Language	Elements	Elements	Intention
Information	Vocabulary	Space	Harmony	Organization

Persuasion Decoration Magic Metalinguistic Phatic	Grammar Syntax Rhetoric	Unity Page architecture Type	Balance Colour Light Scale Tension Form Content	Stimulation Location Identification Attraction Pleasing
ISTD (2002) Applications Newspapers | Magazines | Books | Corporate identity | Logotypes/brandmarks | Stationery | Typeface design | Calligraphy/hand-lettering | Posters | Calendars | Wall charts | Brochures | Catalogues | Annual reports | Postage stamps | Packaging/containerization | CD covers | Advertising | Direct mail | Exhibition and display | Signage | Multimedia (CD-Rom, TV and Film) | Websites				

Attempting to incorporate all of these defining features into a diagram is not the intention here. This paper is concerned with redefining the plural domains, and establishing critical dimensions for the subject. In doing so it proposes a 'basic research' model for contemporary understanding the subject. The model demonstrates how the practical and contextual domains are interwoven in the sense of a textile weft and warp (Barnard, 2003, p. 59) (Fig. 4), identifying a practical and theoretical framework. These contextual domains have invariably been identified as social, cultural, economic, political, environmental and technological. But, in keeping with the educational context within which this paper has evolved in the UK, domains are contextualised here in terms of the contribution that Art & Design graduates make to Industry, Commerce, Culture and Society (Quality Assurance Agency for Higher Education, 2002, p. 2).

3.1 DIMENSIONS

When we talk about the dimensions of a subject, what do we mean? Potter and Sarre use the term in preference to disciplines, when they explain what is meant by Society.

> 'Imagine that we have the task of familiarising people with a continent that contains at least five countries. Each country has its own history, way of life, dialect, institutions, literature, and ideology. Each has a core territory, but some have large areas peopled by separatists. Worse, there are substantial areas where two or more countries claim jurisdiction, and other areas not claimed at all. How are we to communicate the nature of this continent?' (1974, p. 3)

This analogy lends itself well to graphic design. But what might we consider to be the dimensions of graphic design? Urban design offers a useful comparison. Carmona et al (2003, p. 5) outline that it is often easier to define urban design in terms of what it is not, and that it is both more and less than those subjects that it interfaces with. They go on to say 'relational definitions (i.e. those that define something in relation to something else)' can be useful and that urban design 'encompasses and sometimes subsumes a number of disciplines and activities'. Perhaps most significant is their acknowledgement that establishing boundaries for the subject is unhelpful when the 'identification, clarification and debate of central beliefs and activities' that encapsulate the 'heart or core' is really needed. This paper is concerned with what might be considered as graphic design's central beliefs. What is at its core? What are the critical domains that will assist us in linking its past, present and future? What are the dimensions of the subject that identify it as a 'profession', a 'discipline' and a 'field', or 'the frames within which a [graphic] designer must act' (Friedman, 2005, p. 3.). These questions cannot be explored fully here but it is necessary to briefly examine the traditional ingredients of the subject with a view to understanding past, present and future importance.
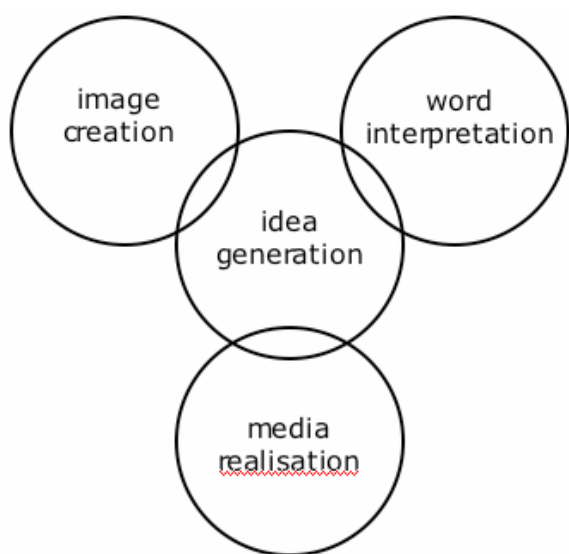
We can assume that typography, illustration, photography and printing are significant and influential actors in graphic design, each being equally important. Despite suggestions by Swann that 'typography is too important to teach to graphic designers' (Jury, 2001, p. 266), or legitimate concerns in the UK expressed by Spencer that graphic design is too often taught by illustrators who favor the 'graphic image (pictures) rather than type' (Jury, 2001, p. 256), we must be cautious to suggest that one ingredient is more important than the other to the graphic designer. Graphic design is frequently more important than any of these, and sometimes less important. And it is much too limiting to describe graphic design as only typography, illustration, photography or

printing. For example typography is described by Baines and Haslam as 'the mechanical notation and arrangement of language' (2003, p. 7). This is not a suitable descriptor for graphic design, though typography is at times an essential ingredient. Therefore typography is not graphic design, though graphic design might consist of a singular typographic outcome (and when it is, it should be equal to the very best typography). To continue with the example of typography, Haslam suggests that 'both typeforms and typography are designed to convey messages. This places typography firmly at the root of the broader discipline of graphic design' (Dreibholz, 2007, p. 4.). On one hand this is true, but conversely this is contestable if it implies that typography is the root, and takes precedence over illustration, photography or printing. Typography is only part of the graphic designers 'tool-kit', but it is limiting if considered in the wider context of how graphic designers interpret words (authored internally or externally). Similarly, illustration, photography and printing are not sufficient descriptors when one considers the need for graphic designers to create images, not only realized in the physical sense using a wide range of media, but also in the mind.

We must therefore continue to redefine these traditional domains in the context of graphic design and reconsider them as part of the dimensions of the subject. This paper argues these dimensions are better described as word interpretation, image creation and media realization. These dimensions are linked by an increasingly sophisticated thought-process that for some considerable time has gone well beyond simple organization and embraced the wider concerns of industry, commerce, culture and society.

3.2 THE IDEA OF AN IDEAS DIMENSION

We have seen that use of language to describe graphic design varies considerably and it is no longer possible to rely on traditional definitions. More generalized terms used have come to be understood as word, image and media, and as stated, the integration of these has required increasingly sophisticated thinking processes and ideas, much of which is carried out by individuals who are not necessarily practitioners in a making sense. As graphic designers have applied their skills to a broader set of communication objectives (that has encompassed both still and moving image), this has required designers to design for different media other than print, and introduce layers of meaning, such as style and/or humour. In doing so, 'creative thinking' has moved beyond the traditional component subjects and, in addition to an interest in doing, graphic design has concerned itself more explicitly with thinking (Fig. 6)..

In doing so it has became more accessible and understandable to a wider audience who have pragmatic as well as creative aspirations. For example, in an article in the late 1980s for the British architecture and design magazine *Blueprint*, Robin Kinross suggests that it was not until the post-war years that graphic design emerged in Britain, as 'visual organisation' rather than 'decoration and image-making' (pp. 29-36). Since then other ideas, such as the adoption of wit and humour, have had significant impact on the outcomes of graphic design. This dimension is identified here as the 'idea generation' dimension of graphic design.

Fig. 6. The development of the 'idea generation' dimension in graphic design

This can be thought of in a number of different ways, but there are two particular aspects relevant to the graphic designer: the

ability to absorb ideas and the ability to visualise ideas. Helfland (2001, p. 137) confirms an emphasis on visualisation by with the simple suggestion that graphic design is the art of visualizing ideas, whereas the American graphic design pioneer Paul Rand thought the essence of what a graphic designer did was create ideas and express them in words and pictures (Poyner, 1998, p. 15). His ability to create ideas was fuelled by his ability to absorb ideas. For example, his understanding of the modern movement, and the work of European artists such as Klee and Kandinsky, enabled him to design symbolic and expressive visual communication that utilised 'freely invented shapes' (Meggs, 2006, p. 374). This is significant in the sense that Rand places an emphasis on ideas generation, rather than design only as an act of unification, or what he described as simply assembling, ordering or editing (Rand, 1993, p. 3). This methodology (absorbing ideas from outside the subject in order to generate ideas that come to represent the subject) can be seen throughout the Twentieth Century, perhaps most recently in graphic design work associated with Post-modernism, and the attributes associated with it such as 'deconstruction, appropriation, technology, authorship and opposition' (Poyner, 2003, p. 6).

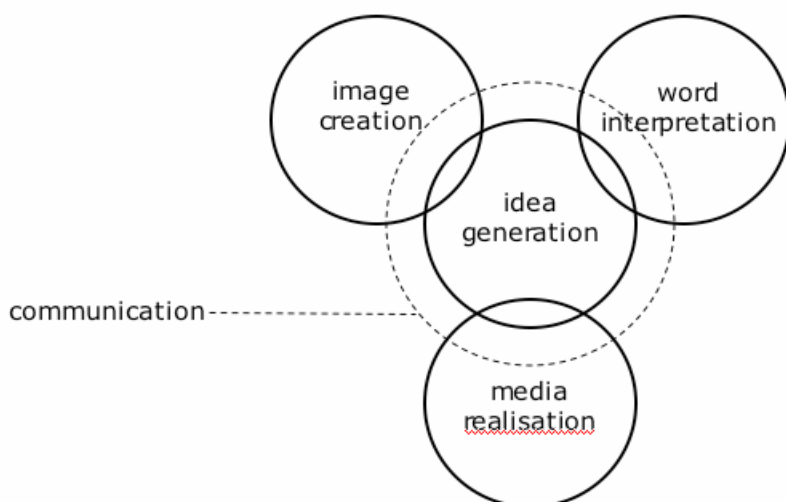3.3 THE COMMUNICATION DIMENSION

It has been argued that communication is, and always has been, the role and function of graphic design (Barnard, 2005, p. 5). In contemporary society, graphic design is the process by which visual communication is organised (Aynsley (2001. pp. 6). But 'communication' does not reside exclusively in graphic design – it is thought to be the central idea in the larger field of design, from industrial and product design to architecture and urban planning (Buchanan, 1985, p. 4). Nevertheless, in the context of 'designing communications' Heskett (2002, p. 84) suggests that graphic design is the most commonly used term to describe the activity of making 2D communications, and Lupton says it is 'how

[graphic design] things are made' (Heller & Petit, 1998, pp. 117–131).

The 'graphic' in graphic design is made explicit in the notion of *graphicacy,* which emerged in the 1960s as a fourth key communication competency alongside literacy, numeracy and articulacy (Poracsky, Young and Patton, 1999. p.103). Nelson (1999) (citing Monmonier) describes these competencies as:

Articulacyfluency in oral expression (language and presence)
Literacy fluency in reading and writing effectively
Numeracy fluency with the manipulation of numbers
Graphicacyfluency in the construction and interpretation of
        graphic modes of communication (graphs, diagrams,
        illustrations, photographs, sculpture, icons, and
        maps).

This suggests that two of the fundamental beliefs that graphic design must posses and display, is an ability to construct and interpret, or create and decode. But in keeping with Buchanan's claim to the successful use of rhetoric in graphic design (Buchanan, 1985, p. 4), the test for graphic design as

communication resides in its ability to elicit a response from a clearly targeted audience. We can therefore assume that Communication is an essential dimension in graphic design (Fig. 7).

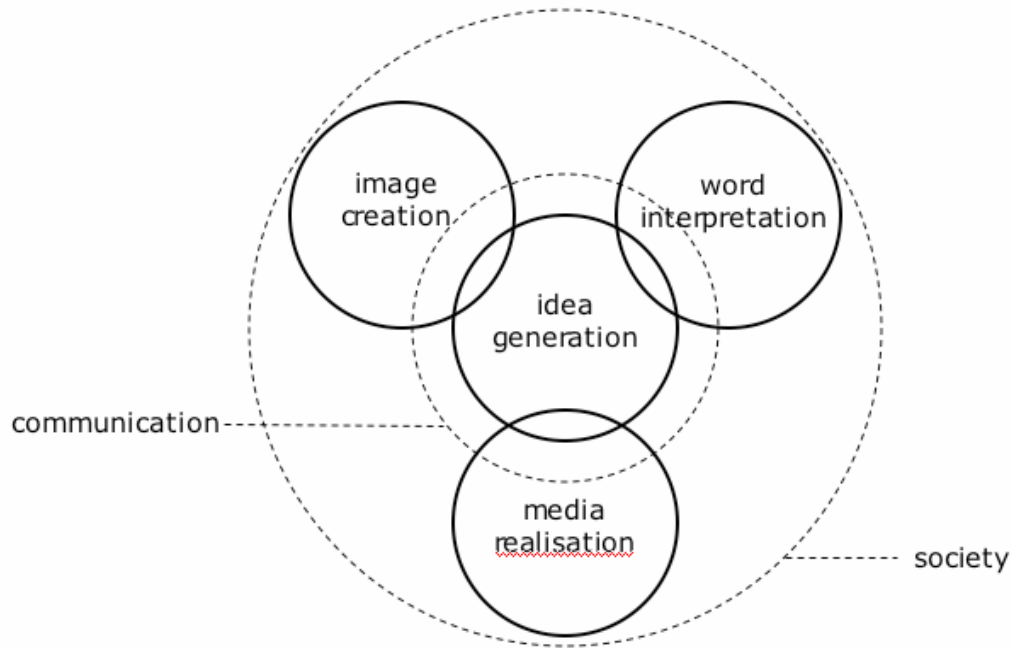Fig. 7. The 'communication' dimension in graphic design

3.4 THE SOCIAL DIMENSION

Graphic design can be described as a social phenomenon. It is a global form of representation that can be used as a measure of how people communicate with each other on a local, national and international scale. That said the social context for graphic design is defined by the needs of people in various social groups, and their need to relate and communicate with each other. To understand the social context, we must be clear about what we mean by society. Watson suggests that society is 'the broad pattern of social, economic, cultural and political relationships within which people lead their lives, typically in the modern world as members of the same nation state' (2005, p. 2).

Graphic design's ability to reflect societal change is significant. David Goldblatt and Kath Woodward state that 'at the beginning of the twenty-first century both sciences and the social sciences are in a state of flux … it is also a moment when significant processes of change have been set in train – such as constitutional reform and European economic and monetary union' (Held, 2004, p. vii). In the early Twentieth Century the majority of people in Europe identify with this through the introduction of the single currency in the late 1990s, as represented in graphic design terms through the use of the Euro symbol •. If we agree that money is an essential aspect of everyone's life, no matter how poor or rich, it is identified in the European community by this single symbol (except in the UK where Sterling, and the use of the £ symbol, remains the national currency). Graphic design therefore acts as a bond that links what Watson describes as a characteristic feature of sociological study. He describes this as the 'relating of the small scale, the local, the intimate in people's lives to the bigger social scheme of things – both within and across particular societies' (Held, 2004, p.2). Graphic design can therefore be seen as an essential and influential element in

societies. There is, therefore, a significant degree of complexity in terms of the role that graphic design plays in society, as society is made up of many things.

Fig. 8. The 'societal' dimension in graphic design

Barnard argues that 'graphic design produces social, cultural, and economic relations; to that extent, graphic design is productive of society, culture and economy' (2005, p. 57). In the Dimensions of Society (1974) Potter and Sarre group the many aspects of society into eight fields: Population; Resources and Technology; Communication; Production and Allocation; Work; Social Relations; Attitudes and Beliefs; Power; and Social Change. In terms of the role that graphic design plays within these, Barnard discusses at length how graphic design authenticates and encourages class and institutional behaviour in capitalist societies, and in particular supports the dominant classes (2005, pp. 57–65). Therefore, society is arguably the most significant context for graphic design on the basis that it embraces many of the other contexts (Fig. 8).

3.5 THE CULTURAL DIMENSION

Edward de Bono suggests that the designer's 'aesthetic sense' may be as important as the generation of ideas, and this is significant in determining the value of communication (McAlhone and Stuart, 1996, p. 9). This aesthetic sense is informed by their understanding of audience, or cultural awareness.
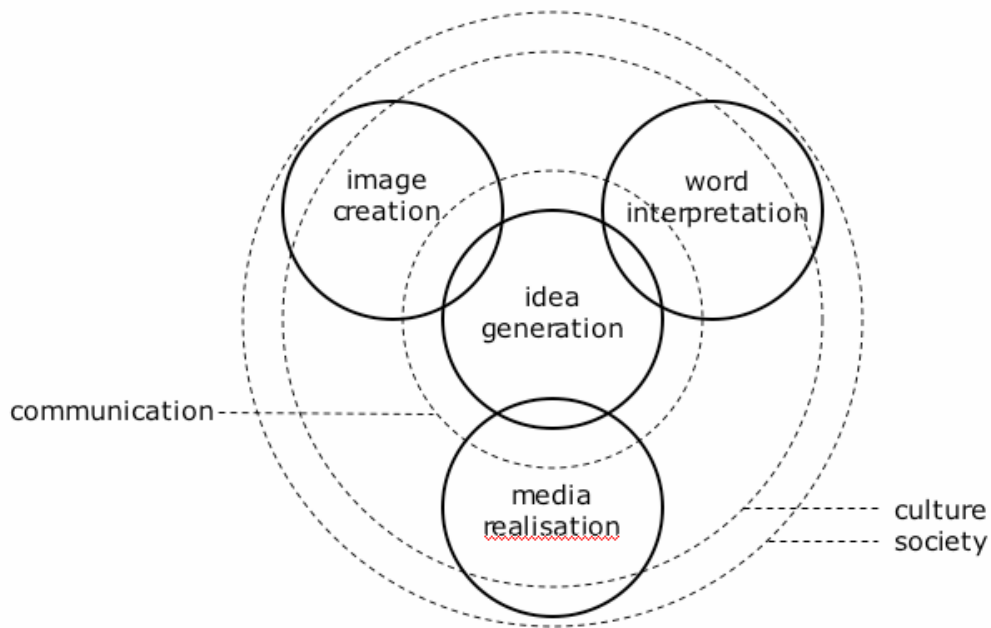
Watson describes culture as:

> 'The system of meanings which are shared by members of a society, organisation or other human grouping, and which define what is good and bad, right and wrong and what are the appropriate ways for members of that grouping to think and behave' (2003. p. 174).

Graphic designers need to have an ability to understand traditions and values if they hope to make an effective contribution to society. This contribution is evidenced by the impact the subject makes on Society, in a specific form of a visual culture. 'Within a state, cultural traditions and values influence the way politicians, business people, workers and consumers think and behave …' (Kelly and Prokhovnik in Held, 2004, pp. 89-90). In terms of locating graphic design within culture, in the UK graphic design is often referred to as being part of the *cultural industries* (or *creative industries*), through its association with art and design activity. However, the level at which it is appreciated as a cultural form of expression is contested. As Rick Poyner points out:

> 'cultural studies commentators have overlooked these communications and products. Critical introductions to postmodernism and the arts routinely deal with literature, architecture, fine art, photography, pop music, fashion, film and television, but they show little sign of even noticing, still less attempting to 'theorize', any form of design, despite its central role as a shaper of contemporary life' (2003. p.10).

This tension comes from an uncertain balance between efficacy and experimentation. In his essay, *There is such as a thing called Society*, Andrew Howard alludes to debate within graphic design in the 1990s, about work emerging at the time especially from American design schools such as Cranbrook Academy of Art. On the one hand, the work was considered 'a lavish aesthetic feast but low on nutritional content' being 'aimless and impenetrable'. But, he also acknowledges Poyner's observations of an emerging trend for 'intention as well as aesthetic' (Bierut, Drenttel, Heller, & Holland, 1997. p. 195). Much of this debate stems from aspects of graphic design's origins as an applied art, and the perceived state of impurity that can be traced to a direct association with commerce, and commercial art. Graphic designs aspirations to be considered as a cultural force are to some extent an attempt to

distance itself from an association with commerce, and with this in mind some designers are guided by the dimension of culture (Fig. 9.).

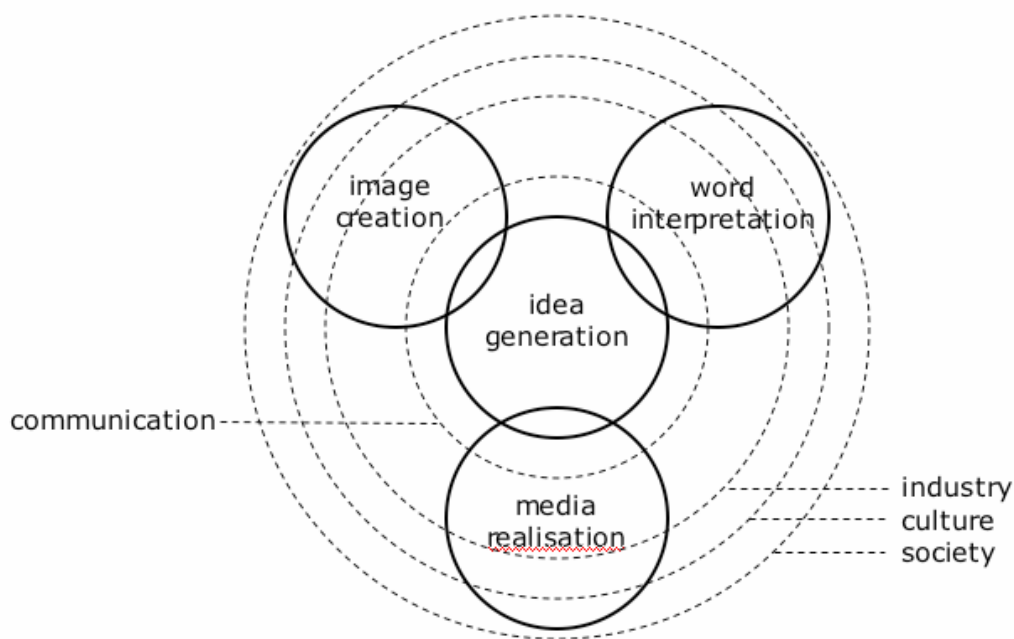Fig. 8. The 'cultural' dimension in graphic design

What we do know is that what we call graphic design in post-modern western culture is rooted in our modern customs and institutions, and contributes significantly to our collective achievements, like it or not. In some situations this achievement is highly sophisticated (think of how we now use graphic design to access the World Wide Web), and in others it is diabolical, (think of the United States presidential election in 2000, when a poorly designed election card delayed the voting process). The relationship between graphic design, society and culture is summarised by Bennett who affirms that 'graphic designers are producers of interdisciplinary knowledge and not just visual translators of a client's knowledge. Its theories and methods span many disciplines from cognitive to social science, and the contributors are both seasoned and emerging design scholars and practitioners. As a group they all care about how culture influences design decisions in order for the final design object or experience to influence and shape society' (2006, p. 21).

3.6 THE INDUSTRIAL DIMENSION

In straightforward terms, industry can be described as 'a group of firms that offer a product or class of products that are close substitutes for each other. The set of all sellars of a product or service'. For example, this is most commonly described as the 'car industry, the oil industry the pharmaceutical industry or the beverage industry' (Kotler, Wong, Saunders, and Armstrong. 2005. p. 459). As a word, *industry* may seem old-fashioned, unpopular and inappropriate because of the demise of much 'heavy' industry, particularly in the UK. But, in an attempt to clarify what the term actually means, Waugh tells us that 'in its widest and more traditional sense, the word industry is used to cover all forms of economic activity (2000, p. 552.).' Some writers, such as Barnard, therefore choose to group industry within the economic function of graphic design.

Nevertheless, industrial activities are described as: 'primary (farming, fishing, mining and forestry); secondary (manufacturing and construction); tertiary (back-up services such as administration, retailing and transport); and quarternary (high-technology and information services/knowledge economy) (Waugh, 2000, p. 552.). Of these four categories, graphic design is most closely related to tertiary and quarternary categories in that it is most visible in these areas. Though it can be found in all four as each of these areas has at very least a basic need to communicate what it does in mediated forms of identification, information, and advertising. On this basis, graphic design's contribution to industry is principally an economic contribution, and Barnard discusses this in detail suggesting that 'graphic design encourages consumption', and consumption is at the heart of cultural beliefs and values (2005, pp. 75-77). (Fig. 9).

Fig. 9. The 'industrial' dimension in graphic design

3.7 THE COMMERCIAL DIMENSION

Possibly more than any other context in graphic design, commerce is rarely discussed positively, and is seen as the poor relation to the cultural aspirations of graphic design. The origins of *commerce* as an act of dealing and exchange, runs parallel with the evolution of something that is very much part of our daily life in the Twenty First Century: shopping. In this sense, the use of the term commerce as a form of social interaction is highly relevant in the physical sense, and is now taking on new meaning in a modern sense as new ways of shopping develop, and continue to develop remotely with on-line activity in virtual environments (facilitated by graphic design). Whereas architecture has traditionally played a significant role in designing the physical infrastructure for the shopping experience, it is now graphic design, and the graphic designing of brands, websites and virtual publishing materials, that plays an active role in encouraging this activity. Graphic design therefore remains closely aligned to the commercial context. As commercial art, it played a significant role in establishing the professional bodies that came to represent graphic design in the mid-Twentieth Century. For example, commercial artists formed the largest group of members of the Society of Industrial Artists in (formed in Britain in 1933), which grew out of a desire to 'nurture the interests of the design profession in general'. This led to the subsequent establishment of the International Council of Graphic Design Associations (ICOGRADA) in 1963 (Hollis, 2001, p. 166).

On a universal commercial scale, graphic design can therefore be described as a global commercial phenomenon that has developed in a highly sophisticated way, integrated with the highly sophisticated communication requirements of international trade. This is in the sense that graphic design makes visual communication, and communication is a key factor in globalisation and the development of international business (Daniels and Radeebaugh, 1998, p. 12). We can deduce that graphic design has played a significant role in the development of international business and the expansion of sales; the acquisition of resources;
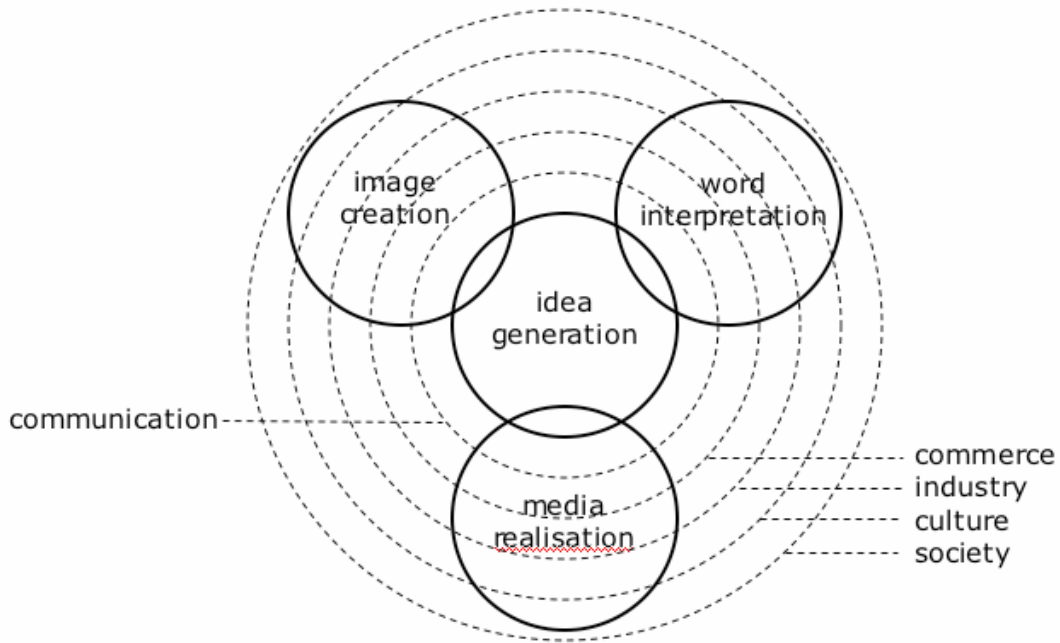
the diversification of sources of sales and supplies; and the minimization of competitive risk. These are the four major objectives that 'influence companies to engage in international business' (Daniels and Radeebaugh, 1998, p. 9). However, to fully understand the commercial context for graphic design we must also acknowledge the social benefits that commerce brings.

> 'It is not always as well understood as it should be how fundamental the performance of the economy is to the well-being of the country. If industry and commerce flourish they provide the basis for a good standard of living. Jobs depend on wealth creation, and hence the well-being both of individual people and of families and communities. The standard of public provision, including the quality of health services and care for the old, depends on how well the economy works. And so of course does the quality of education'.
> (Learning to Succeed. Report of the Paul Hamlyn Foundation, National Commission on Education. (1993), p. 13)

The commercial context of graphic design is therefore very important, arguably the most important dimension, and completes the nine dimensions illustrated here (Fig. 10).

Fig. 4 The critical dimensions of graphic design

image creation

word interpretation

idea generation

communication

media realisation

commerce
industry
culture
society

4.0 CONCLUSION

This paper set out to report on work in progress demonstrating the development of a diagrammatical representation of graphic design at a time when the subject is moving beyond a background rooted in practice to embrace a future that exposes its research potential. It has outlined the use of diagrams to explain graphic design as an educational aid and facilitation tool. It demonstrates, to a limited degree, some of the relationships that exist within the domains of the subject, and represents those as dimensions that are at times both practical and theoretical, and at times purely theoretical. These dimensions demonstrate the potential to incorporate other related issues and concerns within the subject, such as the tension between self-expression and constraint.

The paper concludes that graphic design can no longer be discussed using the traditional descriptors of typography, illustration, photography and printing, and perhaps is better thought of in terms of word interpretation, image creation, idea generation and media realization – and these dimensions act as a window to the world of industry, commerce, culture and society, and their communication requirements, through an interwoven relationship. This relationship has been demonstrated through diagrammatic means.

Further research will explore the potential for this model to represent other facets of the subject, such as professional bodies, human resource requirements, and curriculum planning.

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