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Researching research in art & design

Research culture

'Research culture' is a phrase used to indicate an intangible state of being that we might have within an academic community such as a department in a university. A research culture, I imagine, could be a Petri dish of sticky goo in which fertile memes come together with emerging questions and pressing issues. It could also be a set of interconnected comings together of interesting and interested people who talk about their academic enquiries, sharing references to other work in the field, reach consensus on what sort of questions need to be asked to further understanding in the field, and who then find the resources and get on with it. A third iteration of a research culture might be the corridor of closed doors, where no one actually knows much about what their colleagues are doing, and certainly never gets the time to read or see their work, but there is intense competition to be known to be getting the grants, or being invited to give keynote presentations, or getting that publishing deal. Within the art and design sphere, that could translate to getting that gallery show, selling to that collection, or getting a contract with that manufacturer. So, is research culture a place, a context, a set of values, or a mode of operation? And are we automatically assuming 'culture' to be a value-added commodity, a 'good thing'? My suggestion is that the culture is what we make it, and when talking about the research culture, or research cultures, within the academic frame, it is the academics that have the responsibility for determining the specifics of that cultural environment in which they might wriggle and grow. We also have the responsibility for careful and sensible consideration of new opportunities and challenges.

The Art and Design Index to Theses

This is a long way around to introducing the background to the Art & Design Index to Theses (ADIT) project, but sets the scene for how that particular body of work originated. ADIT comprises a database of information on all research degrees awarded by UK universities in the subject fields of art and design. The background for why we undertook to build the database provides a useful context for considering the key questions that could arise when considering the PhD in relation to studio subjects like fine art. An initial analysis of the database itself may provide useful material for developing arguments about different ways to move the debate about advanced degrees in art and design subjects forward. Finally, reflection upon the perspectives offered by the ADIT material when seen in conjunction with an analysis of the research field drawn from the data compiled for the 2001 Research Assessment Exercise, may give some clear pointers for additional questions needing further address in the field.

A few years ago while visiting Leeds Metropolitan University as an External Examiner for their Masters programmes in art and design, the discussion between the other External Examiner, Tom Fisher of Sheffield Hallam University, members of the Leeds Met staff, and myself, turned to the imperative to come to some sort of consensus on the research agenda for our subjects. We thought this would be beneficial to counter the range and particularity of doctoral projects being undertaken by research students we knew, and would provide a benchmark against which to reflect upon the usefulness of specific contributions to subject knowledge in the field. Such clarification of an agenda might also suggest strategic topics for ring-fenced funding. One of the concerns we explored was the resistance shown by some doctoral students to locating their enquiry within its context – otherwise known as 'doing the literature search'.

We mapped some of the factors that might form a background to this tendency, speculating upon the impact of a model whereby the framing of a doctoral project within art and design was, more often than not, based entirely upon the individual student's area of interest. We noted how this differed from the model used in many other academic subjects, where a student doctoral study might be part of, or tightly related to, an area of enquiry articulated by the Supervisor or Principal Investigator of a major research project. We conjectured on the importance of the individual 'voice' within art and design practice, and the influence of that dominant model on emerging research practice. On occasions, creative practitioners assert

importance, or originality, based only upon the evidence that they 'know' or 'feel' that what they have produced is creative, original, or novel. The argument might go as follows: 'I created it, thus this expression of my individual experience/being/creativity/voice has value'. It is clear that this sort of value model does not sit comfortably alongside with the well-established model of verification and replicability that forms the backbone of generic understandings of research within the university system and more widely throughout industry, commerce and general society.

A more pragmatic explanation for the lack of reference to previously completed doctoral work within the literature reviews of research students was the difficulty of getting access to this material. We shared the experience of advising students to look at this thesis or that thesis from a particular university, that we might have heard about at a conference or other discussion with peers, but which the student was then unable to locate. It was concluded that this fairly common experience in our little Petri dish could result from institutions not passing completed theses to the central Index to Theses, or that students were not aware of or were overwhelmed by the mass of material contained within that Index. It was recognised that the subject classifications of the full Index did not usefully reflect the range of activity that we were aware of and there were clearly omissions within it. All of these latter issues could be dealt with, but the reasons for not passing material to the national repository were beyond speculation.

The conversation moved on to further explore the need to develop a consensus on the important questions for our subjects. In part, we were developing a consensus that doctoral study had an important part to play in building the knowledge base of art and design, in a way in which it had not previously been possible. The potential to influence or direct the selection of questions or avenues for enquiry was considered worthy of further consideration. But we were also grappling with the chicken and egg question: does the agenda derive from activity in the field, or do the 'gatekeepers' or 'stakeholders' determine that agenda? The Arts and Humanities Research Council (still a 'Board' at that point) had been fairly open to the subject fields in relation to its priorities. It had not been identifying and ring-fencing funding for strategic subject initiatives, as was fairly standard among the other research councils. It was however starting to develop funding streams tackling specific infrastructure issues. A particular initiative, the Collaborative Doctoral Training scheme, appeared to provide us with a useful vehicle through which we could explore the topic of research agenda development while addressing the way in which information on doctoral theses could be accessed in the future. So, in the spirit of my second iteration of a research culture, we prepared and won a bid for a collaborative project, led by Tom Fisher at Sheffield Hallam University, to set up a database of research theses in art and design that could be used as a resource for training future doctoral students. We determined that an important part of the groundwork for developing research agendas in the field should be an analysis of the sorts of questions and approaches that had figured in doctoral work to date. The data collected would be interrogated for dominant or emerging themes, and careful attention would be paid to the claims for methodological innovation or precedence.

The core of the raw data already existed within the Index to Theses¹, which is drawn from records sent to them by university registrars. However relevant records in this database were not categorised in a way which reflects current practice in art and design. Potential records were cross-referenced against the Allison Research Index to Art and Design², which covered subject-specific material from early art education studies at Leicester Polytechnic up to the mid-1990s, and additional material was drawn directly from university Registrars and Art and Design departments. A working version of the ADIT database of art and design PhD records up to those awarded in the first few months of 2005 was completed by December 2005.

The subject spread of the database reflected our focus on disciplines where engagement in art or design practice could be a viable component of investigation. Criteria were established to determine inclusion or exclusion. The project covers the fields of design, including architecture, and fine art, but excludes technical studies of materials, historical studies, museology, consumer studies or philosophical studies that do not focus on contemporary creative practice. The main focus was on research where the title or abstract (if available) made it apparent that the study or specialism came from within the art and design field, rather

than enquiry from outside looking inwards. The Joint Academic Classification System (JACS) was used by the Researcher to code the records, to enable future users to identify records of interest by subject³. It was acknowledged that any project of this nature, requiring the categorisation of complex material, could be open to different interpretation, and further working on testing how we apply coding schemes might well be an appropriate area of further work. For the purposes of the analysis reported here, the JACS codes are grouped into seven sets under the headings Fine Arts, Architecture, Design Subjects, Textiles/Fashion, Visual Communication, Crafts, and Film & Photo⁴.

1957 to 1975 – the early theses

Key questions that the database allows us to address include the growth of activity within the field. When were the first PhDs in art and design awarded, what subjects were they in, and what methods did they use? The very first record in the database comes from 1957 - Chew's 'Some recent British sculptors: a critical review', undertaken at the University of Manchester⁵. From then until 1975, twenty-six of the thirty-eight PhDs awarded by UK universities were in architectural subjects. That year, 1975, saw the first PhD awarded by the Council for National Academic Awards, to a candidate from the polytechnic sector. There were only another three Fine Arts PhDs during this first period from 1957 to 1975: Pal's Cambridge University PhD on the sculpture and painting of Nepal⁶, Wilkinson's Courtauld study of Henry Moore's drawings⁷, and Sleigh's 'Learning to paint: a case study of a school of fine art' at the Institute of Education⁸.

From 1976 to 1985, one hundred PhDs were awarded by UK universities (see table 1). Forty four of these were in architectural subjects, six in visual communications (three of these at the Royal College of Art) and twenty-one in Fine Arts subjects. Eight of these Fine Arts PhDs were in polytechnics with studio courses in Fine Art. An indication of the focus or approach can be inferred from the titles of some of these studies, but most of the records drawn from the British Index to Theses or ARIAD of pre-1984 PhDs in art and design do not include abstracts. Seven of the records indicate a focus on childhood learning about art or upon art education questions⁹. Another five records indicate studies of a more historical or anthropological nature¹⁰.

	Architect ure	Creative art &des other	Design subjects	Fine art	Photo/ film	Textiles/ fashion	Vis com	year total
1976- 1985								
1976	2		3	1				6
1977	2		2					4
1978	6			1	1			8
1979	9			3		1	1	14
1980	2		3	3			1	9
1981	3		5	1		1	1	11
1982	6	2	2	2			1	13
1983	5	1	4	7			1	18
1984	4			1		1	1	7
1985	5		3	2				10
subject group total	44	3	22	21	1	3	6	100

Table 1, PhDs by subject group, 1976 to 1985

The remaining nine PhDs awarded during this period do appear to focus upon the processes of art-making from the perspective of the practitioner, rather than being historical, anthropological, educational or developmental studies, and were generally undertaken in polytechnic departments. The focus upon questions arising out of practice was a perspective that informed the framing of my own doctoral work in the mid-1980s, and several of this

following group were among the few models available for doctoral students in art and design studio disciplines at that time¹¹.

The subject foci of the remaining doctoral projects in the period 1975 to 1985 were Design Subjects (22 projects including industrial and product design), Textiles (3 projects), Photography (1 project) and three in Other Creative Arts and Design. In each year during this period there were between four and eighteen PhDs awarded. Even in 1985, the year after I started my own doctoral study, there were only ten doctoral awards made, and only two in my own subject, Fine Art.

1985 to 1995 and emerging models for research in art and design

Twenty years later, some important assumptions formed the backdrop to the initial discussions and the emergence of the ADIT project. The members of the collaborative team¹² were already involved in the supervision of doctoral students. There was 'buy-in' to the core concept that we were responsible for providing training for the students undertaking doctoral research, and that understanding of the context for research was an important part of what doctorates were about. The origins of the way in which we frame our position on such topics developed in part as a result of the way the new university sector responded to the opportunity to engage in research degree study during the ten years from 1986 through to the mid-1990s. In the context of thinking about a new PhD in Studio Art, the following exploration of the background to emerging research practices makes links to some specific events, before looking at the characteristics of more recent doctoral activity.

The question of what a PhD is for continues to exercise parts of the academic community, but implicit in the framing of the ADIT project was clear recognition that in part, doctoral research is about finding out a lot about a particular field or topic. Doing a PhD is about becoming an expert in something that there are few other experts in. Generally, that finding out a lot part is what might take place in the initial stages of the doctoral project – the Master of Philosophy or MPhil bit. During this 'finding out' part, the researcher formulates, or reinforces, the argument that we (the academic community?) need to know much more about a particular question, and that we might best go about that by using specific tools, or methods. This leads on to what I consider the other two main points of doing a PhD. These are firstly the development of knowledge about and aptitude in the application of specific tools or research methods that are appropriate for finding out things in that subject field. And secondly, this should be demonstrated through the address to a particular and specific question or problem, using appropriate tools, which generates some new perspective, understanding or knowledge of interest or useful to that subject field.

The framing of these two latter stages of the doctoral project is my interpretation of the explicit direction enshrined within the UK Quality Assurance Agency (QAA) level descriptors¹³. I would not necessarily impose my reading upon colleagues, but it is, however, a fairly widespread understanding within the academic community more generally and is enshrined within the generic definitions of a PhD provided by the research degree regulations of those institutions with a Royal Charter to award research degrees. It also does provide a useful background for thinking about what the purpose of doing a PhD might be. Beyond satisfying the intellectual curiosity of the individual, a PhD has been described as providing the experience that can provide a basis for high-level problem finding and problem solving. The QAA asserts that holders of this degree would be able to 'make informed judgements on complex issues in specialist fields...and be able to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist audiences'. Within the university context, the PhD has more generally been seen as providing the appropriate training for further research, which the QAA level descriptor describes as the ability to 'continue to undertake pure and/or applied research and development at an advanced level, contributing substantially to the development of new techniques, ideas, or approaches'. It is also seen in some subjects as a useful introduction to academic life, and within research supervision training, the idea that one is supervising ones 'colleague of the future' is a key concept. At

times it can be difficult to maintain certainty in the extent to which these cultural models are shared, as indicated in the following two anecdotes:

When asked by former colleagues working as fine art lecturers and technicians about what she was currently working upon, a recently completed PhD student, whose first degree was in painting, responded that she was developing ideas for a research project that would investigate the relationships between aesthetics and neuroscience. 'What,' her interrogators enquired, 'are you not doing anything in the studio?' She felt that their valuing of engagement 'in the studio' was so strongly held that they were belittling her aspirations to find out more about the subject that they were all involved with. This reflects my own experience almost twenty years ago, when, as a recently completed PhD student myself, I was asked at an interview for a lecturing job why I hadn't been working in my studio. I gave up trying to get a job within academia for another six years. What both of us actually had to offer was knowledge of our particular field of contemporary art that was of greater breadth and depth than could have been achieved through study at Masters level, which had previously been viewed as the terminal degree within art and design. We also had the capacity to undertake further research in subjects both close to and at a remove from our core interests, potentially enabling us to prepare teaching materials for a range of undergraduate or more advanced courses. Perhaps we should continue to view the Masters degree as the terminal degree within art and design practice, and consider, for a moment, whether more advanced enquiry might necessarily demand a broader field of activity than provided by practical engagement within a creative art or design field? Looking at the evidence provided by doctoral projects that have been completed within the context of practice might enable a clearer position to emerge on this question.

The key issue does continue to be uncertainty about what we could, or should, be doing with this fairly new opportunity to do research degrees. I would suggest that posing the question this way is a more appropriate framing than asking 'what can we get from this new opportunity to award research degrees?' This second model may be more appealing to colleagues who are engaged in advanced studio work, but is not one that I have come across with colleagues who have themselves completed doctoral study. It is important to keep reminding ourselves of how recently the opportunity became clearly apparent to the art and design subject fields. Key events include the inclusion of the subject fields within the academic degree-awarding systems in the UK in the 1960s, and the establishment of the Council for National Academic Awards (CNAA). Up to 1992, most research degrees were awarded by universities, although the CNAA was keen to stimulate activity in this area. Among the one hundred PhDs awarded between 1976 and 1985, only twenty-three were from the CNAA. After 1992, awareness of the opportunity to engage in doctoral study became more widespread in art and design, when the former polytechnics, home to most art and design schools, became part of new university system and were given the power to award their own degrees. It is not absolutely clear what stimulated the emergence of research degree activity, but the following notes indicate some factors that may be implicated.

Prior to 1992, the CNAA Research Committee for Art & Design had supported the emergence of research degree activity, and a series of conferences had reported on some of the early work in the field and explored some of the emerging issues of infrastructure and scope¹⁴. In 1984, the CNAA made a statement which noted that as an important part of staff development, it was important for lecturers to be involved in research and related activities which infused teaching with a sense of critical enquiry. They saw such activities as including the following: 'academic research, applied research, consultancy, professional practice, scholarship, creative work, curriculum and pedagogic research, and the development of applied, interdisciplinary and collaborative activities that are responsive to industrial and community needs'¹⁵. Inaccurate reporting or obtuse interpretation of this clear articulation of activities that support subject health could be considered a key reason why there has been some confusion about the relationship of research and creative practice within the English-speaking world. The statement was about 'research', and 'related activities', which infuse teaching. A sensible interpretation might be that those activities to which the authors appended the word 'research' might be understood as that particular sort of academic enquiry, and that those that did not include the word 'research' might be understood as

'related activities'. That appears to be what the CNAА intended, if we look at subsequent statements.

The 1988 Matrix conference publication included a 1989 statement from the CNAА Art & Design Committee, which clearly stated that they did not accept creative work as legitimate scholarly activity, but recognised rapid growth in the reporting of such activity¹⁶. The Committee reinforced recognition of the breadth of activities that they considered was needed to support healthy subjects and debated whether we needed alternative awards to recognise advanced creative work. The Committee was clearly making a distinction between advanced creative work, which has long been held as an important component in the teaching of the creative arts, and the growing interest in research degrees. It would appear that there was recognition that the sector might be starting to confuse research with creative practice, although the conference itself evidences some sensitive consideration of how the sector might develop its approach to research. The papers stressed the need to look at what we could usefully investigate within the discipline, rather than leaving it up to people from other disciplines to tell us what was special and distinctive about our activities, and an important point made by Alan Livingstone was that we were mistaken to believe that 'analysis leads to paralysis'¹⁷.

By 1992, the rapid growth of creative activity being reported under the research and related activities performance indicator of the CNAА (but not accepted by them as 'legitimate scholarly activity') was entered into the UK Research Assessment Exercise (RAE). Art and Design, as the 'new kids on the research-block'¹⁸, were the saviours of the new universities. The volume of activity submitted by art and design rather skewed the projections made by the Higher Education Funding Council (HEFCE) about how far the research money would go, but did create a climate in which the activities and outcomes the art and design departments submitted as research did generate significant income streams for several universities. Brown Gough & Roddis note that a lot of the activity reported at that 1992 RAE was applied work undertaken within commercial or industrial contexts, and note that it was the sort of activity described mostly as 'professional practice'. Thus it was probably the sort of activity the by-now-disbanded CNAА would have described as 'related activities' and possibly not as legitimate scholarly activity in their terms.

What we can see in this account of the CNAА's comments on research and the 1992 RAE is a sudden 'about turn'. In the late 1980s, a clear distinction was being made between research activity and creative professional activity. Suddenly, post-1992, the equivalence card was played and funding proved to be a convincing part of the argument. But in terms of working out what we should be doing with the development of advanced-level enquiry within the subject fields, it is uncertain whether this helps or hinders progress.

All of this confusion gives an interesting backdrop to the growth in the numbers of students undertaking research degrees in art and design (see table 2). The total number of completing PhD students in Art and Design in the UK during the ten year period from 1986 to 1995 was 181, against 100 during the previous ten year period. Numbers are still small in many of the subject fields, with just one or two completions each year in photography, crafts, visual communications and textiles. The volume of Fine Art and Design completions continues to remain similar over the period, together accounting for almost a third of the activity. Architectural subjects remain the most prevalent during this period as during preceding years.

1986-1995	Architect ure	Craft	Design subjects	Fine art	Photo/ film	Textiles/ fashion	Vis com	year total
1986	12	1	1	3	1	1		19
1987	7		3	2		1	1	14
1988	6		3	6			1	16
1989	5		2	2		1		10
1990	9	1	2	6		1		19
1991	8		5	2				15
1992	8	4	4	6		1		23

1993	6		6	4		2	1	19
1994	9	2	5	6	1	2	1	26
1995	11		2	3	1	2	1	20
subject group total	81	8	33	40	3	11	5	181

Table 2, PhDs by subject group, 1986 to 1995

Defining research in art and design

In 1993, Christopher Frayling, then Rector of the Royal College of Art, first applied Herbert Read's model of teaching for, through and into a discipline to the subject of research¹⁹. He noted that research could be **for** practice, as in Picasso gathering source material for the making of a painting such as 'Les desmoiselles d'Avignon'. He saw research **through** practice as being exemplified by the interactive process of making a working prototype, testing and amending that model, and research **into** practice as including observations of practicing artists at work. The particularly tricky one of this triad when thinking about research degree programmes is the emphasis placed within undergraduate programmes upon research for practice. There is a search which forms an integral part of many creative processes, but the extent to which this becomes more than the compilation of a 'research file' of material that is intended to stimulate studio work may be questionable. Is it the same sort of intentional data gathering or data generation undertaken in order to address a research question? The collection of 'stuff' indicates very little about the capacity to organise, evaluate or interpret, although the counter-argument would be that it is the resulting art object that articulates this evaluation and interpretation. Frayling in 1993 saw the goal of this collection of stuff as art, rather than knowledge or understanding, and more about autobiography and personal development than about communicable knowledge. Buchler, in 2000, also considered that 'the aim of academic research is the production of expert knowledge; the aim of art is the expression of understanding as an account of experience'.²⁰

An additional complication that started to emerge during this period was a bit of a 'hang-up' about wanting to show creative work as a part of the research degree submission. This opportunity had been enshrined within CNA regulations since the late 1970s, but making that operational within the new university structures of the 1990s required some adroit argumentation with colleagues beyond the subject domain. Given that the preceding period had also seen the emergence of cultural models that privileged the audience over author in terms of meaning-making, deeply held beliefs that the work 'speaks for itself' start to become unravelled. A key factor may be that within the art and design world we are too used to 'show and tell' as our main means of exchange within the professional context. But as Frayling has said – 'no scientist would ever say that contents of a test-tube changing colour "speaks for itself"'.²¹

From the evidence of the forty records coded as 'fine art', 'drawing', 'painting' and 'sculpture' from the period 1986 to 1995, the abstracts indicate that the outcomes of creative practice were particularly important for two submissions. It is apparent that a visual record of the creative practice forms a central part of Douglas's, 'Structure and Improvisation: The Making Aspect of Sculpture', undertaken at the University of Sunderland. Gilhespy's 'appraisal and artistic response' to Soviet sculpture, while indicating in the abstract that one chapter documents his own artistic practices, does not make it clear whether the sculptures produced formed part of the actual submission. On balance, this particular PhD appears to be predominantly an appraisal into Soviet sculpture of a more historical nature. Seven of the forty awards made in this subject group during this period appear to fall within the Frayling notion of research 'through' practice, including that by Douglas. What is particularly interesting about these projects is the indication that experimental methods provided the dominant strategy for investigation, and there was a clear concentration on issues of media or process. Pepper makes unambiguous reference to experiments in his investigation of display holography, while Akyuz refers to 'testing several instruments' before producing his 'standard atlas of 2-

dimensional pencil marks'. Douglas also makes explicit reference to experiments with materials, noting that she initially drew her methods from Materials Science. She recorded 'the relationship between different aspects of the material through one and two parameter testing: colour to texture, texture to form' and so on. Testing was also part of the strategy employed by Watson's exploration of chance 'as a stimulus to the creative activity known as sculpture'. This project included the development of a device, an exploration of the use of chance by other artists, and a review of models for understanding creativity. Bennett more emphatically focuses on the use of reflection upon practice in what was described as an 'art teacher research report' that 'connects research to painting', but this reflection upon ones own practice is an emerging strand in this set of records²².

Many of the enquiries continued to look at the work of others, and all apart from the above seven fit into Frayling's model of research into practice. Of these, five fit the model of enquiries into the processes of making art or the media used, with three of these from the Royal College of Art²³. The remaining twenty-eight PhDs in the fine art subject group during this period are a combination of more historical, anthropological or education-orientated studies. A significant proportion of these (twenty-one) continue to come from the long-established universities that generally did not have established studio practice programmes within their portfolio²⁴.

At this point, in the mid-1990s, it appears that the dominant model for doctoral activity within the fine art subject field continues to be that provided by art history, but that there are emerging strands of experimental studies through practice, and of studies into the processes of contemporary practice. What is not yet emerging are studies that fit Frayling's notion of research 'for' practice, which he had considered the most problematic, but probably the closest to our understanding of the normal day-to-day practices of professional artists.

1996 to 2005 - The growing research population

Bursaries for doctoral study

What comes over the next ten years is a significant increase in activity. The total number of theses recorded in this period is 406, up until the first few months of 2005. There appears to be a steady rate of successful completions, with over forty doctoral projects being awarded each year²⁵. During this period, the Arts and Humanities Research Board (AHRB) was established, in 1998. This body took over the responsibility for providing bursaries for postgraduate education across a range of arts and humanities disciplines, and reframed these resources as national competitions. Since then, they have adjusted the balance of funding between the support of Masters and Doctoral awards year-on-year, increasing provision of bursaries for the more advanced projects. Their reports on the 2005 competition²⁶ indicate that they funded ninety-eight doctoral projects through their Visual Arts Postgraduate Panel, of which only fourteen are in fine art and design fields. In addition to these, the Panel funded forty-three awards for studies in the History of Art, Architecture and Design, fourteen in Cultural Studies, and twenty-one in Film Studies. Perhaps it is more useful to consider the number of actual applications. There were sixty-seven applications for bursaries for fine art PhD study, and twenty six for design doctoral funding, indicating perhaps that the interest is there if not the quality applications that could be funded. Whatever the numbers applying to or funded by the AHRC, total annual completions do start to make it meaningful to consider PhDs awarded in relation to the total population of research active academics in the art and design sector, and in relation to the total number of undergraduate students. We are starting to have a population of researchers and research supervisors who do form a community of research practitioners, and who may start to generate common understandings and shared agendas as a part of their research culture.

The size and shape of the research and teaching community

The research and teaching community is made up of the academic staff, the research students, and undergraduate and other postgraduate students. The most accessible and

reasonably precise indicators of the size of the student community can be found through the Higher Education Statistics Agency²⁷. Data for undergraduate enrolments for the 2004-2005 academic year indicates that there were 11,285 full-time undergraduate architecture students, 13,500 on fine art programmes, 1,205 on craft courses and at least 50,425 on design courses²⁸. This gives a total of 76,415 undergraduate students in art, architecture and design within the UK, excluding part-time students. The nationally available statistics on staff numbers do not break neatly into subject fields²⁹, but on the basis of undergraduate numbers, the total number of academic staff by 'full-time equivalent' (recognising that many staff work part-time in these fields) could be calculated on the basis of a fairly normal staff:student ratio of 1:20. This suggests there may be about 3,800 academics working in these subjects. On the basis of most doctoral programmes taking three to four years, with between forty to fifty completions each year, it is reasonable to speculate that a conservative estimate of the annual population of UK doctoral students in art and design may be around 200, out of a national total in all subjects of 91,605³⁰.

We can also look at research-active staff numbers through the record of research activity occurring in UK universities as reported in the last Research Assessment Exercise (RAE). According to the RAE records³¹, 2,523 academic and researchers were submitted to the 2001 RAE from Art and Design departments. In architecture, it is more difficult to determine exact numbers, as some departments submitted the work of their architects to the Art and Design panel, and some to the panel looking at a range of subjects under the label 'Built Environment'. There were 691 academic staff and researchers submitted to this panel, but many of them were structural or civil engineers, or other subject academics working within property and construction departments. This RAE data suggests that there may be around 3000 academics actively engaged in research and possibly supervising research degrees. We thus have a ratio in art and design subject fields of staff to doctoral researchers of about 15:1, based on a doctoral student population of 200. The total number of academics in UK universities is 106,900. If we assume 50% of staff nationally are research active, with a research student population of 90,605, we get a ratio of 1:1.7 for staff to research students across the academic community in the UK. It appears that significant growth in the research student population would be required to reach national norms. But at least the fifty or so doctorates each year at present could contribute to the model where research students are our colleagues of the future.

Current figures suggest that 50% of successful doctoral candidates do progress to careers within the education sector, as researchers or lecturers in higher education, or within the primary and secondary sectors³². What may be an issue is subject spread, as in many of the subject fields within art and design, the number of successfully completed doctorates each year is still in single figures (see table 3). It is only in design subjects (industrial and product design), fine art and architecture where the numbers of completions each year exceeds ten per annum in two or more of the years in the period from 1996 to 2005.

1996-2005	Architect ure	Craft	Design subjects	Fine art	Photo/ film	Other creative art &des	Textiles/ fashion	Vis com	year total
1996	19	2	6	8			1	2	38
1997	5	1	9	15	2	3	7	2	44
1998	9	4	7	19	2	2	5		48
1999	7	1	11	15	5	4		1	44
2000	12	1	12	23	4	4	5	3	64
2001	8	1	4	19	2	2	3	4	43
2002	13	3	9	19	3		4	4	58
2003	6	2	6	19	2	3	4	3	45
2004	2	1	3	9	1		2	1	19
2005				2			1		3
Subject group total	81	16	67	148	21	21	32	20	406

Table 3, PhDs by subject group, 1996 to 2005

Volume and dissemination of research activity

In relation to the research activities of staff, the high proportion of PhDs in fine art subjects is reflected in the volume of research outputs submitted by their supervisors and others to RAE 2001³³. Almost forty per cent of the outputs were the outcomes of fine art research and practice, although these subjects only make up about 20% of the staff and students in UK art and design higher education. The outputs from the fine artists included a high proportion of exhibition-type outputs, at 80% (1,907) of the 2,398 examples of work from this subject field. Just four per cent of the fine art outcomes were books, and several of these were books by other authors that illustrated the work of the artist. There was a similar proportion of journal articles (114, or 5% of the fine art subject outputs) and about half that of conference papers (52, or 2% of the fine art subject outputs). It should be noted that the type of outputs submitted by academics and other researchers in fine art subjects shows a different pattern to those submitted by their colleagues in design. The range of outputs from the design disciplines is much more evenly spread, with a ratio of 1.48:1 of text-based to practical outputs, compared to a ratio of 1:5.45 for the fine art subject academics³⁴. The imbalance of in types of research activity and the particular nature of prevalent outputs might influence the growth of doctoral activity in the design subjects, and is likely to impact upon perceptions of the type of outcome expected from research activity for all subjects in the art and design domain.

In comparison to other subject groupings such as Built Environment, or General Engineering, the different patterns of output type are even more distinctive. These subject fields have a much greater reliance on publication within journals as the dominant mode of dissemination. In the 2001 RAE, the proportion of research outputs published by the 'General Engineers' through journal publications was 93%. For the architects and other researchers covered by the Panel for the Built Environment, journal articles were the method of dissemination for 60% of the research activity reported. What we need to note here is that it is largely the academic community itself that runs these journals – they are one of the fundamental building blocks of the research culture in those disciplines.

Before picking up again on the issue of subject spread, this data on the sorts of outputs being recorded by the research assessment exercise gives us an opportunity to reflect on who is undertaking the gate-keeping function for research and professional practice within the art and design subject fields. A positive aspect to the range of output types used by the design subjects is that researchers in those fields, particularly if they are involved in refereeing for journals or conferences, may be able to have more influence than their fine art colleagues, who may be dependent upon gallery directors or curators or commissioning bodies, on disseminating and assessing the quality of new thinking. It is important to recognise who gets to decide what gets disseminated within different fields. The reason that the engineers focus so single-mindedly on journal articles for dissemination of research results may be partly because there is no 'professional' world of engineering exhibitions or books about engineering for the broader populace. Art and design are different – our 'products' may hit a commercial market and it may be qualities that are far removed from research rigour or research impact that determine whether they get to the front page of *Vogue* or *Elle Decoration* or set new records at auction. The decision to exhibit work in the Waddington Galleries or the Lisson, or to include objects in an exhibition at the Hayward or Documenta, has very little to do with its research value, and is made largely by individuals with very little interest in or understanding of the academic world. In short, the scholarly community has little or no influence over the gallery world or over the design market.

When looking at PhD completions within the period 1996 to 2005 in relation to the proportion of research outputs submitted to the 2001 RAE Panel for Art and Design, there are some interesting imbalances. What is in balance is the proportion of the total number of doctorates awarded in fine art, and the volume of activity by subject academics in fine art - both sit at over 35% of the total activity. Of greater concern is the gap in some of the other subjects

where the total volume of activity is much smaller. In particular, it appears that there is a very low proportion of doctoral activity within the craft disciplines (3.93% of all doctorates awarded in the period), compared to these fields making up 8.11% of all outputs returned to RAE 2001 by academics in these subjects. Similarly, visual communications PhDs are less than 5% of the total, with the outputs returned by potential supervisors running at 12.48%. Inverse ratios are present in the figures for architectural subjects, which may be explained by some outputs being returned to the Built Environment Panel. The data on staff research activity in design subjects such as product and industrial design paints a surprising picture. Of the outputs in the 2001 RAE submission that have been coded, only 194 fall into this subject group, although this has been one of the stronger subjects in terms of doctoral awards over the past twenty years. We may be right to express concern about the levels of engagement by supervisory staff in product and industrial design in their own research. At least the fine art doctoral students are in a context in which potential supervisory staff are more likely to be visibly engaged in some sort of research or professional activity in the public domain.

Outputs and PhD completions	% of RAE 2001 outputs	% of phds 1996-05
textiles/fashion	8.67	7.86
architecture	5.87	19.90
design subjects	10.04	16.46
vis com	12.48	4.91
fine art	39.54	36.36
craft	8.11	3.93

Table 4, Comparison of outputs and PhD completions by subject groups

Emerging characteristics of recent PhDs

Of the 406 doctoral theses in art and design awarded in the ten year period from 1995 to 2005, the largest group are in fine art. These 148 awards account for 36% of all successful completions in the period. Fine Art theses had accounted for 22% of all art and design theses in the preceding ten year period of 1986 to 1995, so not only had the overall number more than doubled, but projects focusing on fine art subjects now also accounted for a larger proportion of the activity. Architectural projects account for the next largest group, continuing the model seen in the preceding twenty years, with eighty-one completions. There were sixty-seven awards for design subjects, including industrial and product design, and thirty-two in textiles and fashion.

The majority of the fine art studies (55%) continue to adopt approaches that could be described as largely historical, anthropological or educational. The defining characteristic of these studies is that they are looking into the subject by looking at the practices of others. An emerging tendency is for these projects to engage with re-visiting theoretical and philosophical models, as in Park Chun's journey 'through melancholia, feminine difference and Paul Cezanne'³⁵, or Crawford's 'Figuring Death: The Phantom of presence in art'³⁶. This PhD claims to analyse 'Hegel's master/slave dialectic and de Man's notion of 'prosopoeia', to 'demonstrate how modernist discourses construct a figure [face] of/for the artist and cover up [entomb] the recalcitrance of his or her corporeal body to be the [ontological] site of meaning.' The anthropological focus is turned on subjects as diverse as the Irish, the Senegalese, Korean and Aboriginal women artists³⁷.

Investigations of process continue to provide a counterpoint to the historical studies, bringing enquiry closer to the subject as practiced in the contemporary world. Thirty of the projects receiving awards in the period from 1996 to 2005 appear to be investigations into the processes of making or apprehending contemporary art practice. At times, the influence of

models of thinking from other subject areas is strong, such as in Hand's consideration of 'the peculiar problem for interpretation' presented by the 'material and temporal conjuring' of artworks, in 'What's happening with das Ding? psychoanalysis, aesthetics and temporality in art'³⁸. At times projects focusing on process can be largely descriptive, highlighting clear questions that could also usefully be investigated by other researchers. A particular example of an abstract opening up a range of possibilities for further work is Hogarth's account of his practice³⁹. There are also examples of theses which are apparently written to accompany studio work⁴⁰, but it is uncertain at times whether the contribution to knowledge is enshrined within the art works or within the thesis. Another eleven projects that focus on the processes of art practice appear to be undertaking this through art practice⁴¹. There is some indication that the methods employed do occasionally extend to include experiments⁴², or other analytical methods. The abstracts of these theses indicate a fairly strong emphasis on literary argumentation.

Practical questions about the use of specific media and specific practices have been addressed through eleven projects⁴³, which could be described as investigations into or through media, as distinct from the enquiries into process already mentioned. One study⁴⁴ makes a clear claim for being practice-led, but the meaningfulness of that particular label might be questioned. The particular project appears to adopt a multi-method approach that included 'questionnaire, quantitative tests of materials, participation in, and initiation, of collaborative case studies, documenting workshop practice and visual development of printed art works, and exhibition for peer review'. If this model were to be applied to many other disciplines, it might be true to say that any applied research could be described as practice-led. Despite this small issue of nomenclature, the theses in this group include a number of straightforward studies that are generally characterised by their usefulness to day-to-day professional practice within the field.

It is clear from immersion within the abstracts of theses awarded by UK universities that there has been a great variety in the work completed. It is becoming more various, and some very interesting models are emerging. The quality of the language used to describe the activities undertaken is uneven, and some abstracts slip more towards the language of the catalogue essay rather than adopting academic precision. The need to ensure that all institutions regularly forward abstracts as well as core bibliographic details to the British Library or other repositories is clear. One major postgraduate institution that has supervised more doctoral work than any other in the UK has only provided abstracts for one third of the eighty-seven projects awarded PhD. This omission makes work such as this paper difficult, particularly given the overall small number of examples that are currently open to investigation.

Summary

This paper has attempted to convey the outcomes of some simple analysis of data available about a range of activities within the academic arena of art and design. The report on the initial analysis of the ADIT database can only provide a taster of the sort of search that can be carried out by interested individuals, and that should be carried out by future research students. Any codification of data as dense as the material covered here is bound to be open to some differences in interpretation, but as the research culture develops in our fields, it is important to develop consensus on the labels we use. This opening work is carried out in that spirit, of attempting to initiate discussion of the usefulness of different categorisation systems.

It is intended that the inclusion of definitions from the Quality Assurance Agency and of references to the previous gatekeepers of academic standards in the UK polytechnic system, the CNA, can provide a useful record of benchmarks. The inclusion of data on staff and student numbers is also intended to provide measures, both of the current situation, and for projecting future targets. Comparisons of subject field activity in doctoral work and in that carried out by the supervisory community again gives us benchmarks that we can use to establish target ratios for future activity.

The volume of material generated by doctoral students over the past ten years has grown to the extent that it is a daunting task to begin to survey. The coding work that has been a part of

the ADIT project is an important contribution to the field in terms of enabling easier access to subject specific subsets of that material. The completion of 'tidying-up' the records accumulated to date, and the establishment of a secure and accessible home for the database is underway, and the ADIT team are looking at the possibility of extending the scope of the project to cover the research degree activity of other countries.

Conclusions

The material I have surveyed for this paper has been of variable quality and covers a wide range of approaches. The abstracts consulted range from the minimal one-liner, through straightforward and well-constructed summaries, to mini-essays of extreme richness and complexity. It is clear that the work undertaken was motivated by some very different objectives. It would appear that we now have a reasonable volume of material that can provide a basis for the academic community to review how we intend to develop activity at this level in the future.

I would suggest that we do need to understand a bit more about the notion of visual knowledge and its transmission with intentionality, if we are to continue to assert any central role for the art or design object in doctoral (or any other) research. It might also be useful for us to consider the quality of our evidence, visual or otherwise, and the way it might be accessed in the future.

As well as clarifying the extent to which we have a consensus on the veracity of sorts of visual knowledge, the position that might be taken on subject knowledge is also open to discussion. I have suggested in an earlier paper⁴⁵ that the academic community 'has the responsibility for knowledge transfer, and for determining benchmarks and values for the subjects for which it is responsible and for which it confers degrees'. I went on to suggest that the 'domain knowledge and strategic knowledge within art and art education would be the appropriate focus for the academics that are part of the field'. By domain knowledge I was referring to knowledge about past achievements within the domain – that which might be enshrined in all those artefacts and records of past activity, and might come to be embodied or recorded in artefacts or records of future activity. By strategic knowledge, I was referring to the active understanding of how to operate within the domain – how to undertake meaningful action. Either of these, or a combination, would seem to be appropriate arenas for enquiry by doctoral research students, if they are to demonstrate advanced understanding and knowledge of their field, and the survey reported here indicates that this is what has been attempted to date.

When considering doctoral projects, I would argue that it is particularly important not to deny the power of that set of really important texts that are built up when doing a PhD, which form the basis of ones mature intellectual framework. Effectively these references form a mini-canon of subject knowledge for that project, which will hopefully overlap to some extent with that of peers. How different is the combination of these to the notion of a body of knowledge within a subject field? Can we seriously say we are doing research if we reject the idea of a body of knowledge? We may need to be cautious about the extent to which we rely on the records of artists themselves, whether in the form of studio notebooks, monologues or interview transcripts because, as Elkins warns us, 'History would seem to indicate that artists have been consistently misguided about what they do'⁴⁶. A research culture does need its benchmarks and its resources on which to base further work. Innovation cannot take place in a knowledge vacuum.

But there is in some parts of the art and art education sector a rejection of the idea of a body of knowledge, which some would label our 'cultural inheritance'⁴⁷. There is also an over-emphasis on strategic knowledge. This is partly a result of recognising the importance of tacit knowledge, that understanding of how it 'feels' to wield the chisel/drape the fabric/draw the connection. Within art and design, this tacit knowledge is special stuff, our stuff, and the bit that current teaching generations see less and less of. It is, though, the site of some rich questions that we may need to answer before we can claim the potential for studio activity to provide an opportunity for the development of skills and knowledge at a level commensurate

with the descriptors for PhD study enshrined in university Royal charters and the QAA. What is more invasive in the culture of the studio at present, is knowledge about how to 'be' an artist or a designer (or even how to 'be' a student). This strategic knowledge is sometimes confused with tacit knowledge. It is fairly easily communicated by the practitioner academic or visiting lecturer with little pre-preparation, but it is more difficult to enshrine this expertise in a way that can be accessed without recourse to individual show and tell.

I would like to think that antipathy to the notion of a body of knowledge is merely a hang-over from the rejection of over-arching meta-narratives that characterised the post-modern transition. It seems quite viable to me for us to recognise that we have to take on the challenge of mapping the multiplicity of information that might need to be accommodated within a domain, without falling foul of imposing partisan world views. The opportunity technology now gives us to encompass the knowledge quotient of 'all the diverse practices' and the 'many cultural positions from which art is made' is clear⁴⁸. The evidence of doctoral studies completed to date suggests we are growing some interesting models in our Petri dishes, but we may wish to reflect further on whether we want to identify particular questions and approaches that might warrant prioritising in future activity. We do now have non-linear and non-hierarchical repositories for information which can be accessed and utilised in a variety of ways, and we can build new ones. The ADIT project is a clear marker that the research culture within art and design in the UK is becoming a responsible teenager – still gawky in places and prone to making some daft claims – but starting to look after our own data.

¹ *Index to Theses in Great Britain and Ireland*. [www.theses.com] accessed 26 March 2006

² Allison, Brian. *Allison Research Index to Art & Design*, 2nd Edition. (Leicester: ARIAD Associates, 1995)

³ JACS is used in all UK universities and the University and College Admissions Service (UCAS), for the identification and coding of academic programmes by subject. See [www.hesa.ac.uk/jacs/jacs.htm] accessed 28 March 2006.

4

Fine Arts:	Visual Communication:	Textile/Fashion:
Drawing	Calligraphy	Clothing/Fashion Design
Fine Art	Graphic Design	Needlecraft
Fine Art not elsewhere classified	Illustration	Textile Design
Painting	Multimedia Design	
Printmaking	Typography	
Sculpture	Visual Communication	

Architecture:	Design subjects:	Craft:
Architectural Design Theory	Biomechanics, Biomaterials and Prosthetics (non-clinical)	Blacksmithing
Architectural Technology	Design studies	Ceramics Design
Architecture	Design studies not elsewhere classified	Crafts
Architecture not elsewhere classified	Engineering Design	Crafts not elsewhere classified
Architecture, building and planning	Industrial/Product Design	Creative Arts and Design not elsewhere classified
Interior Architecture	Interactive and Electronic Design	Furniture Design
Interior Design	Medical Technology	Others in Creative Arts and Design
Landscape Architecture	Metal Crafts	

Film & Photo:
Cinematics and Photography

Cinematics and Photography not elsewhere classified
Film studies
History of Cinematics and Photography
History of Photography
Media studies not elsewhere classified
Moving Image Techniques
Photography
Producing Motion Pictures
Theatre Design
Visual and Audio Effects

⁵ Chew, B. A., *Some recent British sculptors: a critical review* (University of Manchester, 1957)

⁶ Pal, P., *Studies in the Painting and Sculpture of Nepal* (University of Cambridge, 1966)

⁷ Wilkinson, A. G., *The drawings of Henry Moore* (University of London, Courtauld Institute, 1975)

⁸ Sleigh, H. C., *Learning to paint: a case study of a school of fine art* (University of London, Institute of Education, 1975)

⁹ Andrews, E.M-R., *The innovation process of culturally-based art education* (University of Bradford, 1983)

Davis, D., *Imagery in thought: nature and function of complexual thinking in art education* (CNA, 1980)

Dunning, R.V., *Language in art education: a theoretical and empirical study of the relations between the visual and the verbal in art and art education* (University of London, Institute of Education, 1983)

Fakhoury, B., *Art education in Lebanon* (University of London, Institute of Education, 1983)

Mather, S.M., *The drawings of Candida: one child's graphic development from her first to her thirteenth year* (University of London, Institute of Education, 1983)

Millard, G.C., *The relationship between image and language in the drawings of young children: the evaluation of a structured teaching programme* (CNA, 1979)

Swift, John, *The role of drawing and memory-drawing in English art education 1800-1980* (CNA (now University of Central England, Birmingham Institute of Art and Design), 1984)

¹⁰ Aulich, J., *The human clay: R.B. Kitaj, 1932-1980: the evolution of a figurative aesthetic* (University of Manchester, 1985)

Clarke, D.J., *The influence of oriental thought on postwar American painting and sculpture* (University of London, Courtauld Institute, 1983)

Clements, Keith, *Henry Lamb 1883-1960* (CNA (now University of Brighton), 1983)

Kasfir, S.L., *Visual arts of the Idoma of Central Nigeria* (University of London, School of Oriental and African Studies, 1979)

Zarringhalam, Mahmoud, *The nature of islamic art and its relationship with abstraction* (Royal College of Art, 1979)

¹¹ Bailey, G.H., *Drawing and the drawing activity: a phenomenological investigation* (University of London, Institute of Education, 1982)

Baxter, P.J., *Art, ideology and one film: The Blue Angel* (University of London, University College, 1980)

Goodwin, A., *Art and idea* (CNA, 1982)

Ironside, Hedley Andrew, *An investigation into contexts relevant to understanding art production* (CNA (now University of Brighton), 1980)

Panton, P., *The artist as agent* (University of Bristol, 1985)

Stonyer, A.A., *The development of kinetic sculpture by the utilization of solar energy* (CNA, 1978)

Thurlby, M., *Transitional sculpture in England* (University of East Anglia, 1976)

Tomkins, A.G.M.H., *Art and cultural production, with special reference to cartoons and caricature* (University of London, Institute of Education, 1983)

Willats, J.H., *Formal structures in drawing and painting* (CNAA, 1982)

¹² The team grew to include colleagues from University of Lincoln, Manchester Metropolitan University, Birmingham Institute of Art & Design and Coventry University as well as the core project originators from Sheffield Hallam University, Leeds Metropolitan University, and Nottingham Trent University,

¹³ Quality Assurance Agency, 2001. Annex 1, Qualification descriptors, 'The framework for higher education qualifications in England, Wales and Northern Ireland'. [<http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI/default.asp#framework>] accessed 28 March 2006

¹⁴ The CNAA organised a series of conferences in the 1980s in conjunction with Middlesex Polytechnic, 1984, Manchester Polytechnic, 1987, and the London Institute in 1988. The conclusions from the two earlier events are reprinted in the publication of the proceedings of the 1988 event.

Bourgourd, Jeni, Evans, Stuart and Gronberg, Tag (Eds.), *The Matrix of Research in Art & Design Education. Documentation from the conference on research in art and design organised by the London Institute and the Council for National Academic Awards 1988*. (London: London Institute, 1989)

¹⁵ The 1984 statement was referred to in a paper statement issued in 1989: Council for National Academic Awards Committee for Art and Design, May 1989 statement, 'Research and Related Activities in Art and Design', Appendix 4 in: Bourgourd, Jeni, Evans, Stuart and Gronberg, Tag (Eds.), op cit

¹⁶ Appendix 4 in: Bourgourd, Jeni, Evans, Stuart and Gronberg, Tag (Eds.), op cit

¹⁷ Livingston, Alan, 'Research into the nature of the discipline', in: Bourgourd, Jeni, Evans, Stuart and Gronberg, Tag (Eds.), op cit

¹⁸ Brown, B., Gough, P., Roddis, J., *Types of Research in the Creative Arts and Design*. (Brighton: University of Brighton, 2004)

¹⁹ Frayling, Christopher 'Research in Art and Design', *Royal College of Art Research Papers*, Vol 1, No. 1, 1993/4. (London: RCA, 1993)

²⁰ Buchler, Pavel, 2001. 'New Academic Art'. In: *Research and the Artist: Considering the Role of the Art School*. Antonia Payne, ed. (Oxford: OUP, 2001)

²¹ Frayling, Christopher. Transcript of Research Seminar on Practice-based Doctorates in Creative and Performing Arts & Design, held on 14 July 1998. (Surrey Institute of Art & Design University College, 1998)

²² Bennett, G., *An artist teacher's portrayal* (University of East Anglia, 1994)

Pepper, A.T., *Drawing in space: a holographic system to simultaneously display drawn images on a flat surface and in three dimensional space* (University of Reading, 1988)

Akyuz, U., *Creation of a 2-dimensional model for pencil marks* (De Montfort University Leicester, 1995)

Douglas, Anne, *Structure and Improvisation: The Making Aspect of Sculpture* (University of Sunderland, 1992)

Watson, A., *An exploration of the principle of chance as a stimulus to the creative activity known as sculpture* (Robert Gordon University, 1992)

Leake, Irene, *Apprehending movement of the human figure through the medium of drawing, with comments on its possible relationship to computer mediated interaction* (University of Brighton, 1993)

Mathee, Jean, *Art Practice as an Act of Paradoxical Creation: sublimation ex nihilo* (Royal College of Art, 1994)

²³ Benyon, Margaret, *How is holography art?* (Royal College of Art, 1994)

Dawe, M.Wendy., *Visual metaphor and the ironic glance: the interaction between artist and viewer* (University of Central England, Birmingham Institute of Art and Design, 1992)

Mottram, Judith A.L., *Critical concepts and change in painting: the relationship of influence to practice* (CNAA (Manchester Polytechnic), 1988)

Pizzanelli, David, *Aspects of spatial and temporal parallax in multiplex holograms, a study based on appropriated images* (Royal College of Art, 1994)

Rogers, Sheena, *Representation and reality Gibson's concept of information and the problem of pictures* (Royal College of Art, 1986)

²⁴ Anderson, Simon, *Re-Flux Action: the Fluxshoe exhibition tour of 1972-73, and the subsequent attempt to catalogue the residual collection, held in the Tate Gallery Archive* (Royal College of Art, 1988)

Blair, L.F., *The working method of Joseph Cornell* (University of Essex, 1991)

Chaplin, R.M., *Robert Rauschenberg – between looking and longing* (University of Sussex, 1992)

Elatta, T.M., *An analysis of indigenous Sudanese graphic imagery and implications for curriculum development in art education* (De Montfort University Leicester, 1990)

Fijalkowski, C.M., *The surrealist object: proof, pleasure and reconciliation* (University of East Anglia, 1990)

Gilhespy, Tom, *A theoretical appraisal and artistic response to Soviet monumental sculpture* (University of Central England, Birmingham Institute of Art and Design, 1993)

Harada, R., *The making of an avant-garde in Japan: an assessment of Okamoto Taro's art of 'counterpointism' and its debt to Europe with particular reference to Jean Arp and Georges Bataille* (University of Essex, 1993)

Harvey, J., *The visualization of religious concepts in the Welsh nonconformist tradition, with particular reference to the paintings of Nicholas Evans* (University of Wales, College of Cardiff, 1990)

Holloway, M., *Picasso: Suite 347* (University of London, Courtauld Institute, 1995)

Holt, D.A., *Art in primary education: a study of the generalist as teacher of the visual arts* (University of Exeter, 1989)

Jeffett, W.F., *Objects into sculpture; sculpture into object: a study of the sculpture of Joan Miro in the context of the Parisian and Catalan avant-gardes, 1928-1983* (University of London, Courtauld Institute, 1992)

Kaye, J.N., *The fine artist's use of theatre form since 1945* (University of Manchester, 1987)

Lewis, A., *Roger Hilton and the culture of painting* (University of Manchester, 1995)

Matthews, J.S., *Expression, representation and drawing in early childhood* (University of London, Goldsmiths College, 1990)

McGuigan, N.D., *The social context of Abelan Art: a comparison of art, religion and leadership in two Abelan communities* (New University of Ulster, 1992)

Nixon, J.W., *Francis Bacon: paintings 1959-1979. Opposites and structural rationalism* (New University of Ulster, 1986)

Oguibe, D.D., *The paintings and prints of Uzo Egonu: 20th century Nigerian artist* (University of London, School of Oriental and African Studies, 1992)

Ollett, M.L., *Toward a new programme of art education* (University of London, Institute of Education, 1988)

Paine, S.M., *The development of drawing in the childhood and adolescence of individuals* (University of London, Institute of Education, 1986)

Patrizio, A.P., *'The ugly and the useless': industry as a theme in Scottish art and aesthetics, 1880-1980* (University of Edinburgh, 1994)

René, Stephane, *Coptic iconography* (Royal College of Art, 1990)

Rhodes, C., *Primitivism re-examined: constructions of the 'primitive' in modernist visual art* (University of Essex, 1993)

Smith, J.A., *An analytic sociology of art: art and society and the origins of modernist painting* (University of London, Goldsmiths College, 1989)

Smith, M.A.E., *Between poetry and painting: an exploration of visual and verbal integration and interaction in the arts of the twentieth century, with particular reference to France* (University of Reading, 1987)

Vargas, E., *Surrealism and painting within the context of the Argentine avant-garde: 1921-1987* (University of Essex, 1992)

Waugh, E.R.F., *Emergent art and national identity in Jamaica, 1920's to the present* (Queen's University at Belfast, 1988)

White, T.E.J., *The use of the performative to disrupt form in the work of artists since 1960.*, (University of Warwick, 1994)

²⁵ The apparent drop in numbers for 2004 and 2005 is anticipated to relate to the delay in records reaching the national repository and being included in the British Index to Theses, rather than an actual decline in number of awards being made.

²⁶ AHRC, Table 1a, Number of applications and Awards in Doctoral Competition 2005, *Report on the AHRC's 2005 competition for postgraduate awards*. (2005) [http://www.ahrc.ac.uk/website/university_staff/postgrad/competition.asp], accessed 28 March 2006

²⁷ HESA stats for student numbers indicate that the total number of students enrolled on undergraduate courses as 65,154. This includes Fine Art students (13,500), Design students (50,425), and craft students (1520). Architecture accounts for another 11,285, and an unknown number of photography students are within the 'cinematics and photography' numbers (11500) www.hesa.ac.uk/holisdocs/pubinfo/studnet/subject0405.htm

²⁸ The number counted as design could include a proportion of the students on courses coded as Cinematics and Photography, and there may be additional numbers covered by the ADIT subject coverage on courses coded 'Others in creative arts and design'

²⁹ The Higher Education Statistical Agency collects data on academic staff under the broad subject category 'Design and Creative Arts' and 'Architecture, built environment and planning', both of which would include staff working in other subject disciplines

³⁰ HESA, private communication, 31 March 2006.

³¹ RAE 2001. [www.hero.ac.uk/rae/] accessed 28 March 2006

³² What do PhDs Do? (UK GRAD, 2005) [www.grad.ac.uk/cms/ShowPage/Home_page/Resources/What_Do_PhDs_Do_/p!eXccLa] accessed 28 March 2006

³³ Seventy-five percent of the 9,242 research outputs (books, journal articles, exhibitions, conferences papers, designs etc.) submitted by art and design academics to RAE 2001 have been coded up by subject type to enable comparisons to be drawn between the activities of different subject fields. All books, edited books, book chapters, journal articles, conference papers and designs submitted to the Art & Design Panel for RAE 2001 have been coded by subject group. In addition, 2445 of the 3748 exhibitions have been coded.

	text outputs	practice outputs
Design	2047	1385
creative arts	548	2987

³⁵ Park Chun, Young-Paik, *Melancholia, feminine difference and Paul Cezanne* (University of Leeds, 1999)

³⁶ Crawford, Joanne, *Figuring Death: The Phantom of presence in art* (University of Leeds, 2002)

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- ³⁷ Chan, S.S.W., *De/centering whiteness, gender and "Irishness:" representing "race", gender and diaspora in Irish visual art* (University of Ulster at Belfast, 2002)
 Dagleish, S. H. R., *'Utopia' redefined: Aboriginal women artists in the Central Desert of Australia* (University of East Anglia, 2000)
 Harney, E., *The legacy of negritude: a history of the visual arts in post-independence Senegal* (University of London, School of Oriental and African Studies, 1996)
 Shin, Ji-Young, *Writing women's art histories: The construction of national identity in South Korea and the tradition of masculinity in abstract painting* (University of Leeds, 2004)
- ³⁸ Hand, J., *What's happening with das Ding? psychoanalysis, aesthetics and temporality in art* (University of Kent at Canterbury, 1998)
- ³⁹ Hogarth, J., *Dislocated landscapes: a sculptor's response to contemporary issues within the British landscape* (University of Sunderland, 1998)
- ⁴⁰ Meynell, K., *Time-based art in Britain since 1980 – an account of an interdisciplinary practice* (Royal College of Art, 1999)
- ⁴¹ Curtin, B.A., *Assuming the 'feminine' position: erotic masculinities and the visual representation of sexual difference* (University of Bristol, 2000)
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