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Research in Art and Design

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'The objects of the College are to advance learning, knowledge and professional competence particularly in the field of fine arts, in the principles and practice of art and design in their relation to industrial and commercial processes and social developments and other subjects relating thereto through teaching, research and collaboration with industry and commerce.'

Charter of Incorporation of the Royal College of Art
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Research in Art and Design

Christopher Frayling

Where artists, craftspeople and designers are concerned, the word 'research' - the r word - sometimes seems to describe an activity which is a long way away from their respective practices. The spoken emphasis tends to be put on the first syllable -the *re* - as if research always involves going over old territory, while art, craft and design are of course concerned with the new. The word has traditionally been associated with; ▮obscure corners of specialised libraries, where solitary scholars live; ▮white-coated people in laboratories, doing esoteric things with test-tubes; ▮universities, rather than colleges; ▮arms length, rather than engagement; ▮artyfacts, rather than artefacts; ▮words not deeds.

Recently an opposing tendency has emerged - largely as the pragmatic result of decisions about government funding of higher education - where the word has come to be associated with: ▮what artists, craftspeople and designers do all the time anyway; ▮artefacts, rather than artyfacts; ▮deeds not words.

Much of the debate - and attendant confusion - so far, has revolved around a series of stereotypes of what research *is*, what it *involves* and what it *delivers*. The debate has also led towards some very strange directions indeed - such as the question (asked in all seriousness) 'does an exhibition of paintings *count* as research or doesn't it?' This paper attempts to unpack some of the stereotypes, and redirect the debate away from some of its more obviously blind alleys.

There seem to be almost as many definitions of research flying around in higher education right now, as there are reasons for promoting them. So I thought I'd go back to base - the OED. The Oxford English Dictionary lists two basic definitions, one with a little r and one with a big R, and within these, many many subsidiary ones. Research with a little r - meaning 'the act of searching, closely or carefully, *for* or *after* a specified thing or person' - was first used of royal genealogy in 1577, then in one of the earliest detective stories William Godwin's *Caleb Williams* in 1794 (where it concerned clues and evidence), then by Charlotte Bronte in 1847 to describe the search for overnight accommodation. Subsidiary definitions include 'investigation, inquiry into things; also a quality of persons carrying out such investigation' and, in music and poetry, 'a kind of prelude, wherein the composer seems to *search* or look out for the strains and touches of harmony, which he is to use in the regular piece to be played afterwards'. So research with a little r has been used, in the last four hundred years, of art practice, of personal quests, and of clues and evidence which a detective must decode. The point, says the OED, is that the search involves care, and it involves looking for something which is defined in advance: a criminal, a bed for the night, a regular musical theme. It isn't about professionalism, or rules and guidelines, or laboratories. It is about searching.

Research with a big R - often used in partnership with the word 'development' - means, according to the OED, 'work directed towards the innovation, introduction, and improvement of products and processes'. And nearly all the listed usages, from 1900 onwards, are from the worlds of chemistry, architecture, physics, heavy industry, and the social sciences. Research as professional practice, which earns it the big R. And its usage developed with the professionalisation of research in the university sector and in the chemical industry. In 1900, the word 'research' as applied to the humanities - for example - would have meant:

- antiquarianism
- the study of constitutional documents
- a self-motivated activity funded by paid teaching or other occupation.

The concept of humanities research as discovering new perspectives, or new information, is actually a very recent formulation.

So the dictionary doesn't take us very far - except that it establishes that the word has traditionally been used of art (and, with a big R, of design), and that for an activity to count in either sense as research the subject or object of research must exist outside the person or persons doing the searching. And the person must be able to tell someone about it. The dictionary also shows that prior to the turn of the century the word research carried no specific scientific meaning - indeed it predated the division of knowledge into arts and sciences.

But we aren't, of course, talking about *definitions* here: we're talking about usage, and this is where the Humpty Dumpty principle comes in. In *Alice Through the Looking Glass*, Humpty Dumpty has strong views about how words come to mean what they do.

> 'There's glory for you', said Humpty Dumpty.
> 'I don't know what you mean by 'glory' ' Alice said.
> Humpty Dumpty smiled contemptuously. 'Of course you don't - till I tell you. I mean 'there's a nice knock-down argument for you!''

'But 'glory' doesn't mean 'a nice knock-down argument'' Alice objected.
'When I use a word' Humpty Dumpty said, in rather a scornful tone, 'it means just what I choose it to mean - neither more nor less'

'The question is' said Alice, 'whether you *can* make words mean so many different things'
'The question is' said Humpty Dumpty, 'which is to be master - that's all'.

Which is to be master? Or,to put it another way, where does the legitimation come from? From a peer group, or an institution, or a funding structure, or an invisible College, or a section of society at large? Is this a political question, with a small p: about degrees and validations and academic status, the colour of peoples' gowns or, more interestingly, a conceptual one, about the very bases of what we all do in art, craft and design?

Assuming that a little more than politics and money-raising are going on, I'd like to look at some of the widely shared assumptions which surround this debate - and, in unpacking them, at the ways in which its terms can perhaps be adjusted to be of more practical use.

And I'd like to start with Picasso's painting *Les Demoiselles d'Avignon*.

'In my opinion' said Picasso, 'to search means nothing in painting. To find is the thing. Nobody is interested in following a man who, with his eyes fixed on the ground, spends his life looking for the pocket-book that fortune should put in his path . . .

Among the several sins that I have been accused of committing, none is more false than the one that I have, as the principal objective in my work, the spirit of research. When I paint, my object is to show what I have found and not what I am looking for. In art intentions are not sufficient and, as we say in Spanish, love must be proved by facts and not by reasons . . .

The idea of research has often made painting go astray, and made the artist lose himself in mental lucubrations. Perhaps this has been the principal fault of modern art. The spirit of research has poisoned those who have not fully understood all the positive and conclusive elements in modern art and has made them attempt to paint the invisible and, therefore, the unpaintable.'[1]

In this rare interview of 1923 (one of only a few he ever gave for publication), Picasso is in part describing the *reference materials* he had used when preparing *Les Demoiselles d'Avignon* of 1906-7. Visual memories of the red-light district of Barcelona, some ancient Iberian sculptures he'd seen in the Louvre, Cezanne's Mont-Sainte-Victoire, a recent Matisse. But, he says, such reference materials should not be confused with research and in any case, the point of the exercise is single-mindedly to produce a finished painting. Only the art historians - a breed of which he was very suspicious - would think otherwise, after the fact. Yes, he had the spirit of research in him. But that was *not* his objective. Research to the painter, he said, equals visual intention. He's a maker not a researcher - and he doesn't even feel comfortable verbalising about his work.

The work may be ambiguous - even in 1923, there were squabbles about what it could possibly mean - but the artist isn't in the business of unambiguous communication. To adapt Herbert Read's famous distinction about art education, this is research *for* art, rather than either research *into* art or research *through* art, if indeed it is research at all. I will be elaborating on these distinctions a little later on.

But there's an even more dramatic moment, which neatly illustrates several popular assumptions about the artist's relation to his or her own practice - about how art happens. It is from a 1956 Hollywood film called *Lust for Life*, and it involves Kirk Douglas, sporting an orange beard, batting off some crows above a wheat-field in the South of France.

In this sequence, Vincent van Gogh played by Kirk Douglas, is impetuous, anti-rational, inward looking - and convinced that he is on an impossible quest to express what is on his mind, or in his mind's eye. He's white, male and quite barmy. He can't talk about his art - 'it's impossible' is the best he can do - and he works very fast - just look at the way he paints all those crows, and creates his stormy sky of turbulent dark blue. The resulting picture becomes yet more evidence of his mental disturbance, which itself is evidence of something called his 'artistic temperament': *Crows over a Wheatfield* (in Auvers) is, according to the film, completed at great speed just moments before he tries to shoot himself - in the summer of 1890; actually, this *wasn't* his last canvas, but pop history has always preferred to believe that it was. The artist, by definition, is someone who works in an *expressive* idiom, rather than a *cognitive* one, and for whom the great project is an extension of personal development: autobiography rather than understanding. The movie stereotype of the artist is almost invariably like this - from Michelangelo, played by Charlton Heston (1965), or Caravaggio played by Nigel Terry in Derek Jarman's version (1986), to Ken Russell's biographies of more modern artists. And it is, I believe, shared by many outside our world. The question is, which is to be master, that's all. As John A. Walker has written:

'the idea that art might be a *construction* . . . rather than an *expression*, or that it might be the consequence of a host of social factors, is alien to the ethos of Hollywood.'[2]

It is unthinkable, he adds, that there could ever be a popular movie about a non-expressive artist such as Piet Mondrian.

Moving on to the designer, up until relatively recently the popular stereotype was rather different. Instead of the expressive artist, we have the pipe-smoking boffin who rolls up his sleeves (always his, incidentally) and gets down to some good, honest hands-on experimentation. From Leslie Howard in *The First of the Few* (1942), to Michael Redgrave in *The Dam Busters* (1955). The designer-boffin's very best moment of donnish understatement came in *The Dam Busters*, when the man from the ministry says to Dr. Barnes Wallis (Michael Redgrave): 'Do you really think the authorities would lend you a Wellington bomber, for tests? What possible argument could I put forward to get you a Wellington?' To which the boffin replies 'Well if you told them I designed it, d'you think that might help?' Cut to Barnes Wallace in the cockpit of a Wellington . . .

Doing is designing for these people - not systematic hypotheses, or structures of thought or orderly procedures; but potting-shed, hit-and-miss, sorry I blew the roof off but you know how it is darling, craft-work.

More recently, there's been a change in the popular image of the designer - reflected in assorted television advertisements of the late 1980s which show young designers at work or play. The designer is no longer a boffin but is now a solitary style warrior who knows his (still it is usually his) way around the inner city jungle, and who believes in an aesthetic of salvage, or junk.

The young designer has become an imagineer - an archeologist of images, and

signs, and styles from within the urban wasteland. Not a creator of meaning so much as an intuitive searcher after the latest thing. Don't think twice, it's alright. I'm reminded of the designer who was overheard on a bus, saying 'let's be philosophical about this, don't give it a second thought'.

Now, side-by-side with the image of the expressive artist, the boffin and the style-obsessed designer, we have the popular image of the research scientist, and how he or she works. My third public image. And it is almost at the opposite extreme to the mad artist and the trendy designer.

The research scientist is orderly, he - again, it tends to be *he*, in popular images - has conjectures and hypotheses and he sets about proving or disproving them according to a set of orderly procedures. His subject exists outside himself, so he must submerge his subjectivity and personality in order to study it. He takes a problem, makes tentative conjectures regarding the answer to it and keeps revising the answer in the light of neat, well ordered experiments, which must be repeatable or replicable. He is what is known as a critical rationalist.

Interestingly, this stereotype exists in pop depictions of true-life scientists, rather than fictional or fantasy ones. Studies of the image of the scientist in pop culture have shown how *fictional* scientists tend on the whole to be something else: lunatics, or alcoholics, or psychopaths, or obsessives of some description - I suppose Drs Frankenstein, Faustus, Jekyll and Strangelove are the prime examples - while real-life scientists in films tend on the whole to be impossibly saintly, incredibly generous, unbelievably humanitarian, and very often martyrs to their staggeringly effective research as well - I suppose Edward G. Robinson as Dr. Ehrlich, the Nobel-prizewinner who discovered a cure for syphilis in *Dr Ehrlich's Magic Bullet* (1941), or Greer Garson as Marie Curie in *Madame Curie* (1943) or Mickey Rooney as young Thomas Edison and Spencer Tracey as the grown-up one, are the classics. Edward G. goes out with an exhortation to the people in the 1 & 9s to 'rid men's hearts of the diseases of hatred and greed', while Madame Curie at the very moment of her scientific discovery turns to husband Walter Pigeon and says 'Pierre - do you mind? You look first' ('He smiles understandingly' says the script, and 'touches her arm'). But on the whole, the psychopaths have won the day. The earliest animated story films, made by Georges Méliès in the first decade of this century, featured explorers and scientists as manic, top-hatted music-hall turns, belonging to something called the Institute of Incoherent Geography. Since then, it's been estimated that mad scientists or their creators have been the villains of 31% of all horror or fantasy movies worldwide, that scientific or psychiatric research has produced 40% of the *threats* in all horror and fantasy movies - and - by contrast - that scientists have only been the heroes of 11% of horror movies.

So it is saints and sinners.

The saints have a self-evidently 'scientific' way of thinking, they tend to say 'Eureka!', and their successes instantly persuade the scientific community around them of the wisdom of their ways. It all seems so simple. And yet, of course, critical rationalism, which relies on making everything explicit, by revealing the methods of one's logic and justifying one's conclusions, and which has at the heart of its enterprise a belief in clarity, has been under considerable theoretical attack in the last 10-15 years. Sociologists such as Harry Collins, in his book *Changing Order* and philosophers such as Paul Feyeraband, have stressed that in science - as in everything else - there may well be conjectures but many of them are unconscious and they tend to be changed or modified without any explicit discussion, and they tend to involve a significant measure of subjectivity. In other words, the Edward G. Robinson version of research doesn't much resemble what science looks like in the laboratory, or what it feels like to those who are doing it. *Changing Order*, according to Harry Collins, involves irrationality, craftsman's knowledge, negotiating reality rather than hypothesising about it, above all tacit knowledge rather than propositional knowledge (and when there *is* propositional knowledge, a fair amount of tacit knowledge is in *there*, too). In the history and philosophy of science, historians such as David Gooding - who studies the methods of Michael Faraday - are now stressing the links between experimental scientists and creative artists (through the joint uses of imagination, intuition and craft practice), especially in the nineteenth century. Where the artist has difficulty persuading people of the connection of art with research, the scientist (whose research expertise has until recently been taken for granted) has exactly the same problem with creativity - which is generally seen as the prerogative of the artist rather than the scientist. This is partly why the *process* of discovering has been virtually ignored until recently, and why the activity of fine art is of increasing interest to historians of science. Look at *The Double Helix*: it could almost be an artist's autobiography.

If the stereotype of the *scientist* as researcher needs some adjusting - to make it seem *closer* to art and design (though by no means identical with it) - the popular image of the *fine artist* needs a lot of work as well. For, in the history of art since the Renaissance, there are of course countless examples of artists who have explored their materials for what they are, and not simply as 'raw materials'. Who have worked in a cognitive rather than an expressive idiom. George Stubbs's researches on animal anatomy - involving portfolios of drawings of dissections, which were also used by scientists - made possible George Stubbs's animal paintings and they have lived on in parallel with the pictures. John Constable's researches into cloud formation - his many cloud drawings and paintings - made possible John Constable's landscape paintings. This is not to suggest that Stubbs and Constable were, respectively, vet and weatherman, but that they operated quite consciously - in a cognitive idiom, researching subjects which existed outside themselves and their own personalities. In this century, one could cite artists who explore the doors of perception such as op artists - or computer artists - or artists as semiologists - as their heirs in this sense. Research *for* art and sometimes research *through* art, to re-use the distinction. One problem is, that the classic examples of this - Leonardo, Stubbs, Constable - date from a long time ago. Their drawings would be unlikely to be at the cutting edge of such research today, in the era of electron-microscopes and other ways of enhancing the image.

As Tom Jones has written:

> 'While Leonardo da Vinci's drawings pioneered anatomical research, any work an artist does now in this vein can *only* be reference material, the study of anatomy having progressed far beyond what can be observed by the unaided eye. Additionally, the medical skills now required are so specialised that they

> are unlikely to be possessed by any artist. Indeed, given current scientific understanding, it is difficult to conceive that much research into subject-matter (in the sense in which it has been defined relative to Stubbs, Constable and Leonardo da Vinci) is possible nowadays.'[3]

It is much more likely to be a matter of referencing the subject or illustrating it in ways that photography cannot achieve.

Nevertheless, the examples show;

- that artists have worked just as often in the cognitive idiom as the expressive
- that some art counts as research - anyone's definition
- that some art doesn't.

It is a relief to discover that there's no question of giving every single painter since the Renaissance an honorary Ph.D., *in absentia*. Whatever definition we end up with, it can never in my view - in principle or in practice - fit all fine art activities. Why should it? If Picasso had wanted a doctorate of philosophy, I'm sure he would have registered for one. Instead he is said to have turned down honorary degrees all over the western world. There must be an institutional, or pedagogical, or academic, or technical, or some reason for wanting to do research. Not just status, promotion and fund-raising.

To illustrate this, here's a famous quotation from John Constable, to set against the Picasso statement I quoted earlier. The quotation is from a lecture to the Royal Institution in May 1836:

> 'I am here on behalf of my own profession, and I trust it is with no intrusive spirit that I now stand before you; but I am anxious that the world should be inclined to look to painters for information on painting. I hope to show that ours is a regularly taught profession; that it is *scientific* as well as *poetic*; . . . and to show by tracing the connecting links in the history of landscape painting that no great painter was ever self-taught . . Painting is a science, and should be pursued as an inquiry into the laws of nature. Why, then, may not landscape be considered as a branch of natural philosophy, of which pictures are but experiments?'[4]

If the stereotype of the artist is fairly wide of the mark, the recent image of the young designer - descended from the image of the art student in general, which was invented as recently as the 1950s - also needs substantial readjustment. Not just in the light of what we know about design research, the design methods movement, basic design, and the whole range of attitudes towards the use of reference materials and procedures and mental attitudes - but, again, in the light of history. In a sense, the concept of design as research - either *applied research*, where the resulting knowledge is used for a particular application, or *action research*, where the action is calculated to generate and validate new knowledge or understanding, or even (but very rarely) *fundamental research* - is so well established that it doesn't need elaborating here. But popular assumptions about design - and indeed some of the self-images of designers - do live on. And what's less well known, is the fact that if you examine the origins of art and design teaching in Britain, you'll probably see that 'research' as a problem area, or as something which exists *outside* studio design, is, again, a relatively recent phenomenon. Let's take your average design student at the government school of design in London from the late 1840s to the 1860s. Already, art and design had been separated from the mainstream university sector - in 1836, they were poised to go in, but the Mechanics Institute-style model was adopted instead - but the curriculum was based to a large extent on formal rather than tacit knowledge, and on design as a kind of language. You learned the grammar - from books by Owen Jones, or papers by Gottfried Semper - and, if you were very lucky, you then learned the usage as well. But in studying the grammar - with reference to other grammars, such as those of botany and sometimes physics and mechanics - you were given access to the very latest research into the design process. It wasn't *doing* versus *thinking*. It was practice as an amalgam of the two, with, if anything, the emphasis on the thinking. Time enough to implement the thoughts after leaving College, it was thought.

To recapitulate:

The popular image of the fine artist as expressive lunatic does not allow sufficiently for the cognitive tradition in art - a tradition which has in fact been called 'research'. Nor does it allow for the fact that art happens in a social, technical and cultural world.

The popular image of the designer as style warrior - superficial, trendy, obsessed with surfaces and signs - does not allow sufficiently for the research and methods tradition in design, or indeed for the tacit use of those methods by designers - to say nothing of applied semiotics. I once asked an eminent advertiser, while I was making my television series *The Art of Persuasion*, for Channel 4 about his line on the science of semiotics. 'Oh', he said '*that*. That's what I do for a living!'

Equally, the popular image of the art and design student ignores those important moments in our history when research - in anyone's definition - was a central part of the curriculum.

By the same token, the popular image of the scientist - as critical rationalist, engaged in fundamental research and shouting things like 'Eureka' or 'it's a crazy idea but it just might work' - the image against which a lot of research tends still to be judged, is equally wide of the mark. Doing science - as opposed to post-rationalising about science - just doesn't seem to be like that, if recent researches into the philosophy and sociology of science are any guide. Doing science is much more like doing design.

Implicit in much of what I've been saying, is a criticism of yet another stereotype - that of 'the practitioner'. As if action which follows reflection, or reflection which follows action, can be put in a box exclusively marked 'practice'. Research is a practice, writing is a practice, doing science is a practice, doing design is a practice, making art is a practice. The brain controls the hand which informs the brain. To separate art and design from all other practices, and to argue that they alone are in a different world, is not only conceptually strange, it may well be artecidal (to use Stuart Macdonald's word). Yes, art and design have been taught separately from the mainstream, ever since 1837. But that is an institutional accident, not a conceptual statement.

So, where does all this lead? Apart from to the important thought that 'research' is a much less diffuse, much more convergent activity than the terms of the recent debate would suggest. And that 'research' has been, can be and will continue to be an important - perhaps the most important - nourishment for the practice and teaching of art, craft and design.

There *is* a lot of common ground. There is also a lot of private territory. I'd like to finish with the three categories (derived from Herbert

Read) with which I began, to make some practical suggestions as to the kinds of research which might suit, indeed grew out of, what we actually do;

- Research into art and design
- Research through art and design
- Research for art and design

Research *into* art and design is the most straightforward, and, according to the Allison index of research in art and design - as well as CNAA lists of the 1980s and early 1990s plus my own experience at the Royal College of Art - by far the most common:

- Historical Research
- Aesthetic or Perceptual Research
- Research into a variety of theoretical perspectives on art and design - social, economic, political, ethical, cultural, iconographic, technical, material, structural . ...whatever.

That is research *into* art and design. At the College, it involves PhD theses or MPhil dissertations. And it is straightforward, because there are countless models - and archives - from which to derive its rules and procedures.

Research *through* art and design which accounts for the next largest category (though a small one) in the Allison index, the CNAA documents, and my own experience of degrees by studio project at the College, is less straightforward, but still identifiable and visible.

- materials research - such as the titanium sputtering or colorization of metals projects successfully completed in the metalwork and jewellery departments at the College and Camberwell, in association with Imperial College of Science & Technology (partnerships are very useful, in this area of research).
- development work - for example,customising a piece of technology to do something no-one had considered before, and communicating the results. A recent example: the Canon colour photocopier at the Royal College of Art, successfully used by some postgraduate illustration students, who have both exhibited and written up the results.
- action research - where a research diary tells, in a step-by-step way, of a practical experiment in the studios, and the resulting report aims to contextualise it. Both the diary and the report are there to *communicate the results*, which is what separates *research* from the gathering of reference materials. Kenneth Agnew has recently and wisely written that research through the design of products has been

> 'hindered by the lack of any fundamental documentation of the design process which produced them. Too often, at best, the only evidence is the object itself, and even that evidence is surprisingly ephemeral. Where a good sample of the original product can still be found, it often proves to be enigmatic'.[5]

These types of research resemble Herbert Read's 'teaching through art' - so long as we're clear about what is being achieved and communicated *through* the activities of art, craft or design. At the Royal College ofArt, this kind of research, sometimes known as the degree by project - with a specific project declared in advance of registration - involves for the MPhil studio work and a research report, and for the PhD studio work plus a more extensive and substantial research report.

The thorny one is Research *for* art and design, research with a small 'r' in the dictionary - what Picasso considered was the gathering of reference materials rather than research proper. Research where the end product is an artefact - where the thinking is, so to speak, *embodied in the artefact*, where the goal is not primarily communicable knowledge in the sense of verbal communication, but in the sense of visual or iconic or imagistic communication. I've mentioned the cognitive tradition in fine art, and that seems to me to be a tradition out of which much future research could grow: a tradition which stands outside the artefact at the same time as standing within it. Where the expressive tradition is concerned, one interesting question is why people want to call it research with a big 'r' at all. What's the motivation? True, research has become a political or resource issue, as much as an academic one. And, as a slight digression, it always amuses me to see the word 'academic' used as a pejorative - by people who themselves earn their livings within the academy. Research has become a status issue, as much as a conceptual or even practical one.

And that - I must confess - worries me. There may well be opportunites for research within the expressive tradition, but they need dispassionate research rather than heated discussion about status, class and reverse snobbery.

At the College, we give *Higher Doctorates* or *Honorary Doctorates* to individuals with a distinguished body of exhibited and published work - but we do not at present offer research degrees entirely for work where the art is said to 'speak for itself'. Rightly or wrongly, we tend to feel the goal here is the art rather than the knowledge and understanding. The Picasso philosophy. And we feel that we don't want to be in a position where the entire history of art is eligible for a postgraduate research degree. There must be some differentiation.

- Research into art and design
- Research through art and design
- Research for art and design

The novelist E.M. Forster's aunt once said to Forster:

> 'How can I tel that I think till I see what I say?'

That seems to me to be very like the first category. If we modify this to

> 'How can I tel what I think till I see what I make and do?',

then we've covered the second category as well. But if we modify it further to

> 'How can I tell what I am till I see what I make and do?'

it seems to me we have a fascinating dilemma on our hands. As much about autobiography and personal development as communicable knowledge. I can only add, that research for art, craft and design needs a great deal of further research. Once we get used to the idea that we don't need to be scared of 'research' - or in some strange way protected from it - the debate can really begin.

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This is the first Paper in a series intended to stimulate research and debate in the areas of art, design and communication.